

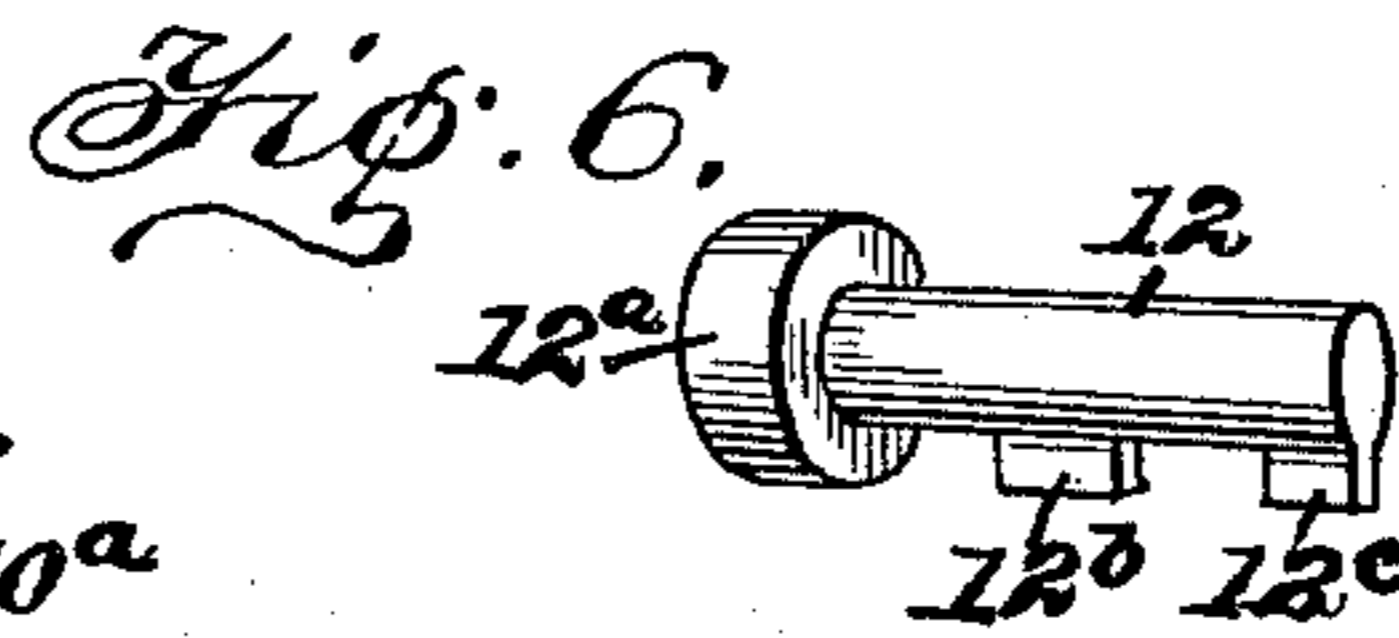
