

(Model.)

C. BARNES.  
Automatic Fire Extinguisher.

No. 239,639.

Patented April 5, 1881.

Fig I

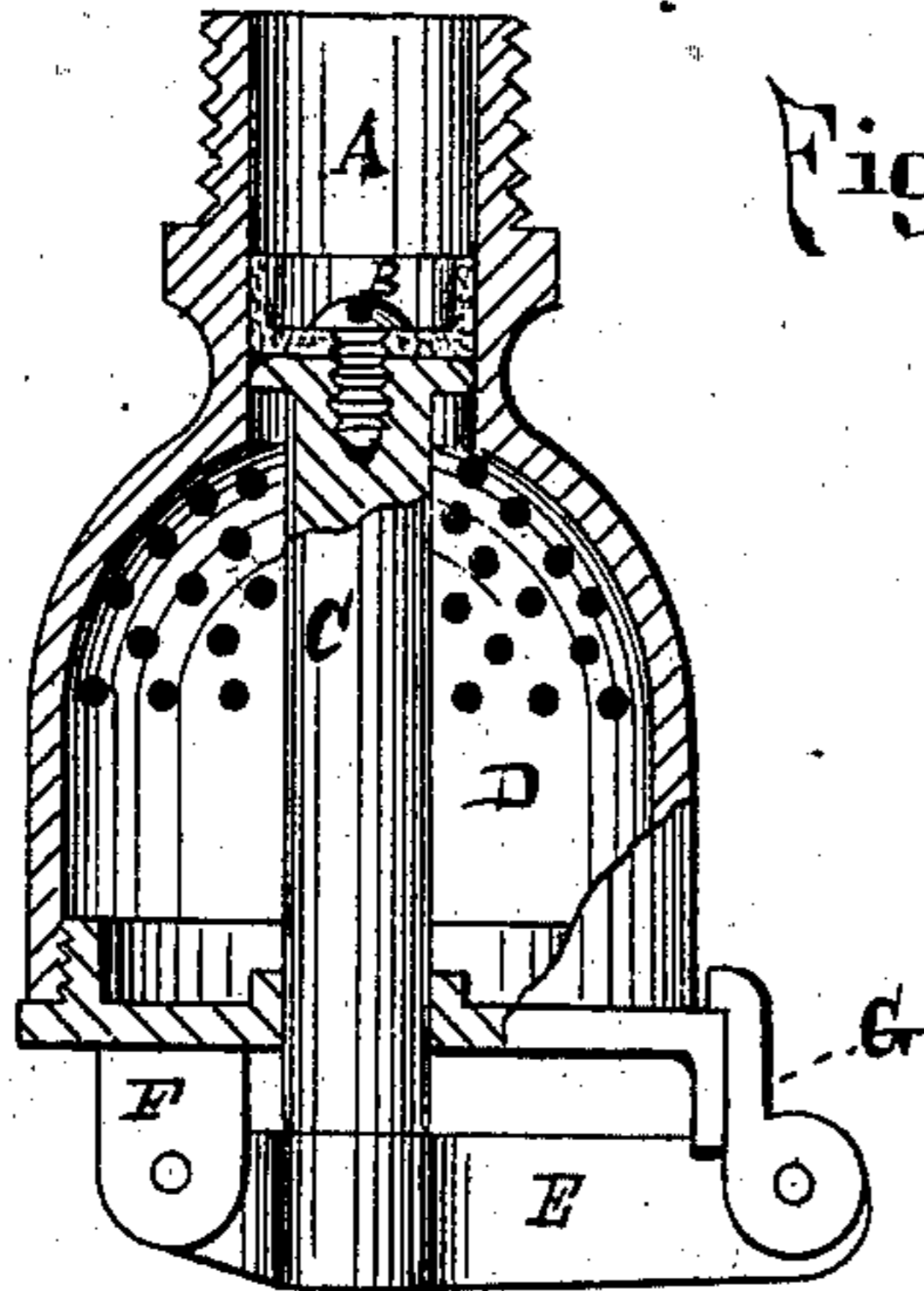


Fig 2

