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MISSING

THE MUNICIPAL WORLD

Published Monthly in the Interests of Every Department of the Municipal Institutions of Ontario.

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The Municipal World.
ST. THOMAS.

Calendar for September and October, 1896. Legal, Educational, Municipal and Other Appointments.

SEPTEMBER.

2. County Model Schools open.
5. Make return of contagious diseases to Registrar-General.—59 V., chap. 17, sec. 11 (4.)
14. Last day for Judge to defer judgement in appeals from Court of Revision for Shuniah.—Assessment Act, section 68.
15. County selectors of Jurors meet.—Jurors Act, section 13.
Last day for County Treasurer to return to Local Clerks amount of arrears due in respect of non-resident lands which have become occupied.—Assessment Act, section 143, as amended 1895.
20. Clerk of the Peace to give notice to Municipal Clerks of number of Jurymen required from the Municipality.

OCTOBER.

1. Last day for returning Assessment Roll to Clerk in cities, towns and incorporated villages, where assessment is taken between 1st July and 30th September.—Assessment Act, section 52.
Last day for delivery by Clerks of Municipality to Collectors of Collectors' Rolls, unless some other day be prescribed by by-law of the local municipality.—Assessment Act, section 120.
Notice by Trustees of cities, towns, incorporated villages and township boards to Municipal Clerk to hold Trustee elections on same day as Municipal elections, due.—Public Schools Act, section 58 (1).

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R. S. O., CHAP. 52.

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ST. THOMAS.

The Municipal World



PUBLISHED MONTHLY

In the interests of every department of the Municipal Institutions of Ontario.

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ST. THOMAS, SEPTEMBER 1, 1896.

The first report of the Deputy-Registrar General, based on monthly returns of contagious diseases occurring in municipalities, is published in another column. It is most desirable that a report should be sent in from every municipality if these statistics are to be of value to the medical health officers of the province. To facilitate the making out of monthly returns, the Registration Department has supplied special post cards, and if deaths are entered in the registers when received the work of making out the returns is trifling. Clerks will notice that they are required to report whether there have been any deaths from contagious diseases or not. Division registrars should co-operate with the department by sending in their returns promptly on the 5th of each month.

* * *

In the city of Guelph special auditors have for some time been engaged in an examination of the treasurer's books, and a deficit of some \$18,000 is reported. Among the reasons given are: 1st. The combination of the offices of clerk and treasurer. 2nd. A lack of system in keeping the books and records of the municipality. 3rd. Inefficient auditors. There is no excuse for this state of affairs, and we believe that the members of the various councils who have allowed the business of the city to drift along in such a careless way are not entitled to much consideration.

The special auditor concludes his report as follows: "For the future a proper annual audit and an adequate fee paid therefor will be the truest economy."

* * *

Among the various publications received at this office during the past month is a voters' list from a township in the county of Frontenac, and, although it is dated 1896, we find that among the

different qualifications entitling the voters to be entered therein the terms "landholder's son," "occupant" and "wage-earner." We do not know what authority the assessor had for so designating the persons entered in the assessment roll, or the clerk for placing persons thus qualified in the voters list. The Municipal Act section 79 gives the qualification of municipal electors as "owners," "tenants," "income voters," and "farmers sons," and the Manhood Franchise Act requires the assessor to enter on the assessment roll the name of every male person of the age of twenty-one years who has resided within the province for nine months next preceding the time fixed by statute or by-law for beginning to make the assessment roll, and provided such person was, at the time fixed as aforesaid for beginning to make the roll, and is at the time of the assessment living in the municipality, and has resided there continuously from the time fixed as aforesaid. This qualification is to be designated by the letters "M. F."

The acts requiring the use of the terms "landholder's son" and "wage-earner" have been repealed, and we do not know that the use of the term "occupant" is authorized.

* * *

The great majority of the Collectors' Rolls for the various municipalities in the Province will be completed on or before the 1st of October. Before delivering the roll to the collector, the clerk is required to attach thereto a certificate under his hand, stating that it is the collector's roll for the municipality for 1896. It is also advisable to give the name of the collector in the certificate, and attach the seal of the corporation. It is imperative that the certificate should be attached, and a roll unsigned by the clerk is not sufficient authority to entitle the collector to distrain, and he and his sureties are not liable under their bonds for the amount of uncollected taxes. In cities and towns where the council have passed the necessary by-laws, the clerk may include in the certificate the statement required by section 4, sub-section 2, of the Assessment Amendment Act of 1896, the statement to include the total amount of taxes levied and collected under and by virtue of such roll or rolls. The name and amount of each rate levied by the municipality which is required by law or by-law imposing it to be kept distinct, and accounted for separately, and specifying the aggregate proceeds of each such rates so levied and collected.

To sprinkle carbolic acid about the house, or to burn a sulphur candle, or to suspend sheets and towels wet with some proprietary liquid, may be excused in the case of untrained attendants, but it is about time that health officers should cease to countenance and advise the employment of such methods in the disinfection of houses.—*Bulletin of N. J. Board of Health.*

Township Commissioners.

A plan whereby the work of road improvement and maintenance may be carried on in a business way is a subject that many councils have been and are considering. It is well known that in most municipalities there is no particular system, other than that which suggests itself as the work becomes necessary. Many councils are now considering better systems of road improvement and maintenance but unless these systems are put in operation on business principles, the result will be inferior work and increased taxation.

The business of a municipality should be transacted at meetings of the Board, and in this connection, we have to suggest that the council should not delegate by resolution, one or more of its members to take charge of works for which they make appropriations. This is permitted by section 479 of the Municipal Act, but we believe it is in the interest of true economy that members of a council should have no direct dealings with the electors. Human nature is the same the world over, and the favoring of doubtful voters and ward magistrates in the purchase of material and by giving out small jobs of work, has been known to be the means of continuing in office many representatives who, under other circumstances would never have thought of violating the terms of the solemn obligation to which he subscribed when assuming office.

Another result of the proper system would be the doing away with the acrimonious discussion of trivial matters which so often occupies valuable time at the nomination meetings, with the result that a particular member may be made the scapegoat of a retiring council.

We have nothing new to suggest in the way of a plan for carrying on municipal improvements, but would say that the work should be placed in the hands of a commissioner, who should be a man specially adapted for the work, and whose tenure of office should be as secure as that of the average clerk or treasurer. The commissioner should have charge of all road and bridge improvements, and be required to report to the council at each meeting. No works should be undertaken unless they are reported by the commissioner and approved by the council. The commissioner would not require to be actively engaged during the whole year. He should have charge of all township machinery and materials required to be used in the work connected with his department. The many economies that would result will readily suggest themselves to councillors of experience.

Canada has 6,000 miles of roads and highways.

The country roads of the United States do not compare favorably with those of any nation in Europe. During the spring season in many districts of the Western States the roads are practically impassable.

The Election of County Councillors

The election of County Councillors under the act of 1896 is a question that requires a good deal of consideration by the officers authorized to carry out its provisions. A careful reading of the Act and the practical application of many of its enactments shows that more is required than is specifically referred to.

NOMINATING OFFICERS AND NOMINATIONS.

The first duty of the County authorities is the appointment of a nominating officer for each of the districts into which the Counties have been divided. This appointment is required to be made by the Warden on or before the 15th November, and in the event of the Warden failing to make such appointment within 24 hours after the time specified, the County Clerk is required to do so. Municipal Clerks by reason of their previous experience at nomination meetings and elections should receive the preference.

A correspondent in the present issue raises the question as to whether the clerk can legally act as nominating officer, and we have no hesitation in saying that there is no objection to their accepting the office.

County council nominations are to be held on Monday, the 21st December, between the hours of 1 and 2 o'clock in the afternoon. The nominating officer is required to fix the place within the division for holding the nomination. This need not be in the most central part of the district, but should be the most convenient and accessible to the great body of electors of the district. Notices of the nomination meeting and of the election are required to be given by two insertions of an advertisement in each of two weekly newspapers published in the county prior to the nomination day, or by giving sufficient public notice thereof by printed posters. Where the latter form of notice is adopted, care should be taken to give proper publicity, and to insure this we cannot recommend anything better than to follow the instructions to returning officers in provincial elections, which are: To post the proclamation up at the town hall or other public place where the meetings of the council are held, and at every post office in the district, and at least at one public place in every polling sub-division.

