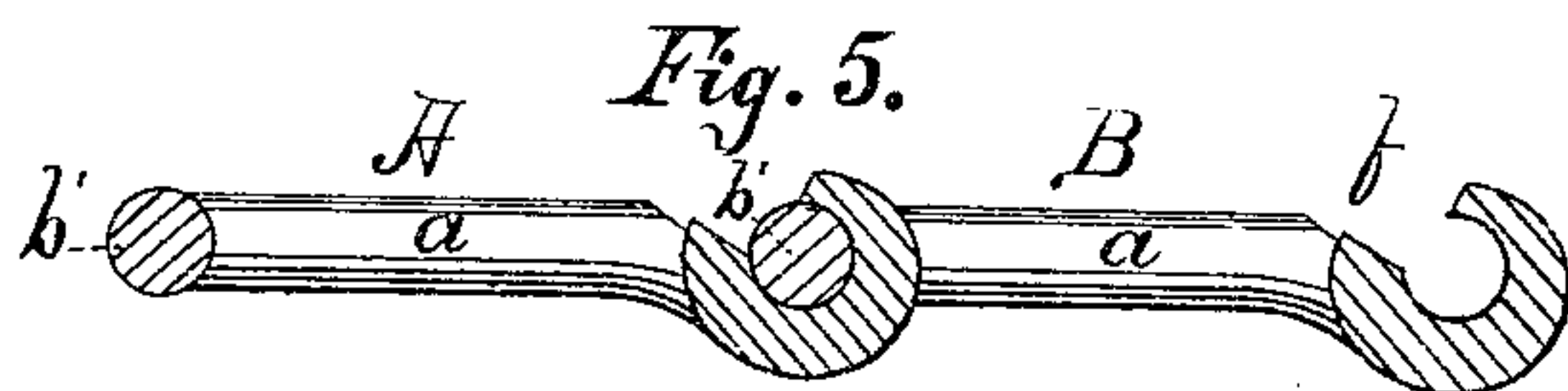
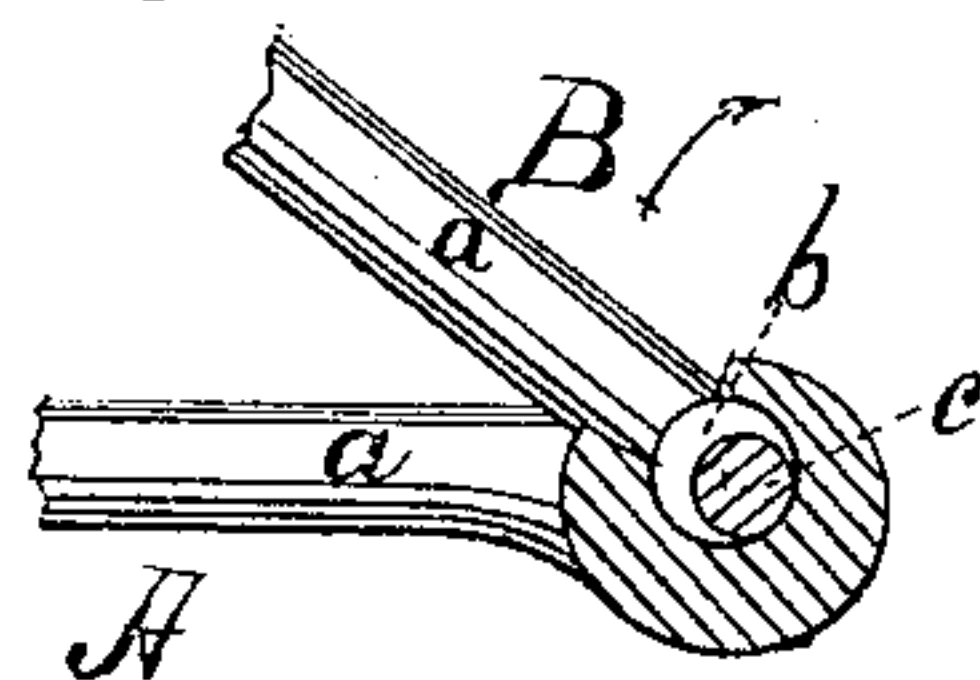
