

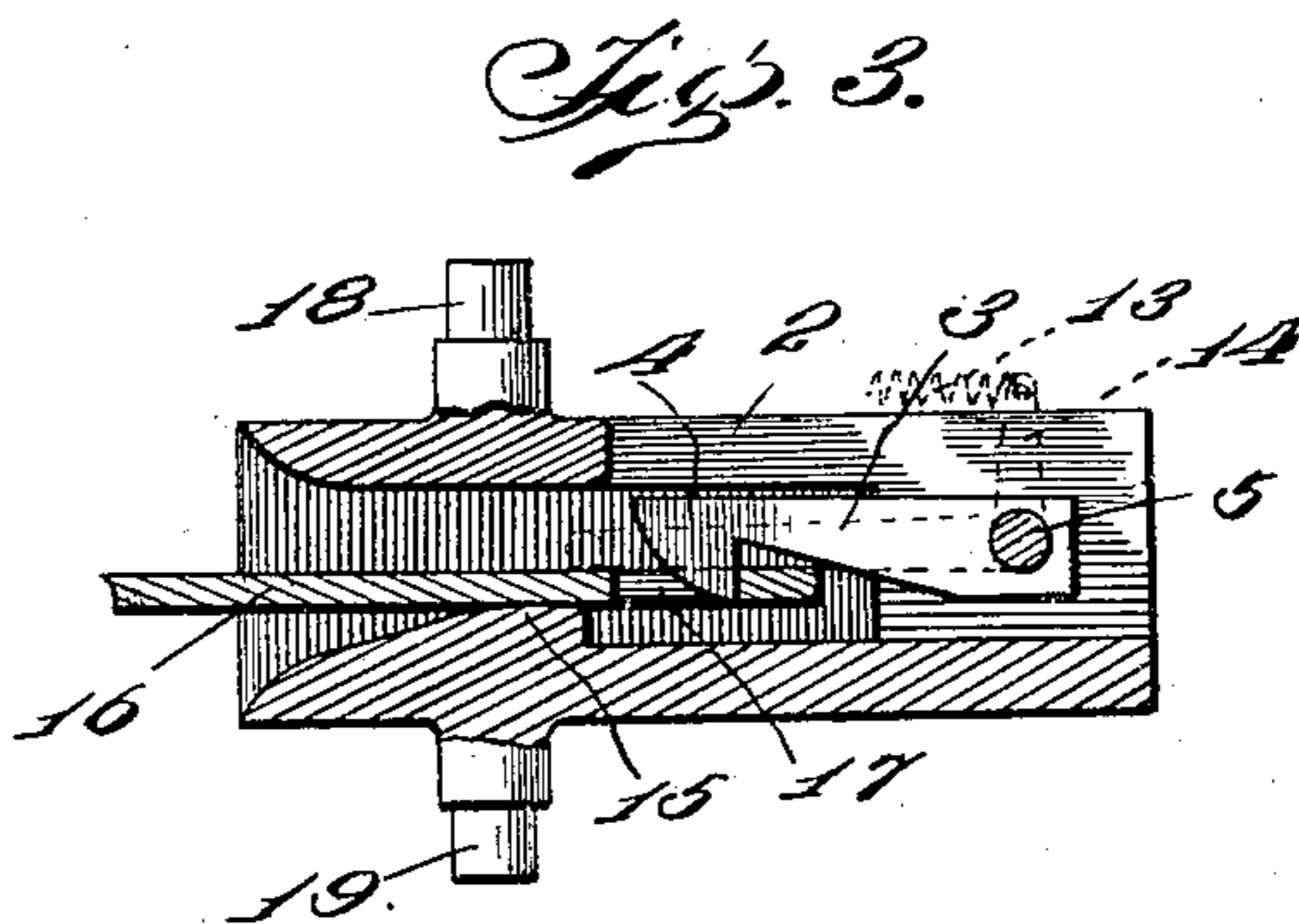
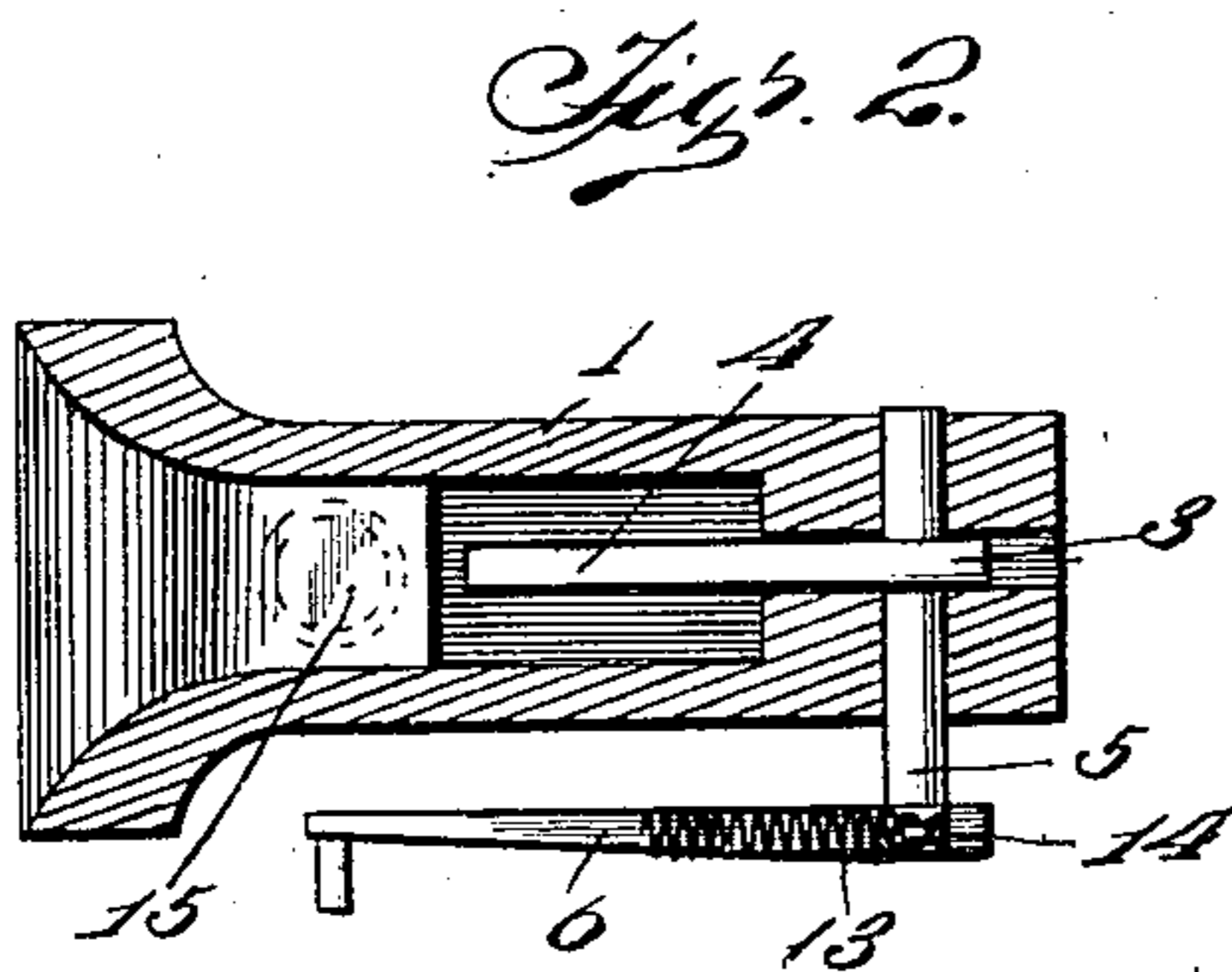
