

915,403.

DRAW BAR AND COUPLING, &c.
APPLICATION FILED JAN. 18, 1908.

Patented Mar. 16, 1909.

3 SHEETS—SHEET 1.

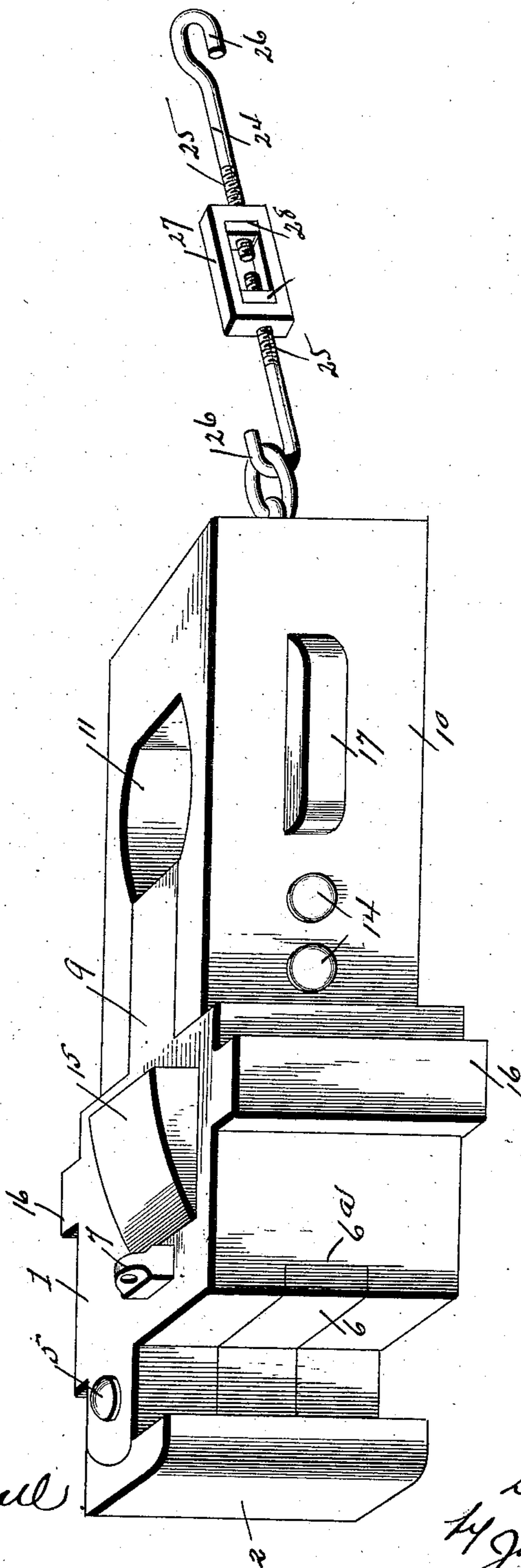


Fig. 1.

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3 SHEETS—SHEET 2.

Fig. 2.

