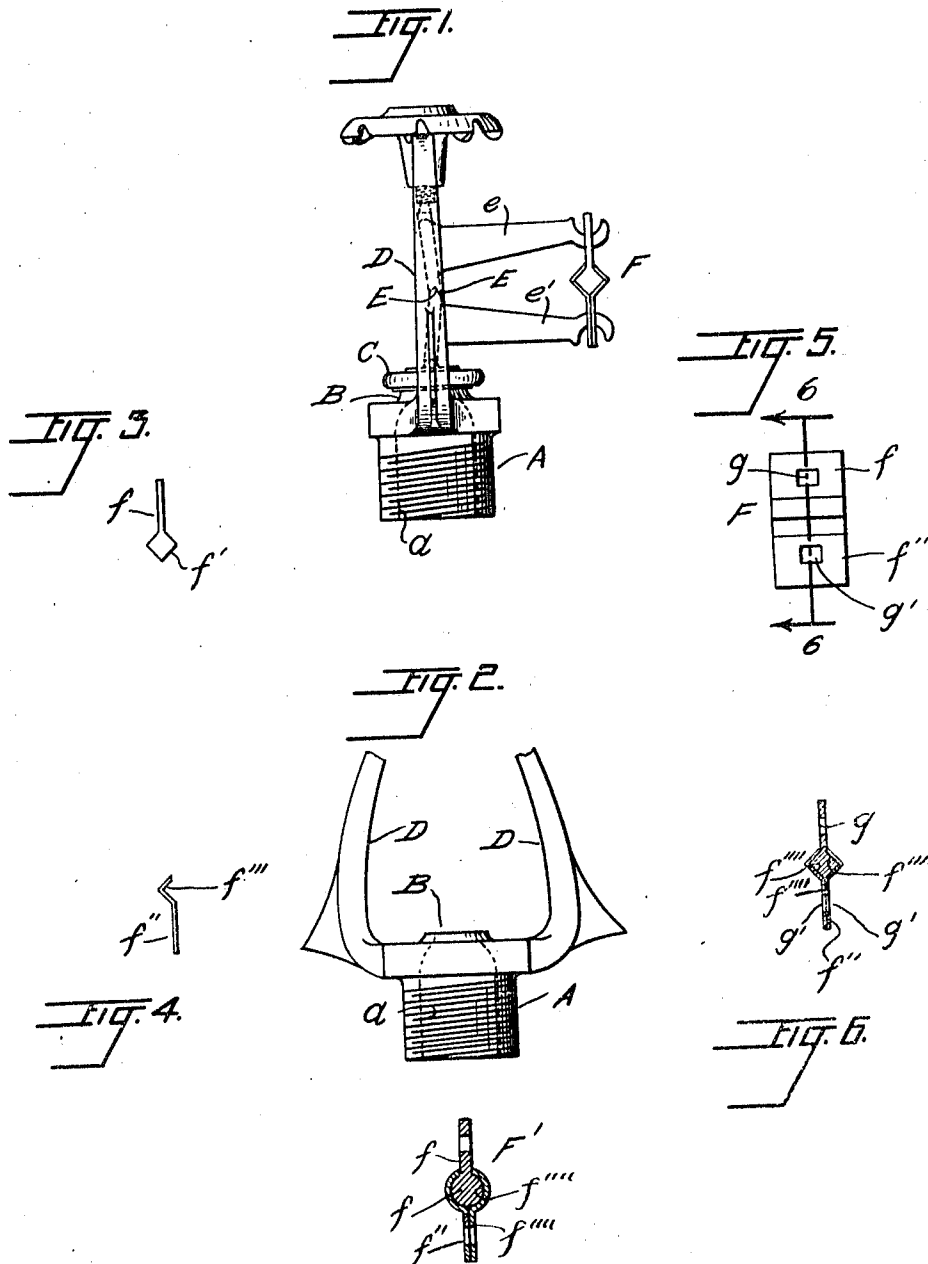


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FUSIBLE LINK FOR AUTOMATIC SPRINKLERS.
APPLICATION FILED DEC. 11, 1911.

Patented May 14, 1912.

1,026,440.



WITNESSES:
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ARNT C. HANNIBAL, OF CHICAGO, ILLINOIS.

FUSIBLE LINK FOR AUTOMATIC SPRINKLERS.

1,026,440.

Specification of Letters Patent.

Patented May 14, 1912.

Application filed December 11, 1911. Serial No. 665,134.

To all whom it may concern:

Be it known that I, ARNT C. HANNIBAL, 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 Fusible Links for Automatic Sprinklers, of which the following is a specification.

