SYSTEM IN INDUSTRIAL ESTABLISHMENTS

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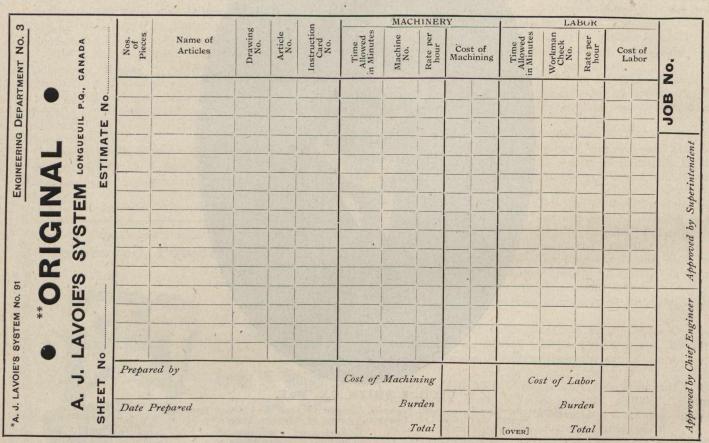
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III.

ESTIMATE.

At this stage the sub-engineer is confronted with the question as to whether it is worth while to make elaborate estimate. If he conclude that it is; then by all means let it be complete and exhaustive. It is in the details where the gains or losses mostly occur; hence keen precaution should be taken to include every item, no matter how small and apparently insignificant. To miss one mark on a drawing may convert a certain profit into a deplorable loss. It may he that the only machine on which a certain operation can be performed is inconveniently located, or is engaged on some special work which cannot be delayed. Or, new tools may be needed, the necessary purchase of which will eat But supposing there is no previous estimate in existence. and the weights, time, and price have all to be figured out from beginning to end; then comes the time to test the theoretical and practical knowledge of the engineer's staff, and the system in vogue.

In making an entirely new estimate, the following rules nust be observed. If there is no drawing or sketch of the machine, appliance, or structure to be estimated, make either one or the other; selection depending upon the character of work. Each article on the drawing or sketch so made, to be numbered consecutively; beginning with the articles to be purchased from outsiders, followed by the heaviest and most expensive pieces. The weight of every article, or detachable part thereof, is to be accurately calculated. And without delay, issue requisition to the purchasing department for the procuration of prices of such parts, or raw material, as must be bought outside. Then—as in the pre-



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up the profits, because the cost was not included. These, and many other things, count in the making of an estimate.

In making any estimate, the following points have to be considered:-(1) Have you ever made an estimate on a job similar to the one before you; (2) did you ever make or manufacture said article; (3) is the quantity required more, or less; (4) did you purchase any special supplies for this previous work; and can you buy on like terms; (5) is there any change in design which will increase or decrease the weight; (6) have you got the machinery to do the work; (7) can you use these machines-probably busy on promised and important work; (8) is the machine in process of repair, and if so, when will it be ready for use; (9) what kind of mechanic can you put on the proposed job; (10) is it the man who performed the work previously, and if so, what time did he make; (II) if a new man, what can he do: (12) has the machinery upon which the previous job of l'ke design was done depreciated since then, and if so, make due allowance. These considerations are all important if an old estimate is used.

vious case of verifying old estimate—enquire if the machines on which it is contemplated to do the work are free; what kind of mechanics are available to operate the machines, and finally determine the earliest possible time of delivery to customer in the event of securing the contract.

The drawing or sketch having been prepared, and the estimate completed, the estimator places original form 91 and 1C4, over duplicate form 92 and 1O4, inserts a carbon paper between the two forms, signs his name in lower left-hand corner, fills in his office number, together with date of estimate completion; also numbers of estimate, sheet and job in the respective places reserved for them.

Having stated generally the modus operandi of making an estimate, both with and without existing data, the way is clear for a more detailed explanation.

Assuming that no reliable data is in the files of the office and that the requisite drawing or sketch of the wor!: to be estimated is before the estimator, the logical order of procedure is: to (1) number each article on the said drawing cr sketch; (2) enquire if any of the parts required are in