ply. This is equal to an average of 117 cubic feet, and a maximum of 166 cubic feet per minute. To pass this quantity through an 18 inch pipe would require a velocity, for the average supply, of $1\frac{1}{10}$ feet per second; and for the maximum supply, of $1\frac{6}{10}$ feet per second; and if the velocity be carried to 2 feet per second, it would be sufficient for the maximum supply of about 40,000 people. This last velocity is rather more than is desirable for the pumping main, but not materially objectionable. It is therefore proposed to put down 18 inch main pipes, which is ample for the present population, and will answer the purpose until the population approaches to 40,000, when a second main may be laid, either 18 or 20 inches, as may appear desirable after the experience of the works shall demonstrate what may be necessary. One 18 inch main, together with one 20 inch main, will discharge the same quantity, under equal head, as a 24 inch main. The cost of the latter will be about One Dollar and Eighty (1.80) Cents per foot less than the two former. The first cost of the 18 inch pipe will be over Two Dollars per foot less than the 24 inch main. The 18 inch main will be sufficient for probably twelve years or more, and the saving of interest on this difference will more than compensate for the difference in first cost. When it shall become necessary to have the second main this plan will be useful in other respects. In case of repairs on one of the lines of pipes the other will secure the supply in the meantime, and an important advantage will be thereby gained, at no increase, as has been shewn, in the ultimate cost.

To do the work proposed an engine of 100 horse-power will be sufficient: it will perform the duty for