

(No Model.)

2 Sheets—Sheet 1.

F. H. NEWTON & L. G. WADE.
CAR COUPLING.

No. 538,178.

Patented Apr. 23, 1895.

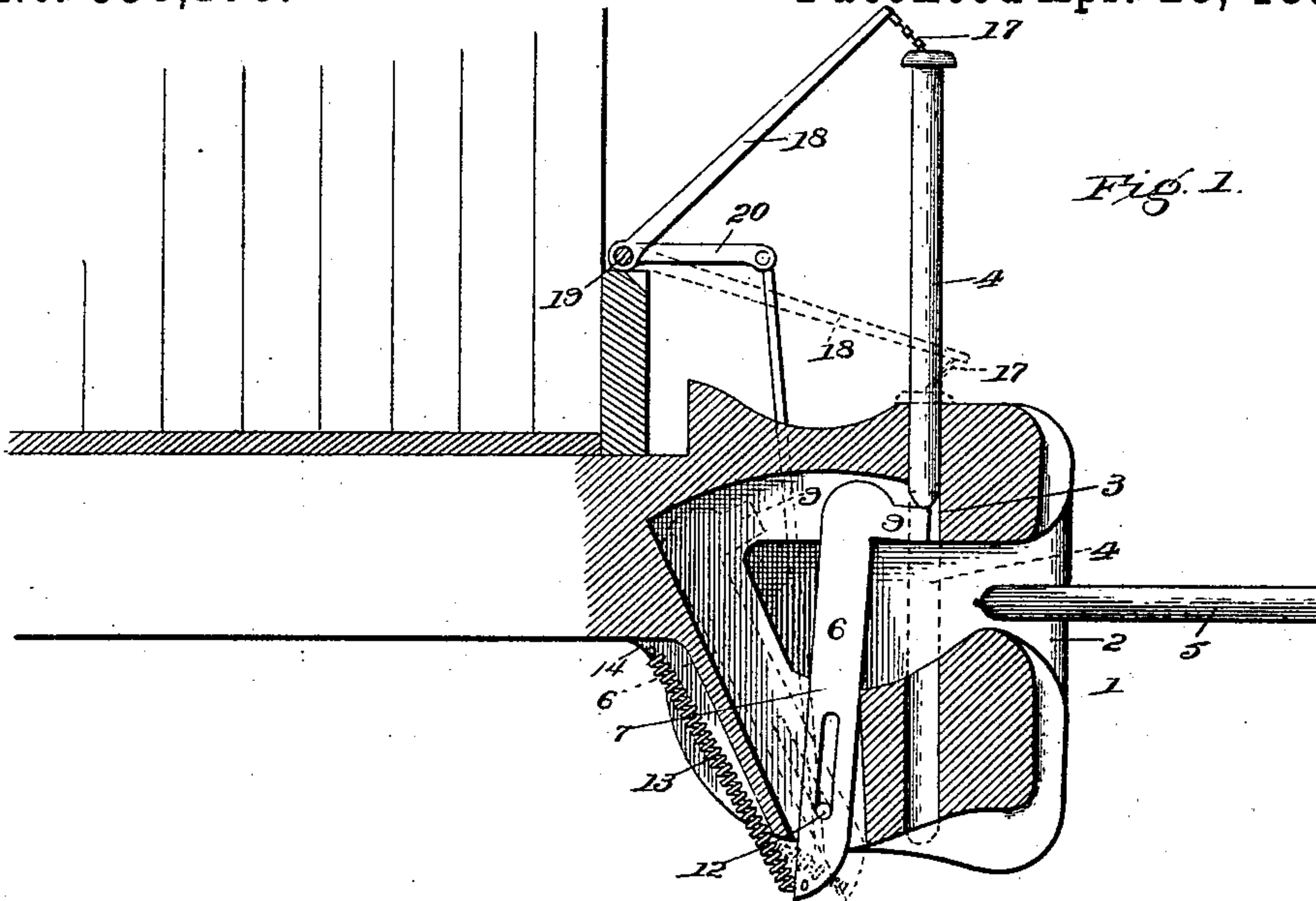


Fig. 2.

