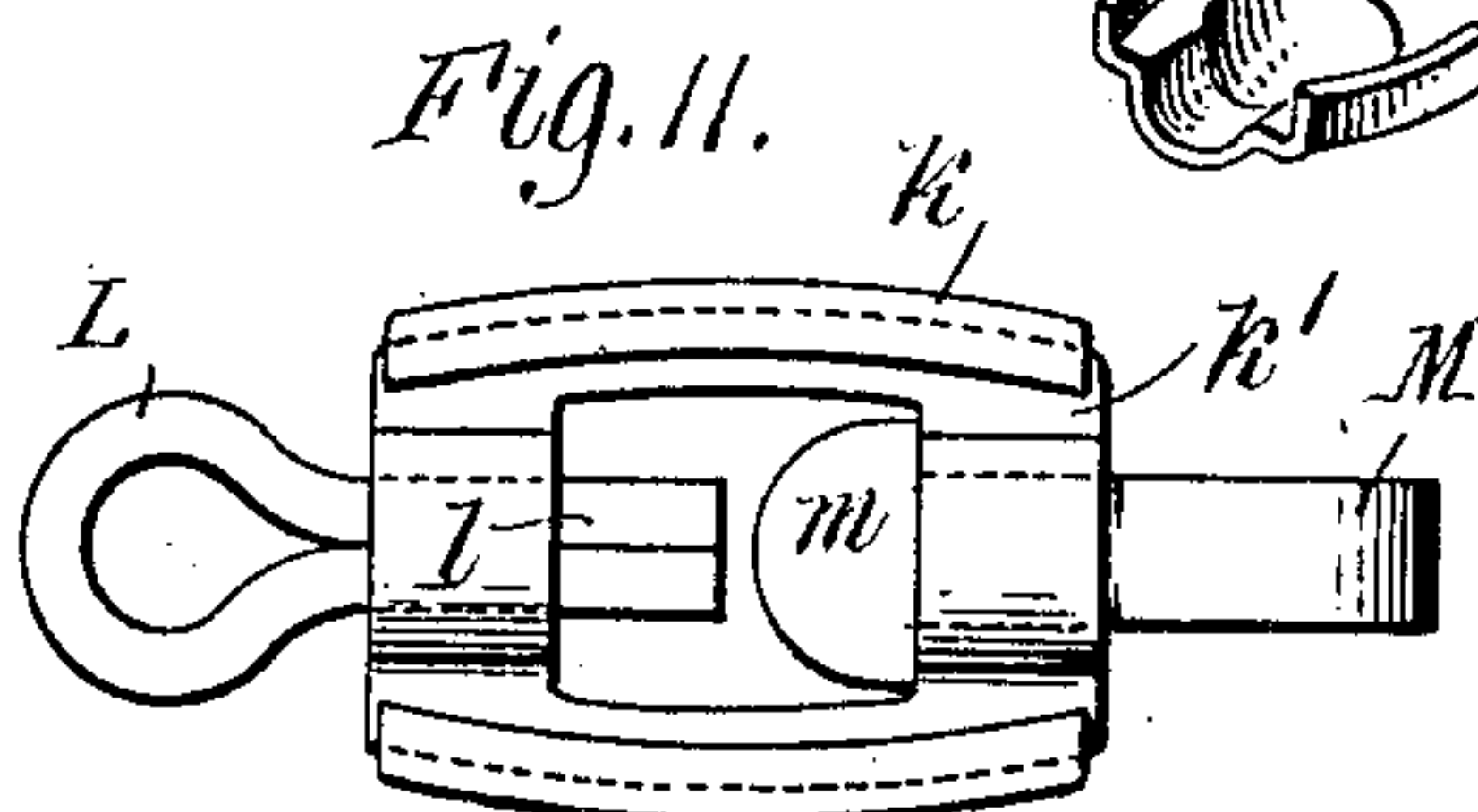