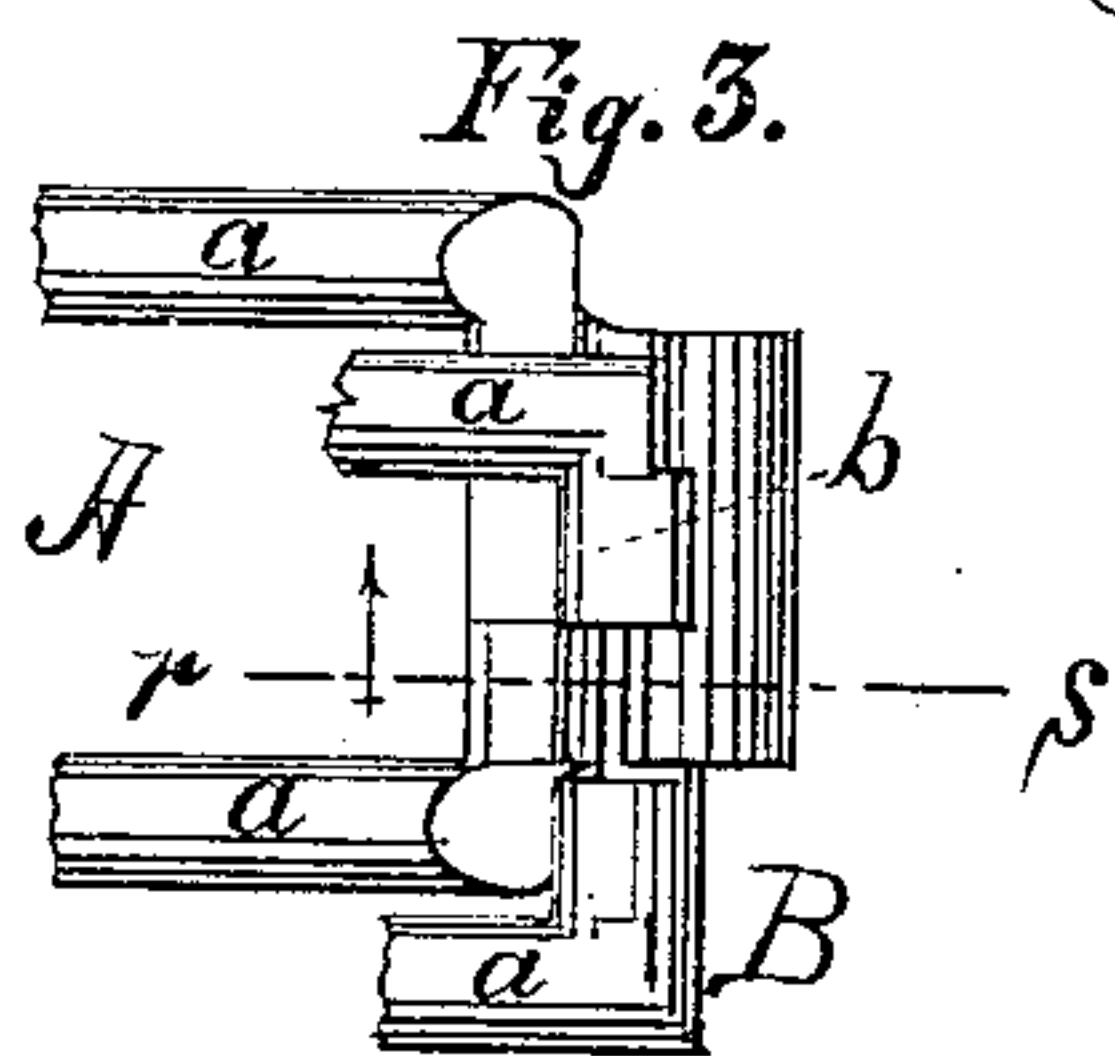