The proceedings at the nomination meeting are the same as the clerk of the local municipality is required to perform as returning officer at the nomination for an election in a local municipality. If not more than two candidates are nominated, they are to be declared elected by acclamation, and the return accordingly made to the County Clerk. If more candidates are nominated than are required to be elected, the nominating officer shall, immediately after the lapse of the time in which candidate may withdraw, being either at the nomination meeting or during the following day, certify the fact

and the names and addresses of those remaining in nomination to the County Clerk. For the purpose of securing uniformity the nominating officers should be supplied by the County Clerk, with a form on which to make these returns of election by acclamation or nominations received. The nominating officers duties are ended when this return is properly made, except that when at an election two candidates receive the same number of votes, and it is necessary to determine which one or two should be elected. The nominating officer for the division is required upon request of the County Clerk, to declare in writing for which of such candidates he votes, and in such case the candidate or candidates for which he votes shall be elected. This places the nominating officer in the same position as returning officers for municipal elections, and nominating officers, in our opinion, should not vote for members of the County Council to be elected for his district. The expenses incurred by the nominating officer in and about the election, are required to be paid by the County. These may include the expense of advertising, of posting notices of nomination, rent of hall for the meeting and for the services of nominating officer. The County Clerk should furnish forms upon which these accounts may be made out.

ELECTION.

When an election is required to be held in a district, the County Clerk is required to prepare the ballots, and before doing so he should receive from the Municipal Clerk of each municipality in his county, a list showing the number of polling subdivisions and the number of votes in each. The ballots should be put up in pads containing the number for each sub-division. These are required to be forwarded with other necessary election papers to the clerk of each local municipality in the divisions where the elections for County Councillors are to be held. The form of ballots, notices and other papers are to be the same as nearly as possible as those provided for by the Consolidated Municipal Act of 1892, and where not wholly applicable, are to be adapted by the clerk for the election of county councillors.

The words "other necessary election papers" in our opinion should include ballot paper, account, statement of votes, envelopes to contain county council ballots, similar to those provided for municipal elections, but to have words "election of County Council" printed thereon.

Where all members of the local council are elected by acclamation, the council of such municipality, and the clerk shall take all proceedings which would have been necessary, and as by-law is provided, that is to say, provide polling places, furnish the necessary and proper Voters-Lists, Poll Books, and appoint deputy returning officers and other necessary officers, and such officers so appointed shall have all the powers, rights and authorities respecting the election of county council-

lors, as they now have respecting the election of members of the local municipalities. The expense of the election and of the officers so appointed are to be borne by the county. In case of any dispute between the local municipality and the county for the payment of any such expense, the difference between them is required to be settled by the County Judge, upon the application of either party.

On the day following the receipt of the election returns, the clerk of each municipality is required to prepare and mail to the County clerk by registered letter, a certificate under his hand as to the result of the voting in his municipality for the candidates for the County Council, in the form given in the Act, and to secure uniformity, these should be printed and supplied by the county clerk.

The county clerk is required at one o'clock on the afternoon of the second Monday in the month of January, after receiving the returns of the local municipalities, to publicly declare elected the two candidates having the highest number of votes in each county council district, and also to post up in his office a statement under his hand, showing the number of votes polled for each candidate. Nominating officers, as has been above referred to, are required to break a tie, upon the request of the county clerk.

A Woman's Town.

In Kansas there is a small town, Gaylord, which is entirely out of debt, whose streets are smooth and clean, sidewalks mended, public works in good order, and citizens happy. This is the result of an administration by women.

It is the only town in the world where petticoat government is supreme, for at the last election the town returned to office a ticket composed entirely of women, the votes received by Antoinette L. Haskell, the candidate for Mayor, being more than double those received by her masculine opponent. Mrs. Haskell has presided at the Council meetings for a year, and displays a knowledge of city affairs that would be a credit to a man. Her appointments have proved to be excellent, and the town is content with her rule. Her husband is a prominent banker and land owner. Politically she is a democrat.

Miss Florence Healey, the City Clerk, entered her father's printing office when she was seventeen, beginning as an apprentice, and has worked her way up till now she is the city editor of the *Gaylord Herald*. She is twenty years old.

Mrs. Mary L. Foote, the Police Judge elect, is an Illinois woman, and is a very prominent worker in the Woman's Relief Corps, as well as a woman highly esteemed by the community. An odd feature about her election is that she was running in opposition to her husband, and defeated him by a large majority. She is forty-five years old.

The Town Council is also made up of women.

Road-Building to be Taught in the Common Country Schools.

Extract from an Address of Gen. Roy Stone, Head of the Government Department of Road Enquiry, Delivered Before the Teachers' Convention, held in Buffalo, N. Y., last Month.

We come to you for help in a work which appeals to teachers of America from a standpoint of every interest in the land—moral, intellectual and social, as well as material. A Southern editor states it perfectly when he says: "Every mile of good road built in the country will increase values, improve morals, elevate citizenship, stimulate trade, beautify the country, promote education, raise the standard of religion, and add to the wealth, health and happiness of the people." We do not come to you, however, for help till we have put our own shoulders to the wheel. Four years ago a few of us organized, at Chicago, the National League, for Good Roads, and spent \$10,000 in hard-raised money to begin our campaign. Before that was gone we had gained the ear of Congress, and we have had a little national aid for our work ever since.

I will not waste your time nor mine in arguing for good roads; what you do not know about good roads is not worth telling. I will come at once to the question, which I trust is on all your lips: "How can we help?" There are three ways in which you can help individually.

1. You can "preach the gospel of Good Roads," and carry the glad tidings that already in America, and in many places in America, and in the most unpromising places, that gospel has borne fruit, and the people are even now enjoying its blessings. If any of you will take up this work we can furnish you with chapter and verse for your sermons, and applications and illustrations without number. I will give you one topic to carry home with you.

The cost of bad roads to the United States has been variously estimated by competent authorities, and the lowest estimate of the bad roads tax, that of Prof. Latta, of Perdue University, collated from the certified experience of practical farmers in forty counties of Indiana, amounts to seventy-seven cents per acre annually, or fifty dollars per square mile of farm area, and there are one million square miles of farm area in the United States; five hundred million dollars, or three times the cost of all the common schools in the country utterly wasted. What could not be done for education if this vast sum could be saved.

2. Not only can you preach Good Roads, but you can teach a little road-building in all your schools. No knowledge would be more valuable; it would be taken home from school and discussed in every family. It is a practical concern of everyday life, and will interest parents as well as children, women as well as men; attention will be called to every defect in the location, construction and care of the roads directly about you. You will need no text books, for no high-class technical

knowledge is necessary to teach the rudiments of road construction and repair. We can furnish you from Washington with our printed circulars, giving all the information you will need to impart; and if any of your pupils desire to go beyond the stage of primary instruction in this matter it will not be long before the higher schools, and especially the agricultural colleges, will be teaching road building in all its higher departments.

3. But better than teaching and preaching, you can do much to actually improve the roads of the country. The great need of our country roads is daily care. For want of that care a trifling depression, which a shoveful of gravel would fill, fills with water instead, and deepens, widens and lengthens with every wheel that dips into it, till it becomes an impassable mud-hole. For want of that care, when a rain-storm comes, a little stream of water which the stroke of a hoe would turn aside, follows the wagon-track down a long incline, grows into a torrent, and makes a dangerous gully or a stony hill face; for want of care and a little work loose stones accumulate in the wagon way, and stay there till the annual season of road repair, while fast ones grow out of the ground apace for want of a hammer stroke to knock off the first point that shows; weeds and rubbish choke the ditches and sluice-ways, and costly wash-outs occur, or standing water soaks the road-bed and turns it into a quagmire.

