

## Educational.

### SOME DISPUTED POINTS IN FOUNDRY BOOKKEEPING.

Some attention has lately been attracted to two questions in foundry bookkeeping which, while simple enough to a practical accountant, seem to have given rise to some discussion among manufacturers. They are:

1. To the debit of what account should "discounts" go, and are they not as much a part of the cost of stoves as iron or labor?

2. Should the cost of patterns and flasks be charged in separate account and carried as part of the assets, or charged directly to the expense account?

The latter part of the first question is the one item for consideration. Are not discounts as much a part of the cost of stoves as iron or labor? This question is one upon which experienced manufacturers may take opposite sides and argue with all sincerity, the difference in their conclusions being for the most part dependent upon the standpoint from which the matter is viewed. The term "discounts" in the above connection we understand to mean the amount deducted from a selling price. It is quite customary in other lines of business as well as in the stove trade to sell goods at a certain price 30 days, 60 days, or even three months, with the understanding that 2 per cent., 5 per cent., or some other deduction will be made if cash is received within a certain specific number of days after date of invoice. The question which arises is, What is the nature of this deduction? Is it a part of the cost of the goods, or is it something of an entirely different nature? If it is a part of the cost of the goods, it evidently should be charged to some account representing the cost of production. In the simplest system of bookkeeping this would be directly to the debit of merchandise or manufactures, or whatever the general account is called representing the production of the establishment. If, however, this amount is not a part of the cost of the goods produced, it does not belong there, but should be charged to some account representing the expense of conducting business, or to an account called by whatever name it may be which stands for the cost of use of capital.

If a certain lot of stoves when manufactured are worth absolutely \$1,000 in the warehouse and are sold for that sum in cash, there being no discount or deduction, the question does not arise at all. If, again, they, being still worth \$1,000 are sold for \$1,100, with a discount of nominally 10 per cent., simply for the purpose of reducing the bill to a fair cash basis, the charge for the deduction evidently goes to the debit of the account which has received a credit in excess of what was right, in order to equalize matters. If, however, the goods being worth \$1,000, cash, are put at \$1,000, 3 per cent. off, in order to convert them into ready money because the concern wants capital, still another set of conditions must be taken into account. These several examples, it seems to us, throw enough light upon the subject to indicate the direction of a correct solution to the question. In considering each of these cases, we have based our calculations on the actual value of the goods in the market. Nothing has been said about cost of production, and we would remark parenthetically, that ordinarily, the cost of production has very little influence upon the selling price of goods in the market. The question is, What can I get for my product? Then, How can I reduce my cost so as to sell it at market rates and still make a profit? It is very seldom that the order of these questions is reversed, and that the calculations are made, first, as to the cost and then as to a selling price based upon a definite percentage of advance upon cost. Given, a certain lot of goods ready for the market; they have a certain value dependent upon general market conditions. Any discount that is made from the price set upon them becomes therefore, one of two things: It is an abatement to meet the market or else a deduction to induce cash payment, because the cash is wanted. Therefore the account to be charged with the discount becomes either the merchandise account, not because the discount is a part of the cost of manufacture but because the credit received by it was originally too great, and must be reduced to equalize things; or, it becomes a discount, or interest account, called by whatever name it may be, representing the price paid by the concern for the use of capital furnished by the purchaser of the goods.

There are other discounts entering into the business transactions of a stove founder, among which may be mentioned those in connection with the purchase of pig iron. It is customary to buy iron at a certain figure, four months, with the

understanding that, if cash is paid, a discount will be made. We have already referred to this question in the columns of *The Metal Worker*, and have advanced the opinion that the difference between the cash value of the material bought and price paid for the four months was an interest charge. In other words, it was the sum in which the concern was paying for the use of that much capital. It is recognized in the accounts of the most advanced concerns that everything must be reduced to a cash basis in order to obtain a common measure of comparison. Take, for example, life insurance, which probably embraces the most scientific system of accounts and values known at the present time. In it, it is customary to reduce everything to a cash basis, in order to present statements of results and actual conditions. In the question under consideration, we think the true solution to the problem will be found in estimating everything at a cash basis, and charging whatever difference there is between cash and the actual amount paid to an account which represents the use of capital. This rule is a broad one, and much might be said about it. There are, however, various side issues that arise. The final solution and the method adopted in any individual concern will depend very much upon the ability of the accountant or business manager to grasp some of the subtleties of business calculations. Books of accounts are, in a certain sense, indications of comparative results rather than absolute statements. For example, it makes very little difference to a proprietor at the end of the year, whose net profits, for example, have been \$20,000, whether the amount has been actually earned in the foundry, or whether a certain portion of it has been gained by judicious manipulation in the way of purchases and sales. On general principles he will assume that careful management in the foundry has made some profit, and that careful business manipulation has not only taken care of that profit, but added to it; but just how much has come from either source, if he be a man who manages upon general principles rather than specific details, he will care very little. We hold, however, that it is to the interest of every man to know just where he is gaining and where he is losing, and to be able to analyze his business in such a manner as to give particular attention to those departments that most need his supervision.

The second question proposed above—should the cost of pattern and flasks be charged in a separate account and carried as part of the assets of the concern or should they be charged directly to the expense account of the establishment?—is very easy of answer. It depends entirely upon the facts of the case. At the end of a year's business do the flasks, pattern and follow-boards represent an actual value, or do they not? Have they been entirely superseded, or will they still be in use for the succeeding year's business? Probably, in the present state of trade, the middle ground is the safe one to pursue. The constant change in styles ordinarily wipes out the value of the patterns made each year. Whatever styles are produced this year are calculated for this year's business alone. Something else will be the leading style next year, and so it goes. However the patterns which are produced this year will have some use in the business next year, and possibly the year following, even though they are not by any means leaders. The question of repairs—the odd plates that are to be furnished at some future time—must also be taken into consideration. The proper answer to the question therefore becomes very simple of statement. Let each year's business bear that portion of the cost of patterns and flasks that properly belongs to it. Let a fair estimate be placed upon the patterns at the end of the year, and let the amount so determined be entered upon the inventory, the balance of the cost being borne by the current year's business. At best, this is only an estimate, and since estimates are always liable to error, it is well to err upon the safe side. Better make the value of the patterns and flasks remaining on hand too small than too large. In no sense can they be considered desirable assets in case the business is to be closed out. The value of patterns and flasks, to the extent of a very large percentage, whatever the estimated amount may be, depends upon the perpetuation of the business under the same management. It is, therefore, simply a question of accounts, partnership settlements, of a fair division of cost between one year's business and another, and the discriminating business manager will see the problem clearly in this light, and solve it accordingly.—*Metal Worker*.

BOILING POINT OF ZINC.—M. Tiolle has determined the boiling point of zinc to be 933°, or very near the temperature (932°) given by Becquerel.