of \$30,600, has been passed by the Executive Committee.—Building permits have been granted as follows: R. Barton, 85 been granted as follows: Bloor st. w., five attached 2 story bk. stores and dwellings, n. side Queen st., east of G. T. R. crossing, cost \$6,5∞; A. M. Smith, additions to warehouse, 7 Front st. e., cost \$2,700.

MONTREAL, QUE -The plans for the extension of Chaboillez square and Bonsecours market will be presented to the Finance Committee at its next meeting. A site has been selected in Belmont Park for the proposed Andrew's Home, which is to be crected by the Bishop of Montreal in connection with the church of England Home for Women. About thirty thousand feet of land has been purchased.-The time for receiving tenders for the steel superstructure and trestle bents for bridge over the C. P. R. tracks on Notre Dame street has been extended by the Road Committee from November 21st to December 5th.-A special meeting of the shareholders of the Royal Electric Company was held recently, at which the issue of debentures to the amount of \$750,000 was decided upon. \$600,000 of the debentures will be expended on new buildings and other improvements.

HAMILTON, ONT .-- The projectors of the proposed radial electric railway will appear before the City Council at its next meeting with a proposition to erect their workshops in this city. The estimated cost is \$50,000. At the last meeting of the Parks and Gardens Committee of the City Council, the Wentworth Pioneer and Historical Society applied for a grant of sufficient land in Harvey Park on which to erect a building in which to deposit relics. The building would also be available for a reception hall, and the plans of the structure would be submitted to the city Council for appropriate Acube to the City Council for approval. A sub-committee was appointed to report in the matter.—E. L. Rastrick and Alex. Henderson submitted plans for improving the water front, and desired that the Committee recommend the Council to proceed with the scheme or permit a private company to undertake it. It was decided to refer the matter to the Board of Works for consideration.—The Wentworth Baptist church is considering the purchase of a lot further east and erecting a new church thereon.-The following building permits have been granted: George Adam, two-storey brick dwelling on Aurora street, cost \$1,000; M. Swales, three two-storey brick dwellings on Ontario avenue, cost \$4,600.

### FIRES.

A brick school-house at Markdale, Ont., valued at \$7,500, was destroyed by fire on Monday last. Insurance, \$5,000. Hull's cooper shop, a frame building, was also burned.--J. E. Tait's pottery at Lynden, Ont., was consumed by fire a few days ago.—The city of Winnipeg was visited by a disastrous fire on the 16th inst., over \$200,000 worth of property being destroyed. The burned buildings are: Western Canada Loan Co.'s building, four stories, loss, \$60,000; insurance, \$30,000; Grand Union Hotel, a three storey brick structure, owned by James Donohue, loss \$35,000; insurance, \$15,000; Merrick, Anderson & Co.'s ware house, a large three storey brick structure owned by Mr. Campbell, loss \$35,000; insurance \$13,000. The offices of the Free Masons were in the Western Loan Co.'s building, and it is probable that the fratainty will now erect a large Masonic temple. The Bennett and Laurandeau blocks at Midland. Ont., were destroyed by fire on Tuesday last. The losses are: W. H. Bennett, four stores and offices, \$6,000; insurance, \$2,000; N. Laurandeau, two stores and dwelling, \$9,000; insurance, \$4,500. The buildings will be rebuilt as soon as possible.

#### CONTRACTS AWARDED.

HATEAN, N. S. - J. Innes & Son have the contract for a new brick building for Clayton & Sons. Work will be com-menced the first of the year.

HAMILTON, ONT.—The Building Committee of the Board of Education has awarded the contract for supplying desks for two new schools to the Globe Furniture Co., of Walkerville. The contract price is \$2,483.10.

