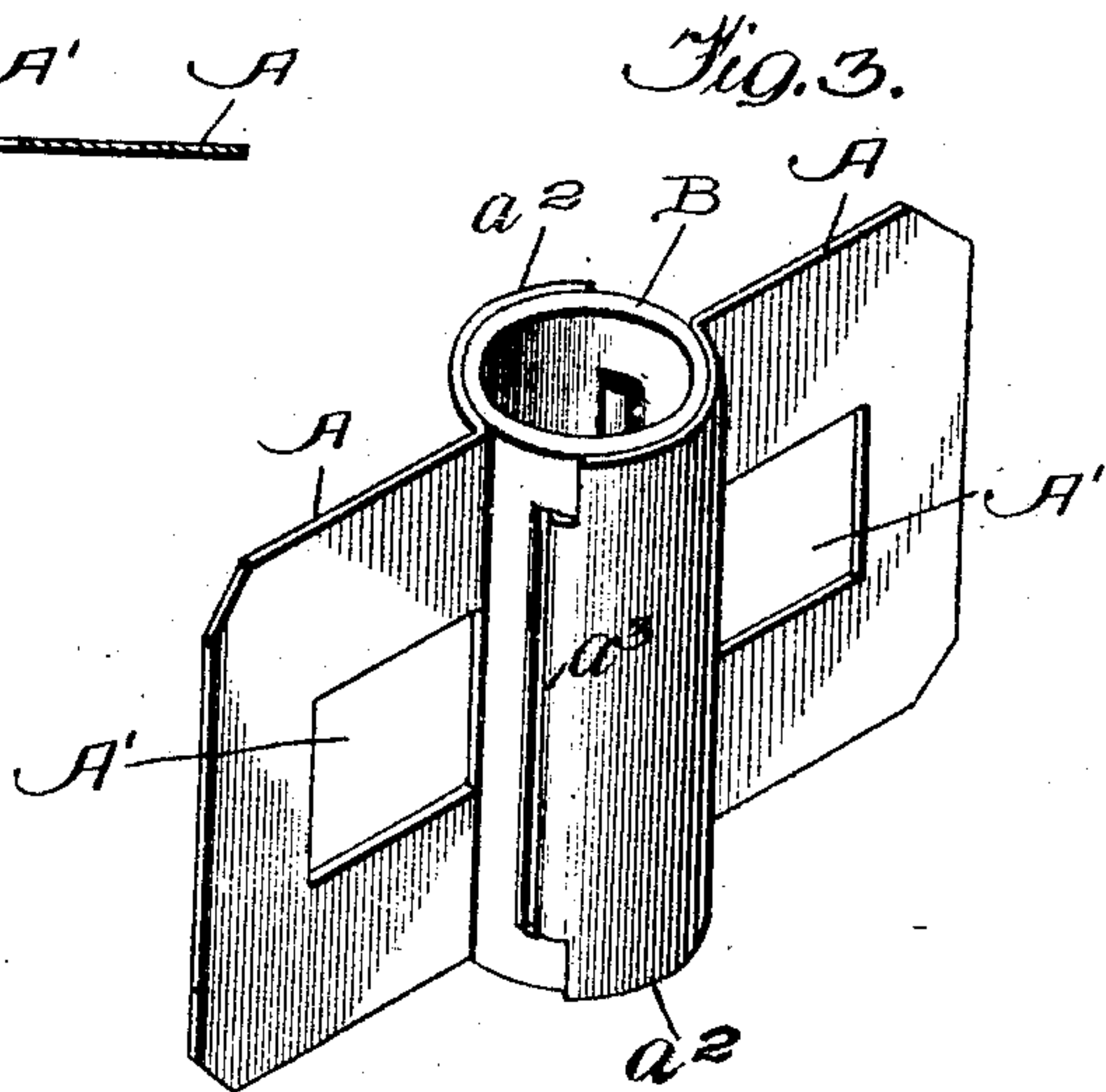
