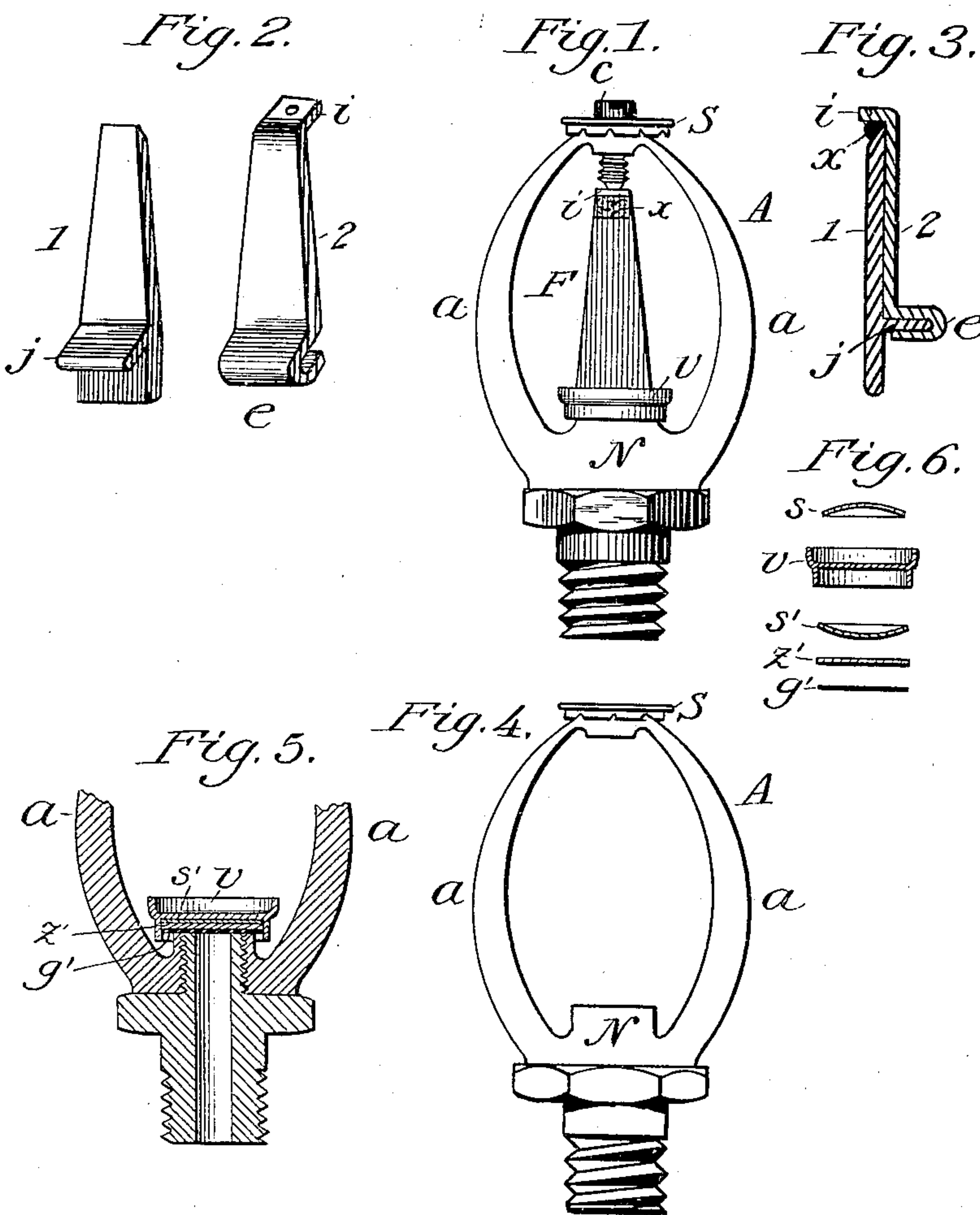


No. 792,310.

PATENTED JUNE 13, 1905.

C. E. BUELL.
AUTOMATIC SPRINKLER.
APPLICATION FILED MAR. 23, 1897.



WITNESSES:

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AUTOMATIC SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 792,310, dated June 13, 1905.

Application filed March 23, 1897. Serial No. 628,837.

To all whom it may concern:

Be it known that I, CHARLES E. BUELL, of North Plainfield, Somerset county, State of New Jersey, have invented Improvements in Automatic Sprinklers, of which the following is a specification.

My invention consists, primarily, in the combination, with an automatic sprinkler, of a fusible fastening comprising two members, a supported member pivoted upon a supporting member, a deflected portion upon the supporting member, and a folded or bent portion of the supported member conforming to the said deflected portion and the said members joined into a support for the valve of said sprinkler by being soldered together along their contacting surfaces, substantially as hereinafter described.

