(Model.)

J. R. BROWN.

AUTOMATIC FIRE EXTINGUISHER.

No. 245,914. Patented Aug. 16, 1881.

Fig. 1.

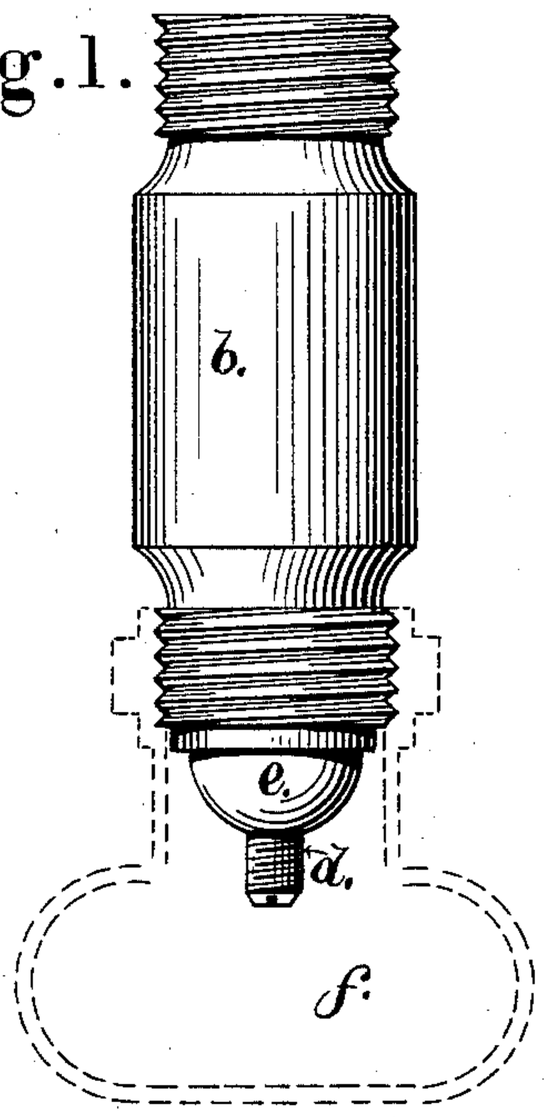
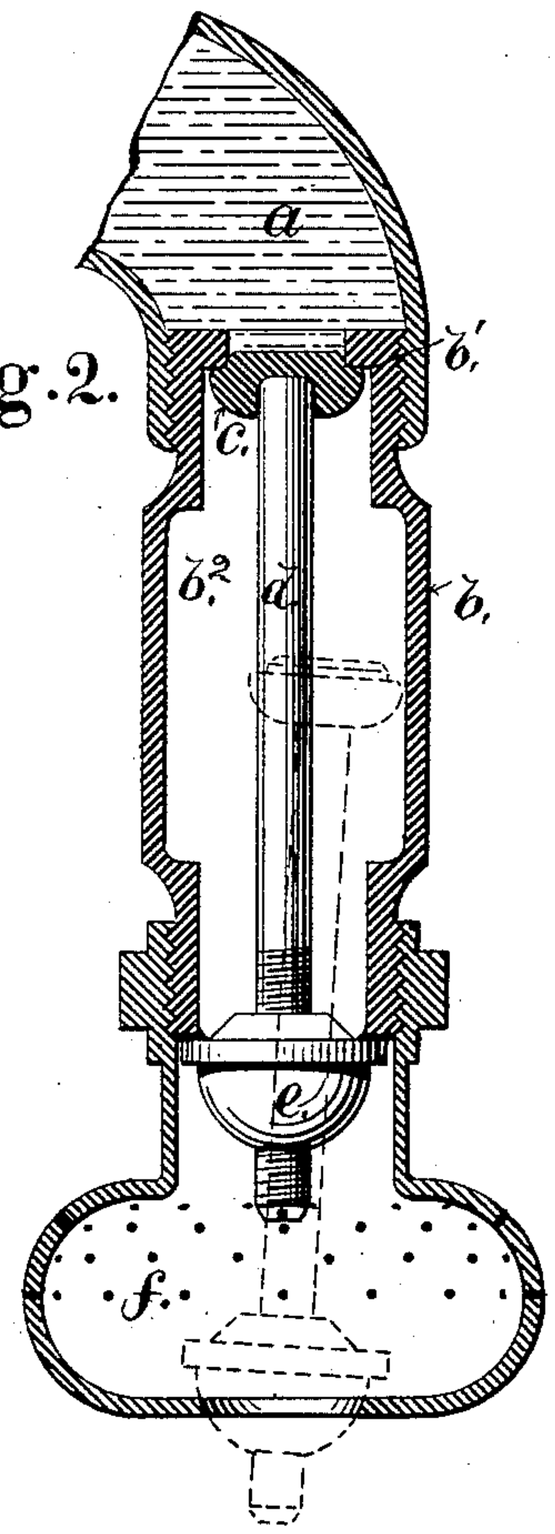


Fig. 2.



