MUNICIPAL DEPARTMENT

THE LIFE OF PAVEMENTS.

Our contemporary, Brick, contains a paper read at the annual meeting of the American Society of Municipal Improvements by Mr. G. W. Tilson, M.Am.Soc.C. E,, engineer of Brooklyn, N.Y., on "The Life of Pavements." The paper deals with granite, wood asphalt, brick and macadam in their various aspects, pointing out the physical and economic end to which all pavements must come—the former, when the pavement is so well worn out that it cannot be repaired and must be relaid, and the latter when the cost of repairing is such that it would be cheaper to relay it entirely than to spend any money on repairs. The author propounds the following formula for determining the economic test as to whether repairs should be continued or an entire new pavement constructed :—

Let N=life of proposed pavement.

    C=cost.

    !=rate of interest.

    R=estimated cost of repairs if distributed over entire line.

    A=sinking fund to be paid each year to equal C at the end of N years.

Then $A+CI+\dfrac{R}{N}$=annual cost of new pavements.

For the purpose of illustrating the application of his formula, he takes two examples, one in which the value of N is fifteen years, and another in which it is twenty years. The paper also discusses the conditions by which traffic is modified in its action on pavements, such as character of pavement, width of roadway, presence or absence of tramways, state of repair, and how well cleaned. Statistics are given of traffic in the principal streets of several cities in America, also in Paris, London, Liverpool and Sydney. In discussing the life of different kinds of pavement, the author gives the results obtained on granite, wood, asphalt, brick and macadam in various cities of the world, and sums up the conclusions arrived at as regards life as follows : Granite on concrete, twenty-five years ; on sand bedding, twenty-years : brick, fifteen years ; wood, ten to fifteen years ; and asphalt eighteen years, while as to macadam, the author does not attempt to assign a limit, stating that this pavement may be said to have no end if properly cared for. But it requires a constant infusion of the elixir of repairs to bring about this eternal life.

MUNICIPAL STATISTICS.

The fifth part of the annual report of the Ontario Bureau of Industries for 1898 is received. It comprises the municipal statistics of the province, showing the population, assessment, taxation and debenture debt of each municipality as returned by assessors. Comparative tables are given covering a period of thirteen years, 1886-98, from which it appears that the assessment of the province has increased during the period from $694,380,650 to $809,184,833, while the population has increased from 1,828,495 to 2,001,350. This increase has been entirely in the cities, towns and villages, the township population and assessed values having been almost stationary. There were 1,148,856 inhabitants with assessed valuations of $452,097,645 in 1886, while in 1898 the population of the townships numbered 1,110,894 and the total assessments were $448,810,060. The city population has grown in the same period from 316,634 to 440,889, and the towns and villages have increased at about the same rate. The valuations in cities have risen from $154,204,921 to $236,077,376, and the assessments in towns and villages from $88,078,930 to $124,297,397.

The total debenture debt of all municipalities has increased from $29,924,863 in 1886 to $53,577,475 in 1897, the increases being entirely in connection with urban municipalities. Township debts have slightly decreased and county debts have been reduced from $3,505,744 to $1,808,107, or about one half. But city debts have grown from $18,469,893 to $37,046,377, and those of the towns and villages have more than doubled.