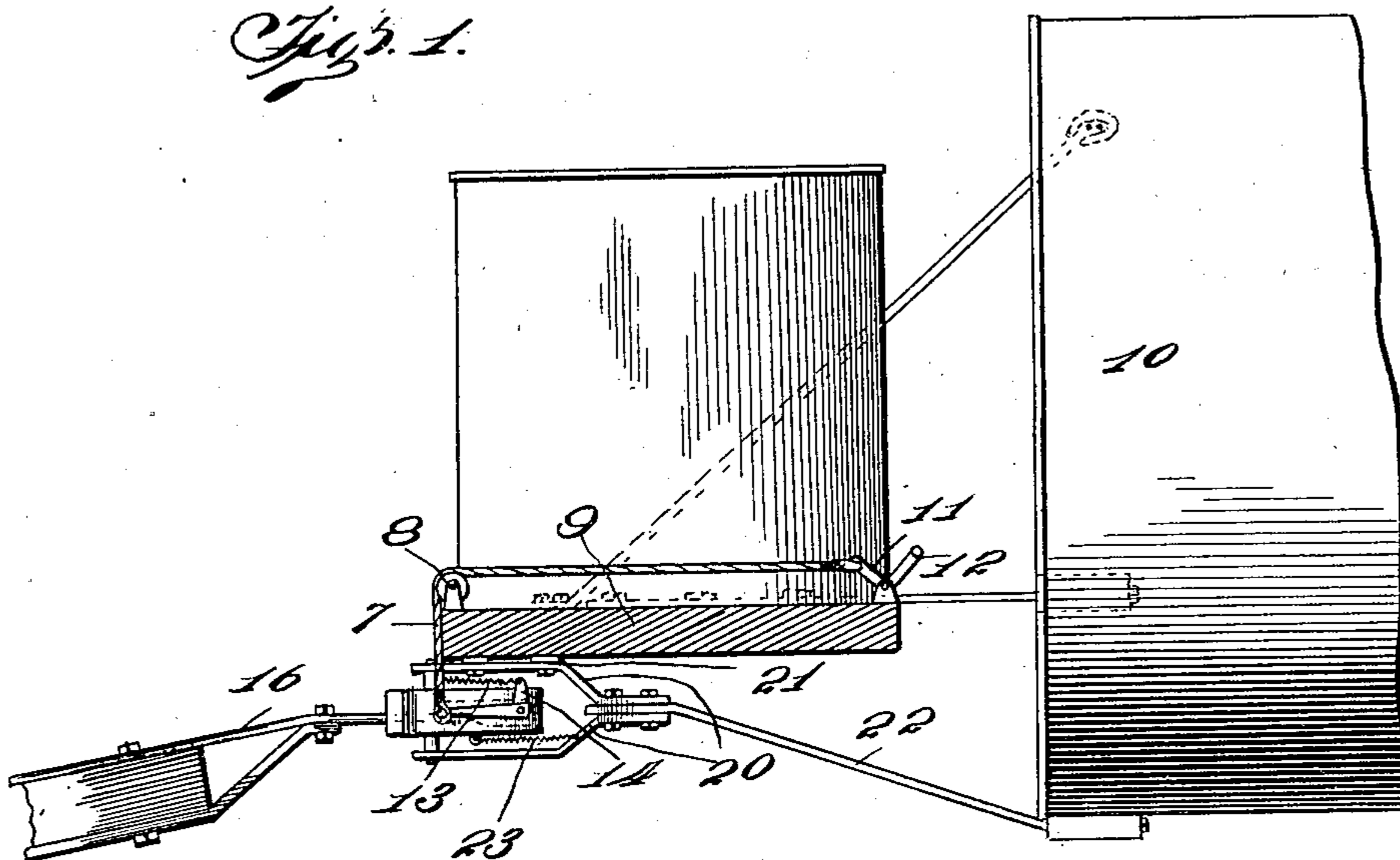
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G. KREBS.
COUPLING.

