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## TENDERS FOR SEWER

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## WEDHEBDAY, SEPTEMEER 15, J897,

 for the appliy dimo roise of stotie suitable ror mace. damp and whis dellvered either in the neighbothood of the Imderick siress whint ur the II rase of Industry.Spedfunatkos may las wen and forms or tender obcained at she offye of lis Gily Éngincer, Torento. to she order of the Gify ryentuter, for aceque payable per cont. on ilis walue of the work tendered for, musi cocompany eath and evely (emder, otherwise they will coo be en mrinined.
Temugrs must benp the bome fillasignature of the concractor and hils paralst, or they tillibe ruled out as inargan.
Lowfy or ary ismer not necesarily accepted. JOIIN GHAW/ (riayor). Chalemkn Board or Contod. - City Hall, Toronso, Sefnember smd, r897.


Tenders uill be received by refistered post only, addrested so the Cbaitman of he Uoard of Control, City Hall. Toroato, up to noon on WEDNESDAY, SEH. TEMSBER 15. 889 , for the construction of the follow ing works:

CONCRETE SIDEWALK
On Yonge Street (west side) from Bloor to Yorkville Avenue, excepting from Cumberland Street to 40 feet south.

## BRICK SIDEWALK

On Queen Street (wuth side) from Bertic Street to point about so fett cast.
On Berti Street (east side) from Queen Street to poins $g$ feet south.
sined ar the ofice be seen and forms of sender obr and afier We office of the city Enkinest, Toronto, on A deposit to the form of a marhed cheque, payable to the order of the City Treasurer, for the sum of $2 k / 2$ per cent. on the value of the worki tendered for, must ar company each mutefery tender; otherwise they will not be entertained.
Tenders muss bear the bona file signateres of the conractor and his sureties, or they will be ruled out 25 iformal.
Lowest or any tender not necessarily accepted. JOHN SHAW Masor),

Chairman Baard of Control
City Hall, Toranto, Aus. $31,1897$.

## CONTRACTS OPEN.

RENFREW, ONT.-J. James is preparing to build a residence.
Nashwask, N. B.-Kenneth McBean will build a residence.
Osgoode Station, Ont. - Albert Bower is making preparations to rebuild.

Lawrencetown, N.S.-It has been decided to construct a system of waterwnrks.

LUMSDEN, N.W.T.-An elevator company is being formed here to crect an elevator.

AYLMER, ONT. - The construction of a curling and skating rink, $160 \times 40$ feet, will shortly be commenced.

Seaforth, Ont.--The Tuckersmith Agricultural Society's building, recently burned, is being rebuitt.

Whitewood, N.W.T.-Mr. Saunders, flour miller, purposes building an clevator of 25,000 bushels capacity.

Souris, Man.-Wm. Postlethwaite is making arrangernents to erect an elevator for a syndicate of grain dealers.

Qu'Aprelle, N.W.T.- 11 is announced that the Lake of the Woods Milling Company will build an elevator here.

Nansimo, B. C.-John Teague, architect, has in hand the erection of brick busmess premises for D. Spencer.

Winchester, Ont.-At the last meeting of the village council, the engineer's report on the proposed Main street drain was adopted.

GUELPh, ONT. - L. C. Wideman, architect, is recciving tenders this weck
for the erection of a brick residence for Thos. Newstead.

Richmond, Que.- The waterworks system will probably be purchased by the town, Extensive improvements to the works are required.

Grand Forks, B. C.-Hon. G. B Marin, Chief Commissioner of Lands, has stated that two new bridges in this vicinity would be commenced this fall.
PERTII, ONT. - No agreement has yet been reached regarding the construction of a setverage system. The question is still under consideration by the Council.

ST. PaUl, QUE-The town has meited tenders for the construction of a main collectung sewe, from plans prepared by $J$. Emile Vanier, C.E., 107 St. James street, Montreal.

Lindsay, Ont. - The Underwriters' Association are insisting that extensive improvements be made to the fire apparatus. It is probible a new fire-hall will be built.
WOODSTOCR, N R.-Tenders are asked by the Chief Commissioner of Lands and Works for the constiaction of a bridge over Bulls Creek, having stone piers and iron superstructure.

