H. S. PARMELEE.

Automatic Fire-Extinguisher.

No. 218,564. Patented Aug. 12, 1879.

Fig. 1.

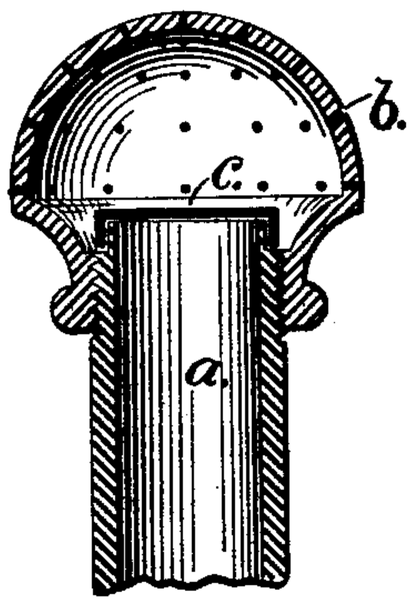


Fig. 2.

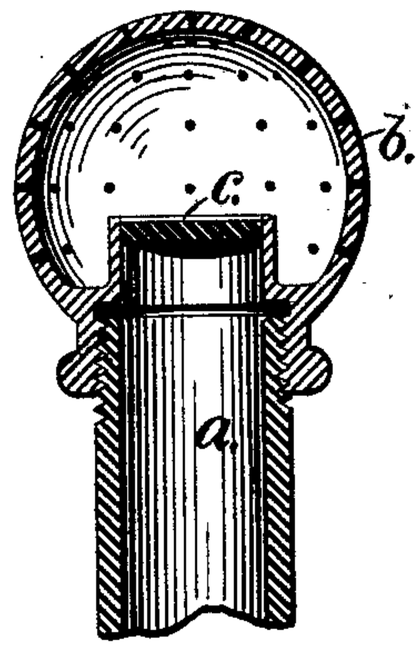


Fig. 3.

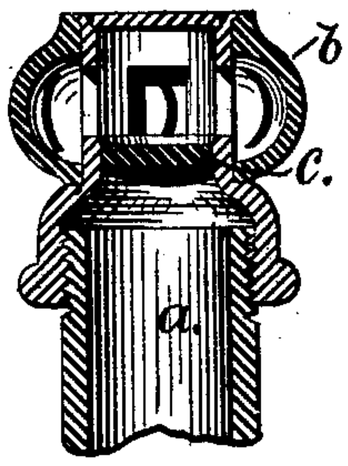
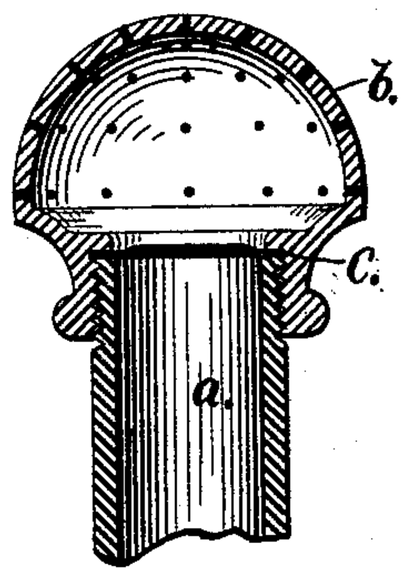


Fig. 4.



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HENRY S. PARMELEE, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN AUTOMATIC FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **218,564**, dated August 12, 1879; application filed December 27, 1878.

To all whom it may concern:

Be it known that I, HENRY S. PARMELEE, of the city and county of New Haven, and State of Connecticut, have invented a new and useful Improvement in Automatic Fire-Extinguishers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a sectional view of a distributer secured to a pipe, the end of which, within the distributer, is closed by a cap either soldered to the pipe by a fusible material or made in part or whole of a metal fusible at a low temperature. Fig. 2 is a sectional view of a distributer provided with an inward-extending neck, within which a disk or plug is secured either by a low fusible solder, or the plug or disk may be made of a material fusible at a low temperature, so as to release itself when the distributer is subjected to heat. Fig. 3 is a sectional view of a revolving distributer, the neck or central stem of which is provided with a plug or disk arranged so as to be released by the heat of a fire, so as to allow the water to flow through the distributer and automatically extinguish the fire. Fig. 4 is a sectional view of a distributer arranged to be screwed to a pipe, and to hold a disk to the end of the pipe water-tight by screwing the distributer firmly down against the disk, which is made of a metal fusible at a low temperature, or may be made of an annular ring of soft metal, so as to form a tight joint, and a metal disk secured within the ring by a fusible solder.

The object of this invention is to so construct a rose or other distributer for an automatic fire-extinguisher that the seal closing the exit shall be within the distributer, or form part of the same, and be protected by the distributer against accidental damage.

The invention consists in so securing the seal within or by the rose or other distributer that the ends or outlets of the distributing mains or branches may be sealed by screwing the distributer to the same, and that the seal will be released by the fusion of the metal automatically by the heat of a fire, all of which will be more fully set forth hereinafter, and pointed out in the claims.

In the drawings, *a* represents the end of the pipe to which the rose or other distributer is secured. *b* is the distributer, and *c* the seal.

The distributers are preferably so arranged that the pipe points upward, so that the seal will be on top of the water, and thus will fuse more readily. As the water will not conduct downward, the heat is retained, and the seal promptly released when the point of fusion is reached.

A solder, or even a disk, can be made by a proper alloy of tin or other metal with bismuth, the point of fusion of which is as low as 160° Fahrenheit, and for all degrees above alloys or metal may be provided which may be used as plugs or disks, or as a solder which will release the plug or disk at the desired degree of temperature.

The distributers may be arranged in all other directions desired other than perpendicular, and the cooling effect of the water may be prevented by closing all the distributers and sealing the pipes water and air tight before the water is allowed to enter the distributing-pipes, so that confined air only will be near the distributer and seal, which, not having the same capacity to absorb heat as the water, will not interfere with the prompt release of the seal.

As the seal is secured within the distributer, which is usually made of metal, the rise of the temperature in a room or compartment will raise the temperature of the metal of which the distributer is made, and thus melt or fuse the joint between the seal and the distributer more readily than if water surrounded or was above the seal. The improved distributer will therefore be prompt in its action, efficient, and may be made ornamental in appearance.

I am aware that fire-extinguishers have been provided with seals within the body of the casing of the distributer, and in connection with a valve arranged therein, and hence I make no claim to such construction. In my improvement the seal is located on the outer end of the water-conduit, connected with the perforated distributer, whereby the seal is not only protected against accidental displacement, and also from dust and dirt from the ceiling overhead, but is exposed most prominently to

the action of the heat, which has direct entrance to the seal through the perforations in the distributer.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an automatic fire-extinguisher, the combination, with a perforated distributer, of a seal attached to the extreme outer end of the water-conduit, connected with the perforated distributer, said seal being retained in place by metal fusible at a low temperature, substantially as set forth.

2. In an automatic fire-extinguisher, the combination, with a perforated distributer, of a seal secured by fusible solder to the extreme outer end of the water-conduit, connected with the distributer, and at a point within the body of said perforated distributer, substantially as set forth.

HENRY S. PARMELEE.

Witnesses:
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