(No Model.)

C. L. DELMAGE.

AUTOMATIC FIRE EXTINGUISHER.

No. 281,181. Patented July 10, 1883.

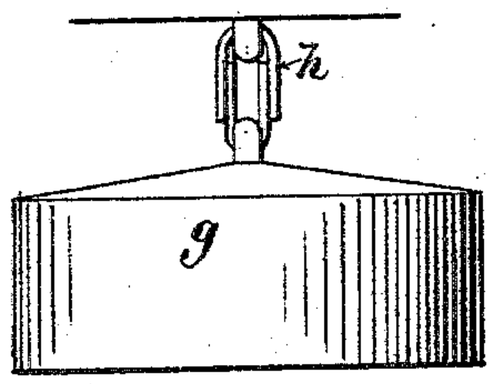
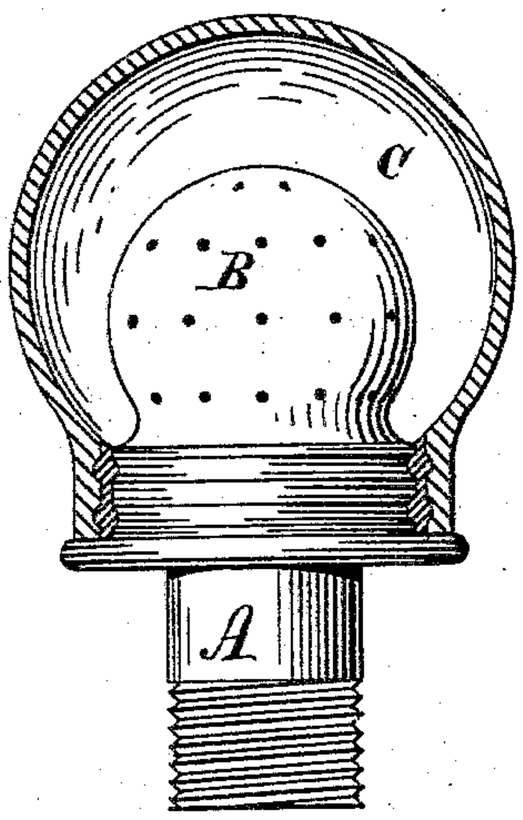
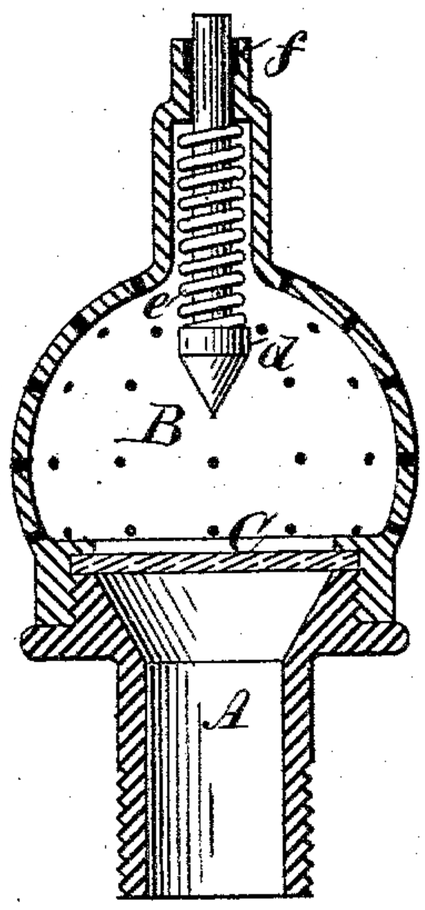


Fig. 3.

Fig. 1.





