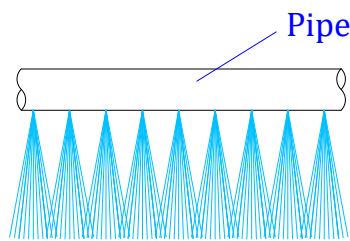
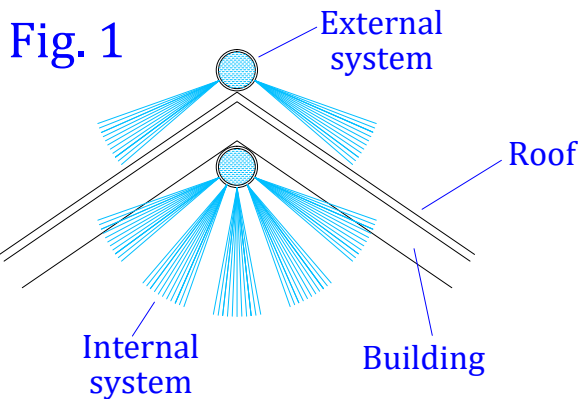


A Samuel Bentham came up with the idea of using small jets of water to extinguish fire in 1797. He came up with a system that was more recognizable as a sprinkler system. His idea was to place large tanks on the top of buildings connected to iron mains that were run to the areas that were to be protected. These fed smaller perforated pipes installed in the roofs and arranged so water was projected over the whole protected area. His system was operated by turning on valves. So although his system was not automatic, it was a giant step in the right direction. Samuel Bentham designed and installed a hydrant and hose reel system at Portsmouth Dockyard, a good idea in the days of wooden ships. His perforated pipe system was installed in the London and South Western Railway Company's Works at Nine Elms in London.



Side View of pipe
Showing spray
pattern **Fig. 2**

This idea was next taken up by William Congrave, who in 1809 took out Patent number 3201 and on the 31st October 1812 took out Patent number 3606.

These piped systems were described by an Architect, Benjamin Wyatt. It was installed in the Theater Royal, Drury Lane, in 1812.

It consisted of a cylindrical airtight reservoir of 400 hogshead underground at the back of the building, fed by a 10 inch main which branched to all parts of the theater through a series of transverse pipes each pierced by a series of holes in three rows so as to pour down "2000 streams of water each equal to that of a small fire engine". The reservoir was replenished after the first ejection of water by use of the 75 horse-power steam engine of the Water Works, the management of which contracted with the theater "to set their engine in full action into the reservoirs in less than 20 minutes on any alarm being given".

In subsequent years, this system was chopped, changed and improved upon. Some systems only covered the outside of a property while other were installed inside, as shown in fig. 1. It was not long before someone had the idea to hang weights to the valve handles and keep the valve in the closed position with the aid of cord and fusible links as shown in fig. 3. When the fire burnt through the cord/fusible links the valves opened and allowed the water to flow.

A practical automatic sprinkler system had now been made.

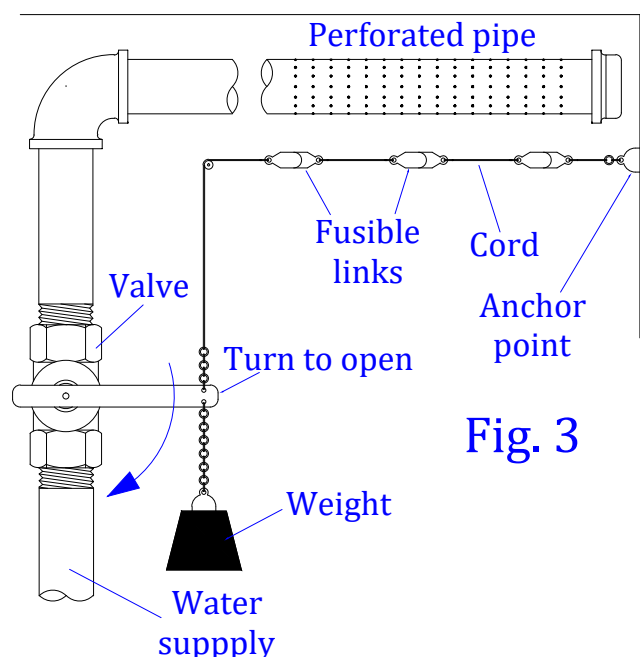


Fig. 3