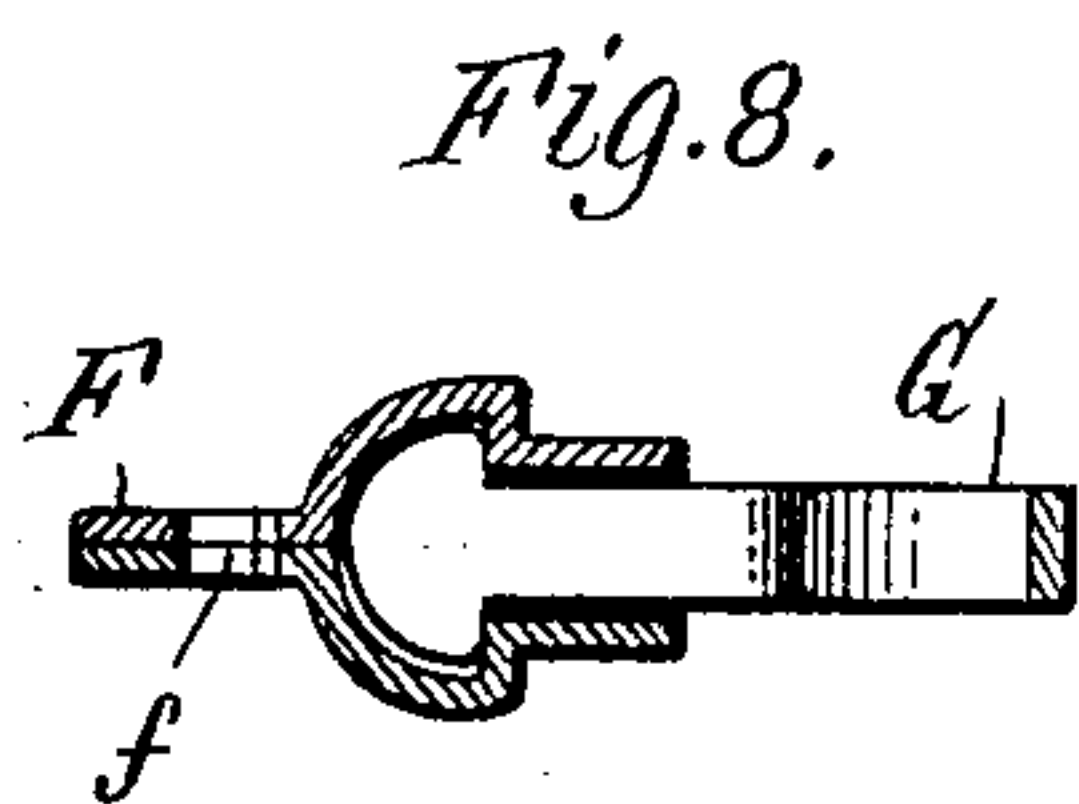
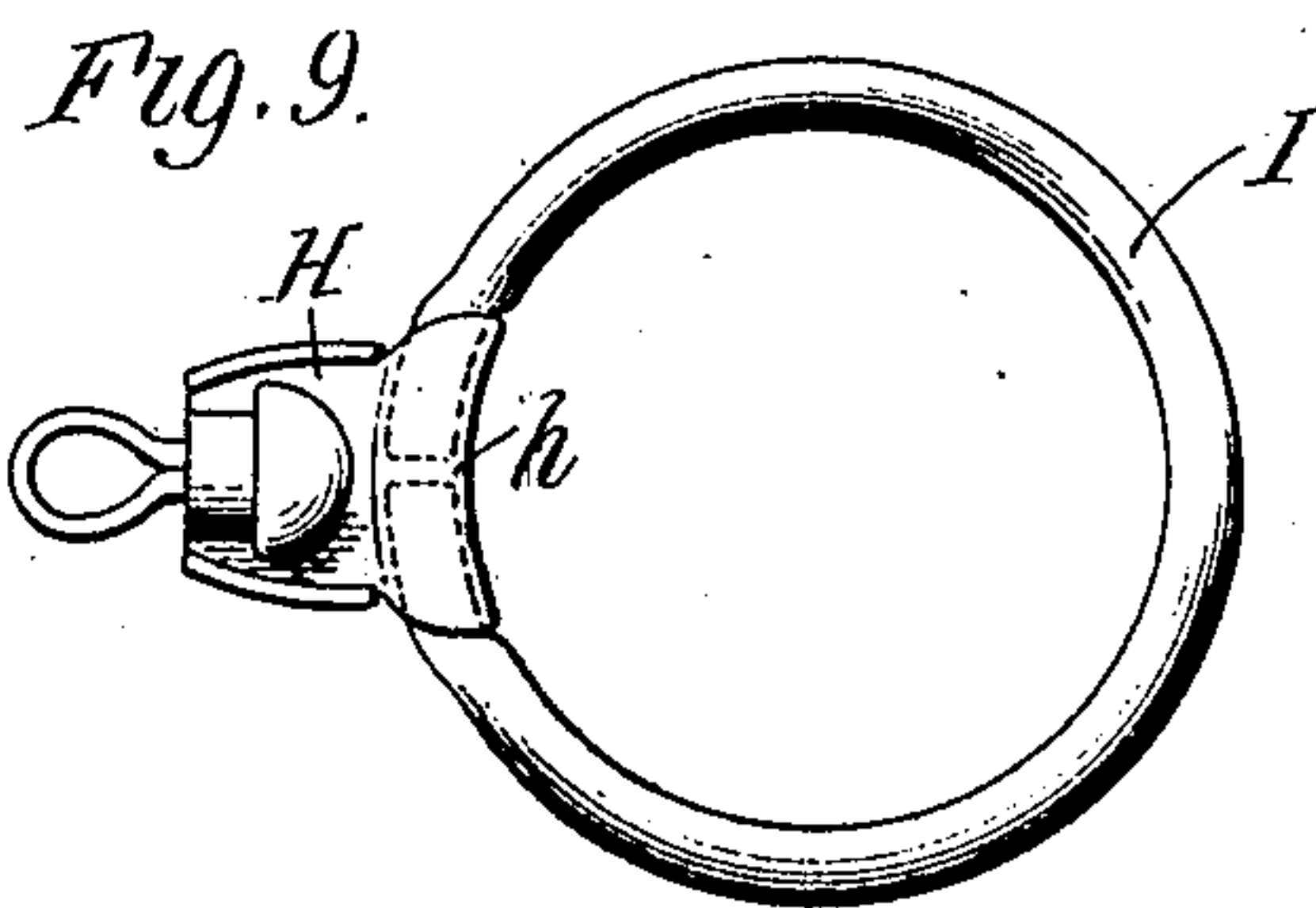