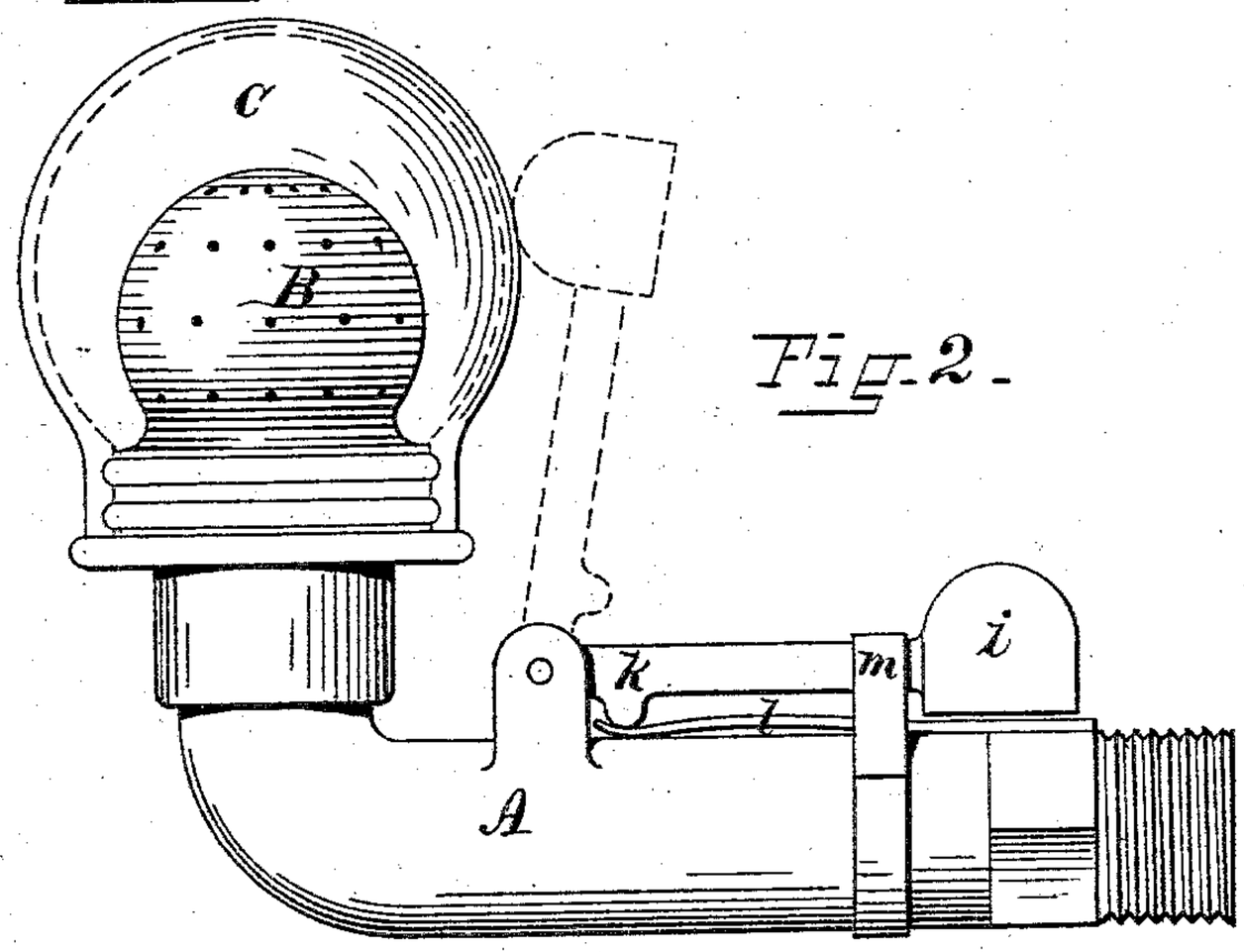


Fig. 2.

WITNESSES:

Henry J. Miller

Wm. L. Coggs.

INVENTOR:

Christopher L. Delmage

by Joseph A. Miller & Co

Atty's

UNITED STATES PATENT OFFICE.

CHRISTOPHER L. DELMAGE, OF WOONSOCKET, ASSIGNOR TO FREDERICK GRINNELL, OF PROVIDENCE, RHODE ISLAND.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 281,181, dated July 10, 1883.