Leamington, Ont.-IW, Stares, represenung the Leamington Electric Light Company, has requested permission from the town to run electric cars within the limiss of the corporation.
Revelstoke, 13. C. - The Electric Lighung Company have cleared the ground on which it is proposed to erect the power house and other buildings. The fume will be nearly 2,000 feet long.
Almonie, ONT.-The soun has voled $\$ 40,000$ lowards the construction of a ratlway to Carp. - At the next mee'ing of the town council, the by-law to provide $\$ 2,500$ for a market building will be constdered.
Springfield, Min.-John Y. McNaugh. asks tenders up 10 12th September for the erection of a school at North Springficid. Plans at the office of E. F. Hutchings, Maın street, Winnipeg,

Brandon, Man.-Johnson \& Co. will erect a two-story and basement store building, $24 \times 90 \mathrm{ft}$., solid brick. Plans are now being prepared, and contracts will be let at once. W. H. Shillinglaw, architect.
Dundas, ONr. - The question of erecting a fire-hall and bulding a dam was discussed at a public meeting held last week. On the 4 th inst. by-laws were carried to provide for the erection of the same.

Huntsville, Ont - A new stmacture will be erected on the site of the old tannery building - A proposition is now before the council to borrow the sum of $\$ 6,000$ for the further extension of the waterworks system.

FERGUS, ONT.-At a public meeting a motion was carried requesting the Counctl to raise $\$ 3,000$ to remodel the High school
buildings and put in new heating apparabuildings and put in new heating appara-
tus. A vote of the ratepayers will likely be taken on the question.

Shawville, Que.-The question of constructing a system of waterworks is under consideration. Among the schemes proposed are the digging of wells in the town, a windmill to pump from Shaw's lake, and the sinking of an artesian well.
Rat Portage, Ont.-Mr. Head, architect, is preparing plans for a new brewery to be built on Lawrenson's Creek.-Mr. Kingdom contemplates erecting a large residence.-Tenders are wanted by Mrs. E. A. Sharpe for the erection of a hall.

BARRIE, ON1.-Competitive plans are invited by Alfred Beardsley until the 15 th of October for a proposed House of Industry for the county ot Simcoe, to accomdustry for the county modate 150 persons, exclusive of clerks' apartments, and to cost, inclusive of heating, ventulation and plumbing, not more than $\$ 17,000$.

Harriston, Ont.-Gen. Gray, archi tect, has furnished plans for a two-story brick veneered iesidence for Jas. Symon, of Wiarton, and a solid brick residence for E. Atchison, recve of Minto, to be built in the town of Harriston. Mr. Gray reports the prospects for fall building to be imprquing.

Chatham, Ont. - The Councll has given notice of its intention to construct flagstone sidewalks, at a cost of several thousand dollars.-James L. Wilson \& Son, architects, have prepared plans for a brick Presbyterian church to be built at Harwich. Tenders for the same will be received by the architect or Dr. P. L. McRitchie until noon of September 25 th .

Victoria, B.C. - The Tacoma Woolen Mill Company, of Tacoma. Wash, will probably erect a mill in this city during the coming fall and winter.-The by law to expend the sum of $\$ 100,000$ for street improvements was last week voted down by the ratepayers.-A syndicate of capitalists, of which Mr. R. I'. Rithet, of this city, is a member, has decided upon the establishment of a sugar refinery at Wheatport.

Haliburton, Ont.-A movement is on foot to secure the construction of a railway from the junction of the Irondale, Bancroft and Oitawa and the Victoria ratway, fourteen miles north, to a point beyond Minden. A bonus of $\$ 3,200$ per mile is asked from the Ontario government. Among the promoters are R. J. McLaughlin and John Austin, Lindsay ; Dr. Curry, Minden; George Evans, Stanhope, and others.
QUEBEC, QUE. The time for receiving tenders for the Y.M.C.A. annex has been extended. Feachy \& Dussault, architects. -C. Baillairge invites tenders until Saturday next, inth inst., for the erection of a dwelling house, corner Maple ase. and
Grand Allee, two stories, $36 \times 40$ feet. Grand Allee, two stories, $36 \times 40$ feet.
Plans at 72 St . Louis street.-David Plans at 72 St. Louis street.-David
Ouellet, architect, is preparmg plans for alterations to the church and sacristy of St. Edonard at Frampton.