WITNESSES:

Wm. L. Coop.

Joseph A. Miller Jr.

INVENTOR:

Joseph R. Brown.

by Joseph A. Miller
Atty

UNITED STATES PATENT OFFICE.

JOSEPH R. BROWN, OF PROVIDENCE, ASSIGNOR OF TWO-THIRDS TO HENRY A. STEARNS, OF LINCOLN, RHODE ISLAND, AND JOHN M. HALL, OF WALLINGFORD, CONNECTICUT.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 245,914, dated August 16, 1881.

Application filed March 14, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOSEPH R. BROWN, of the city and county of Providence, and State of Rhode Island, 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.

This invention has reference to an improvement in devices used for distributing water on a fire, the water-outlet of which is closed and and is constructed to open automatically by the action of heat on a fusible solder.

The invention consists in providing such a seal with a valve held to its seat by a stem secured in the seal by means of a screw-thread, so that the valve can be firmly held to its seat and the water kept from contact with the seal, as will be more fully set forth hereinafter.

In an automatic fire-extinguisher, and particularly when the same is pendent from the supply-pipes, it is desirable to exclude the water from the soldered joint, as the heat will act more promptly on the solder, and it will not be so liable to be carried off by water. In pendent automatic fire-extinguishers the sediment and impurities are also liable to settle in the vertical pipe, and the water cannot be drawn from the same. By the use of the auxiliary valve the water is kept away from the soldered joint and from the pendent pipe.

Figure 1 is a view of the pendent pipe by which the distributer is connected with the supply-pipe. The distributer is shown in broken lines. Fig. 2 is a sectional view, showing part of the elbow-fitting of the supply-pipe, the pendent pipe in which the valve and soldered seal are secured, and the distributer. The position of the valve and seal when they are released is shown in broken lines.

In the drawings, *a* is the water-supply pipe; *b*, the pendent pipe, provided with the valve-seat *b'* at its upper end. *c* is the valve, held against its seat by the rod or stem *d* resting in a cavity made in the valve, and secured by a screw-thread in the seal *e*, the end of the stem being provided with a slot, so that when the seal *e* is soldered to the end of the pendant *b* the valve *c* can be forced firmly against its seat. *f* is a perforated distributer.

The action of the device is as follows: When it is prepared for use the valve *c* is inserted and placed on its seat. The stem *d* is screwed into the seal, so that the same can be soldered to the pendant *b*. The stem is now forced against the valve *c*, the distributer is secured, and the whole screwed into the outlet-fitting. The water will only reach the valve, and can be readily drawn off when desired. It cannot reach the seal and cannot affect the soldered joint. When a fire breaks out the soldered joint will melt readily, and the valve, the seal, and the stem will fall, as shown in broken lines in Fig. 2, and the water will flow through the distributer on the fire and automatically extinguish the same.

To prevent any obstruction to the water by the valve and valve-stem, the pendant is provided with an enlargement, b^2.

This device is simple in construction, is not liable to be affected by sediment or impurities contained in the water, is prompt in its action, as the soldered joint is exposed to the heat of the fire when one breaks out, and it cannot leak, as, even if the valve *c* should leak, the seal *e* would prevent any loss of water, as it forms a soldered joint.

To insure the prompt action of my automatic fire-extinguisher and make the sticking of the valve *c* an impossibility, the valve *c* can be made of such composition of metal that it will melt at a temperature above the melting-point of the seal, so that after the soldered joint of the seal is released the valve, if still held, will melt as soon as a higher temperature is reached.

The solder for the seal is usually made to melt at 150° Fahrenheit, and in such a case I would make the valve of such composition as will melt at from 200° to 300°.

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

1. An automatic fire-extinguisher consisting of a pendent pipe, a seal secured by fusible solder, a distributer inclosing the seal, and

a valve above the seal, constructed to keep the water from contact with the fusible solder, as described.

2. In an automatic fire-extinguisher, the combination, substantially as before set forth, of a pendent pipe having a valve-seat at its upper end, a seal at the lower end secured by fusible solder, the secured valve-stem supported by the seal, and the distributer inclosing the seal.

JOSEPH R. BROWN.

Witnesses:

JOSEPH A. MILLER,

J. A. MILLER, Jr.