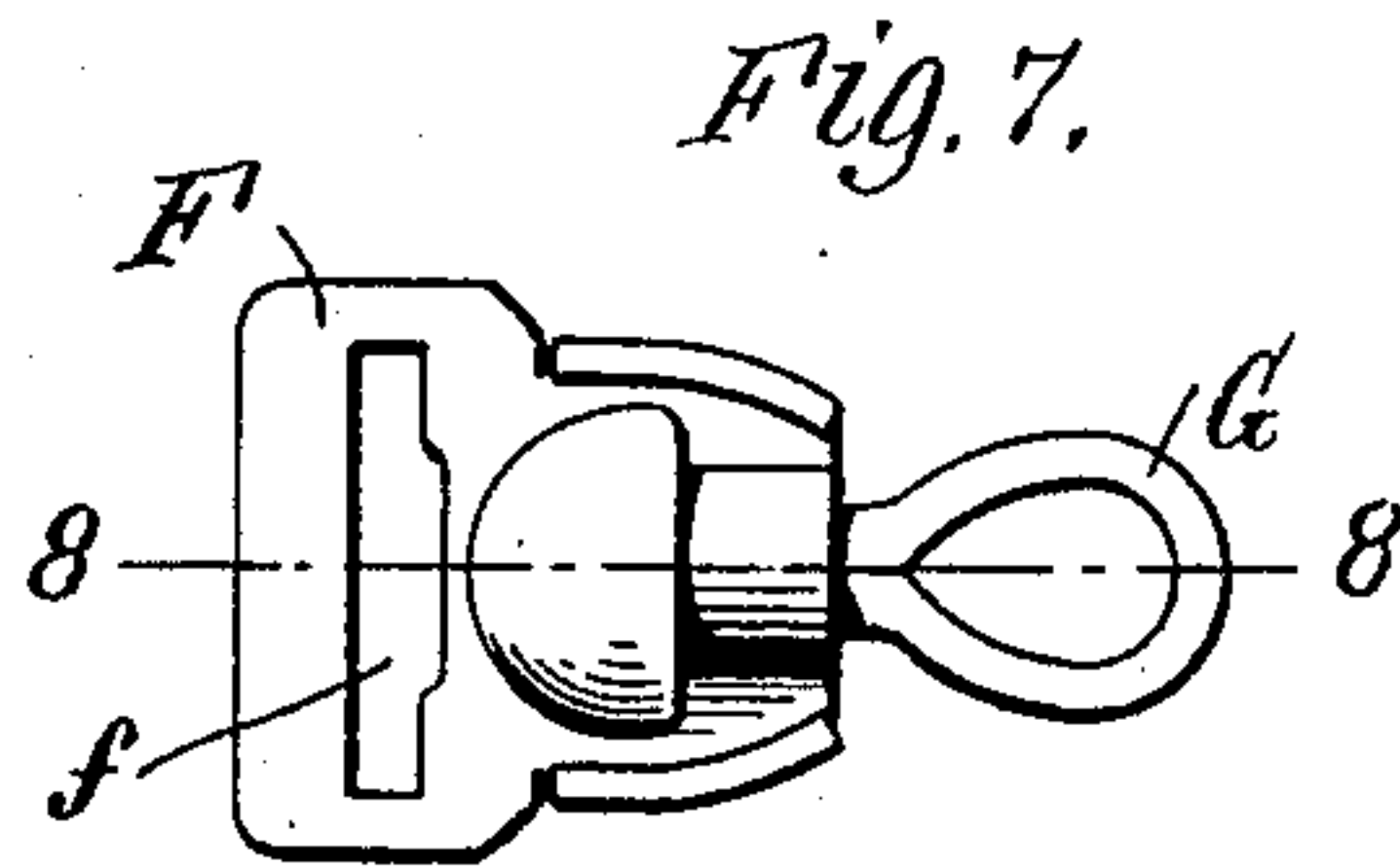