In the absence of care every defect grows by geometrical progression; the worse it gets the faster it grows. Forty million dollars we spend every year on road repairs, and make the road no better. We roll the great stone up the mountain with forty million days' work, and then we let it go to the bottom, to be rolled up again next year. What is the cure for this state of things? The trouble itself is nothing new. Every thinking farmer knows it of old, and has puzzled his brain for a remedy. The daily care of all the roads by paid laborers would be a tax absolutely unbearable; the travel to and fro to do the little work required would cost ten times as much as the work itself. What, then, can we do? When you have interested parents in your district in the subject of road improvement, and taught your scholars something of the proper methods of carrying it on, why not take advantage of the fact that your roads are travelled twice a day by boys old enough to take the ordinary daily care of them if they have the means to do it? Why not organize your own road leagues among the older boys, and persuade your township road authorities to supply a few light tools, to be kept at the school house, and carried home when needed for road repairs, or used at recess on the roads near the school-house? And why not persuade these authorities to offer a prize for that school district which does the best work in this direction? The effect of daily care would show so promptly in preventing the deterioration of the roads

after each annual season of repairs as to offer great encouragement for the general betterment of the highways, and by these means you will not only be conferring an instant and visible benefit upon every resident in your district, but you will be training up a generation of better road builders for the future.

So much you can do individually. Collectively, if your powerful organization will interest itself in this subject, make it one of its active departments in connection with rural schools, put some of your best workers at the head of it, and, finally, co-operate heartily with all the State and local organizations, you may have the satisfaction of helping to raise country life in America to a level with that of the old world, where good roads prevail.—*Good Roads.*

A Successful Institution.

The Brockville *Times* has been investigating the working of the House of Industry built by the county council of Leeds and Grenville, at Athens, which was opened last year—and found thirty-three regular inmates; seventeen women and sixteen men.

* * *

During the summer months the rising bell rings at five o'clock and for breakfast at six, but in winter they rise and breakfast an hour later. Dinner at noonday, tea at six, and all in bed by nine o'clock,—some much earlier. For breakfast they get bread and butter, porridge and milk, and tea; for dinner—potatoes, meat (beef or pork), soup, vegetables, rice or bread pudding, and bread, but no pies or pastry; while for tea they are given bread and butter, tea, hot biscuits, or johnnycake once a week, and occasionally a hash of meat and potatoes. Sugar is a luxury unknown to the great majority, and butter is given only at breakfast and tea. Granite-ware is the prevailing style of china.

* * *

The House of Industry is not alone an honorable monument to the Christian charity of Leeds and Grenville. It is a monument no less to the sound, practical, good sense and business capacity of the counties council in dealing with the problem of relief for the helpless derelicts of the community who have been left stranded by age and poverty. In thus dealing with the problem the United Counties of Leeds and Grenville stand among the first counties of Ontario,—and of the Dominion,—in affording an object lesson of how best to give permanent relief to the helpless, aged, infirm and poor in a way that is at once the most effective and the most economical in its results.

The road system of Ohio is one admirably adapted to the end proposed; the county paying a part of the cost and the property owners, within a reasonable distance on either side, contributing the remainder.

ENGINEERING DEPARTMENT.

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

Intercepting and Relief Sewers.

Our inland cities and towns are all located on streams of greater or less size into which the sewage of the communities must be discharged, either with or without purification. Heretofore, there has been but little thought of the necessity of purification of the sewage, except in a comparatively few cases where the nuisance created or the damage caused has demanded action. In those sections where the population in cities is large as compared with the area, the question of sewage purification is prominent, and as the population becomes more dense, it will become more prominent in all sections. Wherever sewage purification is required it is necessary to diminish the amount of liquid to be purified to a minimum, or the cost of purification will be too great to be borne. The first proposition made is usually to construct a separate system of sewerage, using the system only for house drainage, and polluted discharge from factories and the like. The storm water from streets, roofs and yards must then be taken care of separately, either on the surface or by an additional system of storm water sewers. In many cases this system will be the most economical, and will answer all purposes for many years.

There are, however, several instances in the country where the change in conditions, and rapid increase in population, have rendered the separate system almost entirely useless in a very few years. What is sufficient to take care of storm water in a town of small size, with streets paved relatively with porous materials, and with good grades, neither too steep nor too flat, will be found entirely insufficient when it is desired to pave the streets with impervious materials, and when the area closely built upon is large, and nearly all the water that is falling in rain storms must be taken care of in the street gutters and culverts. If the grades are steep the collection of water at the foot of the hills will cause sudden and damaging overflows and wash-outs. If the grades are flat the overflows will occur with less trouble from wash-outs but with more difficulty in removing water after the storm is over. Full consideration must, therefore, be given to the future of the town before deciding that the separate system is the proper one to adopt.

One strong point in favor of the separate system is its low first cost, but a proper application of the principles of intercepting and relief sewers will very frequently diminish the difference in cost between the separate and combined systems, and in the long run will often secure a more economical construction than the separate system.

In a city or village, whose area is nearly level, it will be found quite impossible to get rid of the surface water when imper-

vious streets are constructed without underground channels. This is especially true if proper construction of street intersections is made. The centre lines of street pavements should extend across intersections without breaks, to give the best satisfaction in driving, and least expense for repairs. To best secure this on streets with low gradients, it is necessary to provide for the removal of the water from the street at the corners, and this can only be done by means of sewers. Culverts can sometimes be constructed to carry the water across the intersecting street, but they make a bad break in the street's surface, expensive to keep in repair, and inconvenient to travel. Open channels or gutters across intersecting streets are always objectionable, and it is worth considerable money to get rid of them. If the area drained by the street gutters which converge at a given point is too large, damaging overflows of adjoining property occur, and necessitate the construction of sewers to take care of the excess. Where the street gradients are steep it will be necessary to remove the water from the street at many street corners, to prevent dangerous accumulation of water at the foot of the hill. When provision is made to remove the water only at the foot of the hill, it can often not be made sufficient for heavy rains. When buildings cover a large part of the area of a block, the amount of water discharged into the street is greatly increased, and the rapidity with which it reaches the street is especially increased, so that a separate system in the business portion may be very shortly outgrown. These and similar reasons may be given for putting, at least, a portion of the surface water into the sewers. A proper consideration of the matter of economy frequently demands the course.

When the storm water is admitted to the sewers their sizes and cost rapidly increase. To keep the cost within reasonable limits the size must be kept at a minimum for safety. There is seldom a village or city which does not have one or more small water-courses running through it which can be utilized to carry off the storm water, although the ordinary flow of sewage could not by any possibility be discharged into them. Proper overflows or short relief sewers can be put in at proper places to discharge everything beyond a certain fixed amount. The first street washings of a storm are almost as objectionable as the house sewage, so the extension of the main sewer should be large enough to carry the regular maximum flow of sewage and this first street wash, or should have, say, three times the capacity necessary to carry the sewage proper. In this manner the main sewer is kept at the minimum size, its cost is reduced, and if purification is ever found necessary, the minimum amount of sewage is presented for treatment.

Another case—the same principle but different in construction—is that where the main sewers may discharge directly

into the stream when the sewage is largely diluted with rain-water, but which would be seriously polluted by the discharge of ordinary sewage. Here an interceptor can be constructed below the level of the main sewers and connection made with it at points of intersection, so that the ordinary sewage flow can run into the interceptor and the water flow into the stream only when rain-water sufficient to dilute the sewage the desired amount has found its way to the main sewer.

Each village or city will present its own variation on the problem, and there are endless combinations of the four elements, combined sewers, separate sewers, partly combined and partly separate interceptors and relief sewers. The skill of the engineer and his judgment come into play in determining which combination is the best and the most economical for the given location, due consideration being given to the local conditions, and to the future prospects of the place, and to the matter of final disposal of purified or raw sewage. It is evident that a village or city cannot afford to begin the construction of sewers until the question has been thoroughly studied by an expert and a full plan for a system has been devised.

CHARLES CARROLL BROWN, C. E.,
in *Municipal Engineering*.

Iron for Bridges.