LONDON, ONT.-The construction of the street car line to Pottersburg will cost $\$ 7,000$.-Mr. D. Gillis has taken out a permat to erect a two-story brick veneer residence on King street, east of Adelaide, to cost $\$ 1,250$.- The school board have decided to purchase a site at the corner of Gray and Waterioo streets for a new school building.-C. Warman has purchased a site, corner George and Cheapside streets, on which it is intended to erect a residerce.

Kingston, Ont.-The property owners will vote on a by-law to grant a bonus of $\$ 35,00$ to the Montreal Transportation Company.-Power \& Sons, architects, have taken tenders for repairs to St . Mark's shurch, Barriefield.-Great interest is being taken in the electric road
scheme from Thousand Island Park to Westminster, a distance of about seven miles. The road can be constructed for about $\$ 7,00$. Ex-Mayor Huram E. Inglehart, of Watertown, has signified his intention of giving $\$ 2,000$ to the project.

Montreal, Que.-J. E. Vanier, C.E., is constructing a main sewer for St . Paul. - L. R. Montbriand, architect, is preparing plans for three houses, five tenements, to be built on Dorchester street for 0 . Gauthier. Same architect is preparing plans for three houses, consisting of four tenements and one store, on St . Lawrence street, for J. Bernard.-Cafetan Dufort, architect, has prepared plans for six tenements to be built on Sherbrooke street for J. E. Desparois. Tenders will be invited shortly.-Jos. Venne, architect, has called for tenders for a new front for the St. John Baptist church.

St. John, N.B. - The Common Council has decided to grant the St. John Cold Storage Company a site on the Pettingil property providing the sum of $\$ 150,000$ be expended on plant. - The Common Council has decided to call for tenders for the supply of 1,000 feet of fire hose. It has been recommended that a number of sewer extensions be made, at a cost of \$12,000.-The Public Library Commissioners have recommended that the Crookshank property on Prince William street be purchased as a site for the proposed free library building, for which the sum of $\$ 20,000$ was recently voted by the city council. The mayor has stated that no plans for the building have yet been submitted.
Hamilton, Ont.- Building permits have been granted as follows-: R. J. Larkin, two 2-storey detached brick dwellings, east side Fairmount avenue, cost $\$ 3,200$; A. W. Peene, brick dwelling on Florence street, between Ray and Pearl, cost $\$ 1$,700; John Dougherty, two 2-storey brick dwellings on Fairmount ave., cost $\$ 2,400$. - Tenders have been asked by the City Clerk for a pipe sewer on O'Reilly street. -Wm. \& Walter Stewart, architects, have been granted a permit for the sewage interception building, at foot of Ferguson ave., to cost $\$ 11,000$.-Tenders are asked ave., the roth inst., for the construction of a canal in the counties of Litıcoln and Welland. Plans may be seen at the office of T. B. Hillman, C. E., 16 James street south.

Winnipeg, Man.-H. Wilson, Chairman Committee on Works, is asking for tenders for a sewer and macadam and granclithic walk.-J. Y. Griffin \& Co., pork packers, purpose expending $\$ 50,000$ in improvements. A Chicago architect is now preparing plans for the work, which will be commenced this fall and completed next spring.-The City Council has given notice of its intention to construct the following works: Sewers on Selkirk avenue, from Charles street to Salter street, on Salter street, from Selkirk avenue to Flora avenue, and on Flora avenue, from Salter street to a point 200 feet westward, cost $\$ 17,000$; cedar block pavement on Graham avenue, from Main street to Fort street, cost $\$ 1,660$; extension of St. Johns avenue, cost $\$ 1,340$.