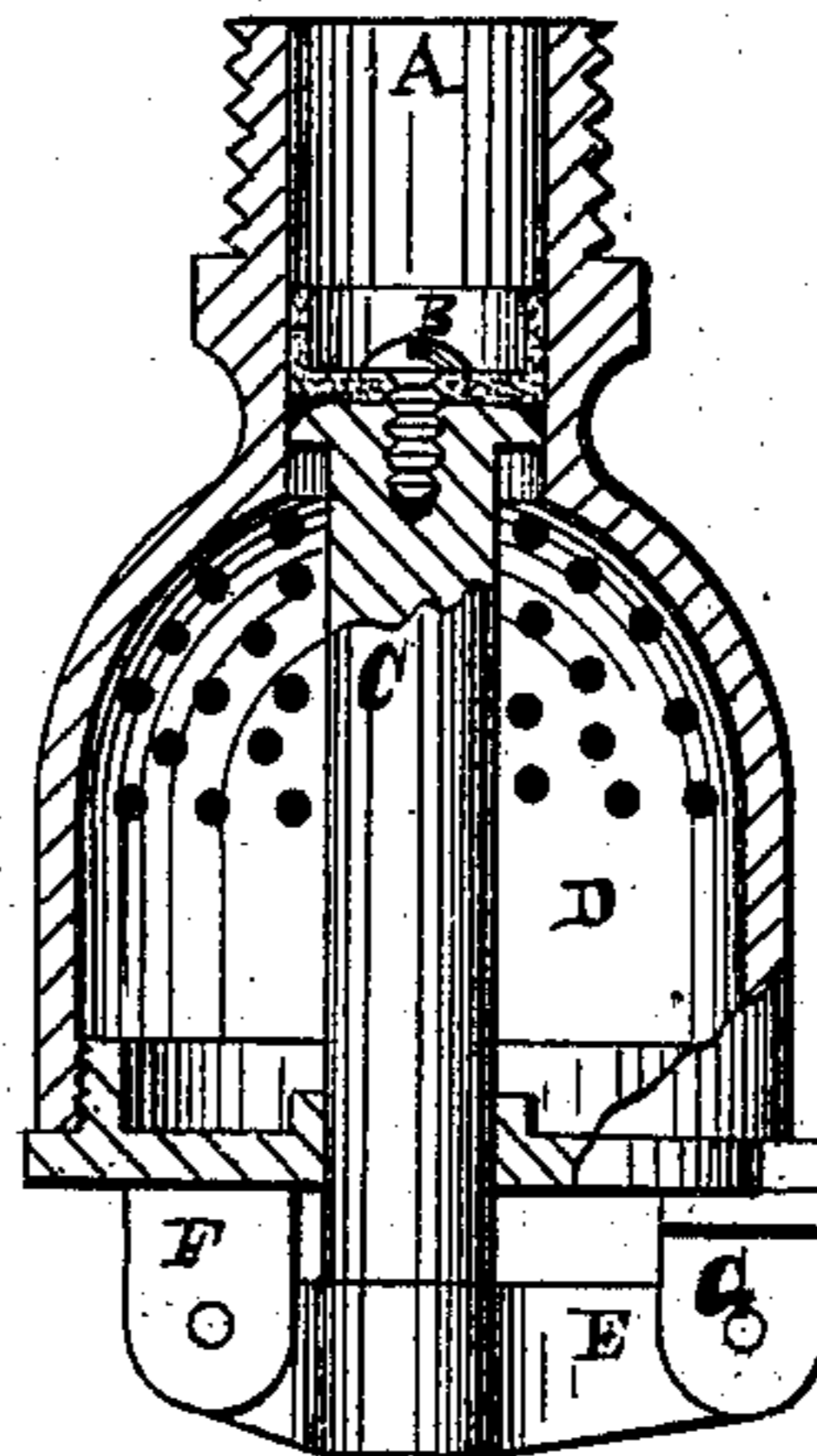


Fig. 3

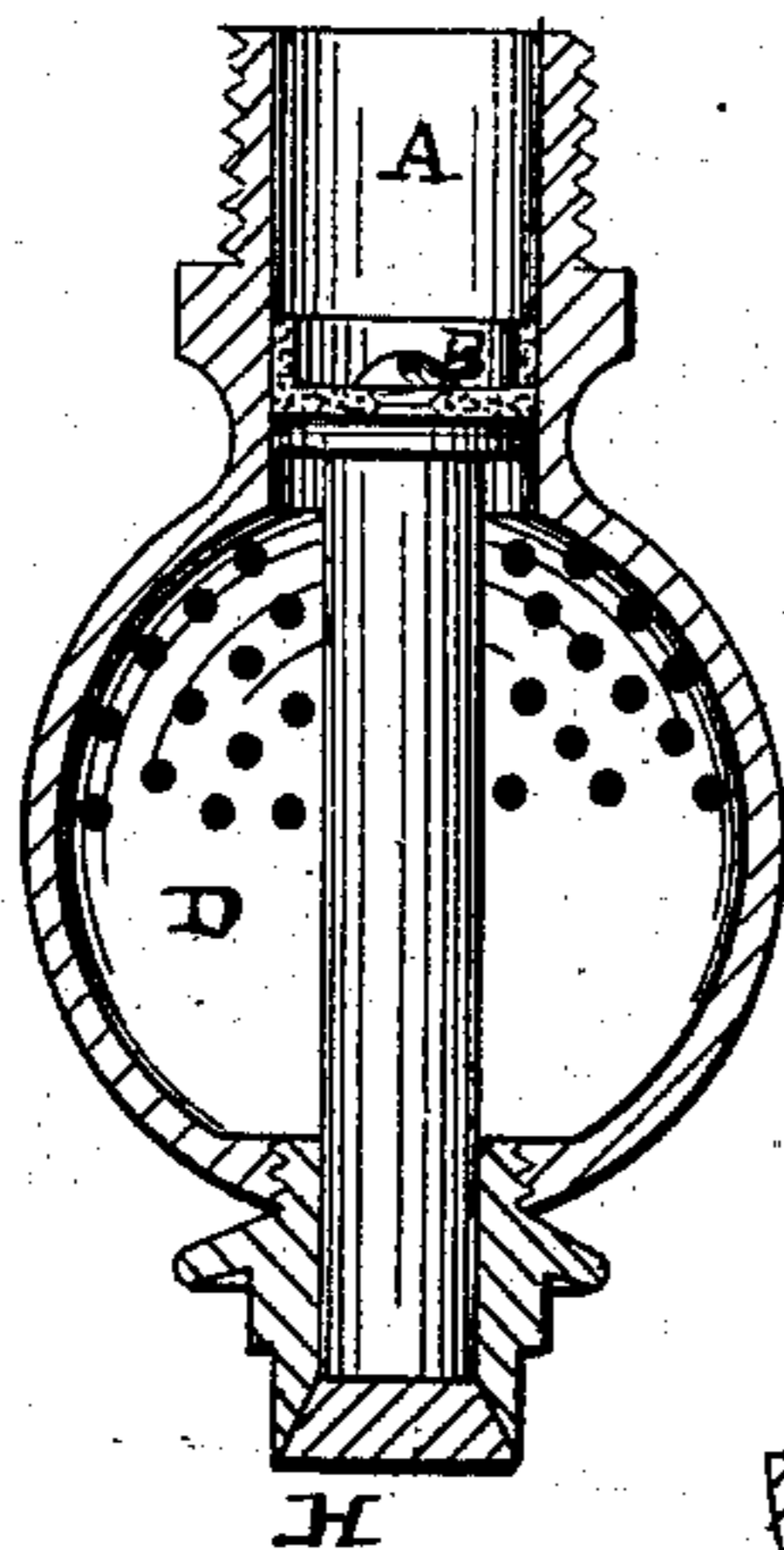