We are entering the "iron age" of bridges. The price of timber is constantly increasing, that of iron is decreasing, and municipalities are everywhere in Ontario finding it to their advantage to adopt permanent, durable structures. Iron is in many ways displacing wood, and it is becoming almost as necessary to be a capable judge of the former as the latter.

The qualities of iron are as variable as the different localities of its production. Iron may be very good or very bad, and yet to the majority of people the two extremes are precisely alike in appearance. Iron is a metal most sensitive to treatment, and the least variation in fuel and working will result in a variation of quality.

The product of the blast furnace, by which the ore is freed from the greater part of its impurities, is called pig-iron. According to the different proportions of fuel used, temperature, pressure and volume of the blast, the pig-iron has different grades, and these grades are again divided into two classes, "foundry pig" and "forge pig." The former is the most expensive to produce; it is to be recognized by its softness, and, when broken, its grey color and open crystalline texture. Forge pig is hard, fine-grained, and presents a white, or at other times, a mottled fracture.

Wrought-iron is produced by passing the pig-iron through the reverberatory furnace, which further extracts the carbon

and other impurities, when, by hammering, squeezing, heating and rolling back and forth through the finishing rolls, the product becomes merchant, or "best iron," and is in the form of bars.

In bridge building uniformity of material is of first importance, and for this reason the wrought-iron used in bridges is usually further refined by the finishing process, when it becomes "best best" iron.

A fractured bar of this wrought-iron will tell to the experienced eye almost everything about the quality of iron. Some fractures present coarse, whitish crystals; others very fine crystals, sometimes black, in other specimens lustrous like satin. The former indicates an iron of poor quality, hard, brittle or weak; the latter indicates strength. A combination of large and fine crystals indicates lack of uniformity, and that further refinement is needed. Uniformity is not always shown, as it is just by chance that the fracture will occur at a "raw" spot, for good iron if sufficiently refined does not show its lack of uniformity throughout.

Instead of breaking one of the bars off short, if it be slightly nicked on one side and then exposed to moderate blows, so as not to bend it too rapidly, the coarse crystal iron of poor quality will snap off short, while the iron of good quality will develop "fibre," exhibiting instead a fractured surface, as of metallic threads torn apart.

The cold bend test, as the name indicates, consists simply in bending an un-nicked bar of iron, by repeated blows of a sledge-hammer, on the corner of an anvil until the sides approach each other within a distance equal to the thickness of the bar. If no fracture appears on the bar at the back of the bend the iron can be safely considered to possess every requirement for bridge purposes—elasticity, ductility and toughness. Uniformity, which depends on the number of workings, not on the quality of the iron, is shown, of course, by this test. As the fibres are very much strained at the corners, the cold bend test is more severe on a square than a round bar.

Large bars of iron do not show the same ultimate strength that small bars do, and the shape of test specimens has very much to do with the result of the experiment. These points should be borne in mind when specifications are being considered.

Cast-iron should rarely be used in bridge building, but is sometimes permissible where there is none other than a direct crushing strain on it.

Asphalt or Brick.

The choice of pavements for the business streets of towns and cities of Ontario appears to rest at present between asphalt and brick, the former so far obtaining the preference.

Asphalt is the more noiseless of the

two, is smooth, sanitary, and presents a good appearance, but it is not the ideal pavement, in all respects, that it was at one time supposed to be. In summer its smooth stone surface radiates an intense heat; any amount of sprinkling cannot keep the surface moist so as to allay the dust, while the glare which it reflects on a bright day becomes painful to one driving or walking over it. The wet weather of fall and spring in this climate keeps an asphalt pavement in a very slippery condition, unsafe for horses, while at any time foothold is insufficient.

The most usual causes of the failure of asphalt are found to be weak foundations, which, settling, permit water to stand in hollows on the surface until the pavement is rotted; tearing up the pavement for sewer connections; surface cracks, caused by excessive contraction in cold weather; insufficient traffic and excess of traffic.

With insufficient traffic the asphalt expands in hot weather, and not contracting on cooling to an equal extent, it becomes porous, absorbs water and disintegrates. This generally shows itself first along the edge of an asphalt pavement, where the wheels of vehicles seldom exert any pressure. This failure at the side may be avoided by placing next to the curb a flag-stone gutter.

Asphalt is seldom worn out by too much traffic, the decay generally arising from other causes, some of which have been enumerated, and which the specifications should rigidly guard against as far as possible. A good asphalt pavement should be maintained by the company building it for ten years, and at the expiration of that time delivered to the municipality in perfect order.

The cost of asphalt pavement was shown in an article in last month's issue of THE MUNICIPAL WORLD to range in price from \$1.83 to \$3.05 per yard in fifteen American cities. So much depends on the manner of construction, various local circumstances and items of grading, excavation, etc., which may or may not be included in these figures, that very little reliance can be placed on them, except for general information. The average cost for twenty-seven other American cities is placed at \$2.80.

The only competitor of asphalt is vitrified brick. This latter is becoming popular, and presents features which tend to cause it to become more so. It offers a better foothold for horses. The surface is not so smooth, and in consequence radiates less heat and light, is quite as sanitary, with less liability to become dusty. Among bicyclists it is much more popular than asphalt. If the joints are filled with pitch or asphalt, brick pavement is but little more noisy than asphalt.

The majority of failures which have occurred with brick, have been traced to defects which the material or better construction could have obviated. Its ease of construction and repair offer a great advantage, ordinary laborers being easily

taught the work. Few repairs are needed if good brick is used, and in the first cost as well as in maintenance brick should be, and generally is cheaper than asphalt.

As to cost, the difficulty again arises in stating a price which is applicable to all cities. The cost appears to range from about \$1.35 upwards in American cities. Brooklyn has had good vitrified brick pavement laid for \$2.55 a square yard, while in Buffalo \$2.75 is about an average price. A fair average price is \$1.75 per square yard.

Barrie's Flood.

Barrie is situated in a valley on the north west corner of Kempenfeldt Bay, an arm of Lake Simcoe. Allandale is opposite on the south east corner of the Bay. The valley extends westerly from Kempenfeldt Bay and may at one time have been an outlet of Lake Simcoe. In an arm of this valley north of the town and inclosed by hills 170 feet in height and having a drainage area of about two square miles, a spring stream has its course and flowing south westerly encircles the north and west sides of the town. In its course it crosses Peel Street then passing along Sophia Street crosses the upper end of Owen, Clapperton, Bayfield, John, Mary and Ross Streets, turns at the junction of Toronto and Sophia streets and flows southerly into the bay following or crossing Toronto street. It is along this course that serious floods have occurred in Barrie, a repetition of which occurred on the 16th of August last. In 1846 the stream overflowed its banks and running south of Clapperton St. to the Bay washed out a channel which was not filled in for years. In 1860 another overflow took place. The channel was then straightened along Sophia Street and the roadway raised to form an embankment about three feet high above the bed of the stream. About 1870 a timber drain three feet wide and four feet high was built from the bay to Sophia Street along Clapperton. In 1886 the northern portion of this drain was replaced by 500 feet of eighteen inch tile. When the stream at its head rose to half the height of Sophia Street roadway, a portion of the water discharged through the eighteen inch pipe into the old drain. Numerous culverts were placed over the stream in its course to the bay.

In 1890 when the flood occurred, an immunity from damage for thirty years had rendered the town neglectful and in consequence the rise of water occasioned by an excessively heavy rain was blocked at numerous points particularly the culvert at Peel Street. When this road gave away, the water rushed in torrents from its channel, already filled with water from the high lands of the north. Clapperton Street again suffered the greatest damage. About 7,000 cubic yards of earth was removed and with other debris was carried along and deposited in the bay. The

street in some places was washed out to a depth of 16 feet.

The last flood which resulted in damage to the extent of \$50,000 was in many respects a repetition of that of 1890. The main body of water was obstructed at Peel Street till breaking through the roadway it rushed along Sophiastreet and found a considerable outlet at Clapperton, which was torn up to a depth of three and four feet.

Barrie after the flood of 1890 had laid an extensive system of sewerage which it was believed would provide an outlet for such excessive floods of storm water. This has been greatly damaged, while the roads and streets on which the town has been expending a considerable sum for permanent pavement, have suffered severe injury. At Allandale one branch of the overflow washed out a gorge 20 feet wide and eight feet in depth.