Toronto, Ont.-Mr. Pink, waterworks superntendent, has recommended the purchase of a ten mullion gallon pumping engme for the main station. The matter will come before the Council.-At a sitting of the Court of. Revision on Monday last, assessments were confirmed for the following work. Brick pavements, Berkeley street, Wilton to Gerrard; Carlton, Parliament to Sackville; Bellevue avenue, Bellevue place to Oxford; Spadina avenue, King to Adelaide; Robert street, College to Bloor; macadam pavements, Bernard avenue, St. Alban street, Carlton, from Sackville to Sumach, and Brock avenue, from Queen to Dundas street; gravel roadway, Dovercourt road, Queen
to Dundas ; Portland, Front to King ; Spencer, Huxley to King, and Foxley street.

Otrawa, Ont.-L. K. Jones, secretary Department of Rallways and Carals, will receive tenders until the 2oth inst. for the construction of a guard lock at the upper entrance. Plans at office of chief engincer of above department.-Wm. McGirr has had plans prepared for a two-story tenement building, corner MacLaren and Elgin streets, for which tenders will shortly be asked.-John Henderson, City Clerk, asks tenders until 5 p.m. to-day (Thursday), for a market bulding in Victoria Ward.-Tenders for the supply of a hot water heater are asked by the City Clerk until to-day (Thursday) at 5 p.m.-The School Board have decided to purchase new desks for two rooms in Wellington street school, and new tops for desks in third room of same school.-An application has been made by the New York and Ottawa Railroad Company for permission to construct a railway from Moira, Franklin county, U.S., to a point on the St. J.awrence river, 18 miles distant.Arnoldi \& Ewart, architects, are receiving tenders for the plumbing and heating of the American Bank Note Company's building.-The Department of Raliways and Canals wants tenders before noon on Wednesday, the $22 n d$ inst., for the construction of the masonry pier and abutment, together with approaches, sidewalks, fencing, etc., in connection with the construction of a bridge at Bank street. Plans may be seen at the office of the acting superintending engineer of the Rideau canal.-The government has given notice of its intention to place a skeleton tower in the harbor of St. John, on the Bay of Fundy coast of New Brunswick. It has been decided by the civic property committee to erect a new meat market at the corner of King and Bond streets, and tenders for construction will shortly be asked.

## FIRES.

George Wynn \& Sons' shoe factory at Milton, Ont., was badly damaged by fire last week.-A frame house at Clarksville, Ont., owned by Robert Morris, was recently burned; loss $\$ 1,000$. The restdence of James W. Boyce, Selkirk, Man., was destroyed by fire last week.-An opera house building at Barrie, Ont., built about one year ago by Mr. S. J. Sanford, was damaged by fire on Sunday last to the extent of $\$ 5,000$; loss covered by insurance.-The planing mill of David Donaldson at Lanark, Ont., was destroyed by fire on the 7th inst. Loss $\$ 4,000$, no insurance.-On Tuesday last the business portion of the town of Magog, Que., was wiped out by fire. Among the burned buildings are the new block of A. G. Dolloroff, the Magog Enterprise office, the meat market and the Eastern Township's Bank. The loss will, it is said, exceed $\$ 150,000$.-A disastrous fire occurred at Montreal on Saturday last, when fourteen houses were destroyed.

## CONTRACTS AWARDED.

Gladstone, Ont.-E. McCann, of Dorchester Station, has the contract for building a brick residence here; cost $\$ 2,000$.

Kingston, Ont.-The Canadian Locomotive \& Engine Company have been awarded the contract of bulding a new boller for the Rockwood Asylum.

MONCTON, N. B.-The offer of the Record Foundry \& Machine Company has been accepted for heating and ventilating apparatus for new school building; price, $\$ 2,950$.

GODERICH, ONT. - Six tenders for sewer extension were received by the town, ranging in amount from $\$ 4,677$ to $\$ 7,162$. The offer of Graham, Stevenson

Finane, of London and Port Huron, has been accepted.

Renfrew, Ont.-Six tenders were received for the completion of the brick and stone work of the new Methodist church, on the contract thrown up by Thomas Henderson. The offer of J. A. Jamieson, at $\$ 3,000$, has been accepted.

