

# 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, and not elsewhere published, 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 acquired the 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 following resolution was unanimously adopted at the First Annual Meeting of the Province of Quebec Association of Architects, held in Montreal, Oct. 10th and 11th, 1890: "Moved by H. Perrault, seconded by A. F. Dunlop, that we the Architects of the Province of Quebec now assembled in Convention being satisfied that the CANADIAN CONTRACT RECORD affords us a direct communication with the Contractors, Resolved, that we pledge our support to it by using its columns when calling 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.

## TENDERS WANTED.

Tenders will be received by the undersigned until THURSDAY, THE 19TH INST., for the several works required in the erection of a House on Johnston Street, Kingston. Plans and specifications to be seen at the office of the undersigned.

The lowest or any tender will not necessarily be accepted.

POWER & SON, Architects,  
Lion Block, Kingston.

## TENDERS.

Local Improvements—Eglinton Avenue.

Tenders will be received by the undersigned for the Corporations of North Toronto and York Township, for Grading, Macadamising, Bridging, &c., on Eglinton Ave., between Yonge Street and Forest Hill Road. Plans, specifications &c., can be seen and tenders received at office of undersigned up to SATURDAY, MARCH 21ST, 1891, at 5 p.m. The lowest or any tender not necessarily accepted.

PETER S. GIBSON, C.E. & P.L.S.,  
Engineer for Corporation.

Willowdale, March, 1891.

## TO ARCHITECTS.

Office and good-will for sale, or will take partner; city. For full particulars, address "R. A.," care CANADIAN ARCHITECT AND BUILDER.

## TO CONTRACTORS.

This is not a "Job," but is in reference to a matter which may prove interesting and profitable to our subscribers, especially the building fraternity and architectural students.

To encourage system in taking out quantities, and assist contractors to avoid the losses so frequently incurred as the result of haphazard methods of estimating.

## A PRIZE OF \$20

will be given for the most complete and best arranged Bill of Quantities figured from plans and specifications of a house, actually built, which will appear in the CANADIAN ARCHITECT AND BUILDER for March.

For full particulars of this competition see the March number of the CANADIAN ARCHITECT AND BUILDER.

## VENTILATION BY HEAT.

A paper read by Mr. W. P. Buchad, Sanitary Engineer, before the Philosophical Society of Glasgow, says: "Some time ago I was testing the speed of air up the ventilating pipe from the ceiling of a church. The vertical part of this pipe was about 40 feet high, while the diameter of the pipe was 18 inches. Near the bottom of the vertical pipe there was a small circular gas tube, with provision for lighting a dozen of gas jets when wished. I first tested the ventilating pipe without the gas being lighted, when the speed indicated was 160 linear feet per minute. This was no great speed, but it showed that the heat of the gas gave considerable increase of up-current. Then the question occurred, would the speed be still further increased by suspending a piece of 12-inch pipe, and say 3 feet long, of thin sheet-iron a little above the gas jets, so that when these jets are lighted they would heat the 12-inch tube, and so increase the current? As it was going to be rather troublesome to make the experiment with the 18-inch pipe, I constructed a 6-inch diameter pipe, 3 feet long, with a 3-inch diameter inlet at its foot, but to one side, the bottom being closed with a lid. The 3-inch diameter inlet was to suit the anemometer. Upon suspending a piece of 3-inch diameter thin sheet-iron tubing, 1 foot long, above a No. 4 Bray's gas burner, placed inside of the 6-inch pipe, the speed indicated, with the gas lighted, was 520 linear feet in two minutes. With the 3-inch tube removed, the speed rose to

585 feet, in the two minutes, showing a difference of 65 feet. The inner tube in this case, therefore, did more harm than good. Another experiment was thereafter made with a piece of plain sheet iron about 1 foot long and 5½ inches wide, suspended a little above the gas, with the result that with this sheet-iron plate on, the speed indicated was 555 feet in two minutes. The use of the plates would, therefore, appear to be a mistake, and a pure waste of money also, the up-current being fully five per cent. less with it than without it.

This loss of speed with the inner tube or the plate suspended above the gas, I attribute to the extra friction.

As Mr. Aitken, of Darroch, has stated that there are about 400,000,000 particles of matter in a cubic inch of air above a Bunsen gas burner, we have still an ample quantity to heat the air in a ventilating tube, without the addition of either the inner tube or suspended plate above referred to, supposing the number of particles of matter above an ordinary gas jet were less than a quarter of the number mentioned by Mr. Aitken.

In order to get the full value of the heat and conserve it for the up-current, it would be all right to wrap asbestos or felt around the outside of the pipe, but suspending large concentric pipes or plate inside the outlet ventilating pipe in the manner described, appears to me to be a pure waste of money. They retard the up-current, and so harm the ventilation, whether the gas is lighted below them or not, and in many cases, in practice, the gas would not require to be lighted, as when there was wind or other natural cause to produce a good up-current. In this latter case suspension of a pipe or plate inside of the outlet pipe would simply be a continuous check. In fact in thousands of cases, were the outlet ventilating pipes put in large enough, and fitted up properly, no gas would be needed—as, e. g., for one-storied schools, and for churches and many halls, etc.

A new roofing material is mentioned in the German papers in the shape of a sort of metallic slate, somewhat similar to that used among us, but enameled so as to be proof against moisture or acid vapors. Metallic slates of tin and galvanized iron have long been used in Germany, and galvanizing has been pronounced by the highest scientific authority there to be the best protection against rust that has yet been applied to iron.