My invention further consists in certain combinations and subcombinations to be hereinafter described.

In the accompanying drawings, Figure 1 shows an automatic sprinkler embodying my invention. Figs. 2 and 3 show the details of the fusible fastening employed for carrying out my invention. Fig. 4 shows the body of a sprinkler. Fig. 5 shows the body of a sprinkler and of the valve for closing the outlet thereof in cross-section, and Fig. 6 shows the details of the said valve.

Referring to the several figures, the body A consists of the arms *a a*, supporting the spreader S, and the nozzle portion N, secured to said body portion by being screwed thereon, as shown in Fig. 5.

The valve V, covering the outlet of nozzle N, comprises the valve proper, V, consisting of a metal shell with a partition, so as to form a cavity above and below the center of said shell. In the lower cavity thus formed there is placed a disk of elastic material *s'*, which may be struck up out of spring metal and curved, as shown in Fig. 6. Between the spring-disk *s'* and the valve-seat there is a gasket *z'*, preferably formed of lead, and a second gasket *g'* of any suitable thin metal.

An elastic disk *s* is placed above the central web, and the strut or fusible fastening F rests

upon the disk *s*, and by means of the screw *e*, which passes through the spreader S, the valve V is forced to its seat, compressing the elastic disks *s* and *s'*, which are normally slightly smaller in diameter than the cavities into which they are to be placed, so as to allow of an increased diameter of the springs when under pressure.

The fusible fastening F consists of the member 1, having a deflected portion *j*, and the member 2, pivoted upon member 1 and so bent as to fold around the projection *j* at *e* and lying at right angles with member 1 at the pivotal point *i*. The members thus constructed and arranged are soldered along their contacting surfaces and at the point *w*.

The valve V, having the elastic disk *s'*, the gaskets *g'* and *z'*, as shown in Fig. 5, extends beyond the exterior of the nozzle N, and the space thus afforded is filled with a fusible material which will melt in advance of the solder, such as paraffin, for excluding corrosive vapors from contact with the valve-joint formed by the valve and its seat.

What I claim is—

1. A sprinkler-fastening consisting of an upright member, a deflected portion on said member, a supported member pivoted on the first-named member and having a part that is folded upon the deflected portion of the said first-named member, and the two members thus disposed secured together by an easily-fusible solder.

2. A sprinkler-valve comprising a cavity above and below a central web, or partition, a metal spring in each of said cavities, and suitable covering for the spring in the lower cavity, substantially as described.

3. An automatic sprinkler-valve consisting of a closing-plate provided with projecting portions above and below said closing-plate, elastic members above and below said closing-plate, and a gasket between the elastic member, below the closing-plate, and the outlet of the sprinkler.

4. In an automatic sprinkler, the combination, with the outlet, of a valve having a central partition therein, a concavo-convex spring

in a cavity above said partition, a second concavo-convex spring in a cavity below said partition, suitable gaskets between said valve and the valve-seat, and a fusible fastening for holding said valve to its seat that consists of an upright member having a deflected portion, a supported member pivoted upon said first-named member and having a part thereof folded upon the said deflected portion, and the two members thus disposed secured together along their contacting surfaces by an easily-fusible solder.

5. In an automatic sprinkler, the combination, with the valve, of a fusible fastening for holding said valve to its seat, consisting of an upright member which is provided with a deflected portion, a supported member folded upon the said deflected portion and the joined members secured together by solder along their contacting surfaces.

6. In an automatic sprinkler, the combination, with the valve, of a fusible fastening for holding said valve to its seat, consisting of an upright member having a deflected portion, a supported member pivoted thereon and folded upon the said deflected portion of the first-named member and the said members soldered together, and an elastic member in the assembled structure that is adapted to give a thrust to the released parts.

7. In an automatic sprinkler, the combination, with the nozzle or outlet, of a valve for closing said outlet, that is like an inverted dish and larger than the nozzle, a suitable facing for said valve, an annular mass of easily-fusible material filling the space between the valve and the exterior of the nozzle, a thermal release for normally holding the valve upon its seat.

8. In an automatic sprinkler, the combination, with the valve, of a fusible fastening for holding said valve to its seat, consisting of an upright supporting member which is provided with a deflected portion, a supported member pivoted on said supporting member and bent upon the said deflected portion and the joined members secured together by solder along their contacting surfaces.

9. In an automatic sprinkler, the combination, with the valve, of a post having between its ends a lateral arm, a lever bearing upon one end of the post and having an arm lying against the lateral arm of the post, and means for securing the lever and lateral arm together in different planes.

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Witnesses:

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