Chatham, Ont.-Horne Bros. have the contract for the Queen street sewer extension.-The Standard Oil \& Gas Company have been given permission by the council to pipe the town for supplying gas for lighting and heating purposes.
London, Ont.-Smith Bros. have the following work under construction: Hot water heating of residences for E. J. McRoberts, Mr. White and Mrs. Blizzard; plumbing of houses for Messrs. William Ward, White, Jolley, W. J. Reed, Fisher, and Dr. Ardell.

QUEBEC, QUE.-The alterations to the buildıng purchased by the Molson's Bank for their branch are progressing rapidly, the contract having been awarded to Messrs. Peters, the well-known Quebec firm of contractors. The plans were prepared by Messrs. Taylor \& Gordon, architects, of Montreal.
Toronto, Ont.-The Buard of Control have awarded the following contracts : Filling Island basin, Britnell \& Co., \$1,174. Gravel roadways-Lisgar street, Constructung \& Paving Company, \$1,302; Beaconsfield avenue, George Johnston, $\$ 1,432$; Peel avenue, Constructing \& Paving Company, $\$ 508$; Cowan avenue, Constructing \& Paving Company, \$I,469.
GUELPH, ONT. - Thos. Holliday is erecting a stone structure $50 \times 16$ feet. Robert Dunbar has the contract for brickwork and John Smith that for the carpenter work.-The County Council have accepted the following tenders for a bridge on the boundary line between Guelph and Puslinch townships : Stonework, Roppolt \& Schultz, Morriston, at $\$ 7$ per cubic yard; steel bridge, 8o-foot span, Stratford Bridge Co., at $\$ 684$--Contracts have been let as follows for a two-storey pressed brick residence for Peter Campbell : Stone and brick work, Samuel Rundell ; carpentry, F. W. Darby ; plastering, J. J. Mahoney; tinsmithing, D. E. Rudd ; painting, E. H. Pass.-G. R. Bruce, architect, has accepted the following tenders for a pressed brick residence for James Davison: Masonry, Taylor Bros. ; carpentry, McKenzie \& Stiffler ; plastering, Peter Martin; tinsmilhing, D. E. Rudd ; painting, Reynold \& Son; plumbing, Feek \& Phillips.

MONTREAL, QUE.-The.bricklaying for Mr . Mercier's house at Cote St. Antoine has been awarded to Olivier Deguise. Chas. Chausse is the architect.-J. B. Resther \& Son, architects, have awarded contracts for fifteen tenements to be built on Mance street, for P. Prefontaine, as follows: Masonry, O. Martıneau; joinery, U. Pauze \& Son; carpentry, L. Beaudry; bricklaying, M. Brouillette; plumbing, S . Corbeil ; plastering, W. Belanger ; painting, T. O. Gauthier.-Capetan Dufort, architect, has àccepted the tender of H . Charpenter for a residence at L'Epiphanie for Emile Ricette.-W. E. Doran, architect, has awarded the contract for modifications of a house, corner Ottawa and Dalhousie streets, for W. Heelan, all trades to F. X. Carle.-G. A. Monette, architect, has accepted the following tenders for two houses on St. Antoine street for A. Mongeau: Masonry, M. Galarneau; bricklaying, Jos. Carriere ; carpenter and joiner's work, A. Mongeau ; painting and glazing, J. Phaneuf; plumbing, J. A Giroux; roofing, Bernier Bros.; plastering, S. Gossclin.

Jane Morley, brick manufacturer, Toronoo, has assigned to E. R. C. Clarkson.

BIDS.
Trail, B.C.-Tenders for the erection of a new school house are now under consideration, and an award will be made this week; estimated cost, $\$ 2,000$.

