THE COST OF WOOD WORKING.*

In this article the desire is to present for the consideration of manufacturers a system which will simplify the keeping for ready reference the cost of the manufacture of any article or set of articles. While a wood-working plant is under specific discussion, it is merely by way of illustration, and it can readily be seen that the principles involved may be carried into any line where system is desired and with the same satisfactory results.

ORDERS.

It matters little what the nature of the article may be, all goods manufactured should be constructed from blank orders which should be furnished to the foreman of each department though which an order passes. The form suggested for this purpose (Figure 1) may be adapted to varied requirements. At the completion of a part of the order in any department it receives the O.K. of the foreman, and is sent along to the next department and so on until the work is finally ready for delivery. This enables the office to at any time learn the exact position of the order without searching through the factory for the desired information. The endorsement of the last foreman having charge of the work should also include the date of the completion of the order.

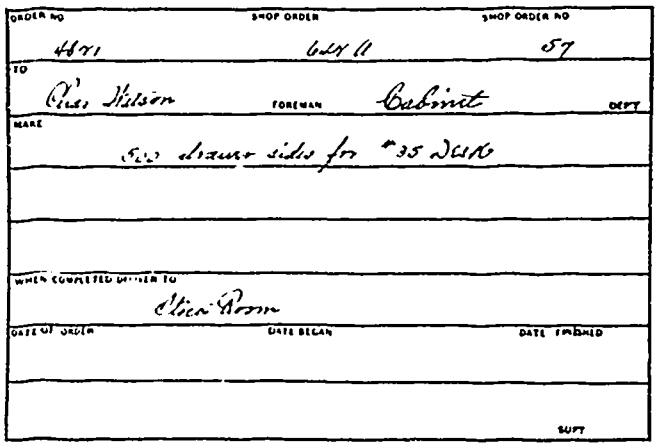

FIGURE I.

If the order is one necessitating its tranfer from one department to another on trucks, then each truck should bear a job ticket or tag on which should be entered the order number and the name of the article to be manufactured. The tickets should in all cases accompany the order, the number of which could at all times be told by the workman detailed, and foremen should be instructed to refuse to receive any job from another department without the ticket attached.

TIME CARDS.

One of the essential points in the cost of the manufacture of an article is the time a workman consumes in its construction; often it is of far greater importance than the actual cost of material. In order to properly arrive at that point the adoption of a time card is suggested. This card may be printed in the form of the dial of a clock (Figure II). This plan is suggested for the reason that the most illiterate workman is able to tell time, and his only task need be to place a cross in the hour when he begins work on an order, and another when it passes from his hand. Thus the exact time required for work in each department through which it passes may be at once determined. Different forms should be provided for each department, as they differ in the operation, but each should retain the chief points; the order number, job number, date commenced, date finished, name or check number of workman, number of pieces and the name of the article. Cards for the cabinet room would have the possible operations printed along the side of the card, and similarly in all of the departments. The idea which it is wished to convey will be found illustrated.

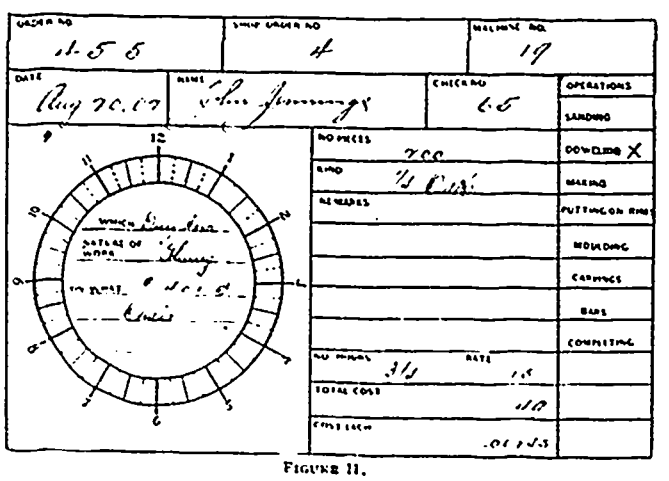

FIGURE II.

These time cards should be deposited in pockets attached to each machine and should be numbered according to the machine number in order to prevent confusion. Then when a workman starts a job he has but to enter the job number on a card and cross the time when he commences his work. The illustration (Figure III) shows one of these pockets in use. He enters his name, or, if he cannot write, his check number, runs a line though the operation to be preformed and when through with it makes another cross on the dial. The plan described, as will be seen, also serves as a check on the workman, for the machine number and the name of the operation or department must correspond. For instance, if a shaper was number 26 and the workman crossed out the operation of sawing on a card bearing the shaper number, the time clerk would immediately know that there had been an error made and could trace it. Of course workmen would be paid for the time indicated on the card. The different cards they turn in each day show the exact amount of time worked, and the exact cost of labor can thus be obtained.

It is a very simple matter to determine the cost of non-productive labor by computing the cost of the productive labor for a given period in a given department, and dividing the amount thus obtained into the cost of non-productive labor for the same length of time in the same department. To illustrate: Assuming that the productive labor amounted to $1,000 for a given period of time, and the non-productive labor for the same department amounted to $100. By dividing as stated above the result would be 10 per cent. Therefore to the cost of the productive labor add 10 per cent. to cover the cost of the non-productive labor.

CUTTING RECORD.

There should be turned in each day by the foreman of the machine room the exact amount of rough lumber cut. This should include all scrap and waste for each order number.

In keeping a stock record a card should be made out for each kind of lumber, the cards to be filed between suitable guide cards (Figure IV). When lumber is received it is entered on the card in the proper column, noting the date, from whom received and the amount. The daily reports turned in by the foreman of the cutting room should show the amount of stock cut for each order, and from his reports the amount of stock could be entered. When an order is made out in the office the actual net amount of lumber needed for its construction is determined and entered in the proper column. The amount of scrap and waste therefore can easily be determined by a comparison of the foreman's report and the office estimate.

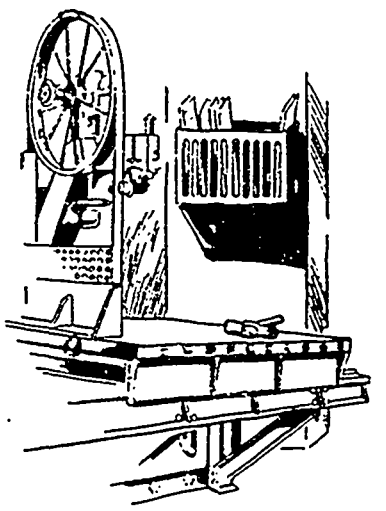

FIGURE III.

In determining the percentage of waste add the various amounts of stock estimated for the different orders and also the amount of stock cut, and the difference will give the amount of scrap and waste together. The superintendent should estimate the amount of stock in the scrap bin. The difference between the stock there and the total amount of scrap and waste divided by the amount of stock cut will give the proportion of waste.

Several entries on the card (Figure IV) serve to properly illustrate this. It will be seen that the entries show that on the orders No. 250, No. 251 and No. 252 the office estimate amounted in the aggregate to 3223 feet. The actual amount of material cut was 4353 feet. The superintendent finds the amount of scrap to be 354 feet. The difference between the amount actually cut and the office estimate is 1028 feet, deducting the 345 feet of scrap leaves a difference of 683 feet, which is properly waste.

The above operation results in determining the cost of material and the 15 per cent. thus obtained is added to the estimate to cover the

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