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.

Vol. 2. ***Toronto and Montreal, Canada, March 28, 1891.*** ***No. 7***

THE CANADIAN CONTRACT RECORD,

A Weekly Journal of Advance Information and Public Works,

PUBLISHED EVERY SATURDAY

As an Intermediate Edition of the "Canadian Architect and Builder."

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), $2 per annum, payable in advance.

C. H. MORTIMER, Publisher,

14 KING ST. WEST. - TORONTO, CANADA.
Telephone 2362.

62 *Temple Building,* - *Montreal.*
Bell Telephone 2259.

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 signified 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 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 M. 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.

USEFUL HINTS.

An expert in such matters says he has found the following the best thing he has tried for making joints against fluid pressure:

5 pounds Paris white.
5 pounds yellow ochre.
10 pounds litharge.
5 pounds red lead.
4 pounds black oxide manganese.

The whole is to be well mixed, and a little asbestos and boiled oil added. This, he says, soon becomes nearly as hard as the iron itself.

As of interest in the matter of anti-fouling coatings for submerged iron and steel surfaces, it may be stated that an experiment is now being tried by the Government at the Brooklyn, N. Y., navy yard, with two plates of iron and steel covered with a species of Japanese lacquer. The plates are each four feet square and will remain submerged for three months. While primarily intended to test the merits of the lacquer for the protection of submerged portions of hulls of vessels, the trial obviously has a wider range of interest. — *Engineering Record.*

To prevent the paint on iron or wood from scaling off when exposed to the weather, first thoroughly wash the parts to be painted and then brush over the surface with hot linseed oil. By following this method, especially with iron articles, no scaling of the paint will occur. In cases where the articles to be painted are small and can be readily heated, it is better to heat them and plunge them into the oil. The thin liquid oil when hot enters into the pores of the metal, absorbs the moisture, and the paint then applied so firmly adheres that frost, rain or air cannot effect a separation.

A FRENCH METHOD OF GIVING COHESION TO SAND.—The want of cohesion in that most useful material, sand, has often been observed to limit its utility, especially when it is employed in making moulds, &c. This difficulty can be got over by heating it with a mixture of coal-tar and asphalte, which causes the grain to agglutinate, and at the same time does not diminish the power of resisting high temperatures. The tar and asphalte are mixed together in any convenient proportions, and then heated in order to reduce them to a homogeneous fluid condition. While still hot this mixture is poured into the sand, which, in a short time, without further trouble, becomes thoroughly impregnated with it. The simplicity and inexpensiveness of this process is sure to recommend it to the notice of many English manufacturers who have experienced difficulties through the natural want of cohesiveness in sand.

The *Locomotive* directs attention to a very dangerous practice in fitting steam guages attached to house-heating boilers. It says: We often find steam gauges so arranged that their indications are necessarialy a number of pounds in error, owing to the static pressure of water of condensation in the connections. While error does not ordinarily exceed two or three pounds, it sometimes is far greater than this, and becomes of grave importance, especially in low-pressure systems. We met with a case recently in which an ordinary heating boiler was in the basement, and the gauge was in the owner's room on the third floor, fully twenty-five feet above. The piping was so arranged that it was an easy matter for it to fill up with water condensed from the steam, so that the indication of the guage might be as much as ten pounds less than the actual pressure in the boiler. Such a gauge, it need hardly be said, is no better than none at all. In fact, it becomes a positive source of danger.

At a recent meeting of the members of the East of Scotland Engineering Association, Mr. A. R. Bennett read a paper on "Lightning Conductors." He showed that a good deal of uncertainty as to the action of lightning conductors prevailed among those who, not being professed electricians, were called upon to erect lightning rods. Having given the physical explanation of lightning, and described by analogy the functions of a lightning conductor, he finished by giving some general recommendations for the prevention of lightning shocks to buildings. These were that buildings should have at least one metal point in as perfect connection with the earth as possible, preferably by several paths, raised above all stone, wood, or other non-conducting portions; that all pipes, bell-wires, and other masses of metal in the house, should be connected with the conductor, and that the conductor, should have as good an "earth" as possible. If such precautions were general, he said, we would hear less of mysterious fires than we do now, and one thing had been brought out again and again with regard to lightning conductors —that ordinary workmen were quite untrustworthy in fitting them up.