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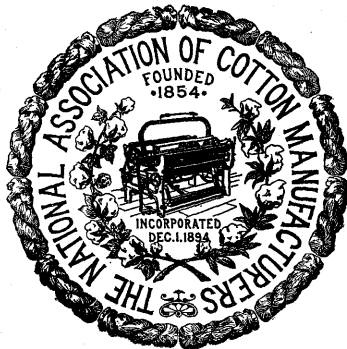
The Cost of Maintenance and Depreciation of Cotton Mills.

BY

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BOSTON, MASS.

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THE COST OF MAINTENANCE AND DEPRECIATION OF COTTON MILLS.

HARVEY STUART CHASE, Boston, Mass.

The standpoint of the writer of this paper is that of an impartial observer, who has had experience as an expert accountant in the examination and analysis of cotton mill and other accounts, and who has also had earlier practical experience for some years inside the mill as an operative, working in various departments, from opening room to weaving and finishing.

In cotton mill accounting, as in practically all accounting which has to do with manufacturing processes, the division of the bookkeeping most difficult to handle successfully is that pertaining to "maintenance." This term being used in its broadest sense as covering all costs of wear and tear of plant, including buildings, machinery, tools, etc. *Maintenance*, rightly used in this broad sense, includes repairs, renewals, reconstruction, deterioration (or "deferred maintenance") and obsolescence.

We will, in this paper, view it under three primary aspects.

1. Current repairs, meaning wear and tear which is constantly recurring year by year, including both labor and materials whose cost should be borne by each year separately.
2. Reconstruction, or renewals of portions of the plant which have deteriorated for some years and must now be renewed. This class of maintenance makes good for a series of years and its cost should be spread over such years.
3. Obsolescence, which is a true element of depreciation, due to changes in methods of manufacture, or improvements in machinery which render por-

tions of the plant obsolete even though they may be in excellent physical condition.

In cotton mills, as in most manufacturing enterprises, the first mentioned class, current repairs, is generally well taken care of in the bookkeeping, and properly charged against earnings. The second and third classes, however, are very unsatisfactorily handled in the great majority of mill accounts with which I am acquainted. It is this fact which I desire to comment on at some length in this paper to the end, if possible, of bringing forcibly to the attention of mill treasurers and directors the necessity, which is now more evident than ever before, for better provision in mill accounts for these most important matters; deferred maintenance and depreciation.

A discussion of these subjects must necessarily touch upon a number of disputed points in the management of mill finances including the common practices of cutting down asset values of plant and wiping out portions of the values of stocks-on-hand. These practices are frequently carried to excess by mill treasurers, as is well known, with the result that the annual or semi-annual balance sheet of assets and liabilities becomes scarcely other than a farce. At best it is practically an enigma which can be translated only by knowledge of secret allowances and hidden percentages which are frequently unknown even to the directors.

It is evident that such methods of bookkeeping are not *accounting* methods. They do not *account* for the actual transactions and conditions. They merely serve as a veil to hide the real situation, which may be better or worse than the book showing.

When the actual condition is worse than the book statements, all men of whatever views unite in discountenancing such methods, but when the actual condition is better than the book showing, many men will endorse such bookkeeping as "conservative" or "safe." So long as such allowances are truly conservative and safe ones and the practice does not reach the point where the books become misleading, we may all properly

agree with such a standpoint. When, however, conservatism runs to such lengths that the real result of the business of a period is so hocus-pocussed with per cent. reductions, hidden allowances and secret reserves that the directors themselves cannot tell whether the profits shown have been earned in that period, brought forward from some prior period or carried forward to some future period, then it is certainly time for the auditor, in the interest of the stockholders, to object strenuously.

If we are willing to acknowledge that such conditions exist in some of our manufacturing establishments, we must similarly acknowledge that under such conditions, all hope of obtaining true information upon which the directors and stockholders may intelligently act, is wholly lost. Administrative control over such a mill is no longer possible by those outside the scheme of secret reserves. No accurate comparisons of the results of administration in one year or period can be made with other periods under these conditions and the directors as well as the stockholders are placed wholly at the mercy of the executive officer who manipulates the hidden reserves. If we grant such a picture to be a true one, should we not all unite in condemning these practices? I desire to ask wherein this picture is untrue so far as a very considerable number of mills is concerned? The question then arises: have such conditions been seriously condemned by auditors or others? Apparently not. If we ask "why is this?" we will be quoted two answers: first, the "safe and conservative" plea and, second, "taxation."

