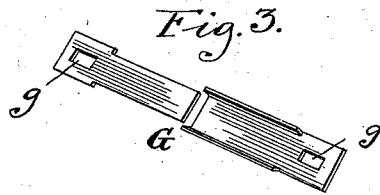
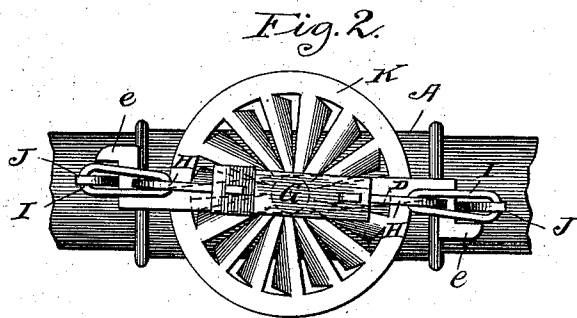
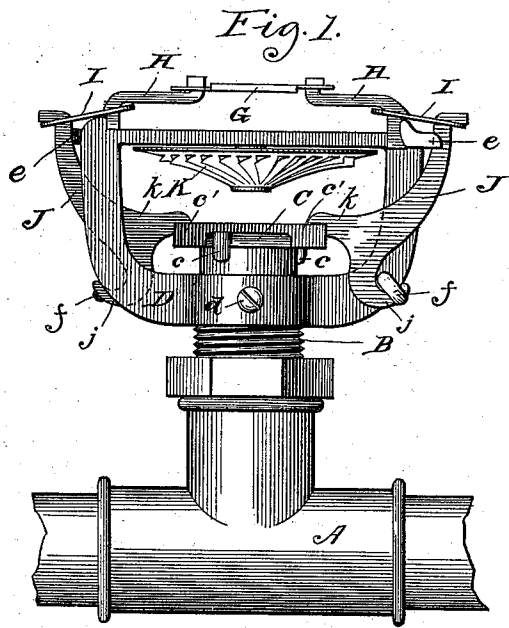


(No Model.)

C. W. KERSTETER.
AUTOMATIC FIRE EXTINGUISHER.

No. 400,688.

Patented Apr. 2, 1889.



Witnesses,

J. J. Mann,
Frederick Goodwin

Inventor,

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UNITED STATES PATENT OFFICE.

CHARLES W. KERSTETER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF
TO WILLIAM E. SMITH, OF SAME PLACE.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 400,688, dated April 2, 1889.

Application filed January 26, 1889. Serial No. 297,671. (No model.)

To all whom it may concern:

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

My invention relates to that class of automatic fire-extinguishers wherein a valve is held in position to close the orifice of a nozzle by levers secured by fusible metal, whereby the valve is released when the heat becomes sufficient to fuse the metal, and the water issues from the orifice, and is sprayed by means of a deflector against which the water discharges; and my invention consists in the devices and combination of devices hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my extinguisher in the position it occupies when in use. Fig. 2 is a plan view, and Fig. 3 is a detail.

In the drawings, A is a T-coupling forming a part of the water-supply pipe, and into the stem of which is screwed a nozzle, B, to the orifice of which is fitted a cap-valve, C. This valve will preferably have the lugs *c*, adapted to embrace the end of the nozzle, and thus prevent lateral movement of the valve.

D is a yoke which is fitted to the nozzle and secured either by the set-screw *d* or by screw-threads, or both. This yoke has at the upper and lower ends of its upright arms, respectively, projecting lugs *e e* and *f f*. These lugs are hooked or bent at their outer ends and preferably project in opposite directions from said side arms.

G is a fusible strip composed of two thin metal plates connected by solder. (See Fig. 3.) Strip G is connected on both sides by short arms H H and links I I to levers J J. The arms H have their ends bent in opposite directions, to adapt them to enter apertures *g* in the ends of the strip G and the openings of the links I. The bent ends of these arms, which pass through the openings of the links, project below the plane thereof and bear against the inner sides of the lugs *e*, the surfaces in contact being beveled to prevent vertical movement, and the upper ends of the

levers J bear against the outer sides of said lugs, while the links I rest upon the upper surface of the same lugs. The levers J have projections *j*, which hook over the lugs *f*. These levers also have short arms *k*, which project inwardly and have a bearing on the valve C, which may have short arms *c'* thereon to form rests for the arms *k*.

K is a deflector, which will be secured to the under side of the cross-bar of the yoke over the orifice of the nozzle. This deflector is made from a disk of sheet metal and has radial openings formed by slitting the metal from near the center of the disk to near its periphery and bending it downwardly from one side of the slit. The metal may also be cut at right angles to the radial slits near the periphery and the points bent downwardly.

I prefer the latter construction, and I also prefer to bend down these points, so that they will be at a screw-pitch similar to the blades of a propeller. With this construction the water issuing from the nozzle will strike the edge of the blades, and part of it will be deflected through the openings and a part of it returned without passing through them, thus breaking up the water into a very fine spray.

I claim—

1. In an automatic fire-extinguisher, the combination of a nozzle, a yoke projecting beyond the orifice of the nozzle and having retaining-lugs on each of its upright portions, a cap-valve adapted to close the nozzle-orifice, levers adapted to engage the lugs of the yoke-uprights and having short arms bearing on the valve, and a fusible strip connected at its respective ends by arms and links to the upper ends of the levers, substantially as described.

2. In an automatic fire-extinguisher, the combination of a nozzle, a yoke projecting beyond the orifice of the nozzle and having lugs toward each end of its upright portions, a valve adapted to close the nozzle-orifice, levers having projections to engage the lower lugs of the yoke-uprights and having their upper ends extended to bear upon the outer side of the upper lugs and provided with short arms adapted to bear on the valve, and a fusible strip connected at its respective ends

by arms and links to the upper ends of the levers, substantially as described.

3. In an automatic sprinkler, a deflector secured over the nozzle-orifice, said deflector
5 comprising a disk slitted radially and having the metal thereof turned down at the edges of the slits at a screw-pitch, whereby to break

the water into spray, substantially as described.

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Witnesses:

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