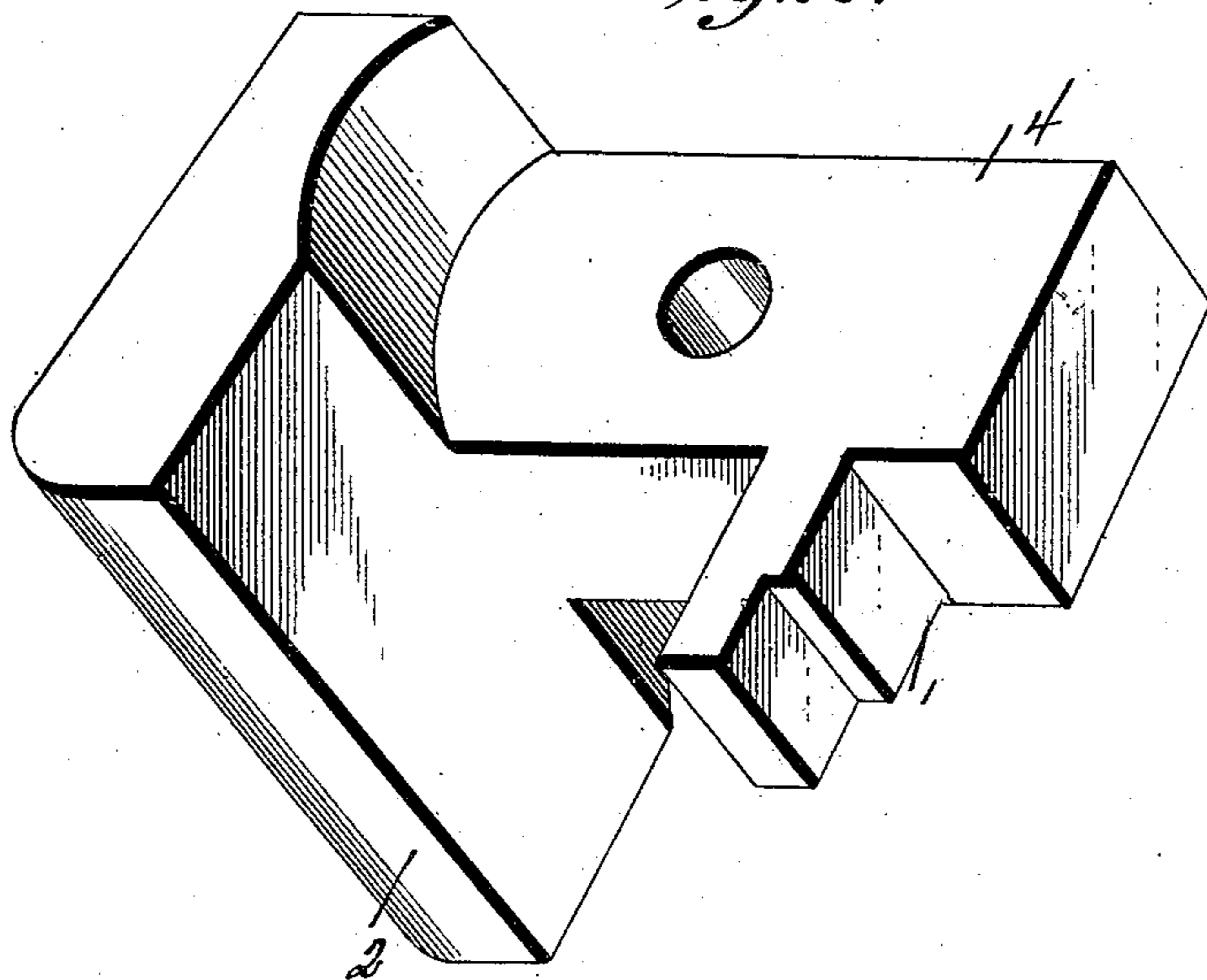
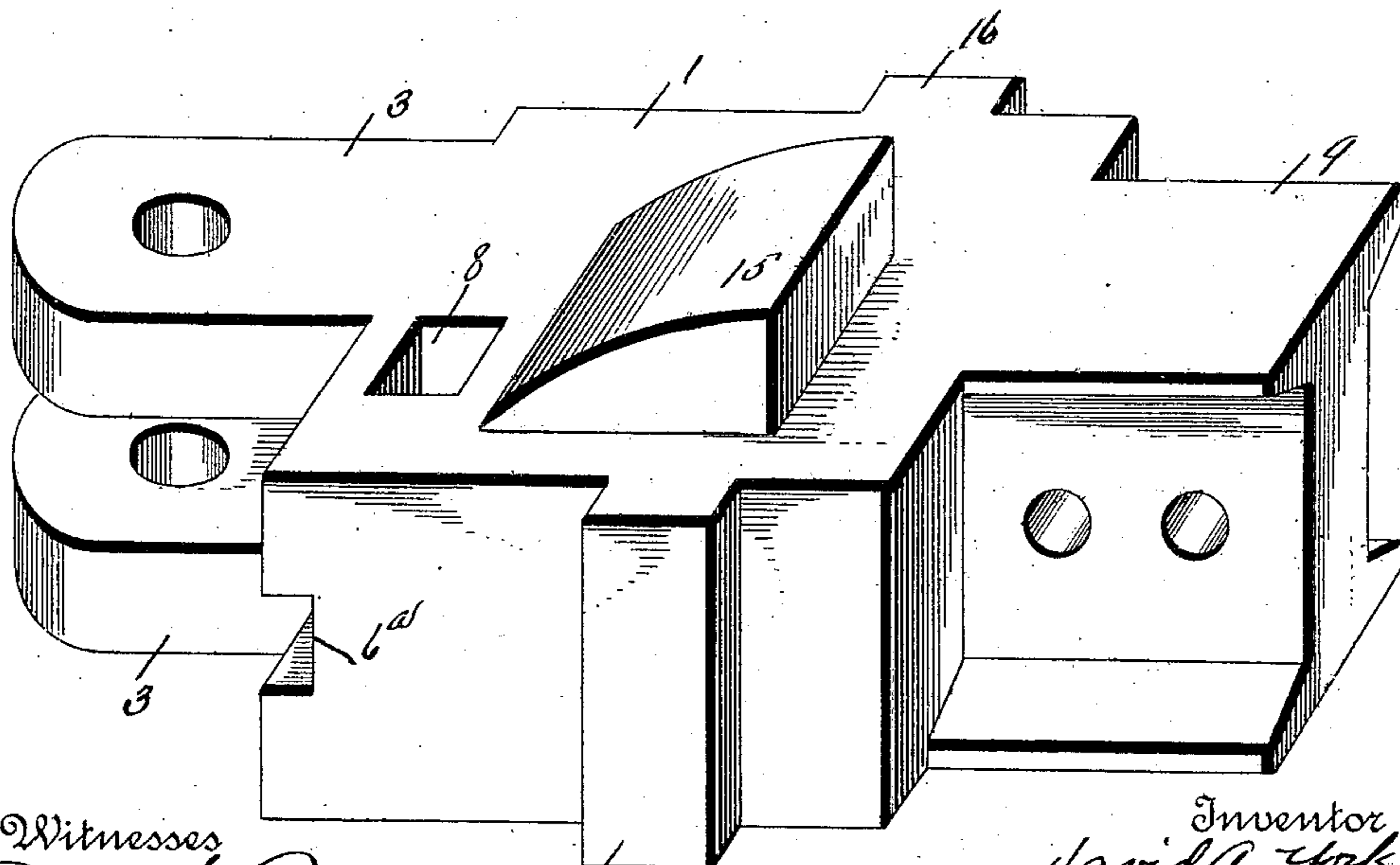


