

Meldrum & Co., of Montreal, are brokers for the company.

KINGSTON, ONT.—A deputation has asked the county council to make a grant of \$20,000 with which to erect a public hall on the campus of Queen's University.—Arthur Ellis, architect, has taken tenders for the erection of an additional storey, with steam heating, to the Medical building of Queen's University.—The city engineer has recommended the purchase of a street scraper.—The authorities of the First Baptist church have decided to purchase a site on which to build a new edifice.—Power & Son, architects, are this week taking tenders for improvements to two stores on Princess street.

LONDON, ONT.—The fire chief has submitted to council his annual report, in which he recommends the erection of a new fire hall in the north part of the city and the purchase of a chemical engine and 600 feet of fire hose.—The city engineer is preparing a list of the cement walks to be constructed this year.—Tenders are about to be invited by the city for the supply of a watering cart.—James Luney is building a brick house on St. James street, between Maitland and William.—Herbert Matthews, architect, is preparing plans for three new brick residences on Percadilly street.—H. C. McBride, architect, is fitting up a branch in the east end for the Bank of Toronto.

VANCOUVER, B. C.—The largest light-house on the coast will be erected on Lawlor's Island. A new hatchery, to cost \$75,000, will also be built there.—The chairman of the fire and light committee has pointed out the necessity of new buildings to replace Nos. 1 and 2 fire halls. The erection of a new police station may also be undertaken this year.—St. Andrew's church congregation has decided by a popular vote to purchase property on Bute street and erect thereon a building suitable for a mission church and Sabbath school. Messrs. McLennan and McQueen have been instructed to procure plans.—The Stave Lake Power Co. is negotiating with the city with a view to securing certain privileges as to the construction of poles and wires. The company agree to expend \$400,000 in building dams, power houses and other works, and in transmitting power to this city.—The British Columbia Railway Co. are calling for tenders for a brick addition to the power house at Goldstream to accommodate the new plant to be installed shortly.—The engineering business of Armstrong & Morrison has been purchased by the Vancouver Agency, Limited, Colin F. Jackson, manager. It is the intention to enlarge the works and erect a modern foundry.

MONTREAL, QUE.—At an early meeting of council specifications will be submitted on which to invite tenders for the electric lighting of the city after the expiration of the present contract.—The chairman of the fire committee will introduce a by-law in council authorizing a special loan of \$100,000 for the building of a fire station in the centre of the city, and to purchase two fire engines and two water towers.—A special committee of aldermen have decided that two hospitals for the treatment of contagious diseases are necessary, and it is proposed to give \$50,000 each to the Grey Nuns and the Royal Victoria Hospital to assist in the erection of suitable buildings.—Ald. Martineau, chairman of the road committee, states that his department will require \$25,000 for permanent sidewalks and about \$35,000 for replacing wood pavements with stone blocks on portions of Craig, St. Lawrence and St. Denis streets.—Another electric lighting company is in process of formation, to establish an electric light plant near Riviere des Prairies and to supply electricity to Sault au Recollet, Longue Pointe and

other towns. Eugene Mony, civil engineer, and J. A. O. Laforest, former superintendent of the Montreal waterworks department, are interested.—The president of the Board of Trade has announced himself in favor of the reconstruction of the burned building.—L. O. David, city clerk, invites bids up to Thursday, 7th inst., for supply of 4,000 feet of fire hose, 50 feet of 3/4 inch hose for the water tower, and 50 salvage covers.—J. Coristine & Co., whose block on St. Paul street was destroyed by the recent fire, have decided to rebuild as soon as the weather will permit.—The harbor commissioners want tenders by noon of 15th inst. for annual supply of castings, spikes, bolts, oils and other stores.

TORONTO, ONT.—Burke & Horwood, architects, have taken tenders for a five-story building to be erected by the William Davies Co. on the present site of Shaftesbury Hall, corner Queen and James streets. It is expected that the work will be proceeded with in the spring.—It is understood that the Ontario Legislature will be asked to make an appropriation for an addition to the Central Prison, to include a new set of baths, a number of isolated cells, and a chapel for the use of Roman Catholic prisoners.—It has been suggested that the memorial to the late Queen Victoria, to be provided by the citizens of Toronto, take the form of an art museum building.—The acting city engineer has recommended the construction of the following works: Asphalt pavement—Bloor street, Yonge street to Avenue road, cost \$18,985; Lowther avenue, Walmer road to Brunswick avenue, cost \$3,930; Bedford road, Bloor street to Lowther avenue, cost \$6,415; Balmuto street, Bloor to Czar, cost \$4,350. Brick pavements—Hayden street, Yonge to Church, cost \$6,840; Wellington street, York to Simcoe, cost \$8,260. Granite set pavement—Church street, Front to Esplanade, cost \$8,240. Tar macadam roadway—Howland avenue, Barton ave. to 2,130 feet north, cost \$12,770. Concrete sidewalks—Queen street, north side, Euclid to Bellwoods avenue, cost \$2,065; George street, east side, Front to 204 feet north, cost \$575; Queen street, north side, from 46 feet east of Dundas street to Bellwoods avenue, cost \$5,850; Front street, north side, George street to 137 feet east, cost \$370; Gould street, north side, Yonge to Church, cost \$1,526; Walmer road, east side, from No. 13 around the bend for a distance of 150 feet, cost \$253; Bloor street, south side, Avenue road to 151 feet west of Devonshire place, cost \$1,284.—The Board of Control will advertise for tenders for cedar sleepers for sidewalk purposes.