Fig. 4

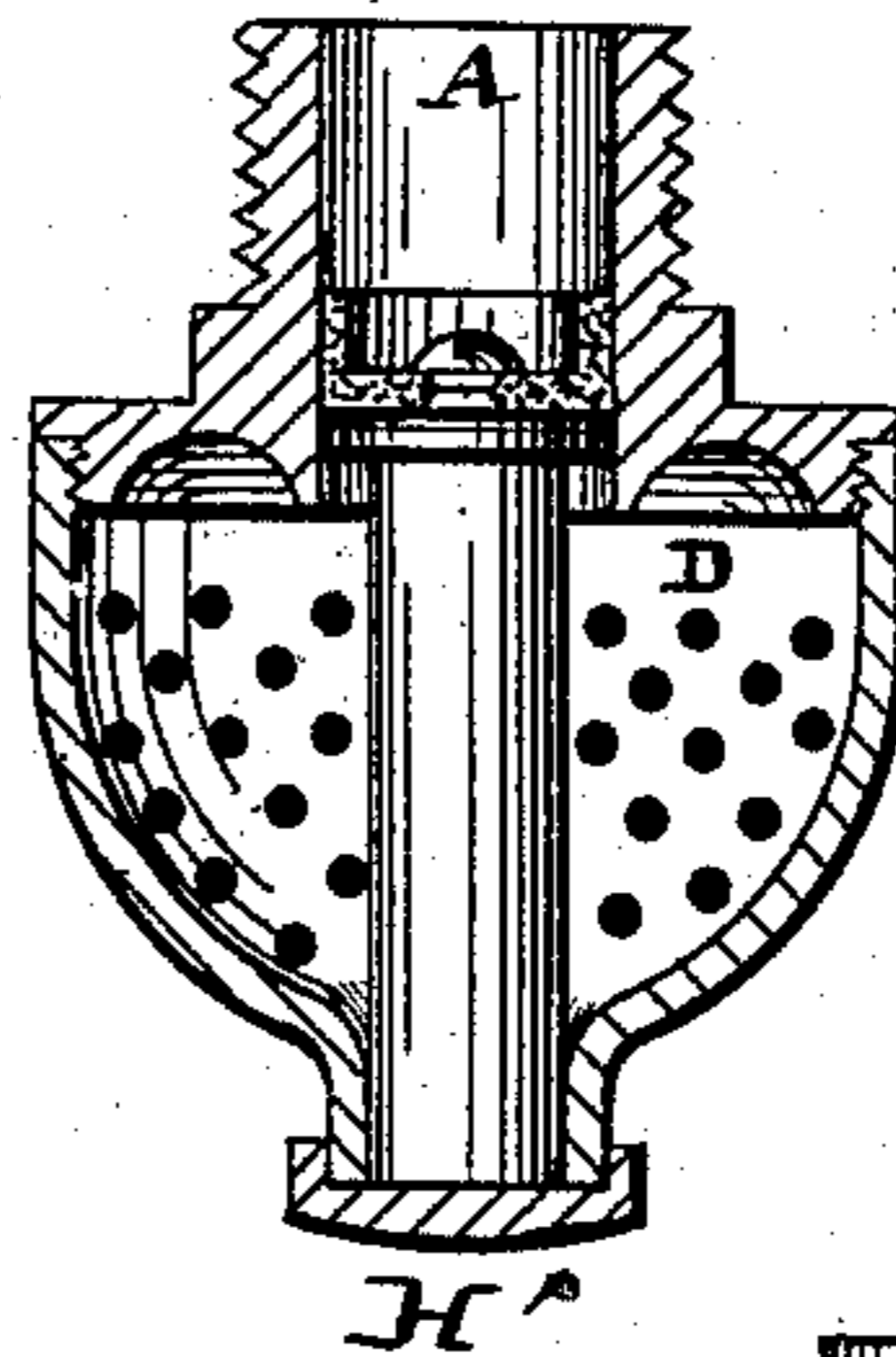


Fig. 5