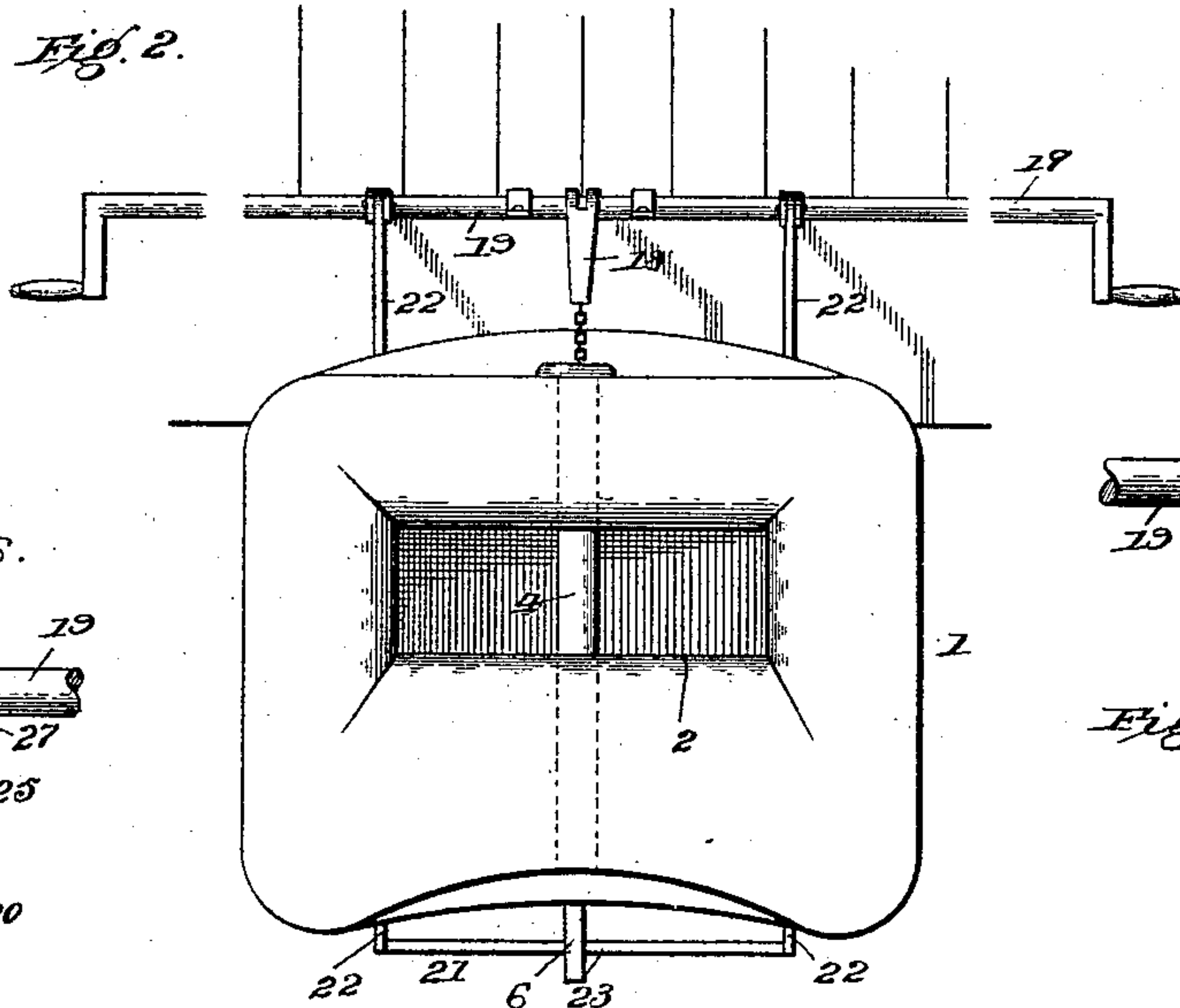


Fig. 6.

