

(No Model.)

O. C. BARBER.
AUTOMATIC FIRE EXTINGUISHER.

No. 473,442.

Patented Apr. 26, 1892.

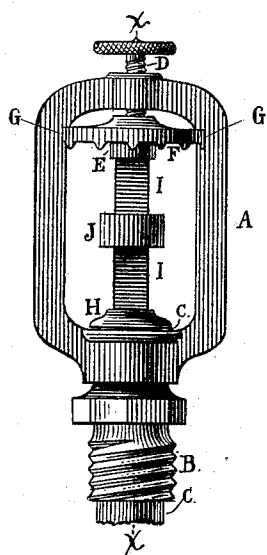


FIG. 1.



FIG. 4.

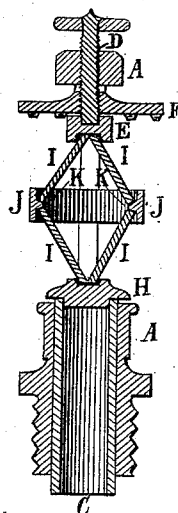


FIG. 2.

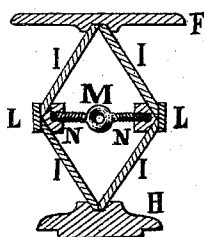


FIG. 3.

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AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 473,442, dated April 26, 1892.

Application filed March 30, 1891. Serial No. 386,916. (No model.)

To all whom it may concern:

Be it known that I, OHIO C. BARBER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Automatic Fire-Extinguishers, of which the following is a specification.

My invention has relation to improvements in that class of automatic fire-extinguishers in which water under pressure is held in a tube by a cap retained in place through intermediate mechanism by a fusible locking device, the fusing of which releases said mechanism and cap.

The object of my invention is to provide new, improved, and simple mechanism for the aforesaid purpose, which shall readily and completely separate and offer no other obstacle to the free discharge of the water.

My invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described, and then specifically claimed, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is an elevation of my improved fire-extinguisher; Fig. 2, a central longitudinal section of the same at the line $x x$; Fig. 3, a similar view of a part of the same, showing a modified device for retaining the truss-braces; and Fig. 4, a top elevation of the retaining device shown in Fig. 3.

Referring to the drawings, A is a metallic yoke having a tubular screw-threaded projection B to connect it with the water-supply pipe, inside of which is an inner tube C, preferably of glass, for a purpose to be shown, extending slightly within the yoke. At the opposite end of the yoke, passing through a screw-threaded opening therein and in alignment with the tube C is a thumb-screw D, bearing on its inner end a revoluble head E, having in its lower face a recess to constitute an abutment for the truss-braces hereinafter described.

Inside the yoke is a spreader F, for a purpose to be stated, which has a central screw-threaded orifice, through which the screw D passes and by which it is retained in place, and side notches G, which receive the inner edges of the yoke and prevent lateral movement. This spreader consists of a metallic

disk having corrugations or points in the face toward the tube C, and its purpose is to encounter the stream from said tube when released and spread it laterally in spray.

On the tube C is a close-fitting cap H, having in its outer face a recess to constitute an abutment for the truss-braces similar to that in the head E, and by having the tube C of glass all danger of sticking from corrosion between the parts is avoided.

Interposed between the head E and cap H are four truss-braces I, similar in shape and size, each consisting of a short flat strip of metal, the upper ends of the upper pair resting in the recess of the head E and the lower ends of the lower pair in the recess of the cap H. The members of each pair incline diagonally from each other, with their outer ends in juxtaposition with the outer ends of the members of the opposite pair. Surrounding the adjacent ends of opposite pairs is a link J, having on its inside a ridge K, constituting an abutment against which said ends rest. The screw D being raised the parts are loosely placed in position and the screw turned down until the parts are firmly pressed together. These parts are thus securely forced and held in position by the screw D, and thereby constitute a truss that retains the cap H on the tube C. The link J is of metal that fuses at a much lower temperature than the other metals and may be constructed of two overlapping strips of ordinary metal united by a fusible solder, and hence when exposed to heat from a fire in a room the ring or the solder, as the case may be, fuses and permits the truss-braces I to fly apart, thereby releasing the cap H and permitting the water to flow.

In the modification shown in Fig. 3, which illustrates so much of the apparatus as shows its application, the upper ends of the upper pair of truss-braces I rest in a recess in the under face of the spreader F and the outer ends of each set rest in spaces formed between the metallic blocks N N and the metallic straps L L, which are severally united to each side of the blocks by a fusible solder, similar to that used in the former device. The blocks N N are provided with right and left hand screw-threaded orifices, in which meshes the right and left hand screw M, by turning which

the parts are firmly braced, as in the other case. By the fusing of the solder the parts separate, as in the other case.

I claim as my invention—

- 5 1. In a fire-extinguisher, the combination, with a yoke having a water-supply tube opening through one end thereof provided with a cap and the opposite end supporting an abutment, of two pairs of braces, one pair resting
10 at one end against said abutment and the ends of the other pair against said cap, the members of each pair extending diagonally from each other and their ends in juxtaposition with the ends of the opposite pair, and a
15 fusible attachment uniting the adjacent ends of adjacent braces, substantially as shown and described.

2. In an automatic fire-extinguisher, the yoke A, the supply-pipe C, and the cap H,
20 arranged to close it and the spreader F, and the screw D, passing through it and the head E, connected with the inner end of said screw,

and the fusible link D, combined with the four braces I, arranged in pairs, the ends of adjacent pairs resting against the head and
25 cap, respectively, and their opposite ends resting against supports in the fusible link J, all constructed and arranged substantially as shown and described.

3. The combination, with the head E, the
30 cap H, and the braces I, arranged in pairs and having one end of each pair arranged to rest against said head and cap, respectively, of the fusible link J, having inner ridges K to constitute abutments for the opposite ends
35 of said braces, substantially as shown and described.

In testimony that I claim the above I hereunto set my hand.

OHIO C. BARBER.

In presence of—

C. P. HUMPHREY,
C. E. HUMPHREY.