

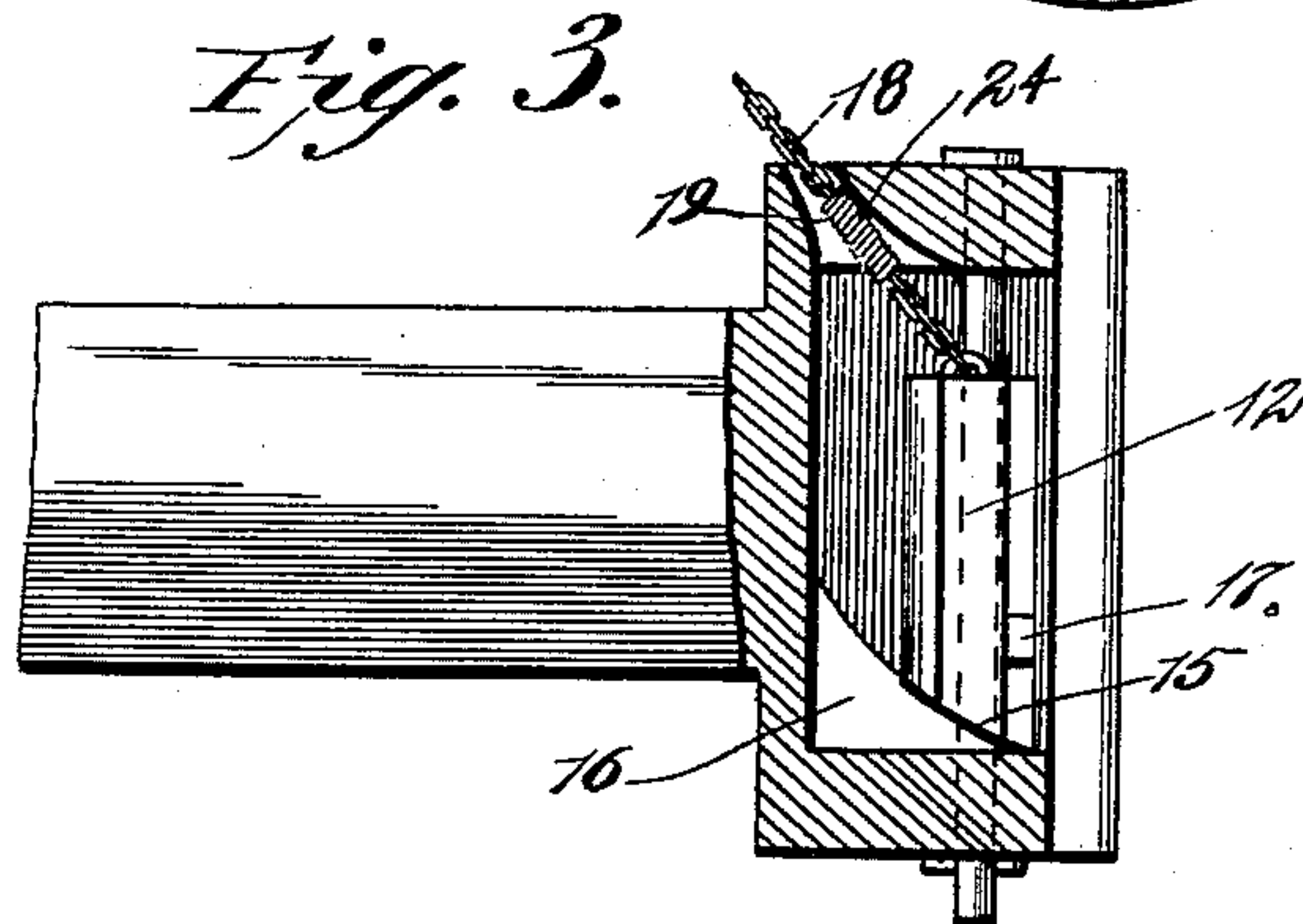
