Balance Sheets

Assets		Liabilities	
First year—all plans			
Plant	$90,000	Stock, Bonds	$90,000
Second year—Plan I.			
Plant	$80,000	Stock, Bonds	$90,000
Depreciation fund	10,000		
Second year—Plan II.			
Plant	$90,000	Stock, Bonds	$90,000
Miscellaneous assets increased	$10,000	Depreciation	$10,000
Second year—Plan III.			
Plant	$80,000	Stock, Bonds	$90,000
Miscellaneous assets increased	$10,000		

Plan II. he calls objectionable and Plan III. seems even worse, and yet most of us have been using either one or the other of them. Commenting on them Cole says:—

"To summarize what has been said of the depreciation fund, then, we find that it may appear on the balance sheet in one of three combinations: (1) among assets only—in which case specific property is set aside to replace or repair machinery, or buildings, or what not, that are thought to have suffered actual depreciation; (2) among both assets and liabilities—in which case specific property is set aside from net income as a safety fund for possible depreciation not thought to be actual; (3) among liabilities only—in which case the amount is deducted from net income and shown on the books as a safety fund for replacement purposes, but the actual property is left among the general assets without specific designation. In the first case the fund could not be distributed to stockholders without impairing capital; in the other two cases the policy might be changed and the fund distributed without affecting capital, though such distribution might be morally and legally unjustifiable as a violation of implied faith."

Straight Line or Sinking Fund?

Our Public Service Commission has adopted Plan I,. and has improved on it by showing plant or fixed capital at its original amount from which is to be subtracted the accrued depreciation, account No. 102, and the depreciation or replacement fund appears as a subaccount of account No. 113.

There is much of interest in Cole's book, which might be quoted here, but only the following paragraph will be added:—

"Has it cost the corporation anything to accumulate this fund? If our real estate and plant are wearing out and are profitably employed, it is obvious that they are reproducing themselves in the annual product. It follows, therefore, that, if the corporation cannot take from the annual product and lay aside as a depreciation fund the equivalent of the annual wear and tear of the real estate and plant, it is running down hill. In other words, that depreciation fund was created, day by day, in the regular product of the business. Real estate and plant, by constant use, have been slowly converting themselves from building and machinery into merchandise. It is the business of the accountant to see that that conversion is recognized and recorded. The surest way to keep it clearly in mind is to take the proceeds from the sale of some of that merchandise and set it aside as a special depreciation fund. Such a depreciation of real estate and plant is loss, of course; but it is loss only in the sense that consumption of raw material is loss; it reappears in the form of goods, and a certain part of the product must be recognized in that form as converted depreciation."

From the foregoing it seems evident that a water company in order to maintain its investment at 100% has the right to earn year by year an amount sufficient to offset its loss by depreciation, and its duty to its stockholders and to the public to set this aside in a fund to take care of replacements as they become necessary. Whether the annual amount of depreciation should be based on the "straight line" or "sinking fund" plan is a matter about which opinion has differed. There are cases where the "straight line" plan should be used, but the consensus of opinion seems to be in favor of the "sinking fund" plan. The subject is discusssed by the Wisconsin Railroad Commission in the Milwaukee Electric case with this conclusion:—

"In our opinion a most equitable situation arises where depreciation is calculated and provided on a "sinking fund" basis. The fund should be in the custody of a commissioner or trustee, to be invested by him, subject to call for money with which to make replacements when necessary."

Treatment of Amount Collected for Depreciation

On this subject the Wisconsin Commission in the same decision says:—

"The amount collected for depreciation can be treated in one of several ways. It can be loaned subject to call on very moderate rates of interest, being treated as a special trust fund represented by quick assets. It can be used from time to time to, temporarily at least, finance extensions and improvements. A considerable part of it, however, should at all times be immediately available for the purpose for which it is raised. However treated, it will be drawing some interest whether loaned or temporarily invested in extensions and improvements. Were it to be permanently invested in such extensions and improvements it would theoretically be earning interest at the same rate as the other original investment. As a matter of practice, however, this probably does not happen. As a rule, some time elapses after the expenditure before much additional return is earned on the new property. The fund is subject to be called upon at any time for the use for which it has been laid aside, and such extensions and improvements in a growing concern, at least, are usually financed, before the lapse of any extended period, by the issue of new securities."

In addition to these suggestions it would seem that in the case of a company which is strong financially, the trustee could lend the funds in his hands to the company on its note or notes, at the low rate of interest at which the annual payments have been calculated, reserving a sufficient amount on hand, on deposit or loaned on call, to take care of such ordinary replacements as are likely to occur. If some unusual demand for replacement should be made, the trustee could demand payment by the company of a sufficient amount on its note or notes to meet the demand for cash from the replacement fund. This would seldom occur, and if it did, the company would, in the meanwhile have had the advantage of the use of funds at a low rate of interest instead of having to sell bonds or stock or borrow from bank at bank rates of interest. The time when new capital had to be procured would thus have been deferred.

Right to Return on Replacement Fund

There is one other fact in the consideration of this subject which we must grasp clearly and insist upon. That is that the investor has the right to a reasonable return not only upon the depreciated value of the plant, but upon the replacement fund; for this fund is what maintains his investment at its original amount or value. But, it will be argued: "The fund is earning interest and you are asking a double return on it." The answer to this argument is that because the fund earns interest the annual amount paid into the depreciation fund is less than it would be otherwise, and the interest that the fund earns becomes part of the fund and is not returned to the investor. Both the annual payment and the interest are necessary to create a fund sufficient to make replacements as they are required, assuming that the calculations on which the fund is based are correct. This would not be true if the fund were created on the "straight line" basis, as was pointed out by the Wisconsin Commission in the Milwaukee case. Assume that a plant has cost $100,000. There can be no question of the right of the investors in that plant to earn a reasonable return upon that amount the first year. Suppose that the depreciation amounts to $10,000 in the first year, and a replacement fund of that amount is set aside from earnings. Shall the reasonable return for the second year be based on an investment of $90,000 and this amount reduced year by year? If the balance sheet shows:—