

own hands to prevent any breach of good relations being maintained between himself and the architect. The work has been specified to be done in a certain manner, and materials of a certain quality have been called for. Now it is impossible for the architect to be always on a building and to see all the material that is put into it. It is left, therefore very much to the honour of the contractor to carry out this part of his bargain honestly. To take advantage of the absence of the architect, and put in inferior stuff, and cover it up before he can see what has been done, every contractor knows is a dishonest trick. He also knows that if an architect does his duty by his client, he must be rigid in regard both to the proper, workmanlike performance of the work, and to the quality of the materials used. It has vexed the soul of many an architect, when he has discovered the want of good faith in this respect. And who shall blame him if in his indignation he has uttered as vigorous an anathema as did Pope Gregory to St. Ingleby Bray, using in less measured terms, his closing words,

"Come bring me a book, come bring me a bell
As big as a dustman's, and a candle as well,
And I'll send him—where good manners won't let me tell."

If an architect is expected to act in a fair and honorable manner towards contractors, they must also carry out their work with perfect honesty. At the same time, although the statements here made apply to a large number of contractors, they are by no means of general application. There are many contractors who would rather work at a loss than be guilty of any dishonorable practice. At the completion of a building, if matters have proceeded as they ought to have done, there should be very little trouble in winding up the accounts to the satisfaction of all parties. Written orders must be produced by the contractor for all claims for extra work; and where no previous agreement has been made as to the cost of such work, then the architect must give a fair valuation for it. And here again, it must be repeated, that it would greatly simplify this part of the transactions if the system of tendering by bills of quantities were generally adopted. It may not be long before such a system comes into use, and the sooner it comes the better for all concerned. The price to be charged would then in the majority of cases be a foregone conclusion, and would have to be allowed without demur, while, by the process now in vogue, there is sure to be more or less discontent on one side or the other. But when an architect is satisfied with amount charged in the final account, and that the work has been done to his satisfaction, he should not withhold by a day longer than is necessary his final certificate. He should remember that the contractor has to meet his legitimate payments for material that has been used in the building, that he has had to pay wages, and that any unnecessary delay in giving a final certificate to the contractor, is a dead loss to him.

FOR COPYING DRAWINGS.

A NEW method of copying drawings which may be found of service in architects' offices, is given in the *Deutsches Baumgewerbet Blatt*. Any kind of opaque, drawing paper in ordinary use may be employed for this purpose, stretched in the usual way over the drawing to be copied or traced. Then by the aid of a cotton pad, the paper is soaked with benzine. The pad causes the benzine to enter the pores of the paper, rendering the latter more transparent than the finest tracing paper. The most delicate lines and tints show through the paper so treated, and may be copied with the greatest ease, for pencil, Indian ink or water colors take equally well on the benzinized surface. The paper is neither creased nor torn, remaining whole and supple. Indeed pencil marks and water color tinting last better upon paper treated in this way than on any other kind of tracing paper, the former being rather difficult to remove by rubber. When large drawings are to be dealt with, the benzine treatment is only applied to parts at a time, thus keeping pace with the rapidity of advancement with the work. When the copy is completed the benzine rapidly evaporates and the paper assumes its original white and opaque appearance without betraying the faintest trace of the benzine. If it is desired to fix lead pencil marks on ordinary drawing or

tracing paper, this may be done by wetting it with milk and drying in the air.

OUR ILLUSTRATIONS.

RESIDENCE, MONTREAL, NOW APPROACHING COMPLETION—
ANDREW T. TAYLOR, F.R.I.E.A., AND G. H. GORDON,
ARCHITECTS, MONTREAL.

ACCEPTED COMPETITIVE DESIGN FOR CONFEDERATION LIFE
ASSOCIATION BUILDINGS, TORONTO.—MESSRS. KNOX,
ELLIOT & JARVIS, ARCHITECTS, TORONTO.

CANADIAN MANUFACTURERS' ASSOCIATION COMPETITION FOR
AN \$800 WORKMAN'S COTTAGE.—SECOND PRIZE DESIGN
BY C. H. ACTON BOND, TORONTO.

