

*The Canadian Institute
46 Richmond*

THE Canadian Contract Record

A Weekly Journal of Advance Information and Public Works.

ITS PURPOSE. TO SUPPLY TO CONTRACTORS ADVANCE INFORMATION RESPECTING CONTRACTS OPEN TO TENDER, AND TO ARCHITECTS, ENGINEERS, MUNICIPAL AND OTHER CORPORATIONS, A DIRECT MEDIUM OF COMMUNICATION WITH CONTRACTORS.

ITS MERIT: ECONOMICAL AND EFFECTIVE SERVICE.

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THE CANADIAN CONTRACT RECORD,

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Information from any part of the Dominion regarding contracts open to tender sent exclusively to this journal for publication, will be liberally paid for.

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Ontario Association of Architects, signed its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

The publisher of the "Canadian Contract Record" desires to ensure the regular and prompt delivery of this journal to every subscriber, and requests that any cause of complaint in this particular be reported at once to the office of publication. Subscribers who may change their address should also give prompt notice of same, and in doing so, should give both old and new address.

NOTICE OF REMOVAL.

Hammond & Williams, contractors, of 306 Spadina Avenue, have removed their private residence to 365 Dupont street. Workshops still at 310 Spadina Ave.

TENDERS

Will be received up to noon of THURSDAY, SEPT. 18TH, for the various works required in the erection of FOUR DOUBLE TENEMENTS on corner of Major and Alexander Streets, Montreal. The lowest or any tender not necessarily accepted.

WRIGHT & SON, Architects,
224 St. James Street, Montreal.

TENDERS

Will be received at the office of the undersigned until Saturday noon, 20th September, 1890, for the several works required in the erection of a brick-stone residence for J. T. Jackson, West Toronto Junction. The lowest or any tender will not necessarily be accepted. Contractors will be required to furnish satisfactory evidence of their ability, financial and otherwise, to properly execute the work. JAS. A. ELLIS, Architect,
Room 7, Dundas Chambers, W. Toronto Junction.

TO BUILDERS.

Scaled tenders will be received up to Friday, September 18, 1890, at noon, for the alterations and additions to the Registry Office for the County of York, situated on Richmond street east, in the City of Toronto. Plans and specifications can be seen at the office of the undersigned, to whom all tenders are to be addressed. No tender necessarily accepted.

By order,

JOHN T. STOKES,
County Engineer.

County Engineer's Office,
Court House, Toronto, Sept. 9, 1890.

SLAG CEMENT.

In a recent article on slag cements *Le Genie Civil* states that these cements are made by finely grinding blast furnace slag and mixing it with a suitable proportion of fat lime. The grinding has to be very fine, because as the cement is made by a simple mixture it is necessary that the surface on which the two constituents, the lime and the slag, react on each other should be as large as possible if proper chemical combination is to ensue. The density of slag cements is much less than that of Portland, weighing bulk for bulk, but from .8 to .88 times as much. In general, this cement also sets somewhat more slowly than Portland, but when hardened, has, in many cases, a greater strength, particularly at early dates after setting. In some experiments still unfinished, the following results were attained with a slag cement from the Department of Iseré:

Age	1 week.	1 month.	3 months.
Breaking load, lbs.			
per sq. in.	473.5	568.8	678.3

These figures are higher than any attained in the tests made on Portland cements for the new Croton Aqueduct. Experiments have also been made with slag cement mortar mixed with, and allowed to harden in, sea water, and gave the following results; the mortar consisted of six parts by weight of cement to ten of sand:

Age.	Breaking Weight, lbs.		per sq. inch.	
8 days.	252.0	319.9	275.1	273.0 285.8
28 "	375.4	327.0	327.0	248.4 341.2

The main objection to slag cement seems to be that if it is allowed to harden in dry air its strength is very materially reduced, and it is then liable to crack. In the town of Villefranche-sur-Saone (Rhône), it has been largely used for paving footpaths, some 4,800 square yards having been laid there with the most satisfactory results.

Graphite has been found an excellent substitute for red lead in making joints and connections in steam and gas fittings. The graphite, mixed with the best boiled oil, makes a much better joint, and, it is claimed, will remain tight three months or three years, and will then yield to the ordinary pressure of the tongs, whereas the red lead once set, it is next to impossible to open the joint without damage to the pipe or tongs. The graphite should be pure and of the right grade of fineness. —*Progressive Age.*

BRICK-DUST CEMENT.

Ordinary brick-dust, mixed with lime and sand, affords a tolerably good substitute for hydraulic cement, the brick-dust mortar being decidedly, though not strongly, hydraulic. In his "Engineer's Pocket-book" Trautwine recommends its employment in all cases where hydraulic cement cannot be obtained. In experiments made by him with mixtures of brick-dust and quicklime, he found that blocks of one-half inch in thickness, after immersion in water for four months, bore without crushing, crumbling or splitting a pressure of 1,500 pounds per square inch. He appears to have been thoroughly convinced of its merits, since he recommends the addition of small quantities of it to ordinary cement and mortar. He believes that the addition of even as small a proportion as one-tenth as much brick-dust as sand to our ordinary mortars would prevent the disintegration so generally visible in the mortars used in the masonry of many of our public works. We have similar testimony as to the value of this material from quite independent sources. The use of brick-dust with lime and sand is said to be very generally and successfully practiced in the Spanish dominions as a substitute for hydraulic cement. F. B. Miles, now in Philadelphia, but who has spent a number of years in Cuba, engaged in engineering work, and who has had an abundant opportunity of testing the merit of the material, states, as his experience that it is in all respects superior to the best Rosendale hydraulic cement for culverts, drains, tanks or cisterns, and even for roofs, whether for setting flat tiles or for making the usual tropical flat roof. It is known in that country as a regular article of commerce. The proportions used in the manufacture are approximately one of brick-dust, one of lime and two of sand, mixed together dry and tempered with water in the usual way. Mr. Miles expresses the opinion in a communication on this subject some years ago, that as this material could be produced at a lower cost than cement, it should prove a profitable plan to utilize the waste and broken bricks by setting up pulverizing mills in all large brick yards. This suggestion we regard as a very practical one, and commend it to the notice of enterprising manufacturers as worthy of their serious consideration. —*Manufacturer and Builder.*

The "Canadian Contractors' Handbook," 50 cents to RECORD subscribers.