In the light of what has already been said the first plea must fall to the ground. It is neither safe nor conservative to accept methods of accounting which give the lie to the facts and which render intelligent judgment by the directors and stockholders as to the efficiency or inefficiency of the management wholly fallacious. In what respect, if any, then, is this plea a proper one? Evidently only in relation to questions of maintenance and depreciation. Only to the claim that unknown problems and unforeseen contingencies will arise in the future, which long experience has impressed so forcibly upon the minds of mill

managers and directors. We will consider this aspect of the plea more fully a little later and meanwhile we can study the second answer "taxation."

We acknowledge that a mill may, and frequently does avoid taxation to a considerable degree by cutting down the book values of its assets and by concealing the true amount of its invested capital. The equities of tax laws cannot be considered in a brief paper such as this one and therefore we must leave this answer, turned in Yankee fashion into a question, for the practical sense plus conscience of the mill man to solve.

To return now to our present themes, maintenance and depreciation, and the parts they play in whatever justification there may be for secret reserves and partly stated assets. All mill experience, failures and successes alike, go to show that there must be ample reserves. The only question then is this:— shall reserves be secret, or shall they be openly entered as actual accounts in the books?

I desire in this paper to enter a strong plea for the latter course and to point out the advantages of such a course. The present time is especially well fitted for an impartial consideration of such subjects for the reason that other lines of manufacture, particularly machine shops, electric plants, railroad and railway enterprises, public service companies and municipal industries alike are up against these problems of depreciation in a way never before fully realized. In many of these enterprises a correct solution of these problems is a life or death matter. I contend that the cotton industry in New England and elsewhere is confronted by the same spectre and that it behooves mill managers and mill accountants generally, to get exceedingly busy and come to definite and sound conclusions in regard to these questions before the time elapses when such conclusions can be successfully acted upon.

Now, what does all this mean? What must mill managers and accountants consider? Can they avert insolvency or increase profits by mere bookkeeping? It should be unnecessary to state that no such results can be directly expected.

Indirectly, however, correct accounting leads to exactly such conclusions. It accomplishes this by putting before the managers the actual results of the business for the period and the true financial conditions at the end of the period. What, then, would an impartial outside observer advise? Would he not advise a persistent attempt to consciously provide for deferred maintenance and depreciation by the formation of reserves correctly set forth in the books and based upon experience of many previous years. Would he not urge that careful estimates be made periodically, covering these doubtful elements and unknown contingencies and that such amounts be charged to expense pro rata over the months of the period and at the same time credited to one or more depreciation (or deferred maintenance) reserves which will stand upon the books as liability accounts; true *reserves* as the name implies. Thereafter all actual expenditures for reconstruction and renewals, other than current repairs, will be charged against these reserve accounts, whose balances at the end of the period will be carried forward to the new period.

With such reserves carefully calculated and in regular use, all assets can be and should be set up at their true values, viz.: — cost less depreciation, or plus appreciation, and a balance sheet thereby provided from which the true financial condition of the enterprise, could be readily determined.

The tendency today in the best managed competitive businesses is to strive to make the accounts keep close to the facts, but the facts which are most elusive and most difficult to establish are acknowledged to be these very elements of maintenance and depreciation. Other operating costs are easily determined. General expenses are equally definite. Interest, taxes, insurance, etc., are positive, but deferred maintenance or deterioration, which is all the time going on, but only now and then actually evident, is a perplexing problem. The only way to conquer it is to get after it in earnest, not to neglect it, or refuse to recognize it, or to smother it under wholesale allowances and secret reserves which bring in more serious problems than those

they are supposed to provide for. Some time ago these questions took firm hold of the writer and since that time he has been endeavoring to gather information in regard to fair and regular percentage allowances for the various elements of depreciation, which he hopes to present in practical form at some future meeting of this association.