"CANADIAN ARCHITECT AND BUILDER" SERIES OF PRIZE COMPETITIONS.

THE following is a list of competitions in Architectural subjects which we have decided to hold during the winter:—

1st.—Plans of a serving pantry, 100 square feet in size, showing cupboards, shelving, etc., with details of same. Plans to be sent in on or before 1st November next. First prize \$5; second, one year's subscription to CANADIAN ARCHITECT AND BUILDER.

2nd.—Designs for three plaster cornices of 20 inches, 25 inches and 30 inches girth; and of three centre pieces of 15 inches, 20 inches, and 25 inches diameter. Drawings to be sent in on or before 1st December next. First prize, \$5; second, one year's subscription to CANADIAN ARCHITECT & BUILDER.

3rd.—Essay on Plumbing. Essays to be sent in on or before 1st Jan. 1890. First prize, \$10; second, one year's subscription C. A. & B.

4th.—Designs with details for a verandah running across the front of a house 40 feet wide, and an outside wooden porch to a front door. Designs to be in on or before 1st Jan. 1890. First prize, \$5; second, one year's subscription C. A. & B.

5th.—Designs with details for front doors and vestibule. Designs to be sent in on or before 1st Feb., 1890. First prize, \$5; second, one year's subscription C. A. & B.

6th.—Details of the interior of a small house to include those for staircase, doors, architrave, base and windows. Designs to be sent in on or before 1st March, 1890. First prize, \$10; second, one year's subscription to C. A. & B.

7th.—Design with details for four mantels, two of wood, one of brick and one of stone. Designs to be sent in on or before 1st of April, 1890. First prize, \$5; second, one year's subscription to C. A. & B.

8th.—Three designs with details, for front fence. Designs to be sent in on or before 1st May, 1890. First prize, \$5; second, one year's subscription to C. A. & B.

9th.—Essay on Heating and Ventilation. Essays to be sent in on or before 1st May, 1890. First prize, \$10; second, one year's subscription to C. A. & B.

10th.—Plan of a bath room for a medium sized house, showing the best position of fixtures; not more than five fixtures to be shown, or more than 75 square feet devoted to the bath room. Plans to be sent in on or before Jan 1st, 1890. First prize, \$5; second, one year's subscription C. A. & B.

The Architectural Guild of Toronto have very kindly appointed a committee from their number to judge the above competitions. We shall publish each report as sent to us by the committee. Draftsmanship, neatness and clearness of arrangement of drawings will be taken into consideration in awarding positions.

Drawings must be made on sheets of heavy white paper or Bristol board, 14 x 20 inches in size, and must be drawn to allow of their being reduced to one-half the above size. Drawings must be made in firm strong lines, with pen and black ink. No color or brush work will be allowed.

Each drawing must be marked with the *nom de plume* of its author, and the author's name, *nom de plume* and full address, enclosed in sealed envelope, must accompany each drawing sent in.

We reserve the right to publish any design sent in.

Drawings will be returned to their authors within a reasonable time after the committee has given its decision.

"HOW TO ESTIMATE."

HAMILTON, Nov. 6th, 1889.

Editor CANADIAN ARCHITECT AND BUILDER.

IN studying out the rules and directions for the measurement of stone work given by "Cato" under the above heading on page 115 of the CANADIAN ARCHITECT AND BUILDER for October, I am sorry to say that it must be apparent to any practical man that "Cato" labors under a very serious mistake when he says that "a perch of stonework measures 16½ feet long, 1½ feet wide, and 1 foot high," for such is not the case. A perch of stonework measures 11 ft. long by 1½ ft. wide by 1 ft. high, making 16½ cubic feet in the perch, and not 24½ feet, as "Cato" says.

"Stone walls are generally measured by the perch, as it is called a perch of stonework, being 16½ cubic feet."—See *Johnson's Arithmetic*, page 43.

Please correct the mistake, which may be perplexing and misleading.

Yours truly,

COMMENT.