MONTREAL, QUE.-Messrs. Perrault & Lesage, architects, have awarded contracts as follows, one three storey stone front store and dwelling on Notre Dame street, for P. A. Rodier -masonry, Prenoeau, Turcot & Martineau; brickwork, E. Morache: 2 three storey stores and dwellings on Notre Dame st. for Jos. Versailles: carpenter and joiner's work, A. Boire; plastering, H. Contant; plumbing, Thos. Moll. Two three storey stone front stores and dwellings on Notre Dame street, for J. B. Charbonneau; brickwork, A. Leger; steel work, Dominion Bridge Three storey stores and dwellings on Notre Dame street for D. Gallery: masonry, Guilbault Bro.; carpenter and joiners' work, John O'Leary; brickwork, E. Morache; electric wiring for two stone front stores and dwellings on Notre Dame street for E. Marcil to F. Simoneau. Cottage for Ald. R. Frefontaine at Ste. Agathe, Que.; counters and fixtures for three storey stone front store on St. Lawrence street for Amoit Lecours & ariviere to Lalonde & Girard. - Messis. Perrault, Mesnard & Venne, architects, have awarded contracts for a three storey stone front store and dwelling, Notre Dame street for estate Hon. C. S. Rodier as follows. masonry, H. Dufort, carpenter and joiners' work, Louis Beaudry; iron work, A. & E. Loignon.

#### NEW COMPANIES.

THESSALON, ONT.- Mississaga River Improvement Co., incorporated; capital, \$5,000; to construct dams, piers, or other work necessary for transmission of timber

KINGSTON, ONT.-Victoria and Black Rock Ferry Co., applying for incorpora-tion; incorporators, J. Swift, J. Hazlett, W. Power and J. K. Scott, all of Kingston.

PALMERSION, ONT.—Canadian Cone Coupler Carriage Co., seeking incorporation; capital \$25,000; incorporators, A. Moyer, John Kearns, W. J. Houston and W. E. Rathwell, all of this place.

NIAGARA FALLS, ONT .- Niagara River Tramway Company, applying for incorporation; capital \$40,000; to build a cable trainway over the Niagara river; applicants, Joseph Tait and John Flett, of Toronto, L. C. Raymond, of Welland, and others. Head office at this place.

PORT COLBORNE, ONT .- Point Albino Street Railway Co., seeking incorpora-tion; capital \$100,000; to construct an electric railway from Fort Erie to this town; applicants, F. F. White and Don-ald McGillivrary, of Port Colborne, Leonard McGlashan, of Humberstone and others.

MAGANETAWAN, ONT .- Maganetawn Tanning and Electric Co., incorporated; capital \$50,000; to carry on a tanning business in all its branches, to build and operate steam and other vessels, and to generate electricity for power purposes; promotors, Gand W. J. Marlett, of Oakville, John Waldie and Win. Cameron, of Toronto, and R. J. Watson, of Burk's

The use of chilled metallic shot has completely revolutionized the stone-sawing trade, by teason of the rapidity with which the work can now be accomplished as compared with the times when the sawing material consisted only of quartzose sand, says The Builder. It is obvious that a sawing granite, for instance, the sand alluded to, not being harder than quartz, was incapable of doing much work, as that mineral exists so abundantly in granite. What was wanted was something harder than quartz. Several minerals answered the purpose, amongst which were corundum (emery) and the diamond. The former of these is occasionally used for sawing, and largely for rubbing granite, murble, and the like, preparatory to the polishing process; the latter has for some

years been employed to a limited extent for sawing the hardest kinds of stone, and diamond discs may be found in the workshops of every lapidary. But these minerals are rather expensive, especially the latter, and until within recent years sharp sand was still almost universally employed. Then a new material, known as chilled shot, was introduced, and was rapidly taken up. During our visits to various granite centres in 1886-87 we found it had already gained a firm foothold, as the rate of sawing was greatly increased by its use; it was also very economical in working, and has been much employed to The foregoing observations were suggested by some samples and a trade description of "Krushite" recently sent to us, which is said to be a new ma-terial. It appears to be chilled metallic shot, and is very similar to, though probably not identical in composition with, what we saw in use some eight years At any rate, the use of chilled metallic shot for sawing hard stone is by no means a "new" idea either here or in America. "Krushite" is said to be capable of sawing blocks of granite at the rate of 4 in., and hard grit-stone at 9 in. in depth per hour, with twelve blades in the frame. It is manufactured in several different sizes, the largest (about the size of small rabbit-shot) being suitable for sandstone, and the smallest (fine dust) for the rubbing-bed. The material is used in sand blast apparatus in lieu of sand, and in substitution for diamond: in boring and drilling. It is described as being absolutely without points or edges, though we do not find this statement borne out by the samples sent. However, there can be no question that the chilled metallic shot is by far the best and most economical material hitherto discovered for sawing the hardest descriptions of stone, and for use in the initial stages of rubbing. It must be handled with great care, though, in the manufacture of marble. Only the other day we saw a beautiful slab utterly ruined, during the final polishing with putty powder, by reason of a few chilled shots having found their way under the felt polisher, with the result that the smooth surface of he stone was deeply scored before the machinery could be stopped. That, of course, is sheer care-lessness; the fact that the chilled shot was capable of scratching so deeply in such a short space of time is distinctly in its favour as a sawing material.

