

A. C. ROWLEY.
FUSIBLE LINK.
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1,267,906.

Patented May 28, 1918.

Fig. 1

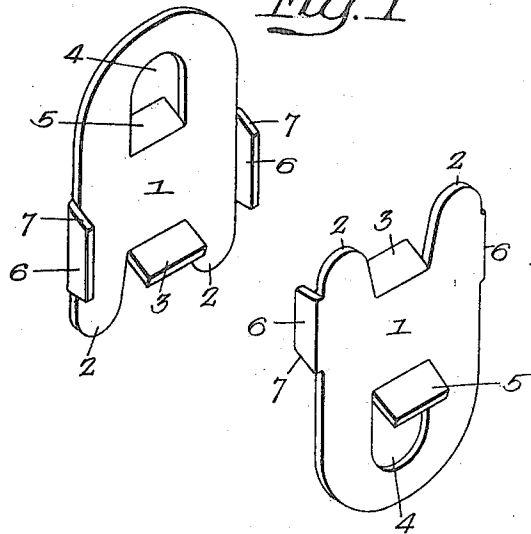


Fig. 2.

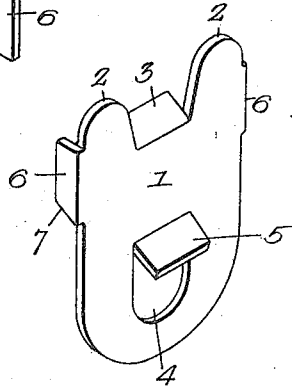


Fig. 3.

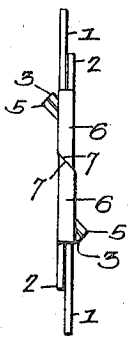


Fig. 4.

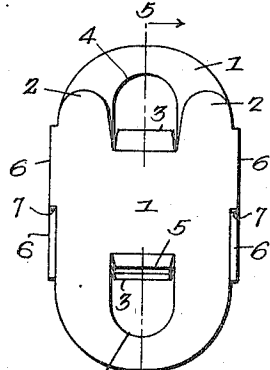


Fig. 5.

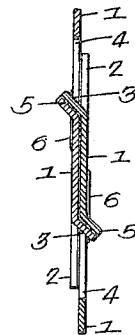


Fig. 6.

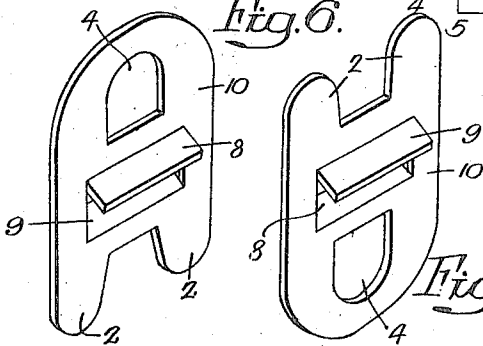


Fig. 7.

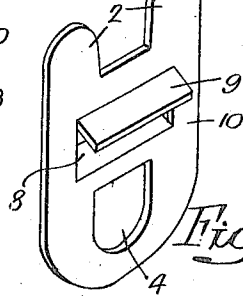
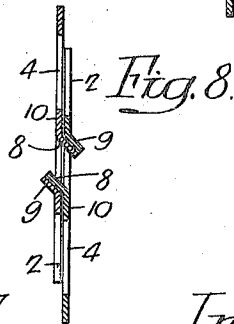


Fig. 8.

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FUSIBLE LINK.

1,267,906.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARTHUR C. ROWLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented
5 Fusible Links, of which the following is a specification.

One object of my invention is to provide a fusible link which shall consist of two like parts so designed as to be capable of being
10 inexpensively formed of stamped or pressed metal and of such construction that when united by fusible metal they shall not be liable to separate under working conditions until exposed to a definite temperature.

15 It is further desired to provide a two-part fusible link whose elements shall be of such construction as to minimize the possibility of corrosion of the fusible metal whereby they are separably connected;—the invention contemplating a novel arrangement and
20 form of side flanges and slidably cooperating tongues designed to protect in a large measure the fusible connecting metal and at the same time insure the separation of said
25 elements when said metal melts.

A further object of the invention is to provide a fusible two-part link having side flanges and coacting tongues so formed and
30 disposed as to facilitate the separation of the plates under predetermined conditions.

These objects and other advantageous ends I secure as hereinafter set forth, reference being had to the accompanying drawings, in which,

35 Figures 1 and 2 are perspective views illustrating the detail construction of each of the two elements constituting a link constructed in accordance with my invention;

40 Figs. 3 and 4 are respectively an edge and a front elevation of my link;

Fig. 5 is a vertical section on the line 5—5, Fig. 4;

Figs. 6 and 7 are perspective views of a modification; and

45 Fig. 8 is a vertical section of the link of Figs. 6 and 7.

In the above drawings each of the link elements consists of a flat plate 1 of sheet metal, preferably having one end rounded
50 and its opposite end provided with a pair of projecting lugs 2. Between these lugs is a tongue 3 of rectangular outline bent at an angle of substantially 45° to the plane of the plate, although obviously it may extend at

any other suitable angle without departing 55 from my invention.