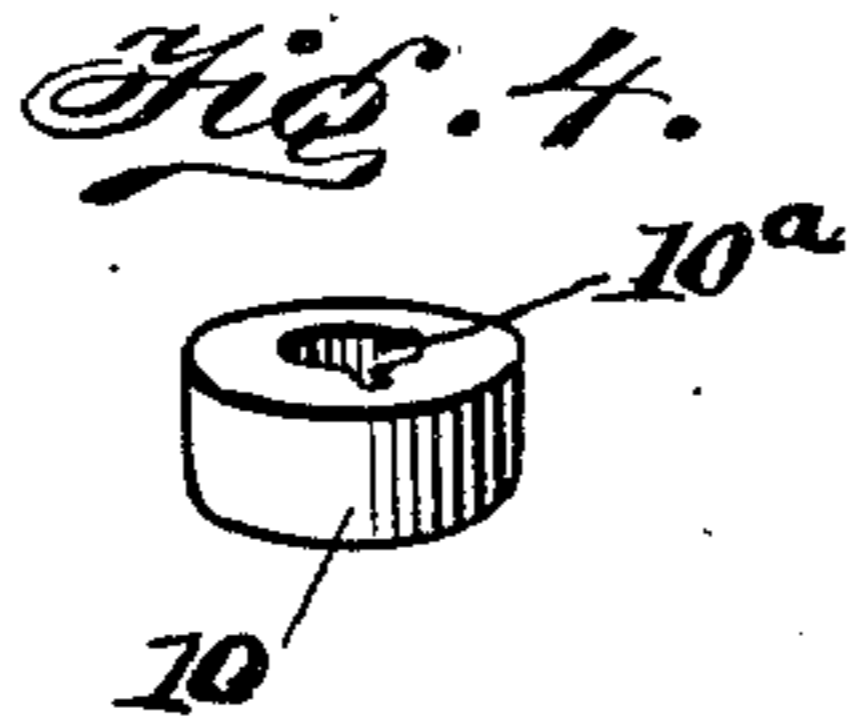
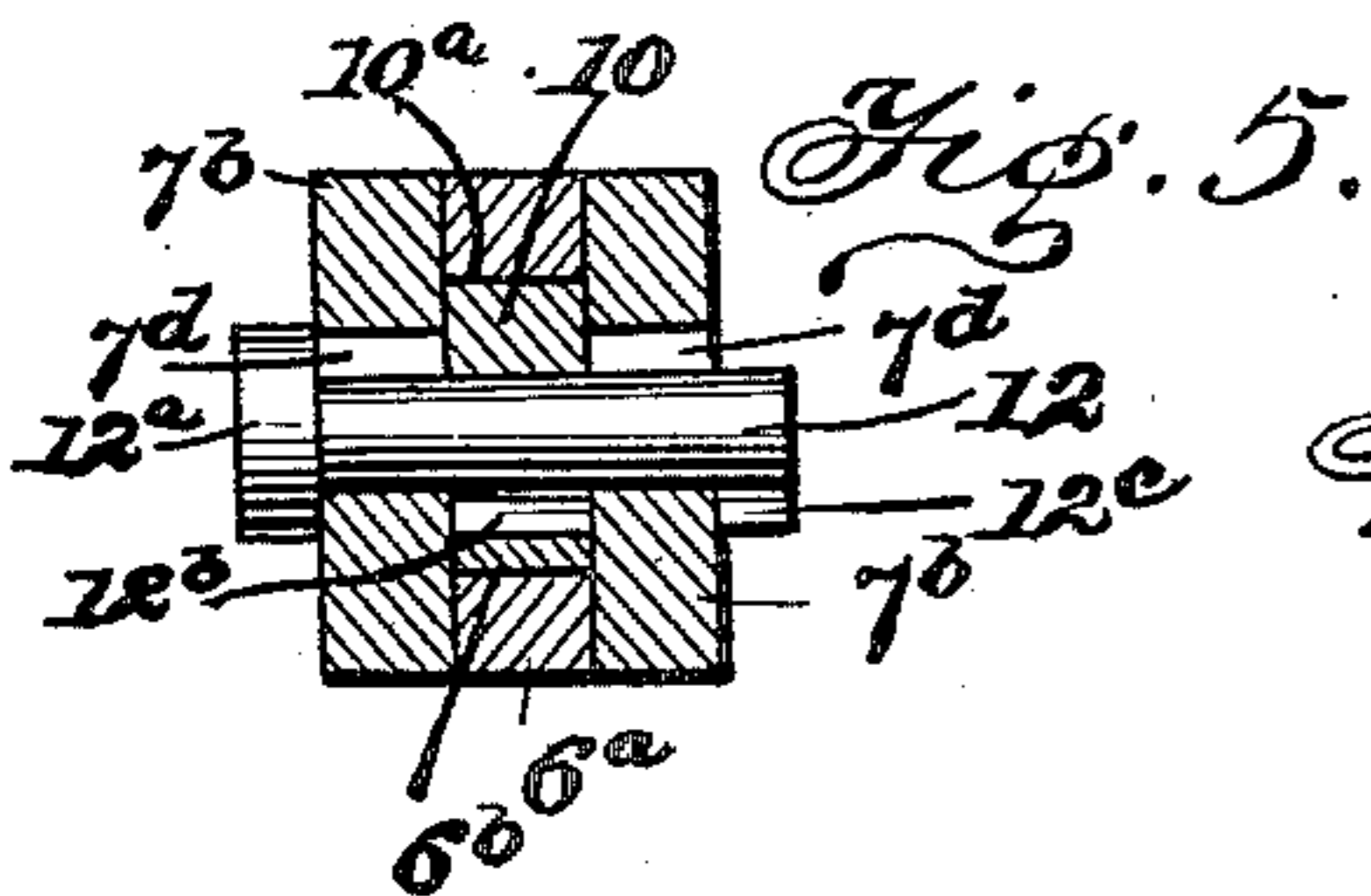
