

through the mains to supply the city—the difficulty was lack of pressure on the higher levels. There were two ways of increasing this by going to a higher level, or obtaining pressure by means of pumps. The first outlay to get to a higher level is much more than adopting a pumping system. Engineer Murdeck estimated that the cost of extending a 4 foot brick conduit to Lake Lattimore would be \$200,000. Engineer Fteley, a recognized expert in 1883 confirmed these figures. He estimated the cost of a pumping plant sufficient to supply the high levels at \$65,000 exclusive of the cost of altering the mains, and the yearly expenditure for attendance coal etc at \$4,500. A substitute plan was also suggested of a 30-inch main to Lake Lattimore which would cost something over \$100,000. But none of these recommendations were carried out.

The agitation for an improved service came very soon after Union, brought about the Silver Falls pumping station which cost one time and another about \$20,000. Then came the repairs and enlargement of the Little river dam which cost in three years \$17,000 more. In all perhaps \$50,000 has been expended in separating the high and low pressure districts and the enlargement of the dam and for the pumping station. In the end it has been discovered that while there is a sufficient supply for domestic purposes the supply for fire protection was totally inadequate and that the only remedy is the extension of the supply to Loch Lomond. No one knows what this will cost. It is easily to figure the cost of the pipe line, but the damages are something that the most gifted engineer, in these days of arbitrations, cannot even estimate approximately. At the present rate of income the water department can provide