This invention relates to devices used to hold the discharge orifices of a water delivery system in a closed position until a determined temperature prevails at or around one or more of said orifices and when said determined temperature does prevail to automatically release the valve or cover of said orifice and permit the said valve or cover to be moved from its seat by the pressure of the water on said system, and water to be discharged therefrom.

The objects of this invention are;—to obtain a device which at climatic temperature, or at the temperature which is designed to prevail in artificially warmed buildings, will sustain the strain incident to its use as a lock or latch, or as a connecting link between locking or latching levers, without liability of breakage and thereby permitting the valve or cover to be removed from its seat; to obtain a device which will not be injuriously subject to corrosion or other injury to materially lessen its resistance to strain when the same is left in use for a considerable length of time, and to obtain a device which, when a determined temperature prevails upon or around it, will automatically give way and permit the valve or cover to be moved from its seat.

Further objects of the invention are to obtain a device of the character described which can be economically made, easily inspected and readily put into use by a person not specially skilled in the art.

In the drawing Figure 1 is a side elevation of a nozzle provided with a valve seat and valve thereon, with means including a device embodying this invention to hold the valve seated. Fig. 2 is an elevation at an angle of 90 degrees from the view illustrated in Fig. 1, of a portion of the nozzle and valve seat illustrated in said Fig. 1. Fig. 3 is an end view of one element of a device embodying my invention. Fig. 4 is an end view of an additional element of the device embodying the invention. Fig. 5 is a front elevation of a device embodying the inven-

tion, and Fig. 6, is a sectional view on line 6—6 of Fig. 5, viewed in the direction indicated by the arrows. Fig. 7 is a sectional view of a modification of the device embodying the invention.

Similar letters refer to similar parts throughout the several views.

A represents a screw threaded nozzle provided with a passage way therethrough, said passage way being indicated by broken lines *a*, Figs. 1 and 2.

B is a valve seat at the discharge end of the passage way *a*.

C is a valve or cover on valve seat B.

D is a frame and E is a toggle joint comprising levers *e*, *e'*.

F is a link embodying the invention which is mounted on levers *e*, *e'*, to hold said levers in position with the toggle joint E pressing cover or valve C firmly on seat B. The link F comprises the parts *f*, *f'*, *f''*, and solder *f'''* joining said parts together.

f' is a rib on part *f*. The parts *f''* are duplicates each of the said parts being provided with the groove *f'''* which fits to the rib *f'* of part *f*. The solder *f'''* (see Fig. 6) holds said parts *f*, *f''*, *f''*, together.

In the modification illustrated in Fig. 7, F' represents the link and it is composed of the parts *f*, *f'*, *f''*, joined together by solder as is the device which is illustrated in Figs. 1, 5 and 6. The modification consists merely in a change in the shape of the rib on part *f*, the said rib being circular instead of rectangular in cross section, and a corresponding change in the groove on part *f''*, *f''*.

Whatever the shape of the rib of the part *f* the groove or corrugations in parts *f''* are of corresponding shape so that said rib will fit in said groove or corrugations.

g is an aperture in part *f* and *g'*, *g'*, are apertures in parts *f''*.

To assemble the elements forming this invention a member *f* and duplicate members *f''* are soldered together, the solder being interposed between the duplicate parts *f''* which are adjacent to each other and between the inner faces of the grooves *f'''* of said parts *f''* and the faces of the rib *f'* of part *f*.

The edges of the several parts *f*, *f''*, are soldered so that no crack or opening is left on said edges either between the parts *f''* or between the grooves *f'''* and rib *f'*.

When the several parts *f*, *f''*, *f''*, are

joined together by solder f'''' and it is desired to put the device into use the levers e , e' , are respectively mounted in frame D to form a toggle joint, (E), and the ends of
5 said levers are inserted in apertures g , g' of link F.

When the link F is in position on levers e , e' , it holds the toggle joint E in place and the cover or valve C is held firmly to seat B
10 closing the aperture in nozzle A.

If the temperature of the device is less than the determined temperature at which it is desired to have the cover or valve C released the link will maintain the levers e , e' ,
15 and the toggle joint E in place, but when said device is raised to the determined temperature the solder f'''' is melted, or at least its tenacity is weakened, and the parts f'' , f'' , are released from each other and from
20 the rib f'' of part f .

I claim;--

A fusible link comprising three members joined together by solder, one of said members consisting of a metal body part provided with an aperture therethrough and
25 having a horizontally extending rib on the lower edge thereof, and the remaining parts substantially duplicates and respectively consisting of a metal body part provided with an aperture therethrough and having a
30 horizontally extending recess on the upper edge thereof, fitting to the corresponding side of the rib on the first named part.

Signed at Chicago, Ill., this 8th day of December, 1911.

ARNT C. HANNIBAL.

In the presence of--

CHARLES TURNER BROWN,
EUGENE WHEELER.