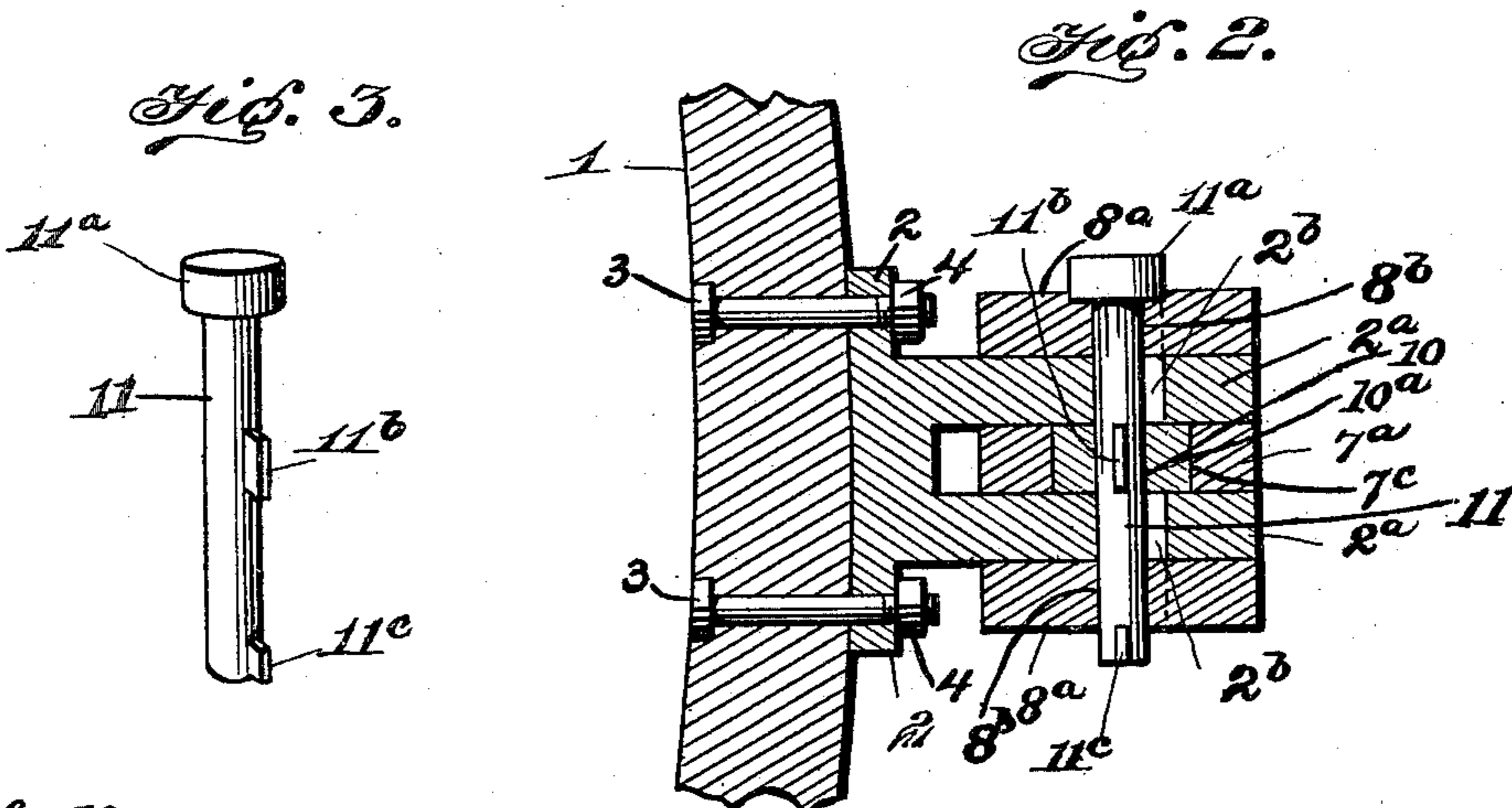