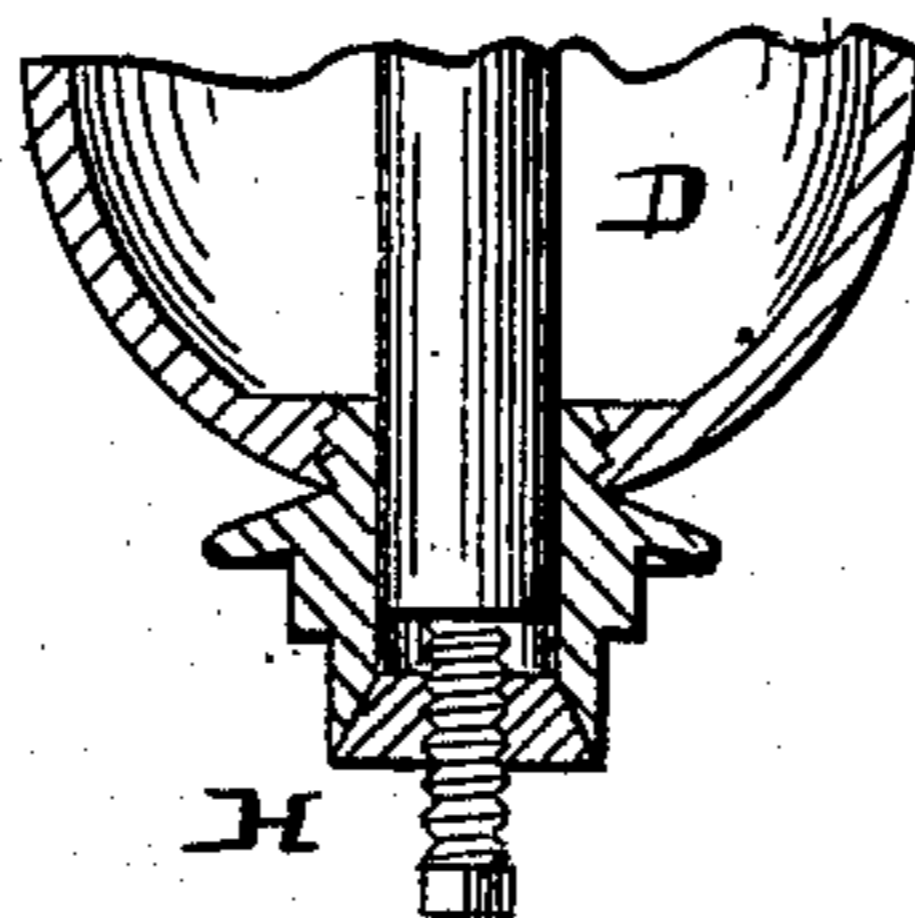
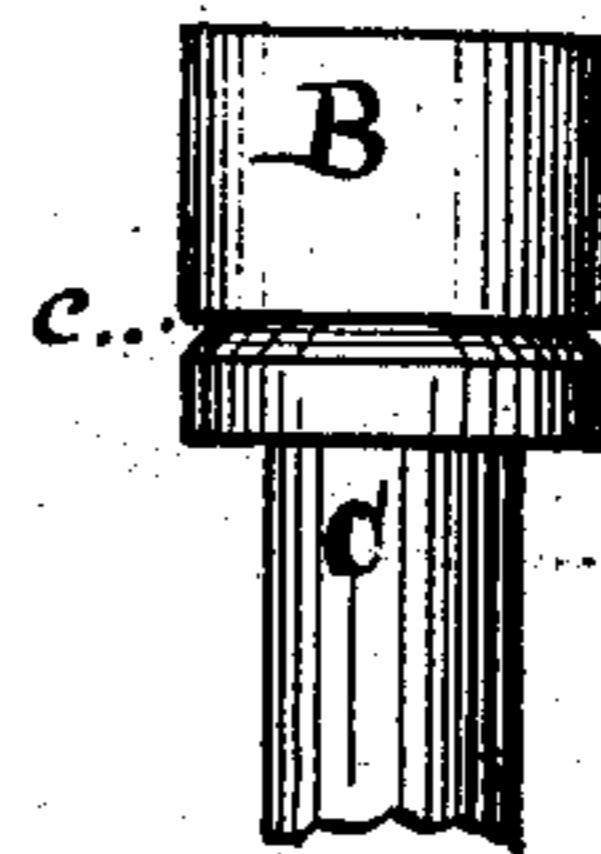


