

A Simple, Yet Accurate Cost Keeping System

ARTICLE I.—A DESCRIPTION OF THE DEY SYSTEM OF COST KEEPING.

To obtain the actual cost of production in factory or mill is the ideal of progressive factory managers and accountants, for by securing this, and only by so doing, are they able to figure out whether they are actually making a profit each month.

Three items enter into the cost of a manufactured article. These are: raw material, labor and burden expense, the last-mentioned including all fixed charges, office and selling expenses, material consumed in manufacturing, such as oil, waste, etc., non-productive labor (which should be determined by dividing the pay-roll into two parts, produc-

ive and non-productive). This item of burden expense amounts to a large sum, yet none of it contributes to the actual production of the factory's output. How is this to be charged? It cannot be charged to raw material, as it has not caused any of this expense. It must, therefore, be averaged and added to the expense of productive labor.

The moment work is started on raw material production begins, and it is not until something is produced can the money be charged that was paid out for burden expenses.

How can this burden expense be properly distributed? At first glance it seems reasonable to add a fixed charge to the cost of each man's labor. But this will not do.

For example, two men working side by side at the bench: one is paid 45c. per hour, the other man 20c. per hour. Each man works on his respective piece of work eighteen (18) hours. By the percentage method you charge say 40 per cent. of labor cost on each man's work to cover burden expense. On this basis, for the first man's share you charge \$3.24 and only \$1.44 for the sec-

ond man, and there is nothing to show where the first man consumed more of the actual burden expense than the other, and yet you are charging over twice as much to the first man's labor. To get the proper amount to add to this labor to cover this expense, you should divide the total amount of the burden expense for the month by the total number of productive hours. Say your burden expense is \$720.00, and your productive hours are 3,600. This gives you a rate of 20c. a productive hour, therefore, to the first man's wages of \$8.10, you add the burden rate of 20c. per productive hour, eighteen

hours \$3.60, making labor \$8.10, burden cost \$3.60, material \$4.50, total \$16.20, the absolutely accurate cost. To the second man's wages of \$3.50 you add the burden hour rate of 20c per productive hour, eighteen hours \$3.60, making labor \$3.60, burden cost \$3.60, material \$1.50, accurate cost \$8.70, and to this you add what per cent. of profit you intend to make.

By the percentage basis add 40 per cent. or \$3.24, to the first man's wages of \$8.10, material \$4.50, making cost \$15.84, a difference of 36c. short of actual cost. To the second man's wages of \$3.60 add 40 per cent., or \$1.44, plus cost of material \$1.50, making a total of \$6.54, a difference of \$2.24 short of actual cost. This is where you fall short of making the profit you had figured on. If you will give this careful thought you will see it is the only way to arrive at the accurate cost.

Take another example. Say we have three men working by the piece. The first man we pay 40c. per 100. In six hours he turns out 475 pieces, \$1.90. The second man we pay 50c. per 1,000. In six hours he turns out 6,000 pieces,

\$3.00. The third man we pay one cent a piece. In six hours he turns out 225 pieces, \$2.25. If you add 40 per cent. to labor cost, you will add 76c. to the first man, \$1.20 to the second man and 90c. to the third man, when each and every one of them took six (6) hours and consumed an equal amount of the burden expense, and should be charged an equal amount, but on a percentage basis you would charge each man a different amount for burden expense. It is necessary to keep a record of the hours that piece hands work in order to obtain the accurate burden their product should bear.

Another example. A piece worker starting to work in the morning and working only a half day, five (5) hours, earning \$1.00. By the old method they would charge 40 per cent. to this to cover burden expense, making \$1.40. This burden expense keeps right on the other half of the day, but what bears it? If she had worked the rest of the day she would have earned \$2.00, and 40 per cent. burden expense makes \$2.80. Although the burden expense went on just the same, but as she did not work and you could not, according to your methods, charge it to her labor, where does it come in? If you had obtained a productive hour rate by dividing the total burden expense by the total productive hours, the burden expense for this half day she did not work would be properly and accurately taken care of.

It is comparatively easy to obtain the cost of material that enters into your product, but the time or labor element is the difficult element in cost.

To get the exact elapsed time on every operation, every job, exact labor cost to a cent on every order that goes through the works, also the productive hours, which gives the proper burden rate and absolute accurate distribution of burden expense, is to save thousands of dollars each year.

To accomplish this the International Time Recording Co., Traders' Bank Building, Toronto, have placed on the market the "Dey" special cost keeper, Fig. 1. By this clock elapsed time on and off a job can be registered as often as necessary, so that the individual operation can be kept. If when an order is issued it is desired to start a job ticket and to have it accompany the order through the works, this clock will record the elapsed time of each man working on the job right opposite the operation he performs, so when the order comes through it will have with it one ticket with the exact amount of elapsed time of each operator, multiplied by their rate, giving the exact and entire labor cost on this one original ticket. If the business is such that it is desired to have a coupon tag to follow the work, each operator detaching a coupon to show what work he did, this clock will stamp the elapsed time on his coupon, showing (if it is piece work), the comparison of the piece price with an hourly rate.

If you prefer to keep a record of the various jobs a man works on in a day on one card or sheet, this clock will give you the elapsed time of each job on that same sheet, directly opposite the order he is working on, so that the total elapsed time will foot up to the exact working hours of the day, multiplied by the rate per hour will give you the



"Dey" Special Cost-Keeper No. 303.