

A New Form of Building Contract.

An Improvement on Old Methods.

By the courtesy of the Hon. C. J. Parr, Minister of Education, a representative of *Progress* was permitted to interview Mr. John T. Mair, A.R.I.B.A., architect to the Education Department, with reference to a new form of building contract described by him in a paper read before the Conference of Education Boards held in Wellington on January 25th, and to publish the following extract, which is of special interest to the architects and builders of New Zealand:—

"The necessity for more schools and the difficulty in securing their erection, even at the high prices ruling, are too well known to you to require stressing here.

"It is my purpose to place before you the alternative methods whereby Education Boards may secure the erection of schools with reasonable safeguards to the Department against exploitation by the builders.

"Fluctuating prices of materials, uncertainty of supply and delivery, and the unsettled labour conditions, have introduced such an element of gambling that throughout the world builders have declined to enter into definite lump sum contracts, except at exorbitant prices.

"Methods have been evolved whereby the builder is, in varying degree, relieved of the gambling element. Apart from the cases where the owner supplied the materials, or bulk of the materials, and let the remainder and labour by contract, the following methods have been adopted:—

- (1) A clause was inserted in ordinary contract conditions allowing for adjustment for any increases in labour or materials during the currency of the contract.
- (2) Day labour on a percentage basis.
- (3) Day labour with an agreed lump sum as the builder's total profit.
- (4) Actual cost plus an agreed lump sum, or fee, subject to a penalty and bonus clause contract.

Under method (1) a statement of the rates of labour and material, upon which the contractor has based his tender, forms part of the contract, and the owner assumes responsibility for all increases on these figures.

Under method (2) the owner assumes full responsibility for the total cost of all labour and material, and in addition pays a percentage on cost to the builder.

"Both of these methods have been universally condemned, as they provide no near approximation of cost before commencement, and afford no incentive to a builder to expend time and energy in judicious buying or in the engagement and control of labour.

In method (3) the builder submits an estimate of actual cost and enters into a contract to carry out the work by day labour for a fixed additional fee (usually 10 per cent. on the estimate) which is the total amount payable to him as profit, whether the actual cost exceeds or falls below the estimate. This method eliminates most of the objections to method (2), as it offers no incentive to the builder to keep the cost up, and does not penalise him for effecting a saving. In 1915 I adopted this method and found it quite satisfactory: the only objection being that should the estimate be considerably exceeded and the builder find himself working for nothing, he is apt to lose interest in the work at the end. In every case the quality of materials and workmanship was more uniform than contract work done simultaneously.

Method (4), generally referred to as the "Cost plus Fee with penalty and bonus clause contract," was developed out of method (3) by American architects and builders in 1919, and since then has been almost exclusively adopted in America and has been copied in other countries.

"Under this method the selected builder submits an estimate of 'actual cost' and states the amount of the lump sum or 'fee' in addition, for which he is prepared to carry out the work. These figures, if satisfactory to the owner, form the basis of a contract wherein it is agreed that the 'fee' payable to the builder shall be reduced if the estimate be exceeded or increased should he effect a saving on the estimate.

"The amount of the 'fee' is usually found to be from 7 per cent. to 10 per cent. on the estimate: a common practice with American builders being to make it 10 per cent. on the estimated cost of labour and 6 per cent. on materials.

"The ratio which the penalty or bonus bears to the excess or reduction of cost, as compared with the estimate, is a matter for agreement between the parties, but usually the local Builders' Association and Architects' Association have come to an agreement on this point. In some cases the bonus is greater than the penalty; in others *vice versa*, and builders have in some instances contracted to bear one-half the amount of any excess over estimate.

"My information is that in America the bulk of the work is carried out on a basis of reduction of, or addition to the fee, by an amount which is the same percentage of the fee that the amount of excess or saving is of the estimated cost. The following example on that basis will clearly exemplify the working of the principle:—Assume a building estimated to cost for actual labour and material £10,000 and a fee of £1,000 asked by the builder—total estimated cost £11,000—and considered