

Anne. The scheme includes a cantilever bridge from Longueuil to the city. An independent line is contemplated to Carillon to cross the Ottawa river.—The project of building a railway bridge from St. Lambert, having a high pier on Isle Ronde and passing over the jail and the city to Sherbrooke street, is again being agitated.

TORONTO, ONT.—The Grand Jury of the General Sessions, in its presentment to the judge, urges the erection of a poor-house where those whose only crime is poverty might be provided for.—The Toronto Ferry Company has made application to the Ontario Government for a lease of the water lot at the island behind the Hotel Hanlan, the object being to move the building some distance back. Other improvements at the island are also said to be in contemplation by the company.—Tenders are wanted until noon of Friday, the 22nd inst. for the plumbing of three solid brick buildings. Plans may be seen at the north-east corner of Shuter and Dalhousie streets.—The Toronto Street Railway Company are making arrangements to provide additional power. The power house will be enlarged to twice its size, and the car sheds adjoining will be refitted for the reception of the new engine and boiler. The plans for the improvements are now being prepared. It is also proposed to increase the power by 6,000 horse power.—The Building Committee of the Public Library Board has been instructed to proceed with the necessary alterations to the basement for the proposed reading room, the cost not to exceed \$750.

FIRES.

A fine terrace of residences on Notre Dame street, Winnipeg, owned by Kelly Bros., were burned on Monday last. Loss, \$35,000.—The polishing room of Raymond's brick factory at Guelph, Ont., was damaged by fire recently, the machinery suffering the greatest loss.—The Oddfellows' block at Tilsonburg, Ont., was destroyed by fire on the 17th inst. The building contained J. Wood's shoe store, Geo. Brasher's general store and C. Thompson's drug store on the first flat, P. Gedde's residence on the second flat, and the Oddfellows' rooms on the third flat. The total loss is about \$40,000.—The axle shop of the Spring and Axle Company at Gananoque, Ont., was damaged by fire last week to the extent of \$2,000, covered by insurance.—A. W. Hepburn's saw mill and sash and blind factory at Picton, Ont., were consumed by fire on the 15th inst. Loss, \$15,000; no insurance.—Phillip Carpenter's residence at Cornwall, Ont., was burned last week.—The villa residence of Mr. Augustus Converse, situated in Lower Melbourne, near Richmond, Que., was destroyed by fire on the 11th inst. Loss, \$4,000; partly covered by insurance.—The dwelling house of D. Hamilton, situated about a mile and a half from the town of Forrest, Ont., was burned on the 13th inst. Loss, \$2,000; partly covered by insurance.—The furniture establishment of Fee & Martin, Montreal, was damaged by fire recently to the extent of \$10,000.—Mr. Cordingley's fine brown sandstone block on Cumberland street, Port Arthur, was completely destroyed by fire on the 15th inst. Loss, \$10,000; insurance, \$4,500.

CONTRACTS AWARDED.

REGINA, N. W. T.—The contract for heating the Assiniboia Club building at this place has been secured by the Gurney Foundry Co., of Toronto.

HAMILTON, ONT.—The directors of the Hamilton, Grimsby, and Beamsville Railway have let the contract to Messrs. Lomer & Rose, of Montreal, for 1,350 tons of steel rails. The contract price is about \$30,000.

LEVIS, QUE.—Messrs. Paquet & Powers, contractors, of this place, have received the contract for the construction of a large section of the Great Northern Railway. They will immediately commence the construction of a bridge over the Lake Ouarreau river.

OTTAWA, ONT.—The contract for heating apparatus for the West Farnham public building has been let by the Public Works Department to Mr. E. Monbleau, of St. Johns, Que. The contract for heating apparatus for public buildings at Lunenburg, N. S., Dartmouth, N. S. and Chatham, N. B., have been awarded to Frank Powers, of Lunenburg; John Boston, of Halifax, and Thos. Campbell, of St. John, respectively.

VICTORIA, B. C.—The contracts for the erection of the new Provincial Government buildings have been secured by local contractors. The following are the successful tenderers: Masons' work, Frederick Adams; carpenters' work, Bishop & Sherbourne; plasterer's work, Richard Drake; coppermith's work, W. H. Perry; plumber's work, H. T. Fleet; ironfounder's work, the Albion Iron Works Co., all of Victoria; painter's work, E. Spillman, Vancouver. The amount at which the several contracts were awarded has not been made public.