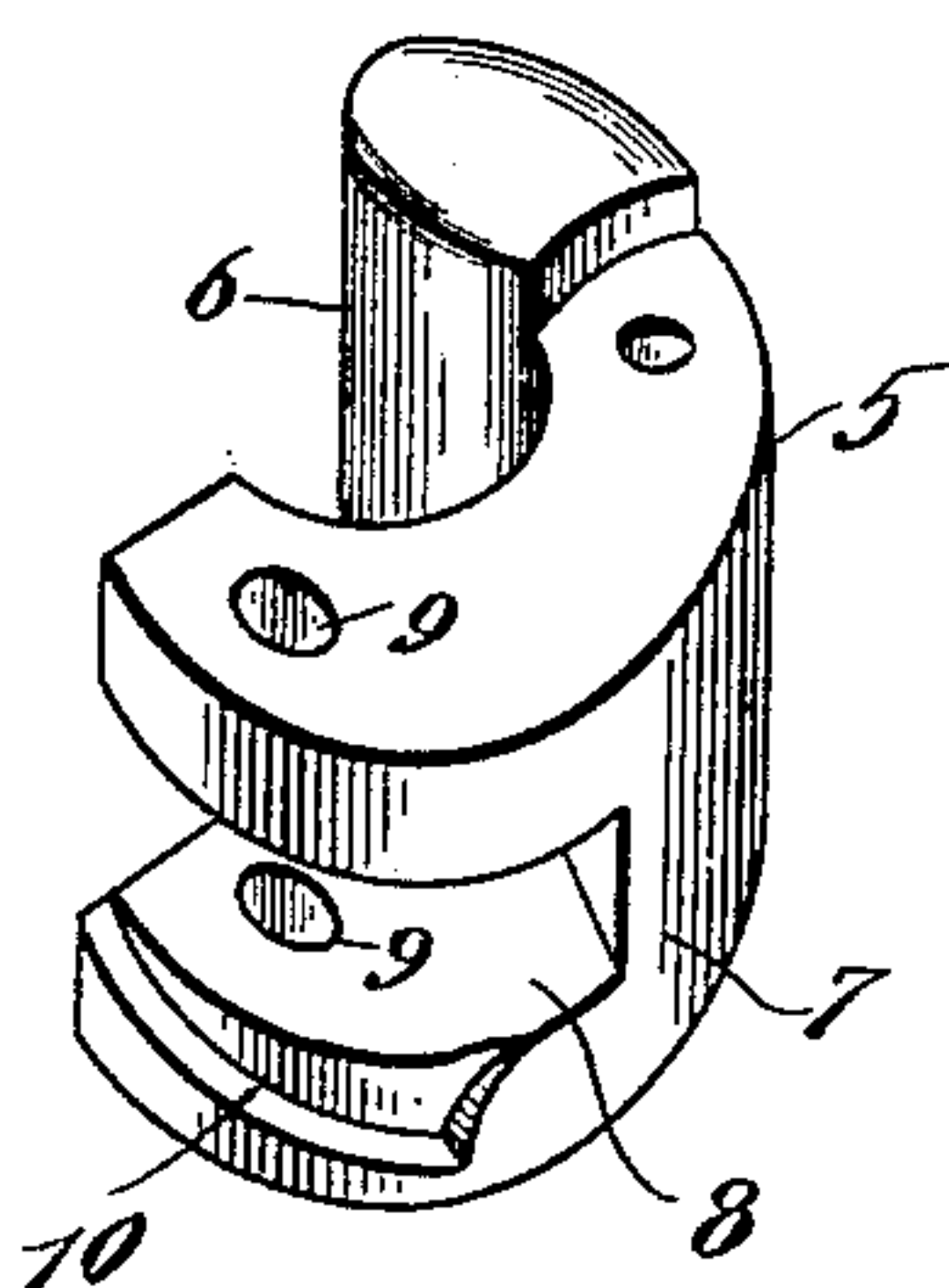
