

**ESTIMATING FRAME AND
BRICK HOUSES: BARNs,
STABLES, FACTORIES AND
OUTBUILDINGS**

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Estimating Frame and Brick Houses: Barns, Stables, Factories and Outbuildings by Fred. T. Hodgson

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FRAME AND BRICK HOUSES
BARNs, STABLES, FACTORIES
AND OUTBUILDINGS

Eighth Edition, Enlarged, Amended and Modernized

BY
FRED. T. HODGSON

Containing a detailed estimate of a \$5,000 house and additions. Detailed estimates of kitchen, dining-room, parlor, den, halls, bedrooms, conservatory, basement, bath-room, closets, etc., all figured out and measured by the quickest and simplest methods. Also showing how to estimate by cubing, by the square of floors or walls, and by the process of comparison; with hints and practical suggestions for taking measurements and making tenders for work.



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Franklin N. Rose

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PREFACE TO EIGHTH EDITION.

The fact that this little book has gone through seven editions, under the title of "Estimating Frame and Brick Houses," is convincing evidence of its usefulness and worth. The steady demands for it, after being in the market for more than ten years, has induced the publishers to have a new revision of the work on an enlarged and improved basis. They have decided to go to the expense of almost rebuilding the work, and giving it another title, in order to bring it in touch with present methods and current prices of builders' work. The author has endeavored, in the present edition, to make the work as generally useful as possible, and so construct it that the builder living in any State of the Union, may make use of it as a basis for making his estimates. Though the rules given may not conform with the local rules of any particular locality, yet they will be found to meet the requirements in general of forming a basis for estimating the nearest possible cost of the different items in builders' work. In the preparation of estimates of the various departments of builders' work, there are certain elements which must always be borne in mind in connection therewith. First, as regards the material, its accessibility to the building site, and expense of carriage thereto. Then there is the labor entailed in its preparation previous to being fitted up or built, and the necessary time and material required for doing so in accordance with the specifications.

Some kinds of material are more easily wrought than others, so that due allowance must be made for any extra labor that may be employed in the manipulation of very

hard classes of material. Again, there is the preparation of the material for the proper execution of any contingent workmanship and the expense of workmen employed. The season of the year in which the work has to be done, and the current prices of material and workmanship, must have also careful consideration, otherwise these contingencies may cause a serious loss if neglected to be taken into account. All these elements must enter into the consideration of the price of every item when computing the cost. There should be no "guess work" in estimating, as is often the case. Of course, a uniform system of measurement for the various classes of work in building operations would obviate this unsatisfactory condition of estimating. But seeing that it is impracticable at the present time, it is the duty of every contractor who is framing an estimate to give these points previously indicated careful attention. By doing so he is not only protecting himself from loss, but also the manufacturers who supply the material for the work. The contractor who frames a thoroughly reliable contract comes out right, whether he be successful in getting the job or not, for if he gets it, then it adds to his reputation; if he does not get it, then he feels satisfied that he is no loser by accepting a job that would not pay him, and he is exempt from the bad reputation of those who "scamp" the work in order to make ends meet. The rules for "Order in Estimating" which follow, will be found of service in the framing of estimates, and if proper and accurate attention be given to all these details, there should be produced a tender that will be satisfactory to owner and contractor alike.

THE AUTHOR.

Order in Estimating.

It will be well if the estimator will follow the order we have laid down in these remarks when making out his estimate—that is to say, he should first begin with making out the cost of surveying and laying out the grounds for the foundation. Then follows the excavating, bearing in mind the distance the earth has to be conveyed, also the kind of earth to be excavated, and the cost of drainage, if such is required to be done. Next follows the stone work, and careful measurements should be made from the plans, taking in and making such provisions for waste and extras as we have pointed out among the earlier pages. Be sure of the cost of this work per cord or perch in the wall before closing a tender

This will be followed by the brick work, and we would suggest that the figures for these various works be kept in separate books, and marked so that they may be referred to again if necessary.

In estimating the brick work be sure not to miss chimney projections, piers of verandas, porches and stoops. If the building is to be faced with pressed bricks backed with common stock, find out the difference in size between the two kinds of bricks, and, if any difference does exist, see how it is going to affect the work, and provide for it accordingly. Sometimes this difference is the cause of considerable trouble and expense. Figure up on the mortar required, and if colored mortar is going to be employed

don't "jump" at the cost, but find out exactly. The quantity may be obtained for each 1000 of bricks in the early pages or from any builders' text book.

Timbers, joists, studding, rafters and other coarse lumber should be figured out exactly and classified according to price, so that the cost can be ascertained. Then follows the roof covering, shingles, slates or metal; floors, bridging, trimmers, strapping or furring, lathing and plastering. Measure plans closely in every case and be sure you are right. Next estimate for labor in placing floor timbers, partitions, roof timbers and all other rough carpenter work. Then follow with estimate of all finished wood work, frames, sash, doors, wainscot, mantels, stairs, trimmings and fitments throughout. Stucco work and other ornamental plastering should come next, then all the painting, glazing, finishing and varnishing and every item that belongs to the painters' trade.

Estimating Plumbing.

If, as is sometimes the case, the general contractor has to estimate on the plumbers' work, he should either consult a plumber or make himself conversant with the prices of labor and material current in this trade, and should be careful in obtaining lengths of piping, number of couplings, number of cocks, traps and other appurtenances, and should make ample allowance for breakages, misfits, extra digging and cutting and other similar shortcomings. If not master of all details in connection with plumbing, he should by all means employ a regular plumber to make out his estimate for this branch. The same may be said for the heating, for if a young contractor undertakes to do

this work for himself and employ regular tradesmen to perform it, he will very likely regret it. The same may be said of electric lighting or putting in electric bells. Our advice in this matter is that experts in these trades be asked to submit figures for which they will agree to perform the work and furnish all necessary materials in conformity with the true intent of the plans and specifications.

After obtaining by careful estimation the cost of a building, a percentage for profit must be added. This percentage may be more or less, according to prevailing conditions, but under no consideration should it be less than 5 per cent. or more than 25 per cent. on the entire cost of the building. If the figuring has been accurate, and the estimator is possessed of ordinary judgment, 10 per cent. will prove ample to give a fair and reasonable profit on the work.