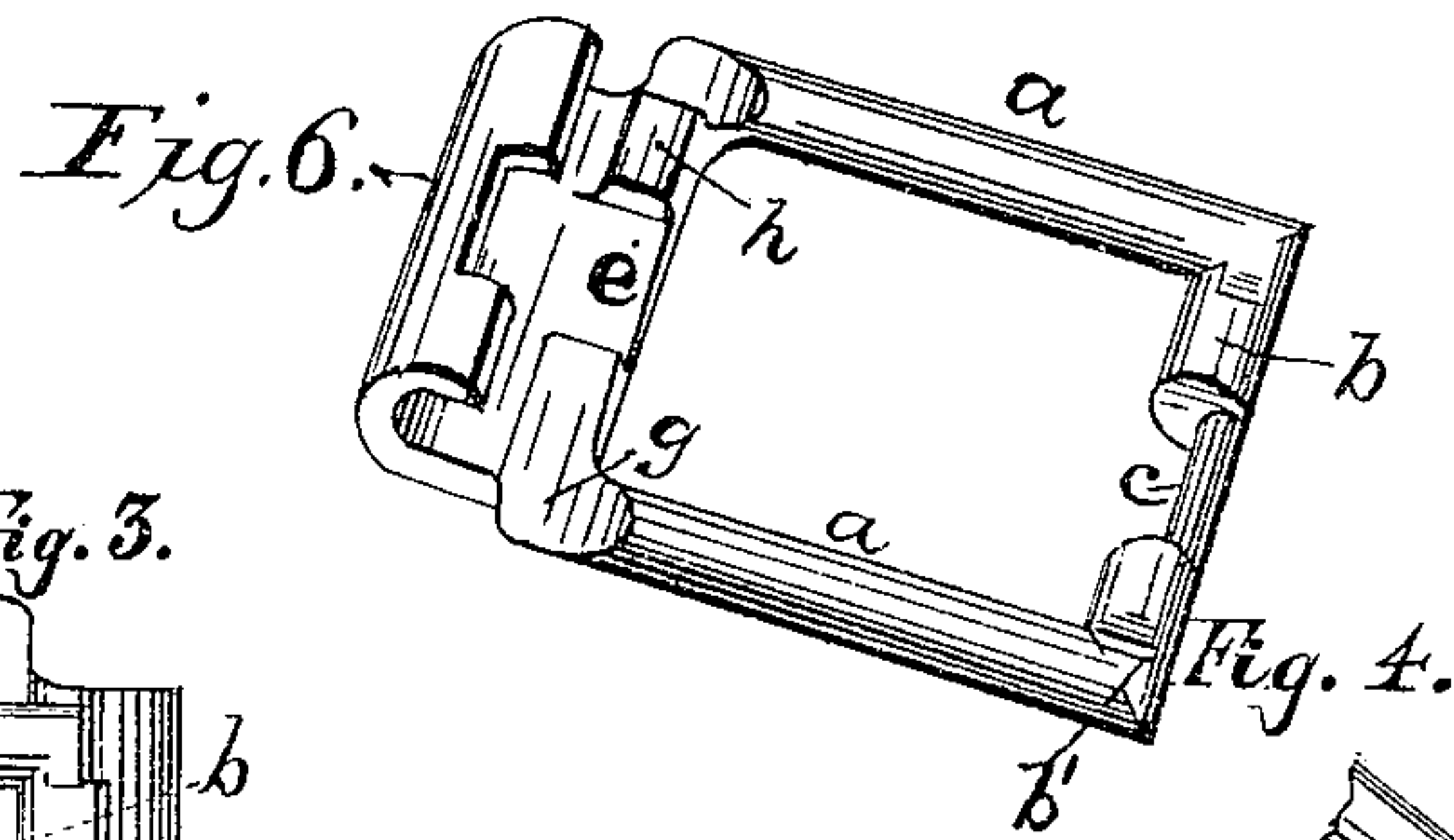
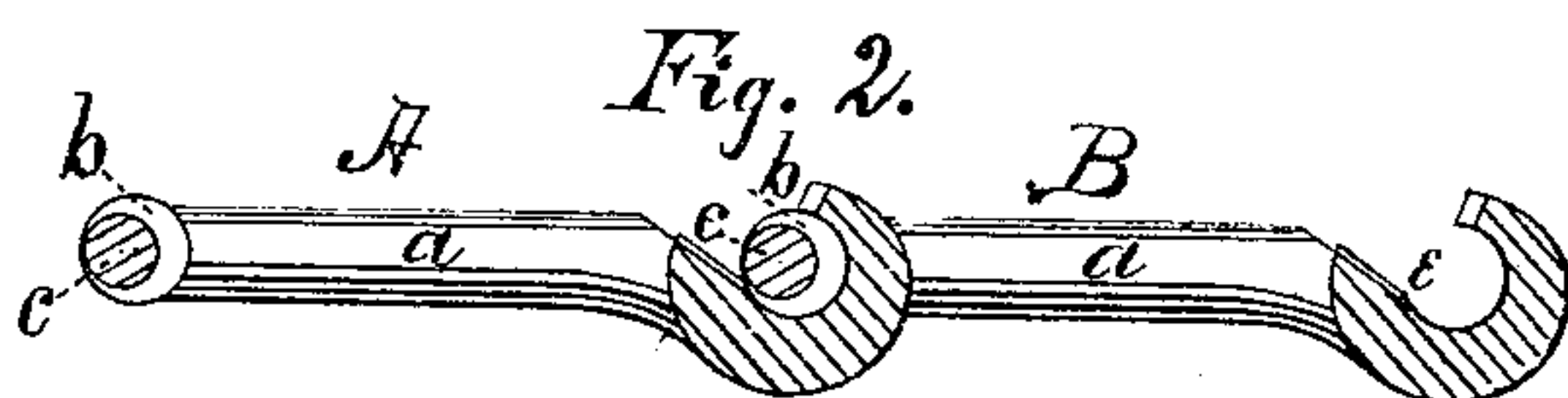
