obtained when every item of expense is included. Buildings that were adequate when first erected gradually outgrow their initial advantages, and in spite of substantial increases shown in the appraisal value, they have less value for the purposes to which they are put than they had when first constructed. They may, in fact, prove so unsuitable to the increasing needs of the business as to justify demolition and reconstruction.

Few owners foresee their needs for ten years to come, and fewer still have the means to build or expand along lines giving ample opportunity for future business growth. It is safer, therefore, to provide proper sinking funds through an ample rate of depreciation for use in reconstructing buildings that have outlived their usefulness.

Machine tools have changed very considerably as a result of the development of high-speed steels, and companies that followed appraisal methods of depreciation find themselves with obsolete equipment and no funds to replace it with modern equipment.

Patterns and small-tool equipment often have but temporary value and should disappear wholly from the inventory when they have served their purpose, yet these two items are fertile sources for inflation of values through appraisals.

What the management of an industry is chiefly concerned in is to provide a fund through a proper scale of depreciation which will reimburse it for the difference between the cost price of a piece of equipment and its fair cash selling price when sold either because it is ready for the scrap heap or because some newer form or method has made a change desirable. This difference is properly a part of the cost of the product, but becomes so only by charging depreciation against the expenses of operation.

Has any appraisal company ever investigated the subject of depreciation from the operating standpoint and recommended a schedule of depreciation for adoption? Has any appraisal company ever advocated that depreciation be distributed as an operating expense against the product? Can any appraisal company claim with any justice that it can determine proper rates of depreciation without close contact with and full knowledge of the operating conditions and operating needs of an industry? Certainly without such contact and without such knowledge the claim that successive appraisals are essential factors in the determination of costs, prices and profits, is, to say the least, pure buncombe. The primary business of an appraisal company is to determine an authoritative replacement value, and its entire organization is trained for this purpose. But when the appraisers enter the field of depreciation, operating values, and costs, they are doing their clients positive harm; for appraisals, as previously explained, have a distinct upward tendency, and the increase in value which they show as the result of wholly extraneous conditions have the effect of lulling the manufacturer into a wrong sense of financial security.

The great majority of industries charge off too little for depreciation rather than too much, and the appraisal companies, if anything, are assisting, unconsciously, of course, in increasing this unprofitable and ofttimes disastrous habit.

I had occasion recently to go over the financial statements of a manufacturing plant which had delegated the important function of depreciation to an appraisal company. The amount charged off annually was less than one-half of the proper amount, this being due, the owner said, to the constant and considerable advance in the replacement value of the property. Here was a typical case of reducing the operating burden of a plant by crediting it with a wholly speculative and unrealizable increase in property value. In this case the appraisal company specified the amount to be depreciated each year, and was therefore responsible for this wholly unsound and unscientific procedure. The owner is about to build a new plant, and I take no chances in prophesying that he has some bitter disappointments awaiting him in unforeseen shrinkages of assets when he abandons the old plant.

The problem of determining an adequate scale of depreciation is by no means a simple one, and it goes hand in hand with the problem of distributing depreciation against the cost of the product. It is astonishing to find how widely the practice among different manufacturers in the same line varies.

Largely as a result of the recommendations made by the Federal Trade Commission that the cost-accounting systems of various lines of industry be standardized, the manufacturers of conveyors and elevators have agreed on the standard schedule of rates of depreciation given herewith. The rates are but compromises growing out of the judgment and experience of the individual members of the manufacturers' conference, but their correctness can later be verified by matching the perpetual-inventory values which these rates will establish, against the actual experience of loss in cash value when equipment or buildings are discarded.

They establish, therefore, a broad basis upon which fair operating values and the shrinkage in these values, due to wear and tear and change in style, can be computed, and serve as the preliminary step to the equitable distribution of these shrinkages or depreciation in value over the cost of the product.

I recognize the value of the work done by the appraisal companies in establishing authoritative replacement values for purposes of insurance, for the purpose of comparing the physical values of various plants about to be purchased or merged, or as the foundation upon which a perpetual inventory kept by the industry itself can be based; but I am convinced that only a perpetual inventory providing for a sound schedule of depreciation, and intelligently handled by the management of the industry, is of value in determining the true cost of the product.

Standard Depreciation Rates Adopted by Manufacturers' Cost Conference, February 25, 1916.

	Per cent. on cost.	Per cent. on balance.
Buildings and accessories:		
Reinforced concrete or steel and tile..	2	3
Brick and steel with non-combustible roof and concrete floors	2·5	4
Brick, steel and wood	3	5
Brick and wood	3	5
Steel frame, wooden roof and corrugated iron walls	3·5	7
Steel frame, non-combustible roof and corrugated iron walls	3	6
Concrete block, with wooden roofs and floors	3·5	8
All wood structures, well built (20 years)	4·5	10
All wood structures, cheap (20 years).	5	12
Sprinkler system (20 years)	4	7·5
Heating and ventilating system (20 years)	4	7·5
Water and sewer piping and sanitary fixtures (where separate)	4	7·5