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

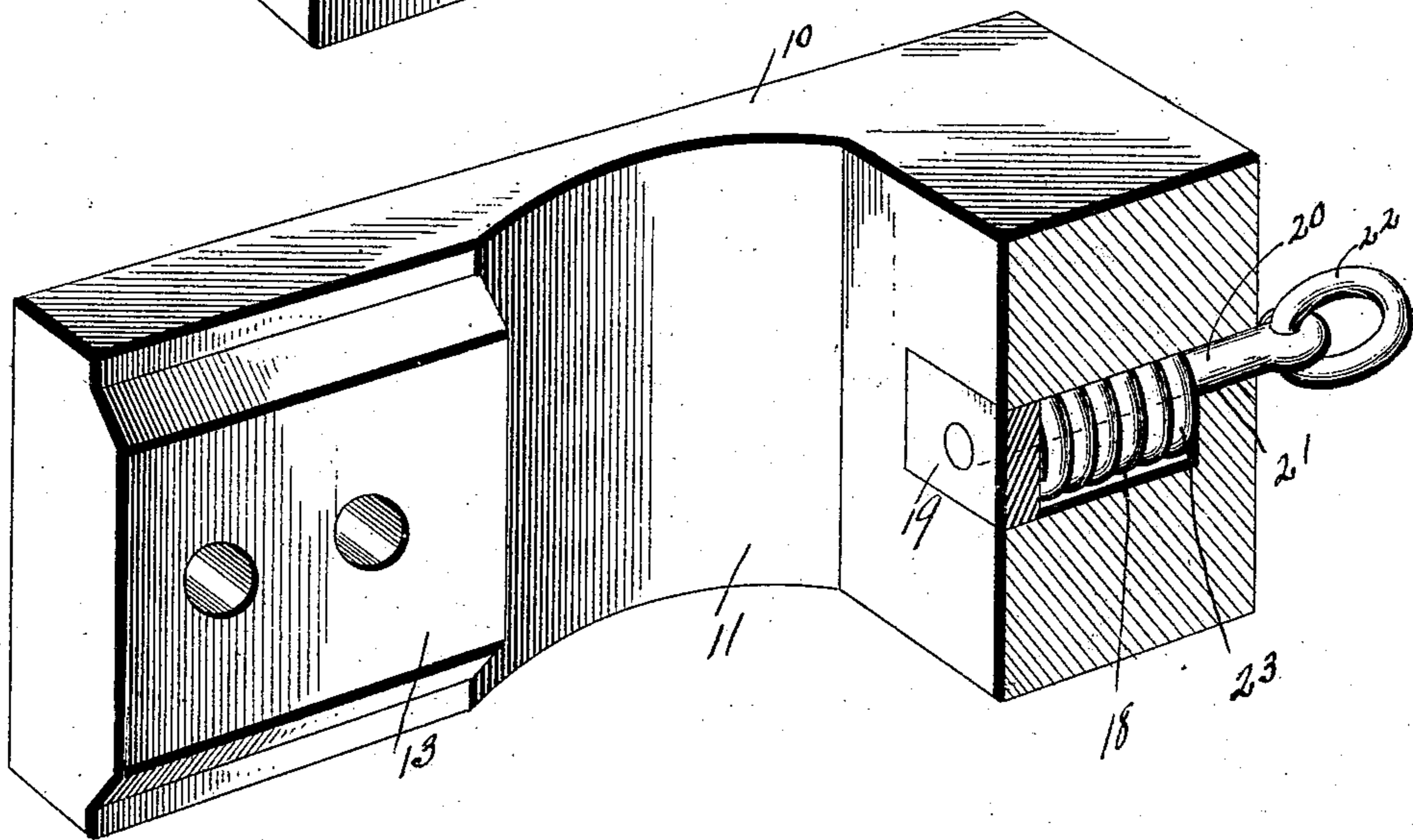
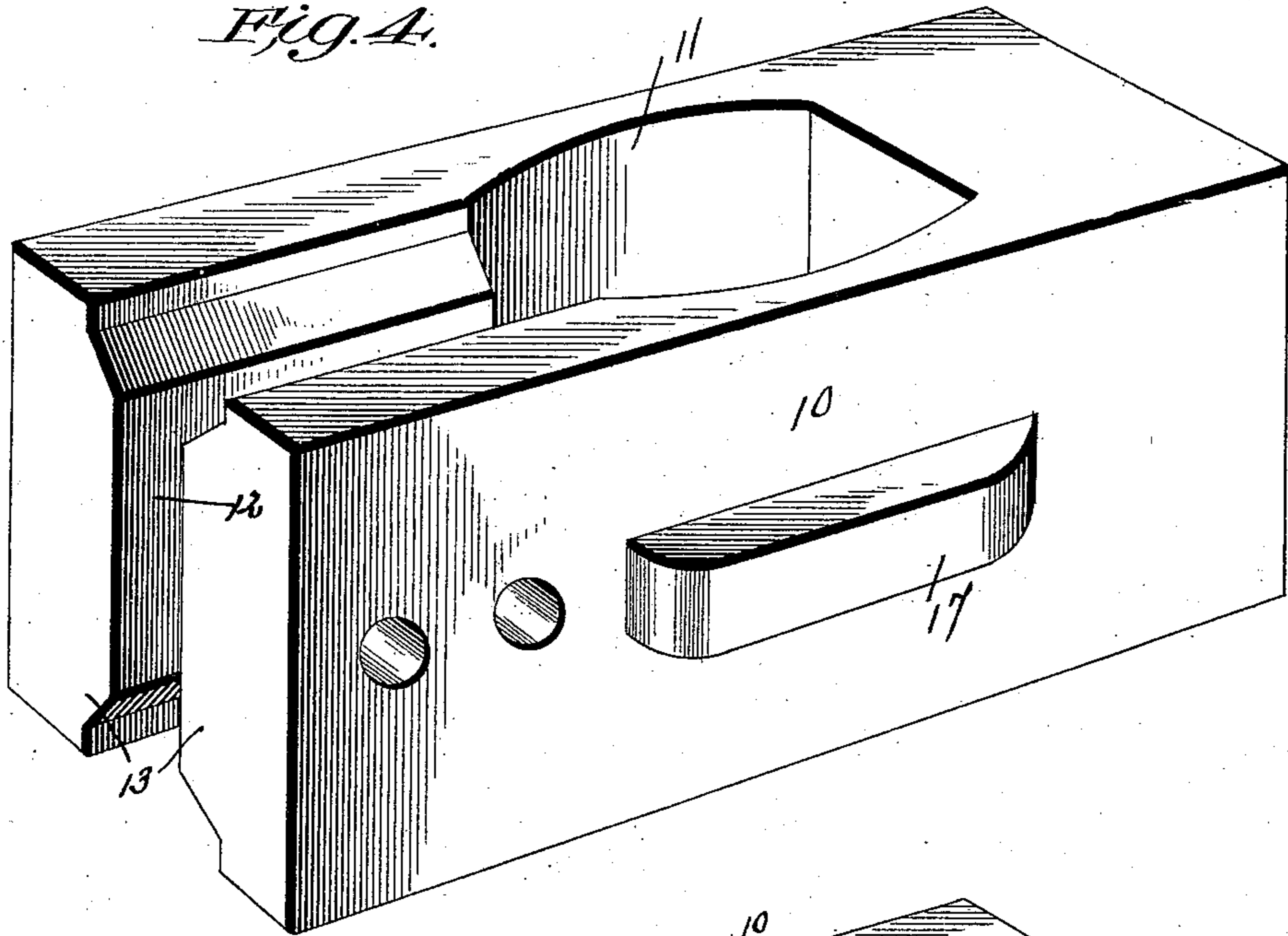