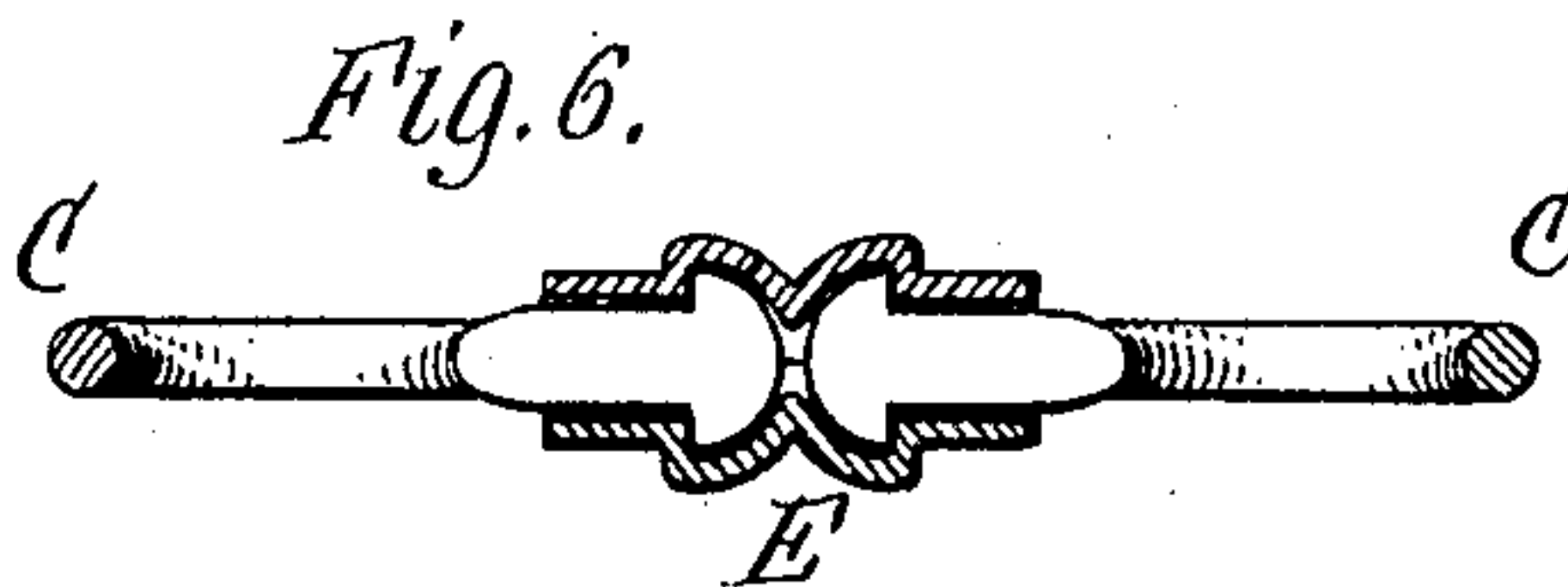
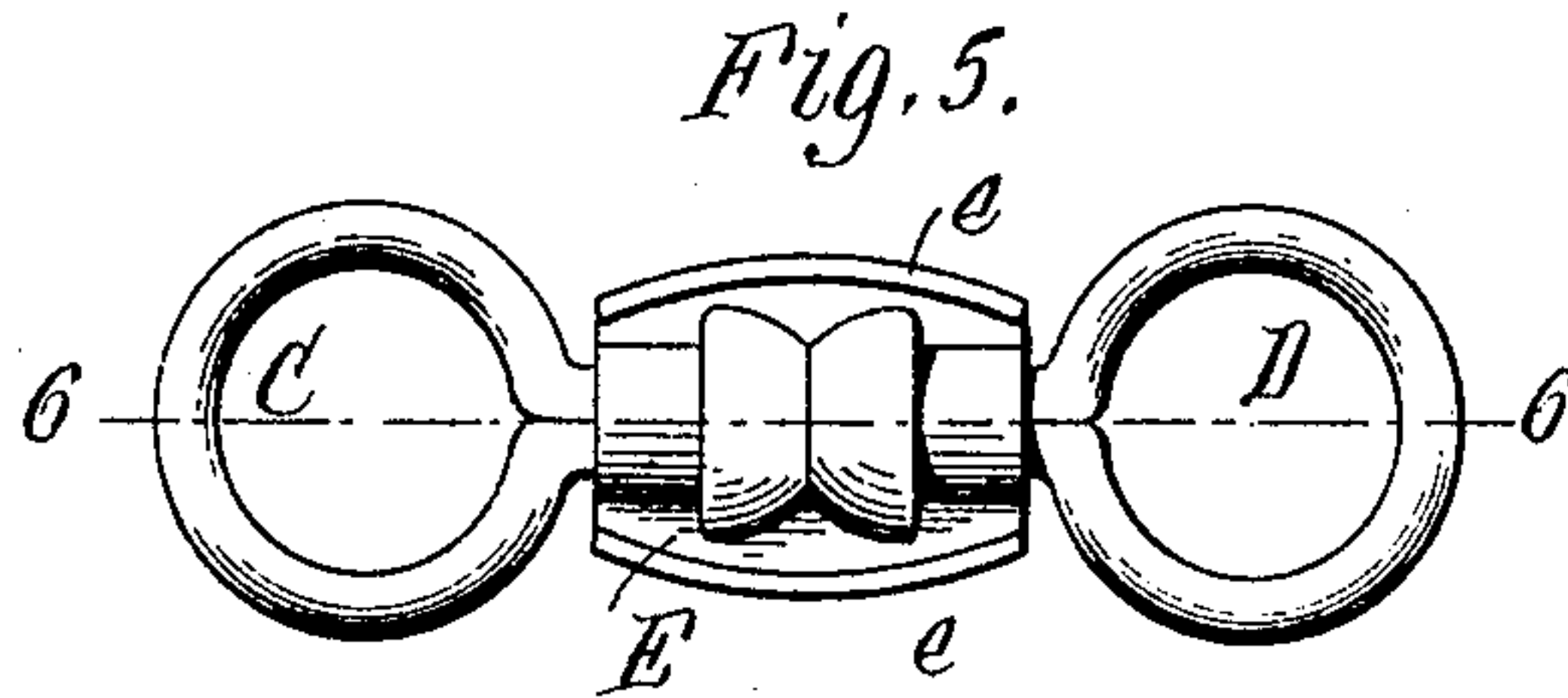