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NO MODEL.



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GEORGE KREBS, OF DURANT, IOWA.

COUPLING.

SPECIFICATION forming part of Letters Patent No. 730,777, dated June 9, 1903.

Application filed April 7, 1903. Serial No. 151,523. (No model.)

To all whom it may concern:

Be it known that I, GEORGE KREBS, a citizen of the United States, residing at Durant, in the county of Cedar and State of Iowa, have
5 invented certain new and useful Improvements in Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in coupling devices, and particularly to couplers which are adapted for use in traction-engines.

15 It consists in a coupler pivoted with its axis in a vertical line, a yoke engaging the pivots of the coupler, and a link-engaging mechanism carried by the coupler.

It further consists, in a coupling mechanism, of a suitable draw-head, a link-engaging mechanism within the draw-head, a yoke for pivotally supporting the draw-head, the
20 said yoke engaging the draw-head forward of the link-engaging mechanism, and means for operating the link-engaging mechanism.

It also consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

30 In the accompanying drawings, Figure 1 is a side elevation of my improved coupler applied to the platform of a traction-engine, the said platform being shown in section. Fig. 2 is a horizontal longitudinal section through
35 the draw-head of the coupler. Fig. 3 is a vertical longitudinal section through said draw-head, the trunnions or pivoting-studs being shown in elevation.

The coupler forming the subject-matter of
40 this invention is suitable for use on cars, traction-engines, and other kinds of vehicles; but I have illustrated the same as applied to a traction-engine for use, upon which it is especially well adapted. The coupler comprises
45 a draw-head 1, formed with a cavity or recess for receiving the end of a link for connecting the traction-engine with another vehicle. The cavity or recess of the coupler is approximately rectangular for a considerable
50 portion of its length and is entered at the top by a passage or slot 2, formed in the upper rear portions of the draw-head. A link hook

or catch 3 is pivotally mounted in this slot, and its jaw 4 projects into the recess or cavity of the draw-head. This hooked jaw is carried by a shaft 5, journaled in the rear end of the draw-head. One end of the shaft projects beyond the side of the draw-head and carries an operating arm or lever 6. The arm is provided with a cable 7, which passes
55 upwardly over a guiding-pulley 8, mounted on the platform 9 of the traction-engine 10, the said cable extending thence to a bell-crank foot-lever 11, mounted in a suitable bracket upon the platform 9. The foot-engaging portion 12 of this lever projects upwardly over the platform in a position for
60 engagement by the foot of the operator of the device. The jaw 4 is normally depressed by means of a spring 13, which is secured at one end of the draw-head and at the other
65 end to a short arm 14, projecting upwardly from the lever 6. When the foot is placed upon the lever 11, the cable will be caused to pull the arm or lever 6 upwardly, and thus
70 raise the jaw 4 out of the cavity or recess of the coupler. When the foot is removed from said lever, the spring 13 will return the hooked jaw to its normal depressed position. The floor of the draw-head cavity is preferably provided with a raised portion 15, which
75 will lift a link or connecting-piece, such as 16, which may be inserted in the draw-head, so that the jaw 4 will engage the recess or aperture 17 in such link in a thorough manner.

85 The mounting of the draw-head forms an important feature of the invention. The draw-head is provided near its front end with supporting-trunnions, as 18 and 19, which project in a vertical position from the upper and lower surface of the draw-head, as clearly shown in Figs. 1 and 3. These trunnions find
90 bearings in the outer ends of the arms of a yoke 20. The yoke 20 is secured at 21 by its upper arm to the vehicle carrying the coupler. The yoke is preferably braced, as by a brace-rod 22, from any portion of the traction-engine
95 10. In the illustration of the invention the brace-rod 22 is bolted directly to the yoke structure at one end, the arms of said yoke being secured to its upper and lower surface,
100 while the other end of the said brace is secured to a portion of the traction-engine. The outer end of the cavity in the draw-head is

flared, as is usual in the formation of couplers, so that the link or connecting member is easily introduced into said draw-head.