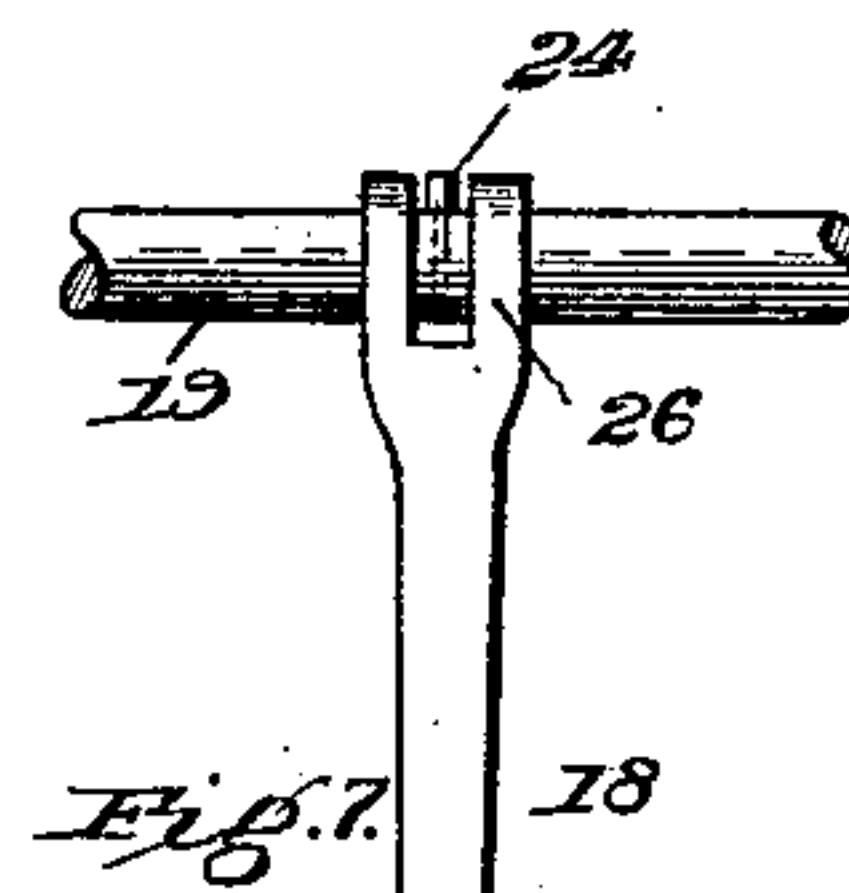
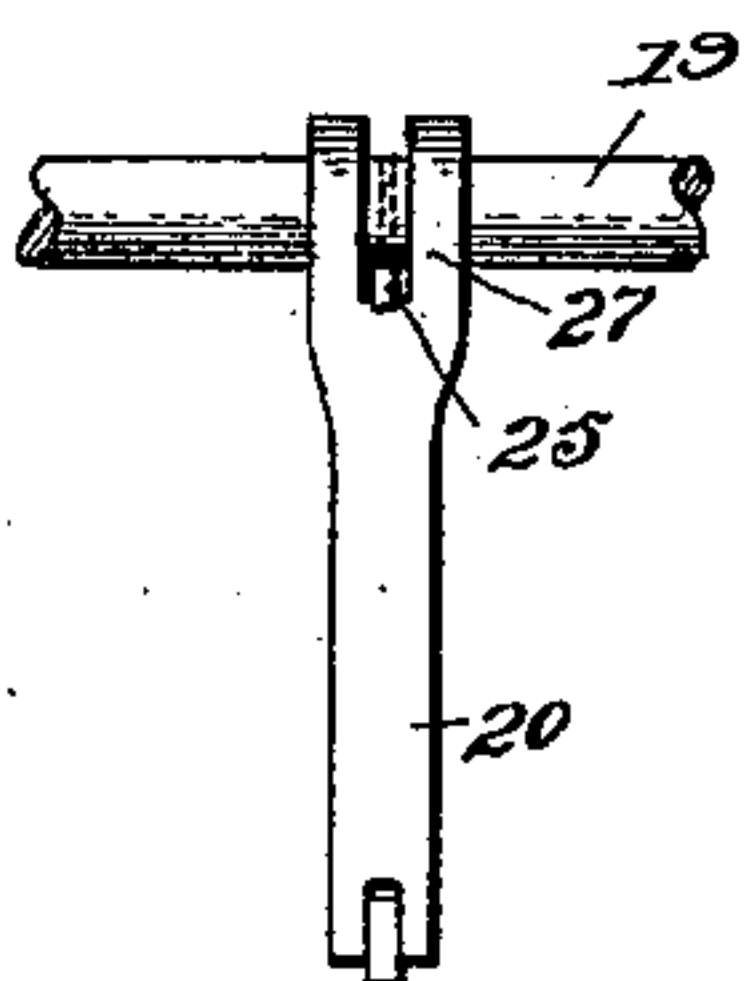