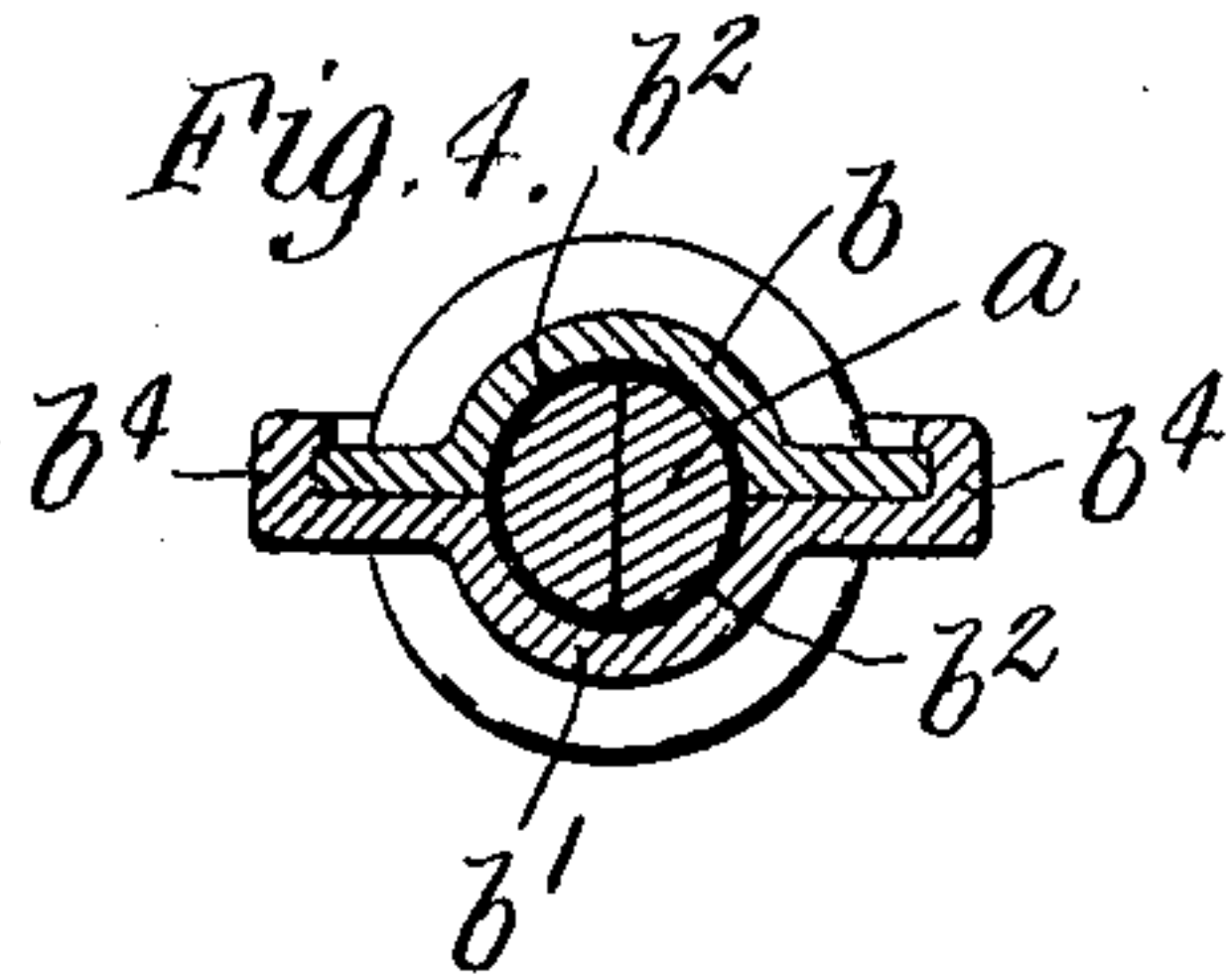