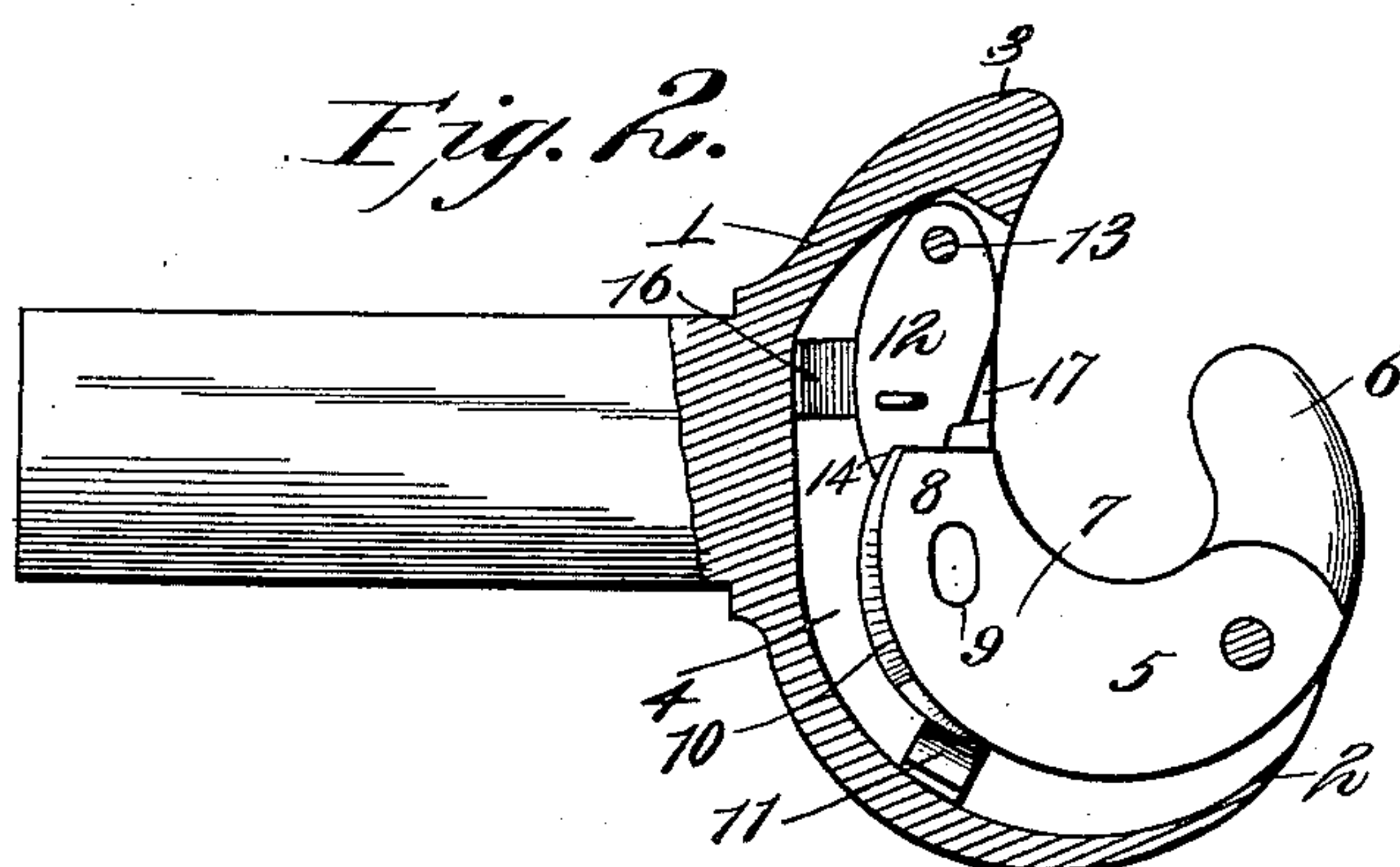