Dundas, Ont. - The following tenders were received by the County Council for rebuilding Montrose bridge: Hamilton Bridge Co., Hamilton-No. 1, steel superstructure, 109 feet 6 in., $\$ 1,200$; No. 2, swing span, 126 feet long, $\$ 2,000$; No. 3, swing bridge, 80 feet, fixed bridge 109 feet 6 in., $\$ 2,700$ Kobt Weddell, Trenton 6 in., $\$ 2,700$. Robt. Weddell, I renton Bridge Co.-No. 1,90 feet permanent and to feet temporary, abutments and piers complete, $\$ 4,120$; No. 2, 64 feet of sta tionary and 36 feet temporary, $\$ 3,980$; No. 3, swing, full government width and fixed bridge on piers, $\$ 9,800$; No. 4, equal arm bridge 104 feet long, and 64 feet tem porary bridge, $\$ 10,700$. Thos. Ray, Wel land-No. 1 , stone abutments on puling in boats, $\$ 3,197$; No. 2, fenders complete $\$ 862$; No. 3 , to raise present swing, pu bents under same, also to construct ap proaches at either end, $\$ 300$; No. 4, new swing, ito feet, 12 feet roadway, with steel pivots, $\$ 1,400$; No. 5, to build steel rivetted bridge, 12 feet roadway, $\$ 2,500$ No. 6 , will build stationary bridge, 120 feet, 12 feet roadway, $\$ 1,200$. Freeman Hodgkins, Welland, to build foundations as shown in plan, $\$ 5,525$. Jacob Lovell, Niagara Falls, to build bridge of wood, \$r,085. F. R. Krafft, Stevensville, to furnish all material and work for building the south approach, $\$ 900$. No action has yet been taken, and the Dominion government may be asked to bear a portion of the cost.

## GILDING ON WOOD.

First get a good surface, then put on the size. Fat oil is the best size for outside work. Tint the size with chrome yellow, finely ground, and thin with turps
until it works well. If in a hurry, you can add a little japan to make it dry faster. Wait until it dries tacky. There is a nice point about the operation that is, to get the rught tack on your size. If too dry the leaf will not adhere well; if not dry enough, your work will look shabby and rub up under the finger. If pressed for time, you can use varnish for sizing instead of fat orl. It dries faster, and you will have to be careful and not size too far ahead oo the "tack" may dry out before you can get it all covered. Now, to handle the leaf. The first thing is not to get netvous or in too much of a hurry. Go into a quiet room, lay the book of leaf on a table, with the back of the book towards you, carefully turn back the first paper, then with the first finger of the left hand hold down the left-hand corner of the book next to you, and tear off the paper by pulling to the right. Now lay the paper flat on your hand, and rub it over your hair, from which it will take oil enough to make the leaf adhere to it. Now lay the paper carefully down upon the leaf, and rub it down with your fingers, to make the leaf stick to it ; then you can use it whole for gilding large surfaces or cut it up with shears in any shape you think fit. If the leaf don't adhere well to the paper your hair etther does not afford enough oll or you have not rubbed it hard enough. It you find your hair will not make it adhere, rub your hands over a bar of hard soap and rub them well through the hair, then you can make the leaf stuck to paper by rubbing the paper
(Continued on Page 4 )

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An ingenious and simple method of fixing metal screws into stone walls has been devised. Wonden dowels, beside the tendency to weaken the walls, do not afford security and permanence. A wire of suitable thickness is coiled on the screws so as to follow the threads of the sanie, and to form a kind of scresv nut. The coiling may commence near the head of the bolts and proceed toward the point by laying the wire into the grooves. After arriving at the point of the screw the wire may be wound backward over the helix already wound on, but with a steeper pitch so as to leave: wider interstices between consecutive convolutions of the wire. This wire coil or nut is introduced into the hole formed in the wall for this purpose, being slightly wider in diameter than the outer layers of wire, after which the surrounding spaces are filied up with plaster of paris, cement, or similar binding material in a plastic cundition. When the cement has become sufficiently hard the screw bolt, which has served as a core, or another screw bolt of the same diameter and pitch, may be screwed into the wire coil, or in and out repeatedly without damaging the wall, thus forming a strong and durable metal attaçment.