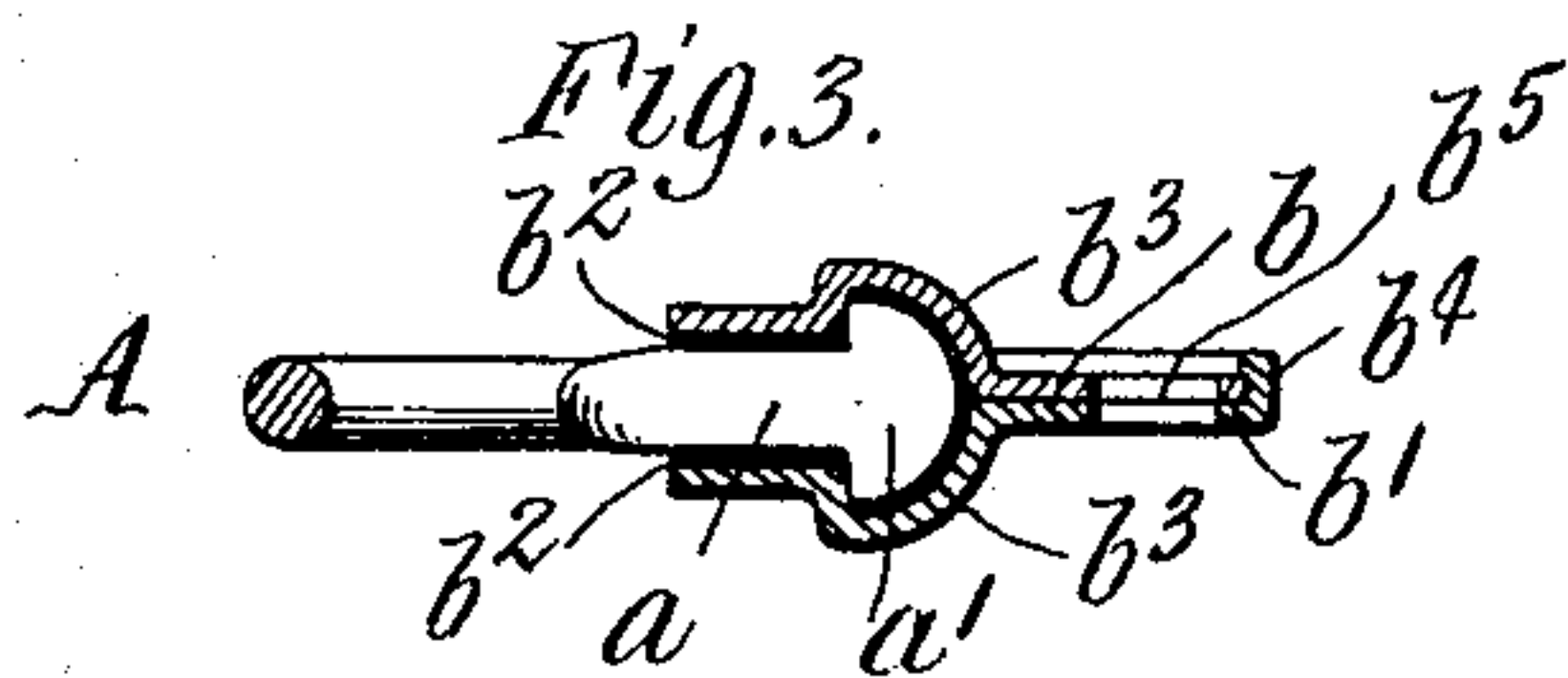
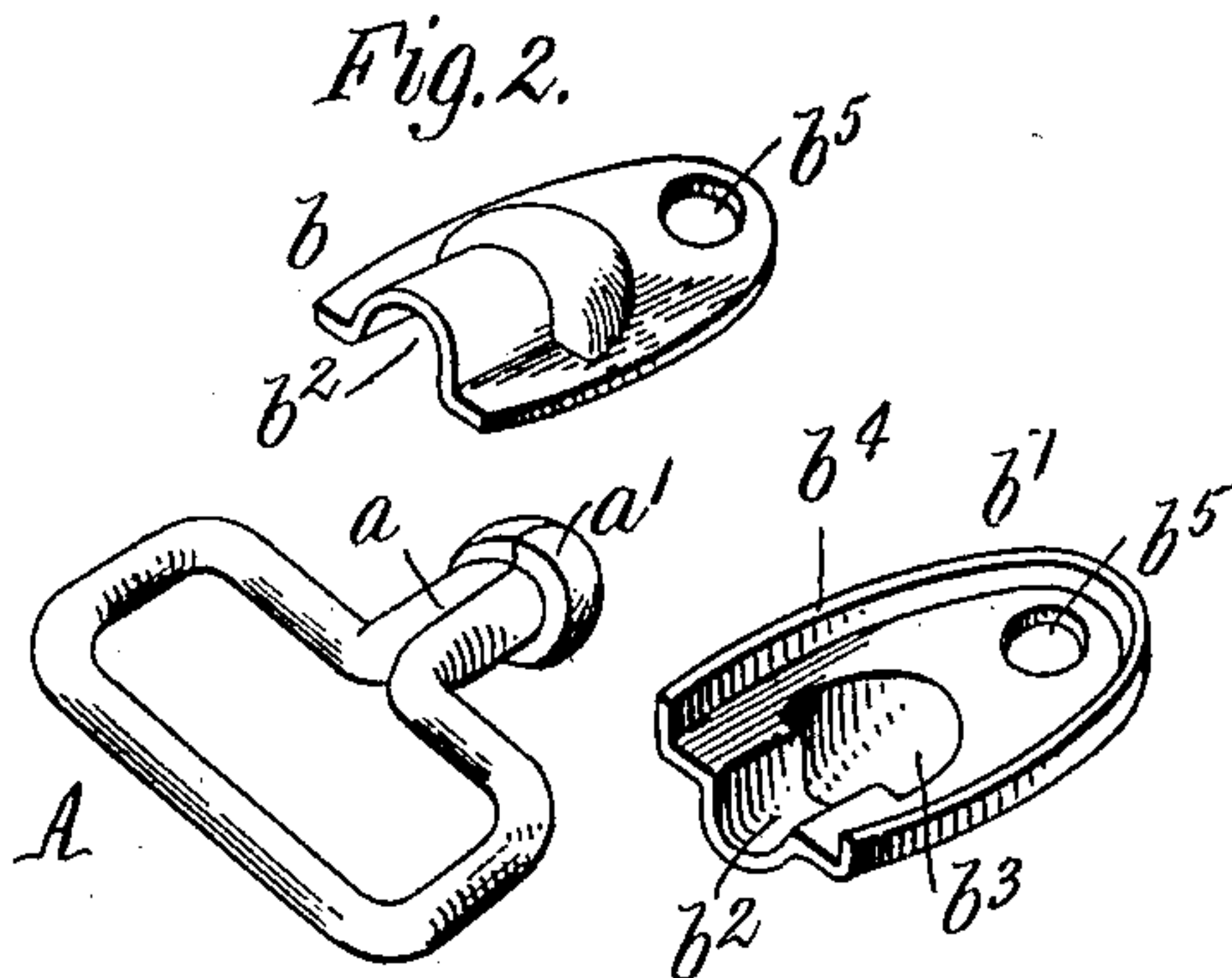