The opposite or rounded end of each plate has an opening or perforation 4 for the reception of the lever of a sprinkler head or any other structure which it is desired to
60 hold in a predetermined position, and the lower edge of this opening is extended in the form of a second tongue 5 in a direction opposite that of the tongue 3 but preferably at substantially the same angle to the plane of
65 the plate 1.

Each side edge of the plate 1 is provided with an integral projecting flange or elongated lug 6 extending at right angles to its plane and having its upper end 7 beveled or
70 inclined at an angle of about 45°.

In assembling the two link members they are placed together parallel to each other with their rounded or perforated ends projecting in opposite directions, with the bottom tongue 3 of one of them projecting
75 through the opening 4 of the other so that it lies parallel to and practically in engagement with the tongue 5 of said second element. Similarly the tongue 3 of this second
80 element extends parallel to and immediately adjacent the tongue 5 of the first element. The inclined ends 7 of the side lugs or flanges 6 are in engagement or immediately adjacent each other.

85 After the two link elements or plates have been brought together in the relative positions shown, they are separably connected in the well known manner by a metal or alloy having a predetermined and relatively low
90 fusing point.

With this arrangement of parts it is obvious that the edges of the thin sheet or body of fusible material lying between and connecting the flat bodies of the two plates
95 is well protected at the sides of the link by the two pairs of flanges 6, each of which projects over a part of the narrow edge of the other member and thus covers the fusible metal adjacent thereto. Similarly, part of
100 the top and bottom edge of this same body of fusible material is likewise protected in a large measure from corrosion, since it is exposed only on what are normally vertical surfaces at the ends of the bent-over tongues
105 3 and 5 of the two link elements.

The length of exposed edge of the main body of the fusible material is thus reduced

to a minimum, it being understood that in assembling the link elements they are spaced apart by any suitable means so as to insure that this connecting layer or sheet of fusible material shall possess a definite and predetermined thickness.

It is further noted that under normal conditions by far the greater part of the tension exerted upon the two link elements and tending to separate them is transferred directly from one to the other through the contacting inclined edges of the side lugs 6 and also through the engaging faces of the two pairs of inclined tongues 5—3. When however, the link is exposed to the predetermined temperature necessary to melt the fusible connecting metal or alloy, the same component of the tension exerted upon the link elements causes these to move laterally by reason of the sliding upon each other of the engaging surfaces provided by the edges of the lugs 6 and the edges of the tongues 5 and 3 so that their lateral movement apart and ultimate complete separation under the conditions noted is rendered certain.

In that form of my invention shown in Figs. 6 to 8 inclusive, I have pressed out two tongues 8 and 9 in opposite directions from the central part of the flat plate 10 constituting the body of each link element. The two plates employed, as in the other forms of my invention, are of identical construction and under conditions of use are united by metal or alloy having a low fusing point, being held as shown in Fig. 8 with the outer face of each tongue 8; parallel with and immediately adjacent the inner face of the corresponding tongue 9. Under these conditions each pair of the lugs 2 as before extend at the opposite sides of one of the openings 4.

With this arrangement of parts the tension exerted upon the link elements is transmitted from one to the other through the pairs of tongues 8—9 and the fusible material between the same, so that when the link is exposed to a predetermined temperature sufficient to melt the connecting alloy, the bodies of said elements are at once separated laterally by reason of the sliding of the tongues one upon the other.

I claim:—

1. A fusible link consisting of two similar plates each having a perforation for the reception of a tension-exerting element and each including a tongue projecting from one edge of said perforation at an angle to its

plane; a second tongue projecting from each member in a plane parallel to that of said first tongue; and relatively fusible material separably connecting said plates, each with the two sets of tongues parallel and immediately adjacent each other respectively.

2. A fusible link consisting of a plate having a perforation for the reception of a tension element and provided with an inclined tongue projecting from the edge of said perforation at an angle to the plane of the plate; a second plate having an inclined tongue projecting at the same angle to its plane as that of the tongue of the first plate; and relatively fusible material separably connecting the plates and holding said inclined tongues parallel and superposed.

3. A link element consisting of a plate having two side edge flanges extending at right angles to its plane and each having a flat inclined end.

4. A link element consisting of a plate having two tongues inclined to its plane and projecting from its opposite faces; with side flanges projecting at right angles to its plane and having inclined ends for coaction with the similar ends of another link element.

5. A link element consisting of a substantially flat plate having an opening for the reception of a tension element and including a tongue projecting from one edge of said opening at an angle to its plane; with a second tongue projecting from one end of the plate in a plane parallel to that of said first tongue.

6. A fusible link consisting of two similar, substantially flat plates each having at least one edge projection extending substantially at right angles to its plane, the projection of each element presenting an inclined edge for sliding engagement with the similar projection on the other element; with a relatively fusible material separably connecting said plates.

7. A fusible link consisting of two similar plates each having a pair of edge flanges extending at right angles to its plane in position to extend over the edges of the other element, the adjacent ends of said flanges of each pair on the same side of the link abutting each other in a plane inclined to the plane of the body of said link; with relatively fusible material separably connecting said members.

In witness whereof I affix my signature.

ARTHUR C. ROWLEY.