Electricity.

Not a month passes without bringing a perceptible variation in the application of electricity to the different industrial uses to which it is applied. Press reports quote Nicola Tesla as saying, "Yes, I did state that electricity can be transmitted long distances upon a commercial basis over a distance of at least five hundred miles. I will stake my reputation and my life upon it. I only qualify it by adding that the amount of power transmitted must be considerable." With this comes the statement that contracts have been signed to cover all apparatus and machinery necessary for the transformation, transmission and delivery of one thousand horse-power to the lines of the Buffalo Railway Co., by the Niagara Falls Power Co. Power may be delivered before the first of next November. The rate paid by the Buffalo Railway Co. has not been made public.

Massachusetts' Highway Commission.

In view of the recent appointment, by the Ontario Government, of a Provincial Instructor in road-making, a glance at the Massachusetts law of 1893 relating to the highway commission of that State will be of interest. It will be seen that, although differing in some particulars, the duties of the two offices are very much alike.

In Massachusetts three commissioners are appointed by the Governor, the duration of office so arranged that the term of one member shall expire each year, vacancies to be immediately filled. The salary attached to the position is \$2,000 for each commissioner and expenses, the office to be in the State House, Boston. The following section, quoted from the Act, details the duties of the commission:

"They shall, from time to time, compile statistics relating to the public roads of cities, towns and counties, and make such investigations relating thereto as they shall deem expedient. They may be consulted at all reasonable times, without charge, by officers of counties, cities or towns having

care or authority over public roads, and shall without charge advise them relative to the construction and repair, alteration or maintenance of the same; but advice given by them to any such officers shall not impair the legal duties and obligations of any county, city or town. They shall prepare a map of the Commonwealth, on which shall be shown county, city or town boundaries, and also the public roads, particularly the State highway, giving, when practicable, the names of the same. They shall collect and collate information concerning the geological formation of this Commonwealth, so far as it relates to the material suitable and proper for road-building, and shall, so far as practicable, designate on said map or maps the location of such material. Such map or maps shall at all reasonable times be open for the inspection of officers of counties, cities and towns having the care of and authority over public roads. They shall, each year, hold at least one public meeting in each county for the open discussion of questions relating to public roads, due notice of which shall be given in the press or otherwise.

The Act further provides that, upon petition of a county commissioner the State commission may adopt any road as a State highway, and construct the same if the legislature makes an appropriation for so doing, except that the grading and bridging are to be done by the county. The highway is to be maintained by the State, and to be under the supervision of the State commission. On petition of two or more cities or towns, a connecting road may be made a State highway, and constructed in the same manner.

Roads of Peru.

A great deal has been said about the wonderful roads of the old Romans, adamantine lines frequently three feet thick which 2,000 years have not effaced, some of them being in use to-day. But it is not generally known that the Incas of Peru, South America, constructed roads which in point of magnificence were not surpassed by those of the Roman Emperors. The narrow fringe of sea-coast was traversed from north to south by two great roads—one in the interior, the other along the Pacific sea board. The first extended 1,000 to 2,000 miles having stone pillars set up at intervals of little more than a league, and hostleries or caravansaries at suitable distances. This road was carried over pathless sierras covered with snow; through galleries cut for leagues in the living rock; upon suspension bridges, swayed to and fro over raging torrents, by cables of native osier thick as the body of a man; and was conducted across ravines of hideous depth filled up with solid masonry. The coast road, about 300 leagues in length was carried on an embankment twenty-five yards wide with a parapet of clay. Trees and odoriferous shrubs were

planted along the margin, and streams of water were conducted through aqueducts along its side, to slake the traveller's thirst. Both roads were paved with heavy flags of freestone some ten feet square, and in some places with pebbles imbedded in a bituminous cement which make a road-bed hard and smooth. It was an evidence of their advanced civilization that persons were stationed at the Incas "swing" bridges to collect toll from all passers-by for the maintenance of these, the only perishable portions of the work.

The Road and the Roller.

The chief feature of the country roads in Ontario, and indeed many of the streets of its towns and cities, is long lines of ruts. These are terminated here and there by patches of gravel, left heaped in the centre just as it fell from the wagon. Nothing is more wasteful in road maintenance, in cost of transporting farm produce, or is more likely to destroy the pleasure of driving. Roads of this description are all too common. They are the rule rather than the exception. Everyone knows where such roads are to be found, and everyone who has compared the cost of roads consolidated by rolling, and the cost of roads repaired in the old "bump and turn out" method, knows that a great saving can be effected by consolidating them with a roller.

A road can be repaired beautifully by the use of a steam roller, handled by a skillful workman. Take a road that has attained its proper shape, but with ruts beginning to show. Fill them up to the face of the road, roll, and the road is at once fit for traffic. It has a durable smooth surface which will shed the water quickly, and is in consequence very much less liable to be worn.

Under old methods it is next to impossible to avoid ruts. Unless a roller is used, a man must be in constant attendance to rake the material and keep it in place. Even when this latter method is used, (and it has been adopted in a few rare instances by townships and counties in Ontario) the result while much more satisfactory than the old system of simple neglect, does not give returns commensurate with the enterprise of those who undertake it.

A steam roller of ten tons will be kept in constant use by 80 to 125 miles of average country roads, and is nearly as well preserved when in use as when idle.

The best roller should be purchased having regard to durability and ease with which it can be repaired. If otherwise well made, the number of cylinders (or roller wheels) make little difference. The latest class of steam rollers have one large solid main drum, which does the real work; also a leading or steering drum divided into two parts, generally touching each other but free to revolve at separate speeds when turning corners. Other

rollers, in place of a large drum have two smaller ones, one on each side.

The heavier the roller the better for macadam, but economy dictates that consideration be given to the amount and nature of work to be done, the strength of bridges and culverts over which it must be taken, etc. In case a steam roller is not available, a five ton horse roller which can be loaded to eight tons will do good service; but a ten ton steam roller will do perfect work on the material used for roads in Ontario.

Painting Iron Bridges.

The painting of bridges to protect them from rusting, is a subject which has not been given the careful attention in the past, which is warranted. Iron exposed to the air and moisture, will rust or oxidize, and if not protected would rapidly lose its strength; much more rapidly in some localities than others. The first requisite of good painting is to have a clean and rustless surface. If paint is put on over an imperfectly cleaned or rusted surface, moisture will get in, the paint will swell and burst, and oxidation go on. It is a difficult matter to have iron properly cleaned in the shop, and a certain amount of rusting will take place while the iron is being shipped from the mill to the bridge shop, it oftentimes being stored out of doors for some time. To obviate this, iron should be given a coat of pure linseed oil before it leaves the rolling mill. This will protect it up to the time of manufacture at the bridge shop. After the manufacture it should be retouched with oil to cover rivet heads and parts where the oil has been rubbed off. And after erection in the field give it two good coats of paint.

This painting had better be done by the corporation for whom the bridge is built, and by day labor, not contract. The advantage of using raw oil instead of boiled oil is that you may be sure of a pure article. The advantage of oil over paint for a first coat, is that rust and scale cannot be concealed from view, so that when you come to paint the bridge yourself, you may be ensured of a perfect surface for the paint to adhere to.

An iron bridge properly protected would probably last forever, while one which was carelessly looked after, might not last twenty-five years.

Gravel Walks.

Gravel is very commonly used for walks in parks, by the roadside, and around suburban and farm residences.

Whether gravel is dug from a pit, or what is better, obtained from the lake shore or river bed, it should be well screened and thoroughly freed from earth and dirt before hauling. Earth mixed with gravel soon causes grass and weeds to spring up; and in caring for the walk the edges should be cut with a sharp spade to remove soil and dirt that has encroached

on the gravel. In removing grass and weeds from the walk, care should be taken not to loosen the surface. The large stones should also be removed from the gravel and used in the foundation layer.