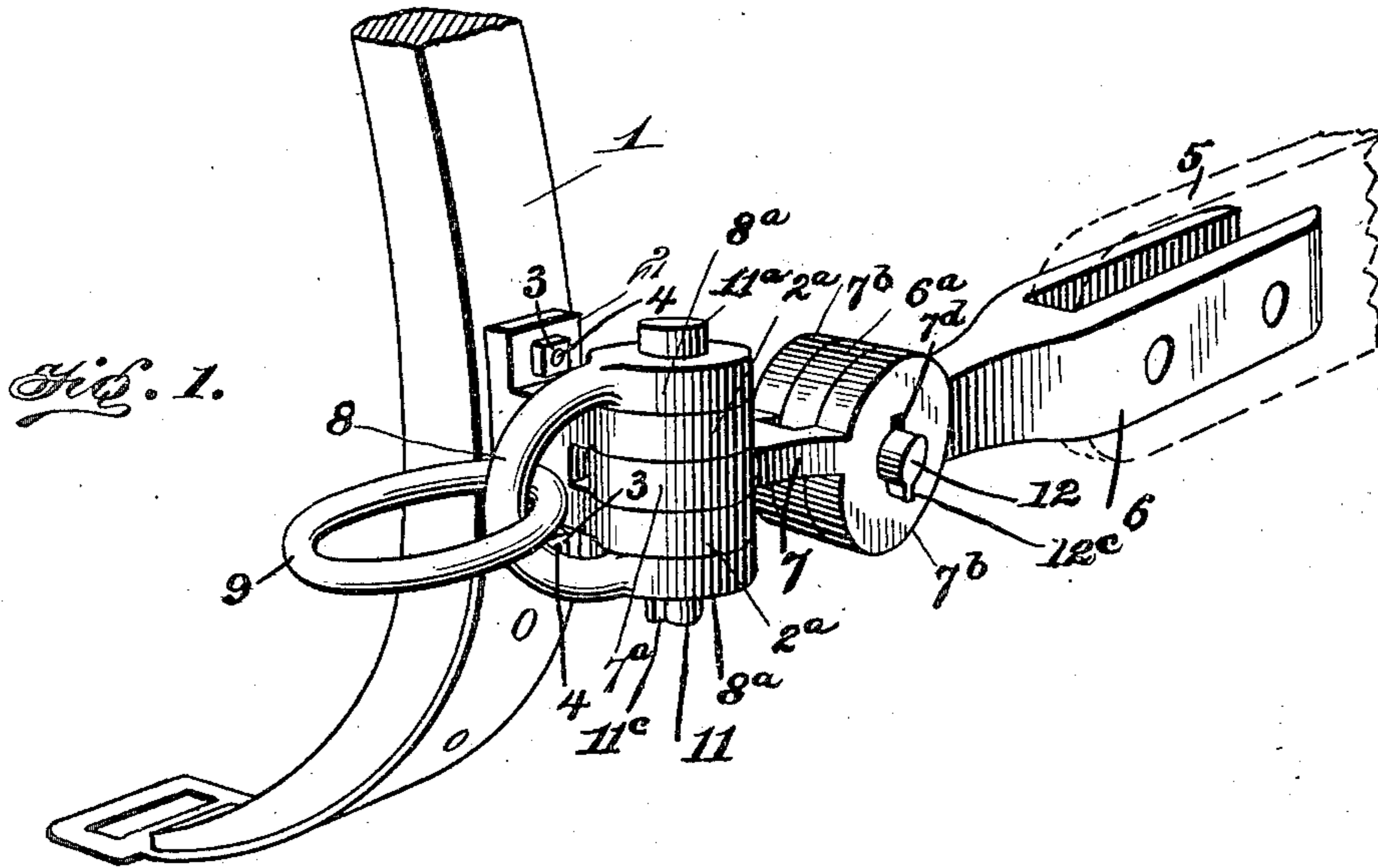
No. 688,165.