FIRES.

Factory of Stanley Piano Co. at Peterborough, Ont., totally destroyed.—Residence of Thurston Silmeier at Cornwall, Ont., totally destroyed.—Building of H. H. Acorn and residence and stores of P. Pampbell at Souris, P.E.I.; loss \$12,000, insurance \$9,000.—Residence of Jas. Sloane in Upper Melbourne, Que.; loss \$3,000.—Grain elevator of C. A. Young at Deloraine, Man.; loss \$10,000.—Building occupied by the Army & Navy Clothing Store, on King street, Toronto, damaged to extent of \$4,000.

CONTRACTS AWARDED.

VANCOUVER, B. C.—Stone and brick block for Dr. A. J. Holmes; T. Turnbull, contractor; price, \$12,000.

CALGARY, N. W. T.—The contract for superstructure of bridge across the Elbow river has been let to S. Spafford.

TRAIL, B. C.—Jas. A. Clarke has secured a contract for cribbing the river bank near the smelter; contract price, \$26,000.

PICTOU, N.S.—The contract for stand pipe for waterworks system has been let to the Chicago Bridge & Iron Co.; price, \$4,275.

DUNDAS, ONT.—The tender of G. A. Stimson & Co., of Toronto, has been accepted for purchase of \$7,177 debentures; price, \$7,352.

OWEN SOUND, ONT.—The council has accepted the offer of the Canada Life Assurance Co. to purchase \$30,875 5 per cent. town debentures for \$28,117.44.

LONDON, ONT.—Herbert Matthews, architect, has let the contract for furnishing shop fixtures for store on Dundas street for G. E. Kennedy to the S. Hadley Lumber Co., of Chatham.

KINGSTON, ONT.—H. P. Smith, architect, has accepted the following tenders for alterations to stone house of Mrs. Yates: Carpenter work, Jos. Hooper; masonry, Langdon & Hamilton; steam fitting and plumbing, J. W. Oldfin; painting, T. Milo.

FREDERICTON, N.B.—The tender of the Berlin Iron Works, of Three Rivers, Que., has been accepted by the Government for building steel bridges at the following places:—Tobique Narrows, Victoria county; Upper Corner, Sussex, Kings county; St. Louis, Kent county; Taylor dam, Rothesay, Kings county.

OTTAWA, ONT.—The Dominion government has let the contract for the construction of breakwater at Mispic, near St. John, N. B., to Simmons & Burpee for building a wharf at Carleton the tender of Smith & Haney has been accepted.—It is said that the lowest tender for constructing a new lock for the Lachine canal is the Canadian Construction Co., of Montreal.

BLASTING.

The coefficient is the quotient obtained by dividing the weight in pounds of the charge found capable of just rupturing the rock by the cube (or third power) of the length of the line of least resistance used in the experimental blast. As the resistances vary with the number of free faces, it is best to determine the rock coefficient separately for the different conditions in practical work. For example, if a tunnel is to be driven the conditions will be as follows: With each new "cut" there will be a certain number of "bearing in" shots to "unkey" the face. In this case the coefficient should be determined for the rock with one free face. The "enlarging shots," after unkeying, will have two, and in some cases three free faces. It will suffice to determine the co-efficient in these cases for the rock with two free faces. The method to be pursued will be sufficiently explained by describing the procedure for obtaining the rock coefficient with two free faces.³ Select a bench of the rock in which blasting is to be conducted, about two feet wide on top and three feet high. In this drill four or five holes of the diameter to be adopted in regular work in future three feet deep, so that the line of least resistance will in each case be two feet long. The holes should be bored as far apart as three times the length of the line of least resistance, so that the shots will not influence each other by opening up seams. The rock must be selected where it is homogeneous, so that all the shots will be fired under exactly similar conditions. Now charge the several holes

3. This gives what Daw calls the charging coefficient. Daw's method is more scientific, determining the rock coefficient and charging coefficient separately, but is not so easily applicable for the common miner. The method here given leads to sufficiently accurate results in practical work.