Fig. 5.

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UNITED STATES PATENT OFFICE.

DAVID A. YORK, OF NORTHGROVE, INDIANA.

DRAW-BAR AND COUPLING, &c.

No. 915,403.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed January 18, 1908. Serial No. 411,550.

To all whom it may concern:

Be it known that I, DAVID A. YORK, a citizen of the United States, residing at Northgrove, in the county of Miami and State of Indiana, have invented certain new and useful Improvements in Draw-Bars and Couplers, of which the following is a specification.

This invention relates to car couplers of the Janney or pivoted knuckle type, the object of the invention being to provide a coupler which is simple of construction and positive and efficient in use, and which is adapted to be movably mounted on the car so that the couplers at the opposite ends of a car may be connected for limited longitudinal movement in unison, whereby, when the cars of a train are coupled together, the series of couplers of all the cars will be connected to enable the train to be easily started without the resistance, strain, shocks and jars usually produced.

With these and other objects in view, the invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a perspective view of a coupler embodying my invention. Fig. 2 is a perspective view of the knuckle. Fig. 3 is a similar view of the drawhead. Fig. 4 is a perspective view of the shank. Fig. 5 is a central longitudinal section of the same.

Referring to the drawings, 1 designates the drawhead of the coupler, which is preferably of rectangular form. The head is hollow or suitably chambered in the usual manner to receive the tail of the knuckle 2. As shown, the knuckle is mounted between spaced perforated ears 3 extending from one side of the center of the front end of the drawhead, its tail portion or locking arm 4 being perforated for the passage of a pivot pin 5 which also passes through the openings in the ears and pivotally connects the knuckle for laterally swinging movement therewith. The tail piece is adapted to recede into a slot or recess 6^a in the front of the drawhead when the knuckle is closed. The tail piece or knuckle is provided with a shouldered lug or projection 6 which projects into the said chamber when the knuckle is closed and is engaged by a locking pin 7 slidably mounted in an opening 8 in the top of the drawhead to lock the knuckle in closed position. This locking pin may be elevated by any type of

adjusting mechanism to release the knuckle for coupling action.