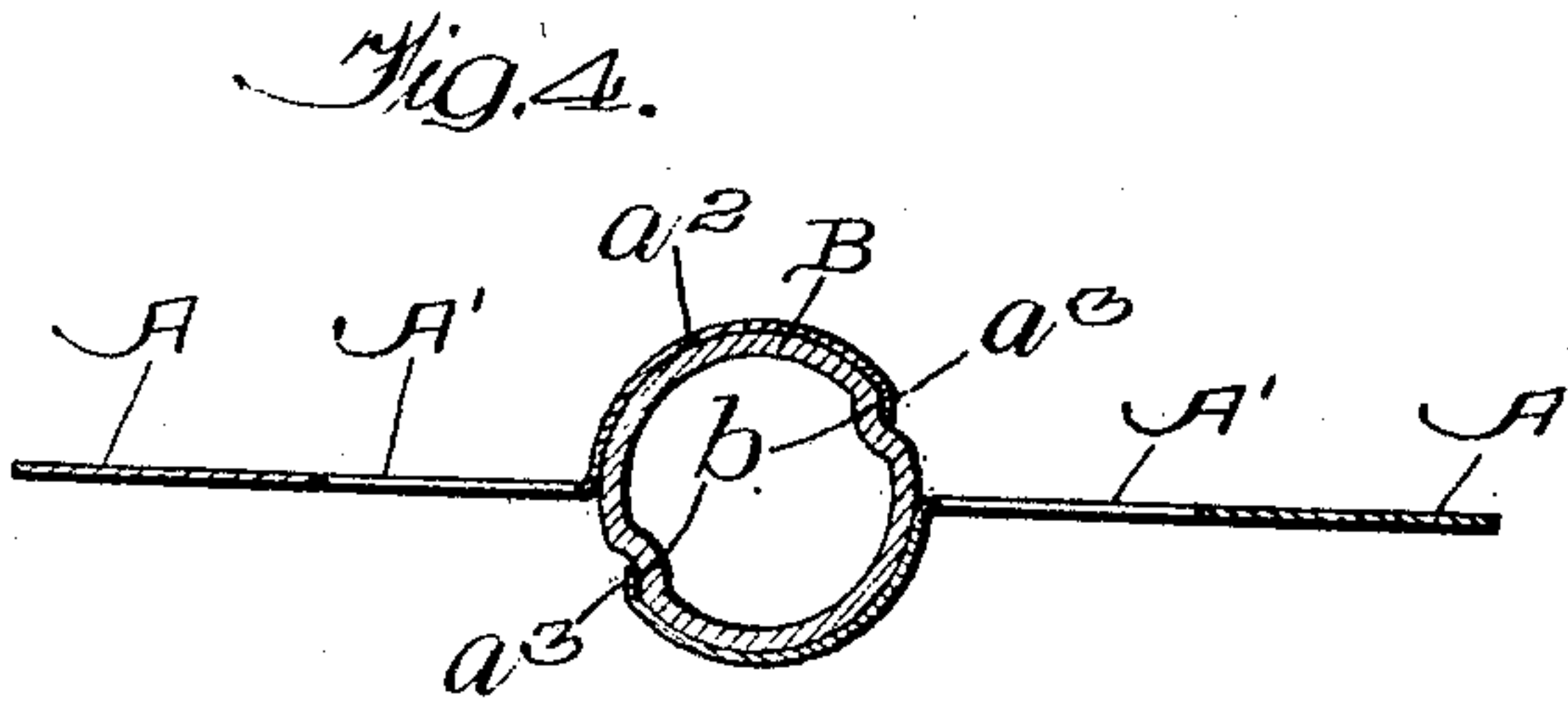