BUSINESS NOTES.

Coutlee & Pelletier have formed a partnership as painters in Montreal.

G. Duthie & Sons, roofers, Toronto, have assigned. It is expected that the statement of their affairs will show a small surplus.

The *Legal and Commercial Exchange* reports the following: John Randall, painter, of Ottawa, has assigned to Geo. O'Keefe.—Edward A. Smyth, of the firm of Smyth & Mumford, contractors, Merriton, Ont., died last week.

HOLLOW BONDS IN BRICK WORK.

In the erection of buildings where low cost is a necessity, says the *Brickmaker*, timber is often employed to the exclusion of brick, simply because to use the latter, and at the same time keep the cost within the prescribed limits, would mean using brick of very inferior quality and these would not last much longer than timber. There is a way of using good brick, and yet of keeping the cost low, and that is by employing hollow bonds.

The bonds can only be used in one-brick walls. There are two methods of laying them. The first is to lay all the brick on edge, laying first a header and then a stretcher, and so on throughout the course. The course above is laid exactly in the same way, with the headers in the center of the stretchers below them; the ends of the courses being closed up with closers of the necessary length. The second method of forming hollow bond is first to lay a course of stretchers on edge. This is followed throughout the wall, there being headers flat and stretchers on edge alternately.

Both systems of laying brick produce a fairly strong wall that will safely carry all ordinary weights. For fence walls they may be used with advantage, and for a number of other purposes they may be safely employed.

Hollow bonds are not recommended to the place of solid walls, only where it is necessary to keep the cost low, and where it would be necessary to use an inferior brick if the walls were built solid. Hollow walls erected of good brick are much superior to solid walls constructed of poor brick.

CRACKS IN BRASS PIPES.

Brass pipes may crack from several causes, such as over-pressure, bending strains due to lack of proper support, or to shocks caused by water hammer. But in several cases breaks have been known to occur (says T. H. Bullock) under quite moderate pressure, and where the pipes were entirely free from any external strain or water hammer. He mentions an instance where a piece of 2 in. brass pipe about 4 ft. long burst under a cold-water pressure of 22 lb. The pipe had three level supports in 16 ft., and was supplied from a tank. The tank opened about 1/4 in. wide, and extended 6 ft. A piece 5 ft. long cut from the other end bore simultaneously a

pressure of 200 lbs., and a sharp blow from a hammer, without fracture. That the part which cracked was under considerable internal metallic strain there can be no doubt, for a piece 12 in. in length required a weight of 1,781 lbs. to bring the edges of the crack together again. Probably, what has a good deal to do with the question of why do brass pipes crack, is the hardness of the metal, though why in the case under consideration there should be such different degrees of it within such a short space is puzzling. Mr. Bullock, to satisfy his curiosity, made some experiments in the matter, in which he compared the various tones given out by different pieces of brass tubing when struck with the notes of a piano. These experiments seem to indicate that the inner portion of the metal of the pipe that burst was under a severe compression strain at the point where the break occurred, but that the other end of the same pipe was substantially free from such strain. It also seemed that in some specimens the outside portion was under strain, as the pipe closed slightly when planed open. It also seems that hardness can be ascertained by tone.

NOVEL HARDWOOD FLOORING.

The attention of hardwood dealers has recently been drawn to a novel innovation in hardwood flooring that is the invention of a firm in Chicago. Never until in the last few months has it been practically demonstrated that the ends of hardwood flooring could be tongued and grooved, but this is now an established fact, although it has taken a good many thousand dollars to prove it. Many previous attempts have been made to bring this idea, which is by no means a new one, into practical shape, but the cost of turning out flooring with the ends tongued and grooved by any process known up to this time had been so great that contractors and builders could not see the value in the extra expense, and the manufacture naturally died out. As it is now made, however, such flooring is within the reach of everybody, as it can be manufactured at an extra cost of only one dollar a thousand feet, and the advantages that it possesses makes this small addition of price of very small consequence in comparison. It has taken long time and study to produce the wood-working machinery to bring about such results, but the success that is attending the introduction of this flooring fully compensates for the time and labor spent in perfecting it. Architects and builders for a long time have deplored the fact that the best of hardwood flooring, no matter how well laid it might be, would ultimately shrink to some extent and spring up at the ends. In this new kind of dovetailed flooring all such difficulty is obviated, besides furnishing an even joint that can hardly be detected. Two weeks ago this flooring was an unknown quantity in the Twin Cities, but even now in Chicago Architects have so readily taken to the idea that they are introducing it into their specifications.

