

intended to discharge; whereas the Sinking Fund Method necessitates the establishing of a separate sinking fund which is not calculated to earn (and in fact does not) as high a rate of interest as is payable upon the loan itself. What are the facts in the case of those municipalities which issue their bonds according to the sinking fund system? Loans are obtained by the issue of permanent debentures carrying interest ranging from $4\frac{1}{2}\%$ to $5\frac{1}{2}\%$, while the sinking fund to redeem such loans is assumed to earn only from 3% to 4%, or from $\frac{1}{4}\%$ to $2\frac{1}{4}\%$ less, and, as a matter of fact, in many instances not much more than the assumed rate is earned.

In addition to this important difference between the rate of interest the municipality pays on its loans and that which the sinking fund, for their redemption, earns, considerable delay takes place in the investment of sinking fund moneys, and as a consequence a further loss in interest earnings inevitably ensues. In contrast to this, the genius of the instalment method is, that interest is being fully earned every day without exception.

ILLUSTRATION OF EACH METHOD.

Let it be assumed that a municipality proposes to issue bonds for some important permanent work for say \$1,000,000, the loan to be repaid in 20 years and to carry interest at the rate of 5%, and the question arises as to which method is most economical and desirable.

Under the Sinking Fund Method the annual levy for interest would be \$50,000, and for sinking fund (assuming 3% as the sinking fund rate) \$37,215.71, a total annual levy of \$87,215.71.

Under the Annuity Instalment Method the annual levy for repayment of principal and interest would be only \$80,242.59, or \$6,973.12 per annum less.

The present value of this annual saving for the life-time of the loan is \$86,900.42, and this amount represents the actual saving to the municipality in issuing Annuity Instalment bonds instead of Sinking Fund Bonds.

Under the Serial Instalment Method, according to the illustration assumed, the annual levy would vary from \$78,750 to \$81,500 per annum, and the saving, therefore, would be practically the same as in the Annuity Instalment case.

The following tables, No. 1 illustrating the Annuity Instalment, and No. 2 illustrating the Serial Instalment Method of repayment, set forth in detail year by year, the gradual and systematic liquidation of the loan we have been considering.