The pivotal mounting of the draw-head in the yoke, as described and shown, and the arrangement of the trunnions forward of the locking-jaw near the outer end of the coupler greatly facilitate the introduction of the coupler-link or connecting-piece. If the connecting member of a vehicle which is to be coupled to the engine approaches the draw-head at an angle, the possibility of forcing the draw-head to one end and prevent a proper coupling is rendered improbable, since said coupling member is not able to move the draw-head out of the way as easily as if the trunnions were near the rear end of the draw-head. The draw-head is normally kept in proper alinement with the yoke 20 by means of a spring 23, which is secured to the draw-head to the rear of the trunnions at one end, while its other end extends rearwardly to the yoke 20, where it is properly fastened. The tension of the spring 23 thus tends to hold under yielding pressure the draw-head in proper position. The placing of the trunnions at this point upon the coupler also makes a strong structure of the device, since the studs are placed at a point where the walls of the draw-head are comparatively thick and of corresponding strength.

It will be evident, of course, that while I have described this coupler as attached to traction-engines it may be used upon railway-cars or other vehicles without departing from the spirit of the invention.

The parts of the structure are simple in structure and not likely to get out of order easily.

The pivotal mounting of the draw-head above described greatly facilitates the coupling operation and the insertion of connecting-links or other means in the flaring mouth of the draw-head.

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

1. A coupler comprising a draw-head, a yoke forming a draw-bar and pivotally supporting the draw-head, the said yoke engaging the head at points near its outer end, substantially as described.

2. A coupler comprising a draw-head, trunnions projecting therefrom, a draw-bar having a bifurcated end for pivotally supporting the said draw-head the forward ends of the said draw-bar engaging the said trunnions, a coupler comprising a draw-bar having a bifurcated end portion for receiving a draw-head, a draw-head pivotally mounted within said bifurcated portion, the pivot-points of said draw-head being located near the outer end of the draw-head, and means within the draw-

head to the rear of said pivotal points for securing coupling means within said head, substantially as described.

3. A coupler comprising a draw-head formed with a recess for receiving coupling means, a locking-jaw mounted therein, a frame or yoke supporting the said draw-head and pivotally engaging the same at points forward of the said locking-jaw, substantially as described.

4. A coupler comprising a draw-bar, a draw-head pivotally mounted therein, trunnions projecting in a vertical direction from said draw-head and engaging said draw-bar, said trunnions being located close to the mouth of the draw-head, substantially as described.

5. A coupler comprising a draw-head, a draw-bar pivotally holding the same in position, a locking-bar within the draw-head for engaging coupling means, a lever for operating the same, a cable connected with said lever and a foot-lever for actuating said cable and raising the locking-jaw when it is necessary to uncouple the parts, substantially as described.

6. A coupler comprising a draw-bar having an upper and lower arm for projecting above and below the draw-head of the coupler, trunnions projecting from the upper and lower surface of the draw-head for engaging said arms, the trunnions being located close to the outer end of the draw-head for preventing the draw-head from being easily moved to one side in the coupling operation, substantially as described.

7. A coupler comprising a draw-head having a recess therein and a slot entering the recess from the upper rear end of the draw-head, a pivoted jaw mounted in said slot, a shaft carrying the same and projecting to one side of the draw-head, an arm or lever secured thereto, a cable for operating said lever, a bell-crank for actuating the cable, a second arm projecting from the first arm or lever, and a spring secured to the coupler at one end and to the said arm at the other for normally holding the coupling-jaw in its depressed position, substantially as described.

8. A coupler comprising a draw-head, a yoke pivotally engaging the same at its forward end, a spring secured to the draw-head in the rear of said pivotal engagement and connected with the draw-bar for holding the draw-head in proper alinement, and a draw-bar pivotally supporting the said draw-head, substantially as described.

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

GEORGE KREBS.

Witnesses:

HENRY VOSS,
M. C. KREBS.