A trench should be excavated about eighteen inches in depth, and three or four feet in width. The edge should be carefully made with a flat garden spade. Fill the bottom with larger stones, brick bats, and similar rubbish, placing eight or ten inches of fine gravel on top.

When the walks are on wet or springy ground, a tile drain should be laid beneath or alongside it. Frequent rolling with a hand roller will keep the walk in good condition.

The Air Motor.

The new air motor has been tested on the street cars of 125th street, New York. Three cars are now in use and others supplied with the new power will soon be operating over a large part of the system. This method of utilizing power does away with over-head wiring and other expensive construction, and in other respects is said to be much cheaper than the trolley. Without altering the design of cars at present in use, the new motive power can be applied to them. In the tests a most successful trip was made, the cars answering the brake and motor to perfection.

Mr. MacKenzie of the Toronto Street Railway, stated in an interview that the air motor is the greatest enemy of the trolley which has yet appeared. If it proves as successful as its promoters anticipate, it should give an impetus to the building of street railways in the smaller towns and cities.

Ingersoll Waking Up.

Ingersoll, Ontario, has contracted for a road roller, and a stone crusher with screen attachment. Ingersoll is going to have good roads. The *Chronicle* refers to the question as follows:

"Our town council are to be commended for the steps they have taken to improve our streets. A false economy has too long prevented our placing our thoroughfares in a respectable condition, commensurate with the other features of the town.

For situation, thrift and general beauty, Ingersoll will compare very favorably with any place of its size in the province, but our streets have been a standing reproach and a severe comment on the wisdom of our town fathers.

A complete outfit of street machinery has now been purchased, and will very soon be in hand, when it is hoped that the zeal and good sense that have secured it for us will put it into immediate operation. We hope the days of mud for our town, at last, are over."

In Connecticut the cost of road-building is divided equally between the state, county and the district.

Roads vs. Monuments.

F. R. NUTTING.

How much better off the entire community would be if, instead of annually spending the enormous amounts which the great monuments and tombs for our great men cost, and which are for mere idle show, and in a few years are hardly noticed, if the same amount could be expended in constructing and maintaining an equivalent amount of good macadam road—a good long strip of which might be termed "Grant Memorial Road," or "Lincoln Macadam Memorial," or the like, as the case might be.

The lives of our great men would be ever before us in a far more impressive and noticeable shape, and the entire community might have the benefit of it, whereas in monuments and the like, *no one is benefited*.

We are inclined to favor the idea advanced by our correspondent, and shall be interested to see what community will be first to adopt the suggestion.

Lives of great men should remind us to improve our roads, instead of leaving useless tombs behind us to mark the memory of the dead. Money spent in marble mourning very seldom ever pays; let us, then, regard the warning and have it used to "mend our ways."

A Short Way with Gipsies.

A council recently sought advice how to deal with the gipsy question were advised to proceed against the owner of the land for permitting a nuisance. The following rider was added: "Cannot you get the gipsies summoned for not sending their children to school? This generally results in their moving on!" and is an easy way of disposing of these wanderers, who are often a nuisance on the suburbs of cities and towns, and who are as amenable to the provisions of the compulsory Education Act as permanent residents.

An Evident Failure.

"Did you hear about my speech?" asked the politician.

"I heard that you made one," replied the candid friend, "but it must have been a very ordinary affair."

"What makes you think that?"

"I haven't heard you accused of plagiarizing anything."—*Washington Star*.

A Memphis man is advocating an amendment to the Tennessee constitution, striking out the requirements that public officers shall give bonds, on the ground that as the public elects its officers it should lose if they prove faithless, and that making the people the losers will cause them to be more careful in the selection of candidates.

LEGAL DEPARTMENT.

JAMES MORRISON GLENN, LL. B.
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EDITOR.

Responsibility of Collectors and Their Sureties.

In view of the fact that the Collectors' Rolls must, in a short time, be delivered to the collectors, who are required to furnish security for the faithful performance of their duties, it may be interesting and useful to municipal officers to refer briefly to those sections of the Assessment and Municipal Acts, and some of the decisions of the Courts touching the responsibility of collectors and their sureties. Section 120, of the Assessment Act, makes it the duty of the clerk to deliver the roll, certified under his hand, to the collector on or before the 1st day of October, or such other day as may be prescribed by a by-law of the local municipality. Hughes, C. C. J., Elgin, in the case of Vienna vs. Marr, held that the roll not being "certified under the hand of the clerk," the collector was not liable to the corporation for negligence in not distraining on the goods of a party assessed; and in the case of the Town of Trenton vs. Dyer, the Supreme Court held affirming the decision of the Court of Appeal, that the provision as to delivery of the roll to the collector, certified by the clerk, was imperative, and its non-delivery with such certificate was a sufficient answer to a suit against the collector and his sureties for failure to collect the taxes. Strong, C. J., says "The case of Vienna vs. Marr was, in my opinion, well decided, and shows that the collector was not bound to act under an uncertificated roll." But a formal certificate on the roll is not necessary. It is sufficient if the clerk signs the roll. In Whitby vs. Harrison, Robinson, C. J., said: "We think the signature of the Clerk sufficiently verified the roll to enable the collector to receive the money, for his signature at the end sufficiently authenticated the roll as that in which he was to make his collections." It is the duty of councils to appoint a collector as soon as convenient after the annual election; Sec. 254, Con. Mun. Act, 1892, and Sec. 12, Con. Assessment Act, 1892. The appointment must be made by by-law; see section 282, which says: "And the powers of the Council shall be exercised by by-law when not otherwise authorized or provided for." It is the duty of the collector, before entering upon the duties of his office, to *make and subscribe* the declaration of office provided by Sec. 271, Con. Mun. Act 1892. He is liable to a penalty of not more than \$80, nor less than \$8, if he does not, within twenty days after knowing of his appointment, make the declaration of office required; Sec. 277, Con. Mun. Act 1892. But the fact that a collector of taxes received the money without the roll having been delivered to him, and without having taken the oath of office, forms no defence for his surety to an action for not paying over such

money; Whitby vs. Harrison. The action in Trenton vs. Dyer, was for not collecting taxes due to the town of Trenton, while in Whitby vs. Harrison the action was for not paying over taxes which had been paid to the collector. Before entering upon the duties of his office the collector shall enter into a bond to the corporation of the municipality for the faithful performance of his duties; sec. 223, Con. Assess. Act, 1892. Sec. 224, Con. Assess. Act, provides, "Such bond shall be given by the officer, and two or more sufficient sureties, in such sum and in such manner as the council of the municipality, by any by-law in that behalf requires, and shall conform to all the provisions of such by-law." Under this section the Council should pass a by-law requiring the collector to furnish a bond with such number of sufficient sureties, (not less than two,) and in such sum as they may consider proper, conditioned to collect all rates and assessments of the municipality for the year for which he is appointed, and to pay the same over to the treasurer of the municipality once a week, or every two weeks, as the law provides, the last instalment to be paid over not later than the day fixed by statute for the return of the roll, and to discharge all other duties required by the Municipal or Assessment Acts. For the time when the roll is to be returned, and the manner of payment of taxes; see Sections 132, 133 and 134, of the Assessment Act, and Sec. 6, of the Assessment Act, 1894. After the passing of the by-law a bond should then be prepared in conformity with the by-law, and executed by the collector and the number of sureties required by the by-law. To an action upon a bond it is a good defence by a surety that he signed the bond on condition that some other person would sign it as surety, and that such other person has not signed it, and in order to guard against any such defence being set up the Council should employ some officer of their own to witness the execution of the bond, or notify each surety that the bond has been delivered by the collector, and that it purports to be signed by certain persons, giving all their names, and the council should, upon being satisfied with its due execution and sufficiency, pass a resolution accepting the bond. The Council should always see that the collector, where the same collector is appointed for successive years, returns the roll of one year before he receives the roll of the following year, so as to prevent him from applying the taxes of the latter year in satisfaction of the previous year's roll. Sec. 281, Con. Mun. Act, authorizes the acceptance of bonds or policies of guarantee companies instead of, or in addition to, a bond of the officer with sureties.