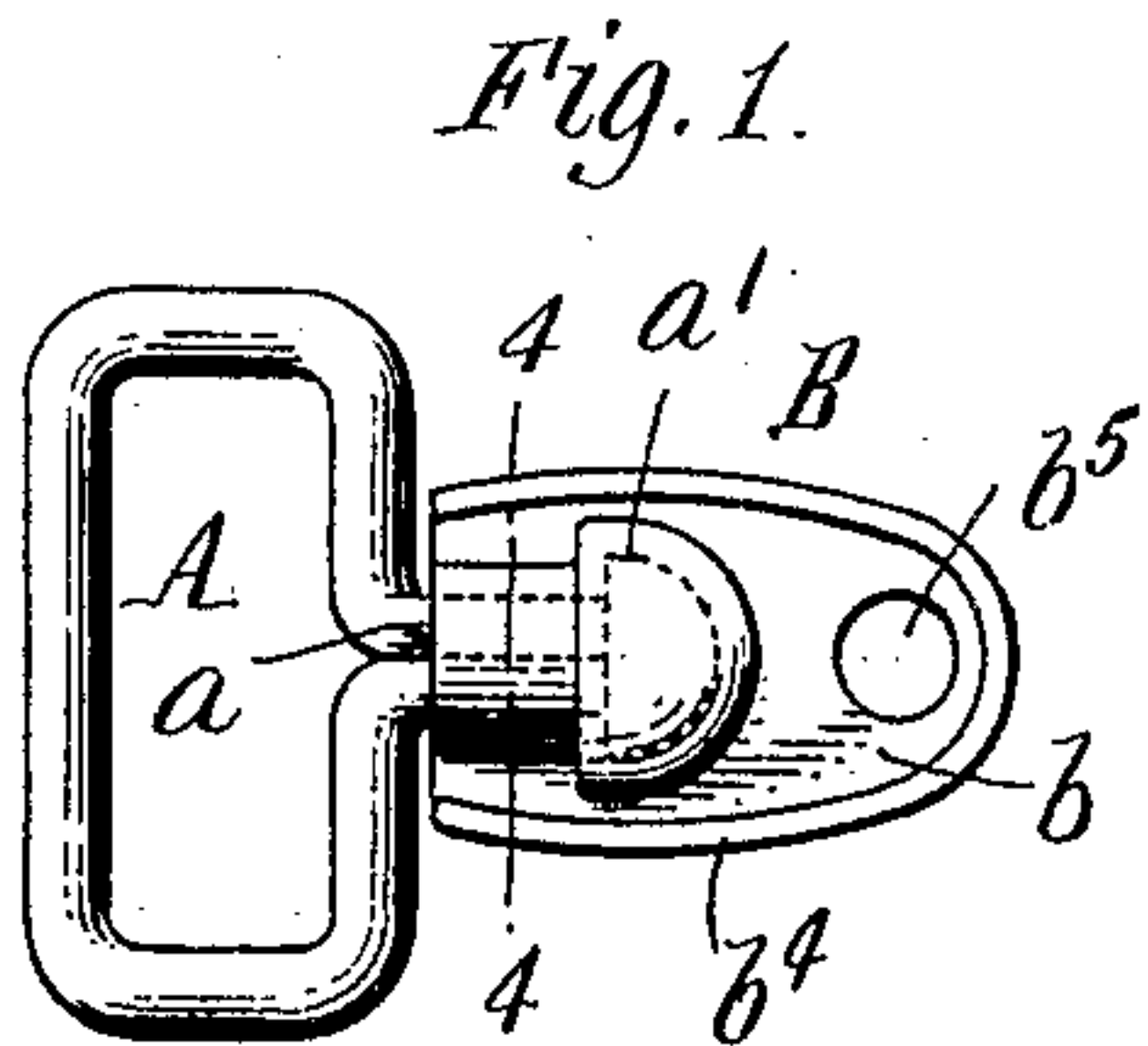