MUNICIPAL DEPARTMENT.

LEGAL DECISIONS AFFECTING MUNICIPALITIES.

Perhaps the most important decision given of late years in the matter of street improvement, says the *Contract Journal*, is that recently given by the Sheffield stipendiary, Mr. E. M. Welby. The issue tried was as between the Corporation of Sheffield and certain executors regarding objections made to the proposals of the Corporation to execute certain private street works. The engineer to the Corporation, Mr. C. F. Wike, had, upon instruction, prepared specifications, plans, and apportionment for the works required. Objection had been made to these plans, it being contended that the works were unreasonable and the expenses excessive. There was of course, a conflict of opinion, and in the end the magistrate decided against the Corpora-

tion. The decision will probably be upset upon the appeal. However, the strangeness of the decision is that the magistrate decides certain questions by which he assumes new duties. A full account of the case appears elsewhere in our columns, and it will be seen that the magistrate decided what kind of material was to be used for the roadway, and that it is not necessary for a street to have a sewer before it is taken over by the corporation. It is hardly necessary to refer to the powers of corporations in relation to private streets. These will be found set forth and discussed in Mr. Spink's admirable book on "Paving, etc." It has usually been held that the authority will decide as to materials, etc., and indeed, it seems to us that no other party is in a position to decide. There must be a continuity of design in the roads and streets and sewers, otherwise the authorities might be led to great and unnecessary expense in maintenance and reconstruction. The duly appointed engineer to an authority is certainly a specialist, and it may be taken for granted that engineers to our large towns have had great experience in street construction, and are the very best men to say what is or what is not required. They have no reason for unreasonableness, but they have very good reasons to see that the new streets and sewers are constructed in a proper manner and in accord with the general engineering of the town. As far as we can see, Mr. Wikes's plans, which were supported as reasonable by colleagues from other important towns, are just such as might have been expected from so competent an authority. The continuation of this case in the Court of Appeal will be interesting, and we shall then find if it is competent for a magistrate to decide upon tar macadam when the authority says granite randoms ought to be used, or that an open channel is a sufficient sewer when the authority decides upon a properly constructed underground channel.

LANGLEY VS HARMAN.—In this case lately decided by the Michigan Supreme Court—The plaintiff Langley is a contractor in Detroit, and three years ago sent in his tender for certain sewerage work required by the city of Windsor, Ont. His tender was accompanied by the usual certified check for \$2,000, and he was given the contract. He refused to take it and the contract was given to the next lowest tender, which was \$1,400 higher than Langley. The city concluded that Langley was to pay this, but when they presented it for payment at the Detroit bank it was found that an injunction had been served on the bank ordering them not to pay it. The chairman of the Board of Works, was made defendant, and the Detroit court held that the city had no right to the amount. The city carried it to the Supreme Court of Michigan, which reversed the decision.

CORPORATION OF TORONTO V. ATTORNEY-GENERAL OF THE DOMINION OF CANADA.—This was a petition for leave to appeal from the judgment of the Supreme Court of Canada to the Privy Council in England. The city of Toronto is authorized to give a discount for prompt payment of water rates. The system upon which they have proceeded to collect rates is, in some cases, by meter; in others by assessing a sum upon each house, charging so much to those who consume the water and allowing a discount. But they have declined to allow this discount to those who are exempt from all other city taxation, on the ground that they have contributed nothing towards the expense of building the waterworks, and it would be unreasonable, therefore, to give them the same advantage and to supply the water to them at the same price as they do to the others. The question presented to the Court was as to the city's right to do that. The Privy Council were of the opinion that the judgment of the Supreme Court holding that the city had no right to discriminate was so plainly correct that they refused leave to appeal.