Patented Dec. 3, 1901.

D. C. GARD.
HAME AND TRACE CONNECTOR.

(Application filed June 1, 1900.)

(No Model.)



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HAME AND TRACE CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 688,165, dated December 3, 1901.

Application filed June 1, 1900. Serial No. 18,743. (No model.)

To all whom it may concern:

Be it known that I, DEWITT C. GARD, a citizen of the United States, residing at Clearfield, in the county of Taylor and State of Iowa, have invented certain new and useful Improvements in Hame and Trace Connectors, of which the following is a specification.

My invention relates to improvements in hame and trace connectors; and my object is to provide an improved construction of such connectors which is simple in arrangement and efficient in use.

A further object is to construct a device of the character named, the parts of which may be readily connected and disconnected and replaced when worn or broken.

My improvement consists in features of novel construction, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved hame and trace connector. Fig. 2 is a central vertical section taken through the hame connections. Fig. 3 is a perspective view of the coupling-pin of the hame connections. Fig. 4 is a perspective view of a loose antifriction-bushing for the coupling-pins on which the connections turn. Fig. 5 is a central vertical section taken through the trace connections. Fig. 6 is a perspective view of the coupling-pins of the trace connections.

Referring to the drawings, 1 represents a hame of the usual construction having secured thereto a metal plate 2 by suitable means, such as bolts 3 and nuts 4. The plate 2 is formed with laterally-projecting upper and lower ears 2^a, having vertical alining keyhole perforations or openings 2^b.

5 is a trace, (indicated in dotted lines,) and to this trace is adapted to be secured a trace-tug 6, formed with a vertical ear 6^a, having a central circular aperture 6^b. Extending from the hame-plate 2 to the trace-tug 6 is a coupler 7, formed with a horizontal ear 7^a, fitting between the upper and lower ears of the hame-plate and with inner and outer vertical ears 7^b, between which the vertical ear 6^a of the trace-tug is fitted. The horizontal ear 7^a of the coupler has a central circular

aperture 7^c, and the vertical ears 7^b have keyhole perforations or openings 7^d.

8 is a clevis formed with laterally-projecting upper and lower ears 8^a, having keyhole perforations or openings 8^b and fitting above and beneath the upper and lower ears 2^a of the hame-plate, respectively.

9 is a breast-strap ring or link connected with the clevis.

Within each of the central circular apertures 6^b 7^c is fixed an antifriction loose bushing 10, having a keyhole perforation or opening 10^a, located at an angle to the adjacent keyhole-perforations when the parts are in locked position.

11 is a long vertical coupling-pin, whereby the hame connections are secured together, and 12 is a short horizontal coupling-pin, whereby the trace connections are held together. The long coupling-pin 11 is formed with a head 11^a, seating on the upper ear of the clevis, with an upper radial bit or lug 11^b, adapted to fit in the keyhole-perforation of the bushing, and with a lower radial bit or lug 11^c, adapted to engage with the lower ear of the clevis, while the short coupling-pin 12 is formed with a head 12^a, adapted to bear against a vertical ear of the coupler, with an inner pendent radial bit or lug 12^a, adapted to fit in the perforation of the bushing, and an outer pendent radial of the vertical ear of the trace-tug bit or lug 12^c, adapted to engage the outer ear of the coupler.

The parts are assembled by placing the bushings loosely in their apertures in the horizontal ear of the coupler and in vertical ear of the trace-tug, respectively, and bringing their keyhole-perforations in alinement with the keyhole-perforations of the hame connections and trace connections, respectively. The coupling-pins are then inserted and seated and each turned with its bushing, so as to bring their bits and the keyhole-perforations of the bushings out of alinement with the keyhole-perforations of the other parts and their inner bits into locking engagement with the upper ear of the hame-plate and the inner vertical ear of the coupler, respectively, and the outer bits into locking engagement with the outer ear of the clevis and the outer vertical ear of the coupler, respectively. To remove the coupling-pins, they are turned

with their bushing so as to bring the keyhole-perforations and bits into alinement.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A hame and trace connector comprising a hame-plate formed with laterally-projecting upper and lower ears each having a keyhole-perforation, a clevis formed with upper and lower ears each having a keyhole-perforation, a coupler formed with a horizontal ear having a central circular aperture and with vertical ears, an antifriction-bushing having a keyhole-perforation and fitted in the central circular aperture, a coupling-pin having inner and outer radial bits, a trace-tug formed with a vertical ear, and means for connecting the vertical ears of the coupler with the vertical ear of the trace-tug.
2. A hame and trace connector comprising a hame-plate formed with laterally-projecting upper and lower ears, a coupler formed with vertical ears having keyhole-perforations and with a horizontal ear, means for connecting the ears of the hame-plate with the horizontal ear of the coupler, a trace-tug formed with

a vertical ear having a central circular aperture, an antifriction-bushing having a keyhole-perforation, and fitted in the central circular aperture, and a coupling-pin having inner and outer radial bits.

3. A hame and trace connector comprising a hame-plate formed with laterally-projecting upper and lower ears, each having a keyhole-perforation, clevis formed with upper and lower ears each having a keyhole-perforation, a coupler formed with a horizontal ear having a central circular aperture and with vertical ears each having a keyhole-perforation, a trace-tug formed with a vertical ear having a central circular aperture, antifriction-bushings each having a keyhole-perforation and fitted in their respective central circular apertures and coupling-pins each having inner and outer radial bits and located in their respective hame and trace connections.

In testimony whereof I affix my signature in presence of two witnesses.

DEWITT C. GARD.

Witnesses:

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