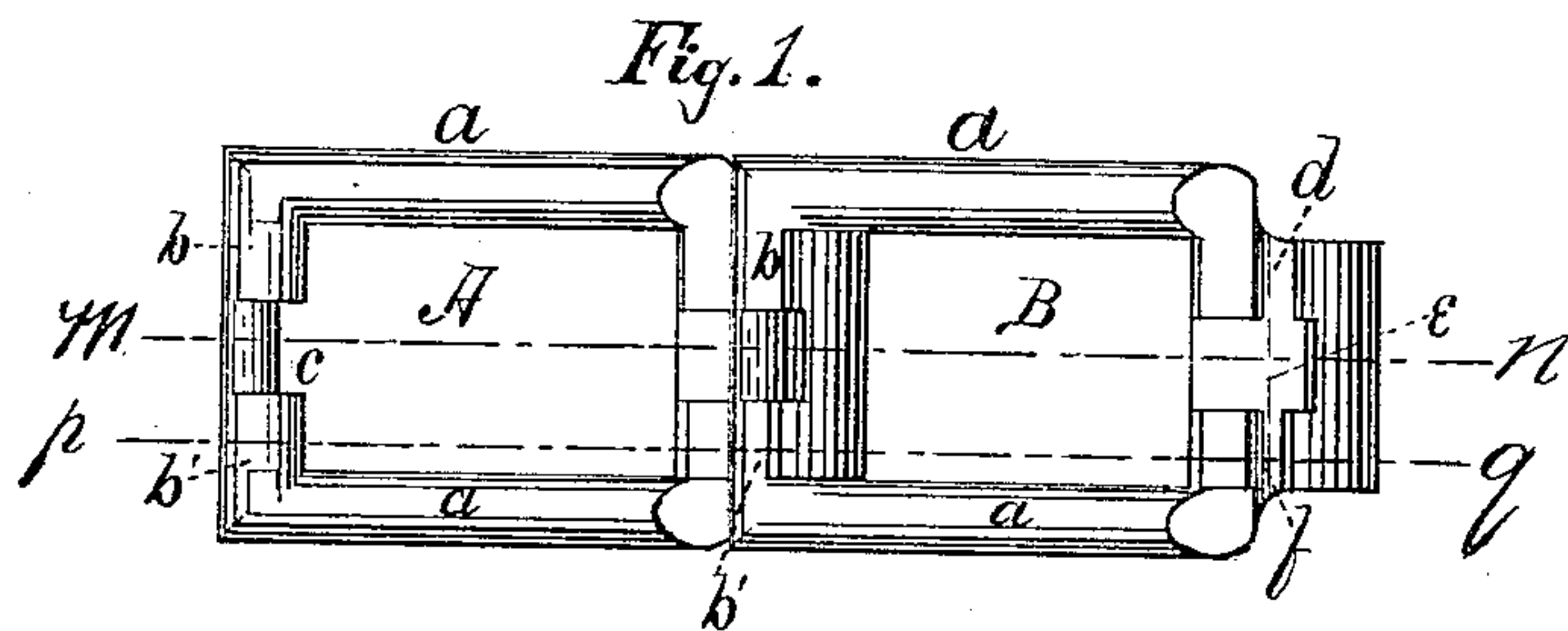