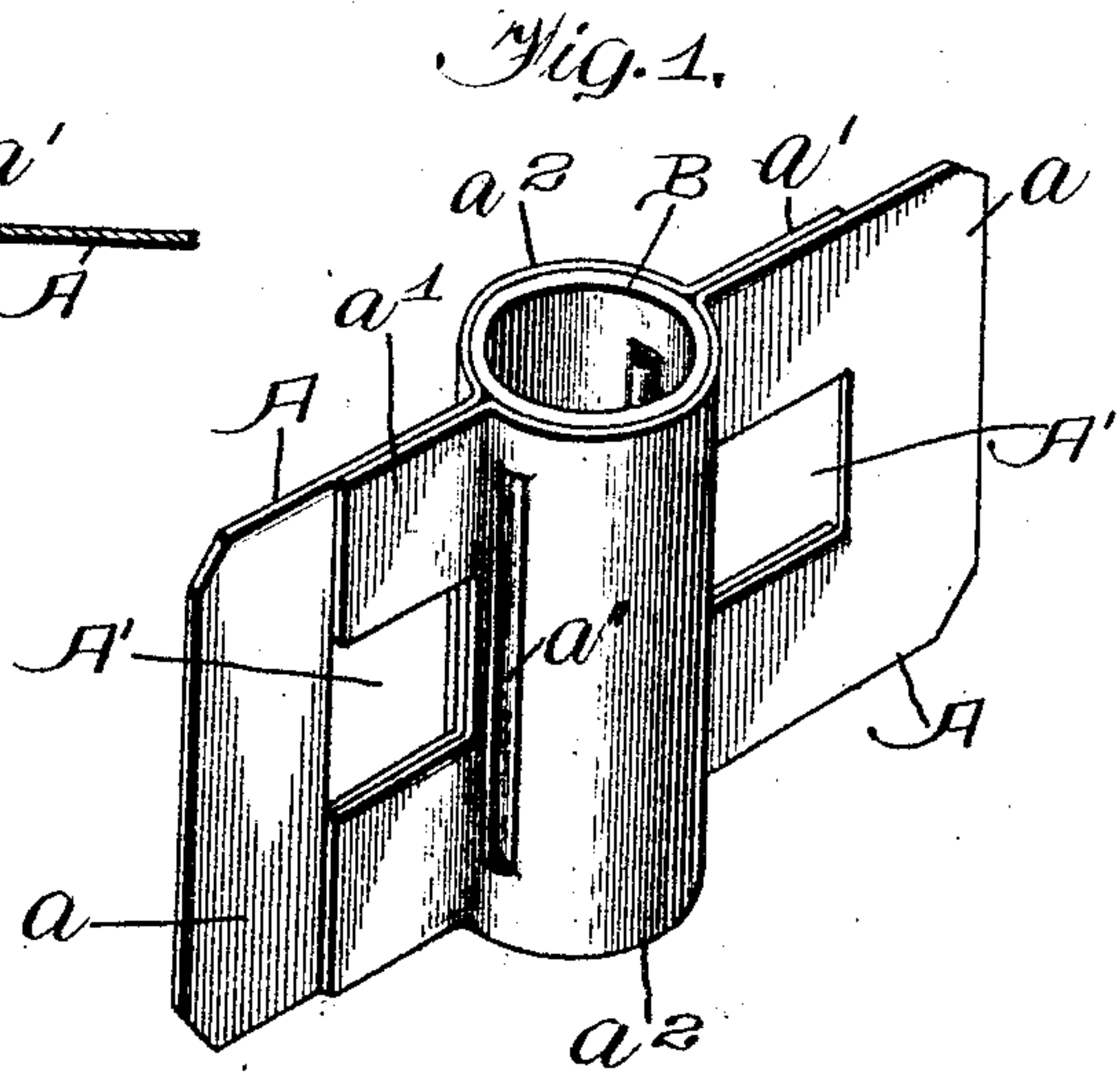