Application filed May 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER L. DELMAGE, of Woonsocket, in the county of Providence, State of Rhode Island, have invented a new and useful Improvement in 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.

This invention has reference to the class of fire-extinguishers usually secured to the outlets of pipes permanently fixed in a building, which are opened automatically or otherwise when a fire breaks out and distribute the water on the fire.

The invention consists in the application of a seal constructed to close the outlet, and made of a fragile material—such as glass, porcelain, or potter's clay—which can be readily broken by a blow, as will be more fully set forth hereinafter.

Figure 1 is a view, partly in section, of a perforated distributer inclosed in a cap made of glass, porcelain, or similar fragile material, showing a weight suspended above, which, when released, will fall and break the cap. Fig. 2 is a view of a distributer inclosed in a glass cap, showing a hammer held against the tension of a spring by a link secured by a solder fusible at a low temperature, which, when weakened by heat, will release the hammer, so that by the reaction of the spring the hammer will break the glass cap, and thus release the confined liquid. Fig. 3 is a sectional view, showing a modification of the seal, which is here placed within the distributer, and is broken by the reaction of a coiled spring acting on a bolt held in place by a fusible solder.

In the drawings, A is the inlet; B, the distributer, those shown in the drawings being the ordinary perforated sprinkler; but any kind of distributer may be used in connection with the fragile seal, and more particularly so with the fragile cap as shown in Figs. 1 and 2, these caps being placed over the distributer or outlet, and are secured in any suitable manner so as to make a water and air tight seal.

C C are the seals, made of glass, porcelain, or any other fragile material that is easily broken by a blow, so that in case of fire they may be knocked off with a stick, or be arranged so as to be automatically broken when a fire occurs. The seals C C (shown in Figs. 1 and 2) are globes or caps covering the outlet and closing the same. The seal shown in Fig. 3 is a plate of glass, porcelain, or other fragile material, secured to close the outlet in any suitable manner. This seal is shown in Fig. 3 as held by the distributer, and it is arranged to be broken automatically by the bolt *d*, held at *f*, by a solder fusible at a low temperature, against the force of the coiled spring *e*. When in this case a fire breaks out, the heat will readily melt the solder, and the coiled spring will be thrown with sufficient force against the fragile seal C to break the same, and thus release the water or other fluid contained in the pipes.

Referring now to Fig. 1, *g* is a weight supported on two U-shaped straps secured together by means of an easily-fusible solder readily affected by heat, when it will release the weight *g* and allow the same to fall and break the globe-shaped seal C, and release the fluid restrained by the same.

In Fig. 2, *i* is a hammer-head secured to the hinged lever *k*, which bears against the spring *l*, and is held in the position shown in solid lines by means of the strap *m*, which is secured by a solder fusible at a low temperature, so that on the breaking out of a fire the hammer is released, and the spring *l* will throw it with sufficient force against the globe-formed seal C, as is shown in broken lines, to break the same.

It is evident that various other forms of devices may be used to automatically break the seal, and I do not wish to confine myself to the special devices shown and described, as they only show some of the various types that may be used; nor do I wish to confine myself to the forms of the fragile seals shown, as these also may be varied to suit the particular form of distributer used.

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

1. The combination, with an outlet constructed to discharge a fluid on a fire, of a fragile seal, constructed and arranged so as to be

broken on the occurrence of a fire, and thus liberate the fire-extinguishing fluid restrained by it, as described.

2. In an automatic fire-extinguisher, the combination, with a fragile seal, of a device constructed, substantially as described, so as to be released by the action of the heat from the fire and break the seal, as described.

3. A seal made of glass or other fragile material, secured so as to make a tight joint and restrain the fluid contained in the pipe sealed with the same, as described.

In witness whereof I have hereunto set my hand.

CHRISTOPHER L. DELMAGE.

Witnesses:

H. J. MILLER,

M. E. EMERSON.