(Model.)

A. S. HELD.
DRIVE CHAIN LINK.

No. 273,732.

Patented Mar. 13, 1883.



Witnesses.
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M. H. Wilson

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UNITED STATES PATENT OFFICE.

AUGUST S. HELD, OF FREEPORT, ILLINOIS, ASSIGNOR TO M. HETTINGER, C. O. COLLMANN, FRED GUND, D. B. SCHULTE, JOHN ERFERT, D. KUEHNER, O. B. SANFORD, C. H. LITTLE, AND F. BARTLETT, ALL OF SAME PLACE.

DRIVE-CHAIN LINK.

SPECIFICATION forming part of Letters Patent No. 273,732, dated March 13, 1883.

Application filed March 6, 1882. (Model.)

To all whom it may concern:

Be it known that I, AUGUST S. HELD, a citizen of the United States, residing at Freeport, in the county of Stephenson and State of Illinois, have invented a new and useful Improvement in Drive-Chain Links, of which the following is a specification.

My invention relates to that class of drive-chain links which may be readily coupled or uncoupled when desired, but which are practically free from liability to accidental uncoupling when in use.

The form of the links and the manner in which they are coupled is shown in the drawings herewith presented, in which—

Figure 1 is a horizontal projection of two links coupled and lying in the same plane. Fig. 2 is a vertical section of the same, the plane of section passing through line *m n*, Fig. 1. Fig. 3 is a horizontal projection of two links in the first position assumed in coupling. Fig. 4 is a vertical section of same, the plane of section passing through the line *r s*, Fig. 3. Fig. 5 is a vertical section of two links in position shown in Fig. 1, plane of section passing through line *p q*, Fig. 1; and Fig. 6, a perspective view of a single link.

In Figs. 3 and 4 the outer ends of the links, or those not placed in contact in coupling, are cut away.

The link is an open rectangle, having plain cylindrical side bars, *a a*, an end bar cylindrical and of a diameter greater than that of the side bars, except at its middle, where for a portion of its length it is reduced in size, the reduced portion being also cylindrical, but of a diameter less than that of the side bars, and an open socket at the end of the link opposite the end bar, said socket being a hollow cylinder of an inner diameter slightly greater than that of the enlarged portion of the end bar, and provided through its entire length with a slot opening on one side of the link parallel with the end bar, but of varying width, its width at one end for a distance equal to the length of the reduced portion of the end bar being the same as the diameter of said reduced portion, its width at its middle and for a dis-

tance equal to the length of the enlarged portions of said end bar being greater than the diameter of said enlarged portion, and its width through the remainder of its length being equal to the diameter of the side bar of the link. This unequal width of the slot is attained by recessing the opposite lips of the hook at their centers. As shown, the outer lip of the hook is straight, except for the recess, while the inner lip consists of two parts, *g h*, on opposite sides of the recess *E*, the part *h* projecting beyond the line of the part *g*, and so contracting the slot at that portion. (See Fig. 6.)

In the drawings, *a a* are the cylindrical side bars; *b b'*, the enlarged cylindrical parts of the end bar, and *c* the reduced cylindrical part of the end bar, its diameter being less than that of the side bar. In practice the length of these three parts of the end bar will probably be equal; but this is not absolutely necessary. In the same figures, *f* is that part of the slot of the socket having a width equal to the diameter of reduced end bar, *c*, and a length equal to that of said reduced part. *e* is that part of said slot having a width greater than that of the enlarged part of said end bar and a length equal to said enlarged part; and *d* is the remainder of the said slot, its diameter being the same as that of the side bar *a*. In practice, if the lengths of the parts *b b' c* of the end bar are equal, the lengths of the parts *d e f* will also be equal.

To couple two links, the parts *b* and *c* of the end bar of one link are inserted in the parts *e* and *f* of the slot of the other link, the two links assuming the relative positions shown in plan in Fig. 3 and in section in Fig. 4. The link B, Fig. 3, is then moved in the direction of the arrow until the corresponding side bars of the two links are in the same plane, when, by rotating the link B about its end bar as a pivot and away from the link A in the direction indicated by the arrow in Fig. 4, the coupling is completed, the links assuming, when completely coupled and in the same line, the positions shown in plan in Fig. 1 and in section in Figs. 2 and 5.

The operation of uncoupling is the reverse of that of coupling.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

An open rectangular drive-chain link having plain cylindrical side bars, a cylindrical end bar at one end of a diameter greater than that of the side bars, but reduced at its middle to a diameter less than that of the side bars,

and an end bar at the opposite end, provided with the lug *h*, recess *c*, and cut-away portion *g*, and carrying an open hook, said hook being recessed at the middle of its lip and adapted to receive the end bar of a similar link, all substantially as and for the purpose set forth. 15

AUGUST S. HELD.

Witnesses:

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LOUIS KARCHER.