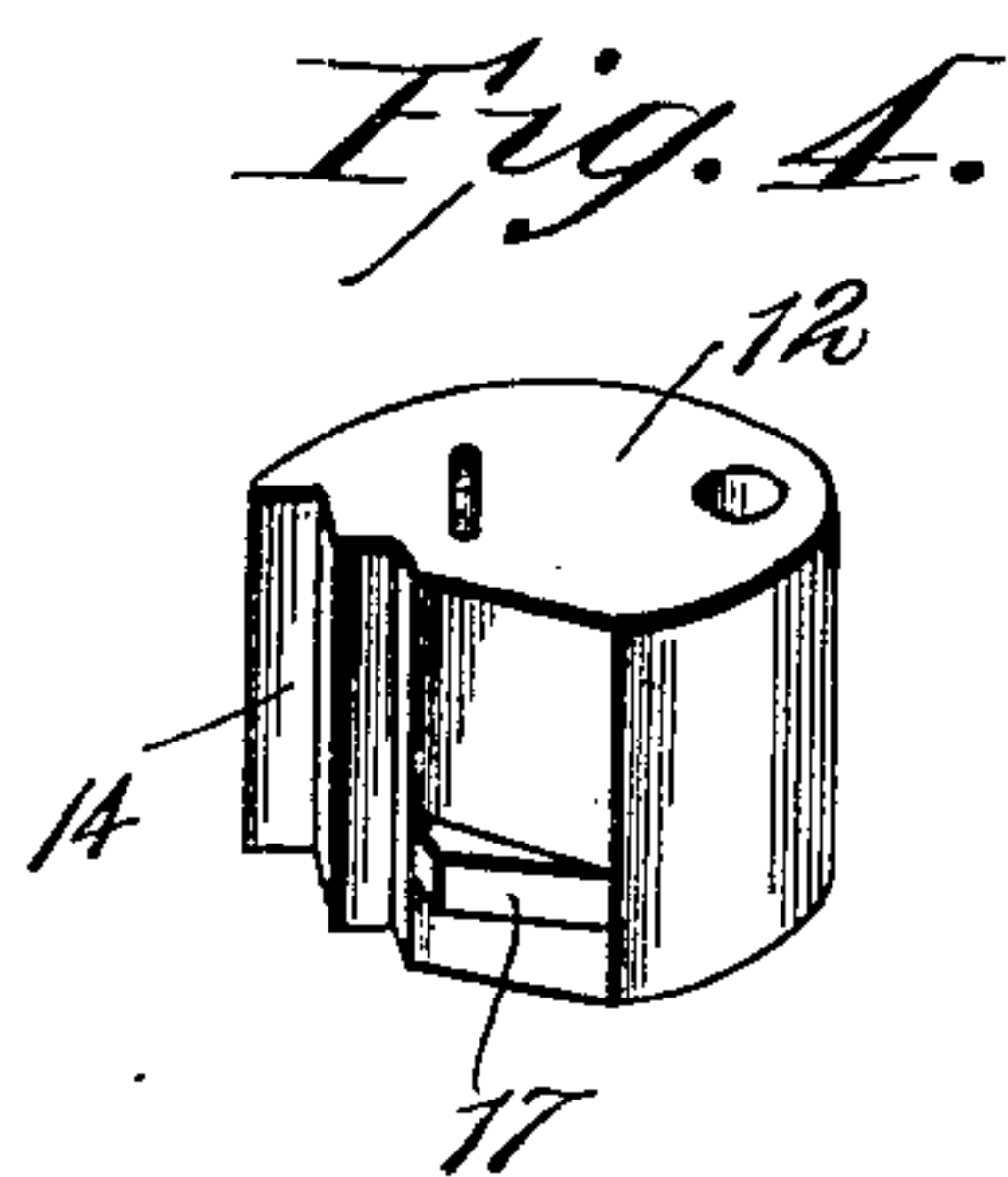