The drawhead is formed at its rear with a central I-shaped tongue 9 for connection with a block or shank 10. The block or shank is formed with a vertical cavity or opening 11 and has its forward portion bifurcated by a slot 12 communicating with said opening. This slot 12 receives the tongue 9, and the side walls of said slot are provided with bosses or projections 13 to fit within the grooves or recesses in the sides of the tongue, thus holding the drawhead from vertical movement relative to the shank. Bolts 14 extend transversely through the tongue and slotted portion of the shank and detachably connect the parts together.

The drawhead is formed on its top with an abutment shoulder 15 to engage a portion of the car or coupler supporting means and limit the backward movement of the coupler and transmit the applied power in pushing or running the car backward. On the sides of the drawhead are also formed vertical ribs or abutment shoulders 16 to engage the coupler supporting means and transmit the forward draft pull on the coupler to the car in running forward. On the portions of the shank block 10, forming the side walls of the opening 11, are formed reinforcing ribs or members 17, which strengthen the shank opposite said opening.

A chamber or socket 18 is provided in the central rear portion of the shank 10 and opens at its forward end into the vertical cavity 11. In this socket, which is of rectangular form, fits and slides a follower 19, to which is connected the forward end of an eye-bolt 20, which extends through an opening 21 beyond the rear of the shank and has coupled to the eye thereof a ring or like connection 22. Surrounding that portion of the bolt inclosed within the socket 18 is a coiled cushioning and bumper spring 23 which adapts the coupling to have a limited longitudinal yielding movement to compensate for irregularities of motion of the coupled cars, and serves to maintain the coupler in normal position. The opening 11 in the shank permits of the ready application and removal of the follower and spring in assembling the parts and disconnecting them for renewal or repairs.

The rings 22 of the couplers at the opposite ends of the car are designed to be connected by a draft rod 24, which is preferably composed of a pair of sections having thread-

ed inner ends 25 and hooked outer ends 26, the latter to engage the rings 22. The threaded ends 25 of the rod are adjustably connected by a turn buckle 27 and are provided with
5 retaining nuts 28, by the adjustment of which parts the rod may be lengthened or shortened to take up any slack which may exist and to prevent undue longitudinal movement of the couplers.

10 It will be understood from the foregoing description that by movably mounting the couplers on the car body, instead of employing an ordinary cushioning mounting, all the couplers of the cars of a train will be connect-
15 ed together for a simultaneous limited longitudinal movement. By this means the pull of the locomotive in starting the train will be directly transmitted through the draw gearing from car to car, thus enabling the train to
20 be started without the usual resistance, strains, shocks and jars. This mode of connecting up the couplers also permits greater flexibility between the cars to prevent accidents frequently caused by undue rigidity of
25 the draft connections. It will also be apparent that in the motion of the couplers under variations in the pulling strain, the cushioning springs 23 will take up all slack and allow

sufficient compensating motion of the individual couplers to prevent breakage or accidents from sudden jerks or jars. 30

Having thus fully described the invention, what is claimed as new is:—

A coupler comprising a drawhead, a knuckle pivoted thereto, locking means for 35 the knuckle, an abutment shoulder on the top of the drawhead, vertical abutment shoulders on the sides of the drawhead, a tongue extending rearwardly from the draw-
40 head, a draw bar having a vertical opening and a bifurcated forward end and provided with a chamber in its rear portion communicating at its forward end with the opening, fastening means connecting the tongue with
45 the bifurcated portion of the shank, a follower movable in said chamber, a draft rod connected with the follower and extending through the rear of the shank, a cushioning spring coiled about said rod between the follower
50 and rear wall of the chamber, and reinforcing members on the portions of the shank forming the side walls of the vertical opening.

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