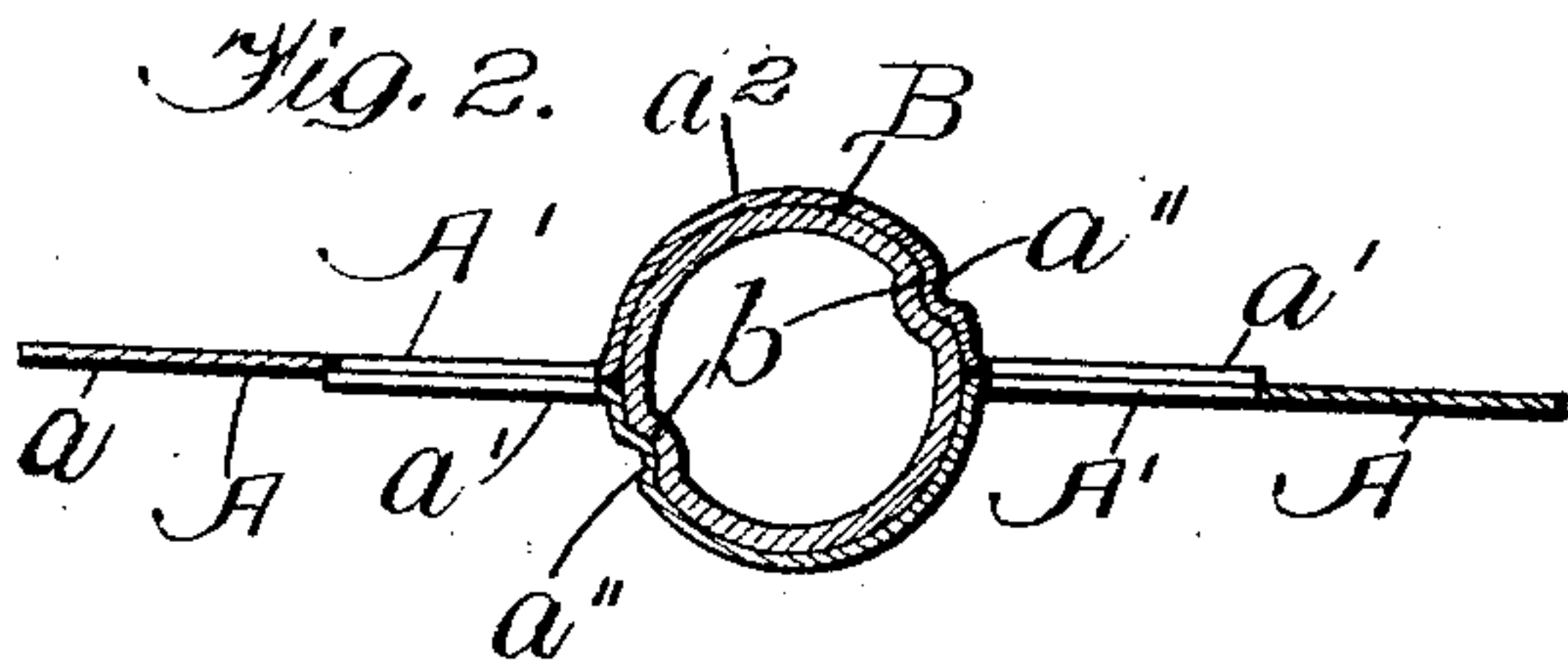