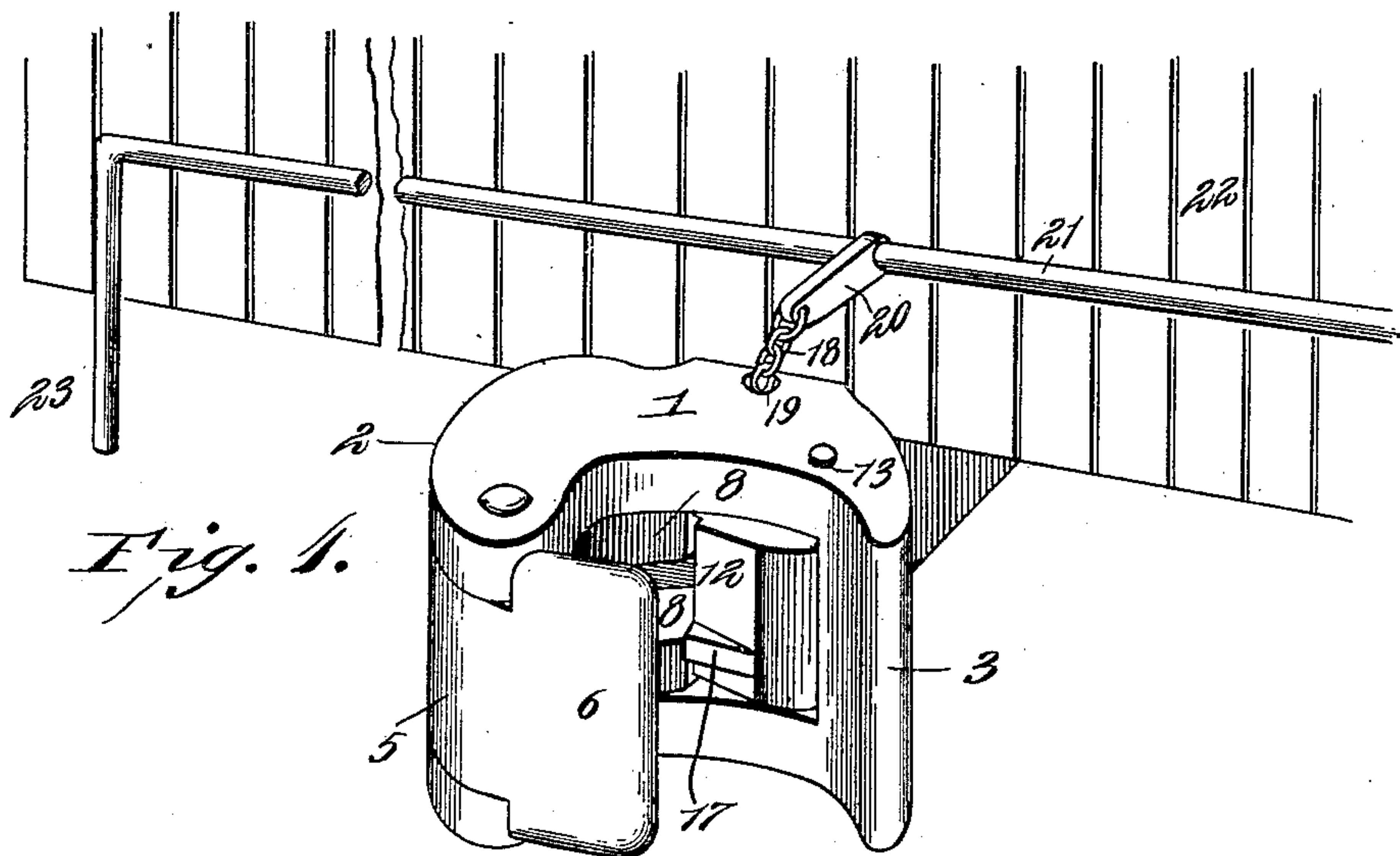
No. 677,366.