## GILDING ON GLASS.

In commencing this work you will require a drawing on paper for each design, which you will prepare as follows: Cut a thin piece of paper to the size of the glass, draw out your design correctly in black lead pencil on the paper; then prick through the outlines with a fine needle. Tie up a little dry white lead in a piece of rag; this is a pounce-bag. Now place your design upon the glass, right side up, and dust it with the pounce-bag ; take the paper carefully off and the design will appear in white dots upon the glass; this is to guide you in laying on the gold on the opposite side. Now cleanthe glass well on the side that the gold is to go on ; prepare your size in the following manner: Get some perfectly clear water, without the slightest particle of grease or other foreign matter; put it on a slow fire to
boil, using and an enamelled saucepan for that purpose, and taking care the smoke does not get into it ; while boiling put in two or three shreds of the very best isinglass; let it boil a few minutes, then strain it through a fine clean rag; when cool it is ready for use. The great point in glass gilding is to have the glass, the size, and everything you use perfectly clean; a touch of the finger on the gliss will tamish the gold; you must use the tip and cushion to put on the gold, laying the gold on as level as possible, as its uniform brightness depends in a great measure on that point ; use a flat camel's hair tool for laying on the size ; flow the size on and let it drain of when you put the gold on; when perfectly dry, take a ball of the finest cotton wool and gently rub or polish the gold; you can then lay on another coat of gold if desirable. Gilding on glass is usually done with ordinary size, and the leaf placed on the outside but we would prefer making the size out of an isinglass that is used for such purposes, dissolving it in water. It can be had in any drug store. In using this size lay the gold on the inside of the glass, as it will look better and wear longer than when on the outside.

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## Notice to Contractors

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Confederation Life Building, TORONTO. of each quoin heads: To find lines to the radius point, also the ame joint at the opposite side of arch. Where these lines meet at a point, L , take the depth of beds from this point and the difference will be the twist on the length of course. The sweep in centre is the oblique course curve running over the finished arch soffits. Take the height of arch at $N N$, say some length down from a line, $\mathrm{H} N$, horizontal. This will give bevels to the interior joints. When applying bevels to quoin heads keep template on line shown at W in
$\because$ developnient. This method of setting out and diagram is from Mr. Alexander Thompson, Gateshead.

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## MUNCIPAL DEPARTMENT

## TO MUNICIPAL OFFICERS.

The Contract Record is desirous of publishing, as far as possible, advance informattion regarding projected works of construction in all parts of Canada, such as sewerage and waterworks systems, railways, street pavements, public and private buildings, etc. Municipal officers would confer a favor upon the publisher by placing at our dispasal particulars of such undertakings which are likely to be carrsed out in their vicinity, giving the name of the promoter, character of the work, and probable cost. Any informatoon thus furnished will be greatly ap. preciated.