W. A. GOLDTHWAIT.
 LINK FOR AUTOMATIC FIRE EXTINGUISHERS OR APPLIANCES.
 APPLICATION FILED APR. 13, 1908.

924,760.

Patented June 15, 1909.



Witnesses:
 J. V. Domansky.
 Elizabeth Moore

Inventor:
 William A. Goldthwait
 By D. W. Hopping His Atty

UNITED STATES PATENT OFFICE.

WILLIAM A. GOLDTHWAIT, OF MELROSE PARK, ILLINOIS.

LINK FOR AUTOMATIC FIRE EXTINGUISHERS OR APPLIANCES.

No. 924,760.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed April 13, 1903. Serial No. 426,812.

To all whom it may concern:

Be it known that I, WILLIAM A. GOLDTHWAIT, a citizen of the United States, residing at Melrose Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Links for Automatic Fire Extinguishers or Appliances, of which the following is a specification.

The use of fusible links, or more accurately speaking, links made up of members united by solder fusible at a predetermined temperature for holding the parts of the valve-holding devices of sprinkler heads is well understood by those skilled in the art. So, also, is the use of such links for holding fire doors, and for other purposes in the art of fire extinguishing.

It is to such a link that the present invention relates, and the object of the invention is to provide a link of improved construction.

To this end the invention consists in the features of novelty that are hereinafter described with reference to the accompanying drawing, which is made a part of this specification, and in which:

Figure 1 is a perspective view of a link embodying the invention in its preferred form. Fig. 2 is a transverse section thereof. Fig. 3 is a perspective view of a link embodying the invention under a modification. Fig. 4 is a transverse section thereof.

The link comprises two overlapping members, A, and an interposed part, B, herein called a rocker. The rocker is tubular and preferably of cylindrical form and has, in its outer surface, two longitudinal grooves which result in longitudinal shoulders *b*, said grooves, and consequently the shoulders being located diametrically opposite each other. These grooves are preferably formed by a punch or die which indents without perforating, the sides of the tube, but this is immaterial, the essential features being the longitudinal shoulders.

The members A are made of thin sheet metal and in the preferred form of the invention each of them comprises two wings *a* and *a'* of unequal widths and an intermediate semi-cylindrical portion *a''*. The surfaces of the members A meet each other, and of course lie in a diametrical plane of the rocker and the wing *a'* of each member lies against the wing *a* of the other, the latter being the wider. The semi-cylindrical portion *a''* of each member A has a longitudinal shoulder *a'''* which engages the shoulder *b* of the

rocker, and this shoulder is preferably the result of an external groove made by a punch or die. The parts whose relative movement away from each other, such for example, as the projecting lever-arms of the members of a two part strut of a sprinkler head, engage or are attached to the wings *a* and to this end said wings are provided with openings and the wings *a'* are slotted as shown at A'. 65

The modified form of the invention differs from that already described only in that it does not have the wings *a'* and the shoulders on the members A for engaging the shoulders *b* on the rockers are provided by forming a lip *a''* on the end of each of said members. 70

The meeting surfaces of all of the parts are secured together by solder fusible at a predetermined temperature.

In the preferred form of the device the strain falls in a plane which is practically diametrical with respect to the rocker, this being due to the fact that each member A embraces the rocker through 180°. The solder joint is relieved from the greater part of this strain by the engaging shoulders of the rocker and members A, and the extent to which the joint is thus relieved or, in other words, the sensitiveness of the link depends upon the positions of said shoulders and consequently the line of strain with relation to the axis of rotation of the rocker. In this preferred form the shoulders are shown as being located only a few degrees removed from the diametrical plane aforesaid, or line of strain, and by locating said shoulders a greater or less number of degrees from said plane, their effect in relieving the solder joint will be decreased or increased, as the case may be. 95

In the modified form of the invention the lines of strain are farther from the axis of movement of the rocker than in the preferred form, so that the link will be more sensitive.

The advantage of a hollow or tubular rocker is that it exposes a maximum area of the solder joint to the atmosphere so that the joint will quickly respond to a rise in temperature. With a solid rocker only the outside surface of the body of solder is exposed to the rise in temperature while with a hollow rocker both the inside and the outside surfaces of the body of solder are thus exposed. By making the wings *a'* wider than the wings *a* the device becomes a strut adapted to resist compressive strains in various fire extinguishing apparatus. 110

What I claim as new is:

1. A fusible element for use in automatic fire extinguishing apparatus, having a cylindrical rocker and two members having wings projecting from opposite sides of the rocker and adapted to receive the strain to be resisted, each of said members having also a portion partially embracing the rocker and fitting closely thereto, said members and rocker having longitudinal shoulders engaging each other, the meeting surfaces of said members and rocker being secured together by solder.

2. A fusible element for use in automatic fire extinguishing apparatus, having a cylindrical rocker and two members having wings of unequal widths, the surfaces of which meet in a diametrical plane of said rocker, and having also, between said wings, portions

which partially embrace the rocker and fit closely thereto, said members and rocker being provided with engaging longitudinal shoulders located on opposite sides of said plane.

3. An element for use in automatic fire extinguishing apparatus, having a tubular rocker, and two members having portions partially embracing the rocker, said members having also wings projecting from opposite sides of said rocker, the rocker and those portions of said members which partially embrace it, as aforesaid, having engaging longitudinal shoulders, the meeting surfaces of the parts being secured together by solder.

WILLIAM A. GOLDTHWAIT.

Witnesses:

L. M. HOPKINS,

FRANK E. BALLARD.