Patented July 2, 1901.

A. A. MOSS.
CAR COUPLING.

(Application filed Aug. 27, 1900.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT AUGUSTUS MOSS, OF PLYMOUTH, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 677,366, dated July 2, 1901.

Application filed August 27, 1900. Serial No. 28,192. (No model.)

To all whom it may concern:

Be it known that I, ALBERT AUGUSTUS MOSS, a citizen of the United States, residing at Plymouth, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Car-Coupler, of which the following is a specification.

This invention relates to car-couplers of the pivoted-jaw type, and has for its object to provide improved means for locking the pivotal jaw and to arrange such means for being conveniently tripped to free the jaw, and thereby uncouple a pair of interlocked couplers. It is furthermore designed to provide improved means for rendering the locking means inoperative when two couplers are being brought together and for automatically locking the pivotal jaws after the coupling has been completed.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim, without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a car-coupler constructed in accordance with the present invention. Fig. 2 is a transverse horizontal sectional view thereof. Fig. 3 is a vertical longitudinal sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the locking-dog. Fig. 5 is a detail perspective view of the pivotal jaw or knuckle.

Corresponding parts are designated by like characters of reference in all of the figures of the drawings.

Referring to the drawings, 1 designates a draw-head of common form, having the usual opposite fixed jaws 2 and 3, of which the jaw 3 is the larger and is bifurcated at its outer end, as usual, said bifurcation communicating with the socket or recess 4, commonly formed within the draw-head. Pivoted within the bifurcated portion of the fixed jaw 2 is a coupling-knuckle 5, comprising the outer and inner angularly-related arms 6 and 7, re-

spectively, of which the inner arm is provided with a bifurcation 8, and the two arms formed by such bifurcation having aligned elongated perforations 9 formed adjacent to their outer ends for the reception of a coupling-pin when the coupler is connected to an ordinary link-and-pin coupler. The rear side of the lower portion of the inner arm of the knuckle is cut away, so as to form an outwardly-directed flange 10, which inclines upwardly and forwardly from about the middle of the arm to the outer extremity thereof. A suitable spring 11 is secured to the back of the recess 4 in the draw-head and arranged to bear against the back of the inner arm of the locking-knuckle, whereby the latter is normally urged outwardly and will spring outwardly when the locking device is disengaged from the knuckle.

The means for locking the knuckle comprises a dog or cam 12, which is mounted eccentrically upon a vertical pivot-pin 13, located opposite the inner arm of the knuckle. The free end of the dog, which is adjacent to the free end of the inner arm of the knuckle, is provided with a plurality of vertically-disposed angular notches or kerfs 14 for the reception of the free end of the inner arm of the knuckle, as indicated in Fig. 2 of the drawings, whereby the knuckle is wedged against the dog and locked thereby. The bottom of the dog is beveled or inclined upwardly and rearwardly, as indicated at 15 in Fig. 3, and designed to travel over the upwardly and rearwardly inclined rib 16 upon the bottom of the recess 4, whereby the dog is elevated in its rearward swing, so as to drop and lock the knuckle after the inner arm thereof has swung inwardly and clear of the dog. Upon the front side of the dog and at the free edge thereof there is provided a transversely-disposed trip rib or projection 17, which is located adjacent to the bottom of the dog and is designed to be engaged by the inclined or cam flange 10 of the knuckle, so as to elevate the dog during the inward swing of the knuckle. A suitable operating connection, such as a chain 18, is connected to the upper edge of the dog and adjacent to the free edge thereof and passes upwardly through an opening 19, formed in the top of the draw-head and in rear of the dog. This chain is connected to

the free end of a crank-arm 20, which is carried by a transverse uncoupling-rod or rock-shaft 21, mounted transversely across the adjacent end of the car 22, and at each end of this shaft there is provided an operating crank-handle 23. A suitable coiled spring 24 is inserted in the length of the chain 18, so that the latter will have a yielding pull upon the dog.

The coupler being in locked position, as shown in Fig. 2, the uncoupling-shaft is operated to pull upwardly upon the chain, whereby the dog 12 is swung rearwardly and upwardly by traveling over the inclined rib 16, thereby disengaging the free end of the dog from the inner free end of the knuckle, and the latter is free to swing outwardly. As soon as the uncoupling device is released the dog will automatically drop by gravity, the inclined rib directing the dog forwardly, so that it resumes its normal position.

When two couplers are brought together, each knuckle is forced inwardly, whereby the cam-flange 10 engages beneath the lug or projection 17 upon the dog, thereby swinging the latter rearwardly and also elevating the same until the knuckle swings clear of the dog, when the latter will automatically swing into its normal position and in locked engagement with the free end of the knuckle. By means of the cam-flange and the lug or projection 17 the dog is prevented from binding upon the inclined rib, as it might otherwise do if the knuckle merely swung against the front face of the dog.

What is claimed is—

A car-coupling comprising a draw-head, a coupling-knuckle pivoted thereto, and having a cam-flange upon its rear side, the upper face of the cam inclining upwardly toward the rear free end of the knuckle, a vertically-movable and rearwardly-swinging locking device pivotally mounted upon the draw-head and arranged in locked engagement with the rear free end of the knuckle, an intermediate transverse trip-rib upon the outer side of the locking device, located above the bottom of the draw-head, and having its under face located in the path of the inward or rearward swing of the upper inclined face of the cam-flange on the knuckle, the cam-flange and the trip-rib being in engagement only during the inward swing of the knuckle, an upwardly and rearwardly inclined elevating-rib upon the bottom of the draw-head and in the path of the inward swing of the bottom of the locking device, and means for disengaging the locking device from the knuckle, the free end portion of the locking device being located in the path of the inward or rearward swing of the rear free end of the knuckle, whereby the locking device is swung rearwardly by the rearward movement of the knuckle.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT AUGUSTUS MOSS.

Witnesses:

ELIAS COHEN,
REESE LLOYD.