

(No Model.)

R. H. PRICE.
AUTOMATIC FIRE EXTINGUISHER.

No. 460,182.

Patented Sept. 29, 1891.

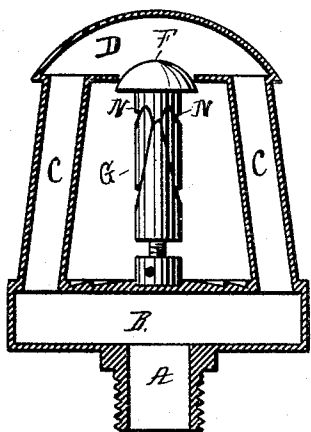


Fig. 1.

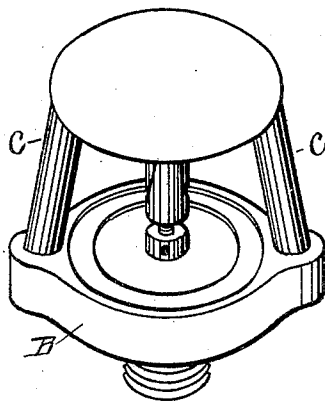


Fig. 2.

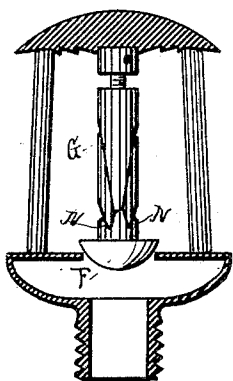


Fig. 3.

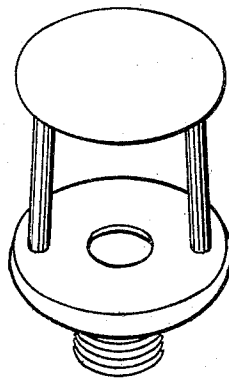


Fig. 4.

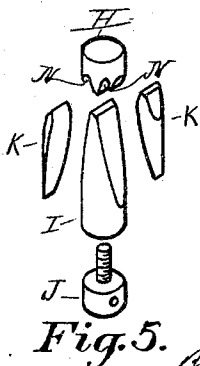


Fig. 5.

Witnesses:
Joseph H. Flaherty
E. Brown

Inventor,
Raymond H. Price
By William B. Vincent Atty.

UNITED STATES PATENT OFFICE.

RAYMOND H. PRICE, OF PROVIDENCE, RHODE ISLAND.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 460,182, dated September 29, 1891.

Application filed October 28, 1890. Serial No. 369,563. (No model.)

To all whom it may concern:

Be it known that I, RAYMOND H. PRICE, of Providence, in the State of Rhode Island, have made certain new and useful Improvements in Automatic Fire-Extinguishers; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a vertical section of my improved device. Fig. 2 is a perspective view of same. Fig. 3 is a vertical section showing the adaptation of my improved post to other extinguishers now in use. Fig. 4 is a perspective view of same with post and valve removed. Fig. 5 shows the several parts of my improved post detached.

The object of my invention is to obtain a better and more thorough distribution of the water upon the release of the valve from its seat and to increase the pressure-resisting strength of the post without retarding its dissolution in case of fire; and it consists in the construction of the device whereby a downward discharge of water is secured and in the construction, composition, and means of adjusting the post, as hereinafter described.

In the extinguishers now in use the water is usually discharged upward against a deflector of some kind, which distributes it more or less over the surrounding space. The water thus discharged against the overhanging deflector is at one and the same time forced outward and downward. The best protection in case of fire requires that the ceiling or whatever is above the extinguisher should be drenched with water as well as the floor and articles below; or if the discharge be downward the device is secured to the under side of the water-supply pipe and the valve is placed at the lowest point, so that the sediment which is constantly being deposited from the water passing through the supply-pipe settles around the valve and is apt to prevent the valve from opening even after the support has been loosened; but by using an upright extinguisher—that is, one that projects upward from the supply-pipe—and placing the valve at the highest point I secure a downward discharge of water and prevent the sediment from settling around the valve.

In the drawings, A, Figs. 1 and 2, is the in-

let for the water, through which it passes into the base B of the extinguisher. From the base B it passes through tubes C C to the upper chamber D, in the bottom of which is the outlet E, closed by a valve F. The valve F is supported against the pressure of the water by a post G, the several parts of which are held together by solder fusible at a low degree of heat. The upper surface of the base B is concaved or provided with annular grooves. The combined diameter of the tubes or passages C C are equal to or greater than the diameter of the outlet E. As soon as the valve F is released from its seat the water will be discharged downward upon the concaved or grooved surface of the base B and will be forced upward toward the ceiling and at the same time outward from the center. Such disposition of the water will not only keep the ceiling thoroughly wet, but will also distribute it over a much greater area than it could be made to cover were its direction of movement simply outward and downward. The concaved or grooved surface is not absolutely necessary, but contributes somewhat to a better result.

The valve F must be securely held to its seat to prevent any leak, and the post G is thus required to sustain a considerable weight. Solder fusible at a low degree of heat is somewhat uncertain when subjected to a severe strain. The posts now in use are dependent upon the solder for their holding strength. In my invention I have constructed, combined, and secured together the several parts of the post, so that the solder will simply be needed to hold the parts in position, instead of sustaining the strain of the water-pressure.

I make my improved post in five parts H I J K K, as shown in Fig. 5. The two parts H and I have central rounded contiguous edges and are held in vertical alignment by the parts K K, interlocked at one end with the part H, and all secured together with solder fusible at a low degree of heat, the whole being supported, adjusted, and forced against the valve by means of a tightening-screw J. In the drawings I have shown one form or means of interlocking these parts together, which consists in providing the part H with two grooves or notches N N, into which the upper ends of the pieces K K project. In

this manner the upper ends of the pieces K
K are held in place without the use of solder,
and as the lateral force of the contacting ends
of the parts I and H is exerted between the
5 ends of the pieces K K each of the pieces K
becomes a lever having its fulcrum at one
end, and consequently it will require but a
very small amount of solder to secure the op-
posite end to the piece I and less heat will be
10 required to melt the small amount of solder
used. It will now be readily seen that the
solder securing the several parts of the post
is not called upon to sustain any considerable
strain; but its office is to simply hold the parts
15 H and I from slipping away from or out of ver-
tical alignment with each other while they
resist the pressure.

While I regard the adjusting-screw J as an
important feature of my invention, it may be
20 dispensed with by lengthening the part I, and
some of the advantages of my post still re-
tained, and other means of interlocking the
parts together may be employed without de-
parting from the spirit of my invention.

In Figs. 3 and 4 I have shown my improved 25
post adjusted to extinguishers now in use hav-
ing the upward discharge.

What I claim as my invention, and desire
to secure by Letters Patent, is—

In an automatic fire-extinguisher having 30
a deflector opposite the discharge-orifice, a
valve for closing the orifice and a post for
keeping the valve in the outlet, said post con-
sisting of the two retaining parts, the con-
tiguous ends of which are rounding, and lat- 35
eral supports, each having one end inter-
locked with one of the retaining parts and the
opposite end secured to the other retaining
part by means of solder fusible at a low tem-
perature, the intermediate portions of said 40
lateral supports bearing against the retain-
ing parts and preventing lateral displacement
of the same, substantially as described.

RAYMOND H. PRICE.

Witnesses:

WALTER B. VINCENT,
JOSEPH H. FLAHERTY.