(No Model.)

J. R. BROWN.

AUTOMATIC FIRE EXTINGUISHER.

No. 306,316. Patented Oct. 7, 1884.

Fig. 1.

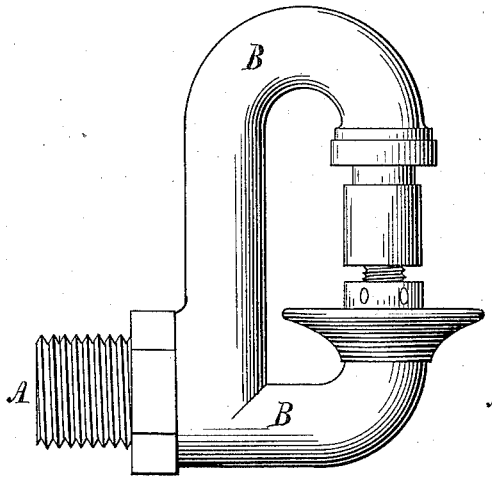
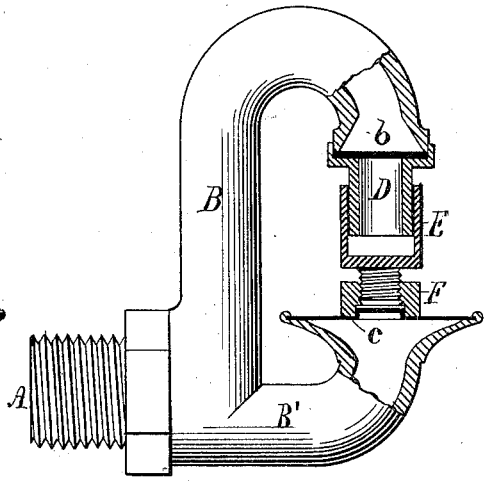


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH R. BROWN, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE AUTOMATIC FIRE EXTINGUISHER COMPANY, OF NEW YORK, N. Y.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 306,316, dated October 7, 1884.

Application filed April 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH R. BROWN, of Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Improvement in Automatic Fire-Extinguishers; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of fire-extinguishers in which the discharge of the liquid is prevented by a fusible joint, except in the event of fire.

My invention consists in the combination, with the extinguisher-body, of certain peculiar and novel devices for confining the liquid within the extinguisher, and for discharging and distributing the same when discharged, as hereinafter described and claimed.

Figure 1 is a side view of my improved automatic fire-extinguisher; and Fig. 2 is a similar view of the same, partly in section.

In the drawings, A is the inlet to the extinguisher, which is divided into two branches, B and B′.

b is the discharge-outlet, and *c* a sheet-metal disk closing the branch B′. The outlet *b* is closed by the cap D, provided with the stem, which is secured by a solder fusible at a low temperature in the cup E, the closed end of which is provided with a screw-stem entering the nut F, which rests on the deflector *c*. By this arrangement the cap D is firmly forced against the outlet *b*, and when the extinguisher is subjected to internal pressure the same is exerted on the deflector *c* as well as on the cap D, and is thus balanced. When, now, on the breaking out of a fire the solder melts, the stem of the cap D is forced into the cup E, the force of the water removes the same, and the stream meets the yielding deflector *c*, by which it is dispersed in all directions. The branches B B′ are arranged as shown, in order that their outer ends may lie opposite to each other, and thereby the parts D, E, and F shall be in alignment and between the outer ends of the branches. A suitable packing is interposed between the cap D and the outlet *b*, and the nut F is not permanently secured to the diaphragm *c*, but simply rests thereon, the said diaphragm being provided with a central boss or projection, which extends upward somewhat into the nut F, and thus prevents any accidental displacement of the same. When the solder-joint between the cap D and cup E is fused by heat, the force of the liquid flowing out of the discharge-opening *b* upsets the nut F from its position upon the boss of the diaphragm *c*, and throws the cap D, cup E, and nut F away.

The disk or diaphragm *c* is made of thin sheet metal, so that when the extinguisher is in operation the liquid by its internal pressure in the branch B will spring the plate or diaphragm variably, and the liquid from the opening *b*, falling upon this moving diaphragm, will be deflected variably, and will thus act effectively upon the burning mass.

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 the extinguisher-body having a discharge-opening and a deflector-seat oppositely disposed, of a deflector permanently seated in the deflector-seat, a valve seated in the discharge-opening, and connections, substantially as described, united by fusible solder and interposed between the valve and the deflector, and operating in the manner specified.

2. The combination, with the body composed of the branches B B′, and having the inlet A, of the solder *b*, the deflector *c*, the cap D, the cup E, and the nut F, all arranged to operate substantially as set forth.

In witness whereof I have hereunto set my hand.

JOSEPH R. BROWN.

Witnesses:
M. F. BLIGH,
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