Fig. 6



Attest

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# UNITED STATES PATENT OFFICE.

CHARLES BARNES, OF DAYTON, KENTUCKY.

## AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 239,639, dated April 5, 1881.

Application filed February 10, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, CHARLES BARNES, of the city of Dayton, county of Campbell, and State of Kentucky, have invented certain new and useful Improvements in Automatic Fire-Extinguishers, of which the following is a specification.

This invention relates to that class of automatic fire-extinguishers in which the supply of water to a perforated distributor is controlled by a valve which is held to its seat by fusible solder until released by heat. Its object is to relieve the fusible joint from strain, whether caused by the expansion and contraction of the metal, by the pressure necessary to make a tight joint between a metal valve and valve-seat, or by carelessness or want of skill in workmen seating metal valves too tightly. Its object is also to avoid the trouble and expense of grinding the valves to their seats.

These objects are accomplished by providing the supply-port of the distributor with an elastic cup-valve, so arranged as to relieve the joint from strain or pressure and prevent a flow of water to the distributor until the joint is melted.

The accompanying drawings show different forms of distributors provided with my improvements.

Throughout the different views, A represents the supply-port or neck of the distributor, screw-threaded upon the outside for attachment to the supply-pipe.

B is an elastic cup-valve, made preferably of rubber.

C is the valve-rod, upon the end of which the cup-valve B is secured by a screw passing through the bottom of the cup and into the rod.

D is a perforated distributor.

In Figures 1 and 2 the valve-rod passes through the cap of the distributor and rests upon a bar, E, one end of which is pivoted in a lug, F, which depends from the cap, and

the other end is provided with a hinged latch, G, which is secured to the cap by a fusible solder joint.

In Fig. 3 the valve is held within the supply-port by the lower end of the valve-rod resting upon a plug, H, which may be of fusible material or of metal fusibly soldered to the distributor-shell.

In Fig. 4 the end of the valve-stem rests upon a cap, H, which is secured to the shell of the distributor by a fusible joint.

Fig. 5 differs from Fig. 3 in having the valve-rod resting upon a screw which is tapped through the cap H.

Fig. 6 is an enlarged side elevation of the elastic cup-valve and the upper end of the valve-rod. The upper end of rod C is of a size to freely enter the supply-port A. Its upper corner is rounded or beveled off at c, to allow the pressure of water to expand the rubber into the wedge-shaped cavity to secure a perfect joint.

I claim—

1. In an automatic fire-extinguisher, the combination, substantially as specified, of a distributor with an elastic cup-valve controlling the supply of water to the distributor and held in place by fusible solder.

2. In an automatic extinguisher, the combination, as specified, of distributor D and supply-port A with an elastic cup-valve located and held within said port by its rod C, said rod resting upon a fusibly-jointed bearing.

3. In an automatic fire-extinguisher, the combination, substantially as hereinbefore set forth, of distributor D, supply-port A, cup-valve B, and valve-rod C, said rod being beveled or rounded at c, for the purpose set forth.

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Witnesses:

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JOHN I. COVINGTON.