In New Jersey, according to a recent law, the property owners along projected lines of road contribute 10 per cent of the cost of construction; the State contributes one-third, and the county the remainder.

LEGAL DECISIONS.

Pocock vs. City of Toronto—Ferrier vs. City of Toronto.

Municipal Corporations—Licenses—Petty Chapmen—Ultra Vires—Damage.

A municipal corporation, whose existence is derived solely from the statutes creating it, is not liable for damages arising out of the enforcement of a by-law passed under a misconstruction of its powers, unless such liability is expressly or impliedly imposed by the statute.

A city corporation, acting in excess of its powers, passed a by-law amending an existing by-law for licensing peddlers, prohibiting them from peddling on certain streets, and the officers of such corporation, in carrying out the by-law, declined to issue licenses except in the restricted form, which the plaintiff refused to accept, and while attempting to peddle without a license was interfered with by the police, over whom the corporation had no control.

Held that the Corporation were not liable.

Neither does any liability arise where a licensee, who has taken out a license in the restricted form, is damnified by being prevented by the police from peddling on prohibited streets.

Regina vs. Cloutier.

Municipal Corporation—Early Closing By-Law—Uncertainty—Delegation of Powers of Council.

Appeal from an order of Taylor, C. J., dismissing a motion for a certiorari to remove a summary conviction with a view to having it quashed. The conviction was a breach of a by-law of the city of Winnipeg, passed under the Shops Regulation Act, R.S. M., c. 150, as amended by 58 V., c. 32, s. 2. It was passed on 6th August, 1894, and provided that from and after the 15th day of that month, "All boot and shoe shops within the city of Winnipeg * * * shall be and remain closed on each and every day of the week between seven o'clock in the afternoon of each day, and five o'clock in the morning of the next following day, except as follows, namely: on Saturdays, and on the day immediately preceding any civic holiday, or holiday as defined by the Manitoba Interpretation Act, and during the last three weeks in December, and during the days on which the exhibition of the Winnipeg Industrial Exhibition Association was being held.

Held, that the by-law was illegal and void, and the conviction should be quashed, but without costs.

The Council must determine specifically the portion of the year, and the day or days of the week when the shops are to be closed, and a by-law like that in question, which excepts days by reference to uncertain events, leaves the operation of the by-law on any day or days so uncertain that there is really no positive enactment requiring shops to be closed on any particular

days, or during any particular portion of the year. There might be numerous days on which the Winnipeg Industrial Exhibition Association would be holding exhibitions.

If there were absolutely fixed days for civic holidays, and for holding of such exhibitions, by reference to which the by-law could be interpreted, then the Council would have positively determined the days which, by reference to these events, were to be excepted; but they have left this to be determined by events which may or may not happen at any time or times of the year, and on any day or days of the week.

The onus was upon the prosecutor to prove a by-law binding in effect, a by-law fixing the days when shops were to be closed; and if there were absolutely fixed days, by reference to which the exceptions could be definitely ascertained at the time of the enactment of the by-law, this should have been shown.

A Report on Diphtheria Antitoxin.

The results of the collective investigation of the American Pediatric Society afford very strong testimony in favor of the treatment of diphtheria with antitoxin. Reports were received from 615 physicians upon 3,628 cases in which, on account of the limited extent of the exudate, or in which the diagnosis had not been confirmed by culture, 3,384 cases are left for analysis, which were observed in the practice of 613 physicians in 114 cities and towns situated in 15 different states, the District of Columbia and the Dominion of Canada.

In addition to these, by the courtesy of Dr. H. M. Biggs, there were placed at the disposal of the Society, 942 cases treated in their homes in the tenements of New York, and 1,468 cases from Chicago, treated at their homes in that city by a corps of inspectors of the health department.

The grand total gives 5,794 cases, with 713 deaths, or a mortality of 12.3 per cent. including every case returned; but the reports show that 218 cases were moribund at the time of injection, or died within twenty-four hours of the first injection. Excluding these and there remain 5,576 cases, (in which the serum may be said to have had a chance,) with a mortality of 8.8 per cent.

Of the 4,120 cases injected during the first three days there were 303 deaths—a mortality of 7.3 per cent., including every case returned, but if from these we deduct the cases which were moribund at the time of injection, or which died within twenty-four hours we have 4,013 cases, with a mortality of 4.8 per cent. Behring's original claim, that if cases were injected on the first or second day, the mortality would not be five per cent., is more than substantiated by these figures.—*Sanitary Inspector.*

QUESTION DRAWER.

Subscribers are entitled to answers to all questions submitted, if they pertain to Municipal matters. It is particularly requested that all facts and circumstances of each case submitted for an opinion should be stated as clearly and explicitly as possible. Unless this request is complied with it is impossible to give adequate advice.

Questions to insure insertion in the following issue of paper should be received at office of publication on or before the 20th of the month.

Communications requiring immediate attention will be answered free by post, on receipt of a stamped addressed envelope. All questions answered will be published.

River Road, Proceedings Necessary to Widen.

254.—W. D. McL.—A river running through this township runs for some distance on the road allowance, and in order to avoid the stream a road allowance was purchased around the river. It is found now that this roadway is too narrow to admit of a proper road being built. The council wish to purchase more land from the adjoining owners, but they refuse to sell on any terms. What steps should the council take to secure the land?

The council must take the proceedings provided in section 546, Consolidated Municipal Act, 1892, in order to widen the road in question.

Tuberculosis—Compensation for Cow Killed—Municipality not Liable.

255.—A SUBSCRIBER.—A farmer had a cow which became very ill. He called in a veterinary surgeon, who pronounced the disease to be tuberculosis (which is, of course, contagious) and under the Act of Contagious Diseases the owner was ordered to kill and bury her. Has the municipal council a legal right to compensate the owner for the value of the animal?

No. See sec. 13, chap. 69, R. S. Canada, as to compensation to owners in certain cases.

Judgment Against Collector for Seizure after Taxes Paid to Council—Municipality not Liable.

256.—J. A. T.—The collector seized a binder and a rake for payment of taxes of A. B. (A's son) claimed that the implements seized were his. Notwithstanding the claim of B, the collector sold the goods and gave a receipt of payment in full to A, and paid back the money to the township treasurer and returned his roll with A's taxes paid. B sued the collector for the full value of goods sold and got judgment in his behalf against the collector for the full value.

1. Now, has the collector the right to ask the council to refund him the amount so paid by him for the taxes of A?

2. And has the council a right to ask A to pay his taxes, for which he has a receipt, but, of course, he did not pay?

3. And further, A took a job of ditching from the council amounting nearly to the same amount as his taxes, and performed his job. Has the council a right to keep the money of his job to pay his taxes, and refund the same to the collector?

A having returned the roll and paid the taxes in question he has no remedy against the municipality. The council should leave the collector to look to A for his remedy.

Treasurer's Loan to Municipality not Legal.

257.—A SUBSCRIBER.—Can a treasurer of a municipality legally loan money to the municipality in which he is a treasurer?

No.

Election of Warden for Two Years.

258.—W. R. A.—In the County Councils Act, 1896, section 19: "If no choice is made after two ballots on the second day," etc.

1. Does that mean that wardens under said act must be elected by ballot?

2. Will a warden elected next January hold the office for two years without being elected again in 1898? Or will the election of warden take place, as heretofore, at the first meeting of the county council after the municipal elections in each year? (Consolidated Municipal Act, 1892, section 225).

1. Yes.

2. The warden elected next January will hold office for two years without re-election.

Municipal Grants for Civic Holidays and Demonstrations not Legal—Mayor not to Appoint Committees.

259.—J. B.—Is it legal for a town council to grant certain sums of money for civic holiday demonstrations or any other demonstration? Also, has the mayor power to appoint special committees on special matters without the vote of the council?

Without express power, a municipal corporation has no authority to appropriate the money of the ratepayers for the purpose mentioned. No such authority is given in the Municipal Act.

Committees must be appointed by the council.

Arbitrators' Costs—School Section Appeal.