Mr. Archibald McNaughton, contractor for the harbor works at Goderich, Ont., was recently tendered a complimentary banquet by the leading business men of the town, in celebration of the completion of the work.

Oil colours cannot generally be applied over cement, as they will not adhere. M. Garson adopts the following method of preparing the surface of the cement to receive the colour: -1. Priming with boiling linseed oil. 2. A coating of white lead mixed with oil. 3. A ground coat composed of white lead, Spanish white, oxide of iron, and red lead ground together in oil.

## MUNIGIPAL DEPARTMENT.

#### UNWISE ECONOMY.

The world of municipalities has during the past half-century been growing wiser. It demands, says the Contract Journal, that its officials shall be of adequate experience and full of ripened knowledge. That is as it should be. The municipal officers have the destinies of nations on their hands, for upon them depends the healthy conditions of town life, and under improper conditions it cannot be expected that the next generation shall be more robust than the present. In order to duly cope with his varied duties, the municipal engineer, for example, must be fairly well acquainted with a wider range of subjects than his more favoured confrere, the con-sulting engineer. The latter may, and most often does, become a specialist, while

the former has to be ready to advise upon almost every conceivable subject. When, however, we come to consider the remuneration obtained by a consulting engineer of large practice and the municipal engiwe find that the latter does not get that consideration to which we deem him entitled. The past still exerts an effect upon the present. In olden days any body was good enough to become town surveyor or engineer. Sanitation consisted in making a drain-of some kind. Roadmaking was an unknown art, and meant shooting down stones anyhow. The building restrictions were few, and never troubled the owner or builder. How different now, and how year by year as knowledge increases the work of the education is costly. The time or inspection is lengthy. The prizes in his pro-The time of his profession are few-too few, alas, to be able to retain many of the ablest men, who are compelled, not because they wish it, but because family expenses and old-age requirements are too strong for them, to leave the ranks they adorn in order to swell those of consulting engineers.

Another important consideration that indirectly bears upon remuneration is fixity of tenure. At the best the municipal engineer's life, unless he is a very strong man indeed, can scarcely be termed a happy one. He has too many masters to be able to please everybody. If he does his best for the ratepayers collectively, he often raises unfriendly feelings individual-Taking all these and a score of other things into consideration, notwithstanding the gradual rise in professional status, also the average rise in remuneration, is it not a self-evident fact that municipal authorities often practice a false economy in paying their servants. They appoint men to control the expenditure of thousands of pounds annually. They expect every design to be perfect of its kind, and its cost to be less than the average of similar work, yet they offer utterly inadequate remuneration to the officer upon whom the responsibility rests. Two reforms are urgently needed in municipal work-first, a proper salary, with practical fixity of tenure; secondly, a diminution of work. Nowadays many an officer is unable to put forth his best efforts, because sufficient time is not allowed him. You cannot reel off a perfect design at a moment's notice, and very often a definite decision is delayed till finally a rush has to be made to comply with legislative demands. The whole question, however, teems with diffi-culties, and it may be said that the muni-cipal world is gradually being enlightened, as is shown in many of the towns, yet we are anxious to see a little more steam put on and a faster progress made in the directions indicated.

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