## THE LAYING-OUT OF PARKS, RECREATION GROUNDS AND OPEN SPACES.

 (Coninued)A very good effect is obtained by mix. ing the species of ivy, thereby obtaining the several shades of green, and the space around the arbour to the width of the trench might be either made into a flower border, a few shrubs planted, or the turf, if there was ans, replaced Upon the position of the walks or drives depends greatly the general effect of the laying. out of sites. How often are there to be found sites made hidenus by a serics of walks formed of tar paving interlaced over the grass surface of the site, lar no rhyme or reason; and to still further accentuate their ughness, flat flower-beds are formed along their borders, instead of a few sarubs and trees to hide the bad effect the walks give. The general appearance of such a site has somewhat the same result upon the eye that a liscord bas upan the ear. A walk should never be made unless there is some reason or apparent reasun for its use, as an expanse of grass is much to be preferred. No two walks should min parallel with one another, as in this case one would be sufficient if it were made a little broader. Straght walks should be avoided, but, if a necessity, a clump of shrubs or other subject might be interposed to hide its lengit. The narrower the walk the shorter should be the length seen. Il the walk is a broad one trees may be planted on both sides, such a distance from the sides that when they are well developed the branches would meet and overhang the walk. At the same time there must be some apparent reason for a curve, and to this a clump of shrubs or a tree misht be planted for the necessity of having a cirrulous patin. All curves should be well set out : the ntrrawer the path is the greater ;an the rurves be made. and as in wripht walks, but short lengits at curned wiks stmuld be wistle. this being dependent "pno their widit.
Should a carriage drive be required, it
should not be made too close to the boundary, and should have a shrubbery to hide the boundary, and there should be a plateau of grass between the shrubbery and the edge of the drive. If another drive is wanted through the middle of the stle a large bank of trees and shrubs should be planted, or a klosk built, to break up its length, and also trees planted on either side. In the author's opinion there is nothing equal to good bright binding gravel for paths; tar paving appears to fird favour in some locallites, probably on account of is better wearing qualities, but undoubtedly for effect gravel is to be much preferred. Giavel no doubt breaks up when the traffic is heavy, and also on account of climatic influences, but this might to a certain extent be obviated by making the paths broader than it they were tar-paved. It is hardly necessary to state the paths should be well made and well draned.
With regard to the planting of trees and shrubs, the after results will greatly depend upon the manner in which the ground has been prepared. As by far the greatest expenditure will be incurred in the purchase of the trees and shrubs, it is always worth while not to stint the cost of the labour sequired, having regard to the fact that the lifetime of the trees and shrubs will be years, and, perhaps for ages. The ground in every case should be trenched in the following manner-viz., a trench should be dug, say, 4 ft . wide and in the manner previously described for planting ivy, and the surface soil from the trench whecled to where the digging will be finished; a liberal quantity of rotten manure should be dug into the subsoil at the bottom of the trench, and the subsoil, if cloggy, well broken up. Another irench 4 ft . wide is then commenced, and the surface soll of this one deposited upon the already broken up and manured subsoil of the last trench, and the subsoil of the second trench broken up and manured. This process is conunued to the further extremity of the plot of land, where the surface soil of the first trench was deposited, this surface soil being used to make up the last trench to the ground level. Great care must be taken that none of the subsoil is brought to the surface. It would be very dificult to estimate the quantity of manure required, as in the case of a porous and what is known as a "hungry" subsoil a load to a pole would be needed, whereas where a sood marl is
met with, a cart-load to five perches, or 30 loads to an acre, would be sufficient ; in the former case lotten cow dung would be preferred.
The first thing to do would be to plant indiscriminately forest trees where required for a back-ground, a couple here, one in another place, perhaps two or three in another position, except where a screen is required, when trees would be planted thickly, 20 ft. apart, or even in some cases less, the object in the latter calse being to gain height for obstruction. In no case should hmes be planted adjacent to other trees, shrubs, or fower-beds, as probably there is no kind of tree which is subject to vermin, blight, or other vegetable diseases, and imparis it to other plants so much as a lime. Where the fruit or flowers of orchard trees cannot be interfered with, the author strongly recommends the planting of such trees amongst shrubs, as the foliage is not only equal in appearance 10 other decidunus trees, but the bloom is charming in spring and the fruit useful in suinmer and winter.
There is no time so suitable for planting most trees and shrubs as atter the leaves of deciduous trees have fallen, after the hirst few frosts of late autumn and early winter. Sometimes this happens late in October, and sometimes extends to early in December. In no case should the plants remain long out of the ground; if they cannot be planted immediately they are received, clumps of them should be at once placed in a hole and the roots covered up with earth. If planting is deferred until spring, very often a spell of cold drying winds follows, which do more harm than any frost. Trees and shrubs are generally planted 100 deep, even by nurseymen. A hole should be made large enough for the roots to be spread and extended their full length, and deep enough to come up to the bole just above the roots, and alter planing the ground should be made solid all around with the heel, and the shrub or tree staked to avoid disturbance of or movement in the root. All ground the subsoil of which is inclined to be wet should be well drained; it would be far better to plant a tree on a mound than in undranted soil-in fact, some trees and shrubs do better when thus planted, and where isolated trees are planted on wet subsoil it is better to.form a mound; they not only thrive better, but also a better effect is given to a tree where the latter is not of very tall growih. In purchasing trees or shrubs it is essential that they should have a mass of fibrous roots, and not one or two thick tap-roots. (To be Continued:)

The death occurred at Chathan, Ont., on September 1st., of Mr. John Tissiman, who for 40 years held the position of City Clerk, resigning on July 16 th last. Decensed was the victim of a cancerous tumor.

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