260.—F. H.—There was a new union school section formed under section 87, Public Schools Act, 1891. An appeal was made against the award to the county council. The appeal was sustained by the county council, and an arbitration appointed under section 88. This arbitration confirmed the award made by the arbitrators appointed under section 87 in nearly every point, with the exception of adding more territory, consisting of four farm lots, to the new union section. Now the question is, who will have to pay the costs of the appeal? The first costs, for forming the section, were charged to the section, but some are of the opinion that the costs for the appeal cannot be charged against the section legally.

Section 16, Public Schools Act, 1891 (now 842, Act of 1896), makes it the duty of the arbitrators to determine the liabilities of the parties concerned for the costs of the arbitration. The arbitrators not having directed by whom the costs of appeal should be borne, we cannot see how the section can be charged with them. The arbitrators would no doubt be paid by the council appointing them.

Stream Obstructed—Damage to Road—Who Liable?

261.—T. F. W.—A stream crossing a road and running through lot 6 was obstructed by saw dust and slabs from a portable mill placed on lot 6 with the consent of the owner of said lot. The owner afterwards, while pathmaster, run a ditch along the road which diverted the water from the creek to the road, making it impassable. Obstructions were placed there before the municipality was organized, but the water turned on the road since organization.

1. Can council compel owner of lot 6 to remove obstructions from the creek on his lot?

2. Can council compel owner of lot 6 to repair damage done to the road caused by diverting water from its natural and original course?

1. No.

2. Yes.

Township Taxes Due in Newly Incorporated Village—Collector's Authority.

262.—J. M.—Where a village has been incorporated out of a portion of a township, and the township did not collect the taxes on the collector's roll until the village council was elected and organized and a settlement pending, has the township collector any authority in the village municipality to collect taxes after the village has become a separate municipality?

If the taxes were due and demand made therefor before the village became a separate municipality the township collector would have the right to collect the taxes. See section 124, Consolidated Assessment Act, 1892, and section 58, Consolidated Municipal Act, 1892.

Nominating Officers May be Municipal Clerks.

263.—D. E.—1. Would it interfere with the other duties of a township clerk if he was appointed nominating officer under the County Councils Act, 1896?

2. Does nomination under said act fall on same day as for local municipalities?

3. Give us your idea of warden's appointing local clerks to fill this position?

1. No.
2. No; one week before.
3. Local clerks, from previous experience, will make the best nominating officers.

County or Township Bridge.

264.—J. G.—Our township built and kept in repair a bridge, which is 100 feet in length. The stream is over 100 feet in width when the river is at its normal height. Is such a bridge a township or county undertaking?

Unless the bridge is upon a boundary line between the township and another municipality, or has been assumed by the county council by by-law, with the assent of the township, it is a township bridge, and must be maintained by the township. See sections 532 and 533, Consolidated Municipal Act, 1892, and section 14, chapter 50, Act of 1894.

Space Between Building and Sidewalk—By-law to Improve.

265.—J.B.F.—1. In a town where sidewalks are built on the local improvement plan only, and the whole cost of the work is assessed against the properties fronting on that part of the street on which the sidewalk is laid, it is found some of the buildings on Main street are set back from 1 to 4 feet from the street limit, and it is necessary to extend the walk latterly so as to cover the spaces between the street limit and such buildings, the owners making no objections, has the council power to build the walk over such spaces, and can they pass a by-law for the issuing of debentures for the payment of the costs of a walk so built?

2. If the council has not such power, how should they proceed so that the sidewalk can be built over such spaces at the same time and in the same manner that the part of the sidewalk on the street is being built?

1. No.
2. The council, having no power to build sidewalks upon private property, must leave it with the owners of the property themselves to build over the spaces between their buildings and the sidewalks. A by-law including the cost of building sidewalks to connect buildings of private owners would be invalid.

Borrowing Money from Treasurer for Municipal Purposes.

266.—J. G. W.—Please give opinion as to whether legal or illegal for a municipality to borrow money for municipal purposes from the treasurer.

Illegal.

Collector to Distrain only in Municipality in Algoma.

267.—Z. R.—1. Section 124, Municipal Manual, permits collectors to distress all goods and chattels, etc., wherever the same may be found within the county. Please state if it is the same in a district as Algoma?

2. Watercourse was verbalized in township A, and has to run its water on township B. Was it the proper procedure to be taken to have said watercourse continued in township B by council of township A?

1. Section 124, authorizes a distress anywhere in the county. Without this authority a collector would have no power outside of the municipality for which he was appointed. We can find no authority given to distrain in the District of Algoma outside of the municipality for which he was appointed.

2. In the absence of full information in regard to the nature of the proceedings, and the Act under which such proceedings were taken by township A, we cannot answer this question.

Contagious Diseases.

The Provincial Board of Health has issued its report, showing the deaths from contagious diseases in Ontario during the month of July. The returns made by the registrars are not complete, 453 municipalities out of 745 having sent in reports. In all, ten cities, or 76 per cent. of the total; 152 towns and villages, or 64 per cent., and 291 townships, or 59 per cent., have sent in returns. The cities which failed to report in time were London, St. Catharines and Windsor. In all there were 156 deaths from contagious diseases in a population of 1,306,667, divided as follows, on a per annum basis:

	Total deaths.	Rate per 1,000.
Typhoid.....	22	0.2
Diphtheria.....	32	0.29
Scarlatina.....	2	0.01
Tuberculosis.....	100	0.9

The returns for the ten cities making returns, calculated on a per annum basis, is as follows:

	Total deaths.	Rate per 1,000.
Typhoid.....	10	0.3
Diphtheria.....	15	0.5
Scarlatina.....	0	0.0
Tuberculosis.....	50	1.6

The total towns making returns on the same basis show:

	Total deaths.	Rate per 1,000.
Typhoid.....	6	0.3
Diphtheria.....	3	0.1
Scarlatina.....	1	0.05
Tuberculosis.....	17	0.9

The total townships making returns:

	Total deaths.	Rate per 1,000.
Typhoid.....	6	0.2
Diphtheria.....	14	0.2
Scarlatina.....	1	0.01
Tuberculosis.....	33	0.5

Only two deaths from scarletina are recorded for the whole Province.

Collectors' Duties.

Before entering on his duties the Collector is required to file a bond in such amount as the Council may direct, and to make the declaration of office to be filed with the Clerk. His first duty is to see that the roll is properly certified to by the Clerk, and in towns and cities where the council has passed the necessary by-laws, that it contains the statement required by sub-section 2 of section 4, of the Assess. Amend. Act, 1896, is appended thereto. Unless the roll is certified properly to, the collector is not bound to act under it.

The collector's next duty is to prepare printed notices containing a demand for the taxes. In cities and towns the written or printed notices are now required to have written or printed thereon for the information of the ratepayers, a schedule specifying the special rates, and the amount on the dollar to be levied for each rate, making up the aggregate of the taxes referred to in the notice. In other municipalities it is not necessary that the notice should specify the different rates. In cities and towns it is optional with the collector whether he calls on the person taxed and personally demands the taxes, or leaves, or causes to be left, with the person taxed a written or printed notice, specifying the amount of said taxes. He may employ an agent to deliver the notices, but the demand must be made by him personally. He is required to enter on the roll the date on which he makes the demand, or gives the notice. This is important, because such entry is made prima facie evidence of such demand or notice, and in the case of the death of the collector, is the only evidence of the making of the demand or the giving of the notice during his lifetime.

No subsequent demand or notice is necessary in the event of a change of occupant to enable the collector to distrain the goods of the subsequent occupant. In places other than cities and towns, it is not optional with the collector to leave the notice unless he is so empowered by by-law of the municipality. The collector must make the demand or give the notice himself; he must also make the entry of the dates in the roll. In cities and towns the entry may be made by some other person on behalf of the collector, but not in other municipalities.

The notice or demand having been given it may be acted upon at any time after the expiration of fourteen days, or after the date appointed for payment under any by-law passed by the Council whichever last shall happen. In township municipalities the collector's notice should give location of the collector's office or residence, and specify particularly days during which the collector will attend at places convenient to the ratepayers for the receipt of taxes.

According to Mulhall, there are in the United States 260,100 miles of public highway.

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