H. M. ELDRIDGE.
SWIVEL AND THE LIKE.
APPLICATION FILED MAY 10, 1907.

916,127.

Patented Mar. 23, 1909.



Witnesses:
ag. Dimond.
E. a. Volk.

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UNITED STATES PATENT OFFICE.

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SWIVEL AND THE LIKE.

No. 916,127.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed May 10, 1907. Serial No. 372,954.

To all whom it may concern:

Be it known that I, HERBERT M. ELDRIDGE, a citizen of the United States, residing at Niagara Falls, in the Province of Ontario, Canada, have invented a new and useful Improvement in Swivels and the Like, of which the following is a specification.

This invention relates more particularly to improvements in that class of swivels or links whose socket members are stamped or otherwise formed from sheet metal.

The object of the invention is to provide a swivel of this character of great strength and durability, which will be simple in construction and in which the members can be readily made and assembled at small expense.

A further object of the invention is to so form the socket member of the swivel that the parts thereof, whether made in one piece or separate pieces, will be securely connected by interlocking integral portions thereof, thus avoiding the use of separate rivets or fastening devices, and consequently reducing the cost of manufacture.

In the accompanying drawings: Figure 1 is a side elevation of a swivel embodying the invention. Fig. 2 is a perspective view of the parts of the same before being connected. Fig. 3 is a longitudinal central section of the same. Fig. 4 is a cross-section thereof, on an enlarged scale, taken in line 4—4, Fig. 1. Fig. 5 is a side elevation of a double swivel or connecting link embodying the invention. Fig. 6 is a longitudinal section thereof, taken in line 6—6, Fig. 5. Fig. 7 is a side elevation of a modified form of the single swivel. Fig. 8 is a longitudinal section thereof, taken in line 8—8, Fig. 7. Fig. 9 is a side elevation of another modification, showing the swivel attached to a ring. Fig. 10 is a perspective view of the socket member of the swivel shown in Fig. 9. Fig. 11 is a side elevation of a modified form of a double swivel or connecting link.

Like letters of reference refer to like parts in the several figures.

In Figs. 1—4 inclusive, A represents the eye of the swivel and B the socket member. The eye A is preferably constructed from a single piece of wire bent to form a loop and having its two ends brought together to form a straight shank *a*, and having end enlargements forming a head *a*¹ at the extremity of the shank, which head is preferably of semi-spherical form. It is obvious that a loop of any other

desired form or construction having a straight shank and an enlarged head portion can be used, as illustrated in other figures of the drawings, the form of such loop depending upon the use for which the same is intended. The socket member B consists of two oblong plates *b* and *b*¹ which are stamped or otherwise formed from sheet metal. In these plates are formed suitable depressions *b*² and *b*³ which, when the plates are secured together, form a socket in which the shank *a* and the head *a*¹ of the eye A are received and adapted to turn. The head of the eye being larger than the shank portion of the socket, prevents the eye from being pulled out of the socket. The swivel eye is thus allowed free rotary movement in its socket but is held from longitudinal movement therein. One of the plates, for example, the plate *b*¹, is provided with an upturned edge flange *b*⁴ which preferably surrounds two sides and one end thereof and is adapted to snugly embrace and be bent over the corresponding edges of the other plate when the flat faces of the plates are placed together to connect said plates. In forming the swivel the socket plates are placed together with the shank and head of the eye in the socket, and are then inserted in a suitable press and pressure applied so that the flange *b*⁴ is bent or turned inwardly over the outer edge of the plate *b*, thus firmly securing the two plates together. The plates *b* and *b*¹ are formed of less width at each end than in the center and this aids in holding the plates securely in position and prevents any endwise movement of either plate upon the other when the swivel is under strain. Their outer ends are provided with suitable registering openings *b*⁵ to receive the hook or link of a chain or other connection.

In Figs. 5 and 6 is shown a double swivel which has oppositely extending swivel eyes C and D joined by a socket member or connecting link E having a double ended socket formed therein for receiving the shanks and heads of the two swivel eyes C and D. The construction of the swivel eyes and the socket member of this swivel is substantially the same as that shown in Figs. 1—4 and above described with the exception that the socket plates have stamped therein oppositely extending depressions for receiving the oppositely arranged head and shank portions of the two eyes, and the two plates are secured together by flanges *c* at the opposite sides of

the socket member instead of by the one continuous flange in the single socket swivel.

In Figs. 7 and 8, a modified form of construction of a single swivel is shown. The modification consists in making the end portion of the socket member F of greater width than in the construction shown in Figs. 1-4 and in forming therein a transverse slot *f* to receive a strap or other flat connecting piece. In this modification the securing flange does not surround this end portion of the socket but extends part way along the sides of the socket member. The eye G shown in this construction is made from a strap stamped from sheet metal.

In Figs. 9 and 10, another modification is shown which consists in forming the socket member H of the swivel of one piece of metal folded at its middle and having its end portions brought together to form the opposing plates of the socket member, the middle portion forming a loop *h* in which are inclosed the ends of a wire loop or ring I. This loop is closed around the ends of the ring under pressure and serves to join these ends as well as connect the socket member to the ring.

In Fig. 11, a modified form of double swivel is shown in which the socket member consists of two plates *k* and *k*¹ joined by flanges on the opposite edges of one plate bent over the edges of the other plate. The construction is similar to that of the double swivel shown in Fig. 5 with the exception that openings in the plates *k* *k*¹ form the sockets for the heads *l* *m* of the eye members L and M instead of depressions, as in the other construction. It is obvious that the socket member of a single swivel could be constructed in a similar manner. In the formation of the socket member of the swivel, it will be seen that no rivets or other separate attaching devices are required for securing together the two plates or the

ends of a folded single plate forming the same. For this reason, these swivels can be very cheaply and economically manufactured.

The securing flange in addition to holding the plates of the socket member together, serves to greatly increase the strength and stiffness of this socket member and prevents the same from bending or buckling under strain.

I claim as my invention:

1. A swivel socket member or link comprising opposite side portions provided with a socket for receiving a cooperating member, said portions being rigidly connected by integral interlocking edge flanges arranged on opposite sides of said socket, substantially as set forth.

2. A swivel socket member or link comprising opposite side portions provided with a socket for receiving a cooperating member, said portions being rigidly connected by integral interlocking edge flanges arranged on opposite sides of said socket and converging toward said cooperating member, substantially as set forth.

3. A swivel comprising an eye member and a socket member having opposite side portions provided with oppositely extending depressions forming a socket for receiving a cooperating part of said eye member, said portions being rigidly connected by flanges formed integrally on one of said portions on opposite sides of said socket and embracing the edge of the other portions, said flanges converging in the direction of pull of said eye member, substantially as set forth.

Witness my hand, this 8th day of May, 1907.

HERBERT M. ELDRIDGE.

Witnesses:

L. C. ELDRIDGE,
JAMES C. MOAKLER.