Fig. 8.

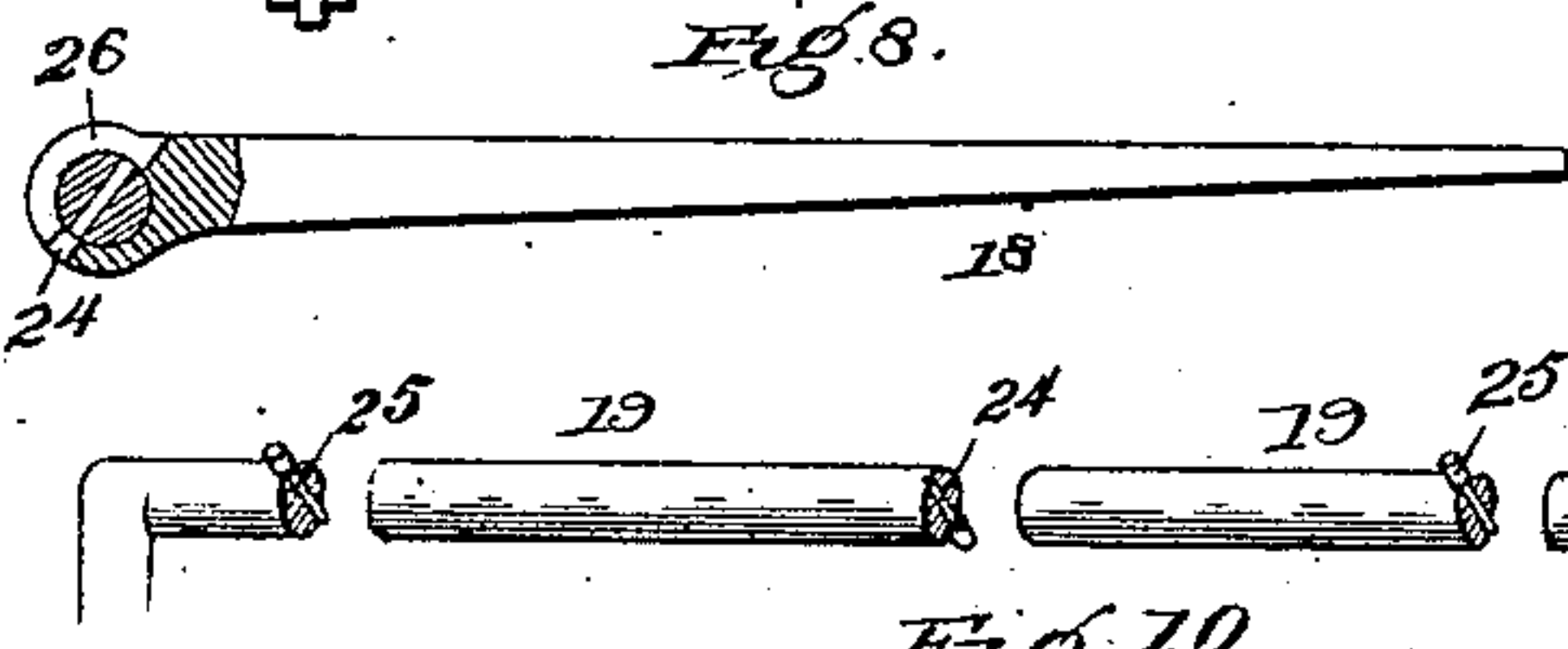


Fig. 9.

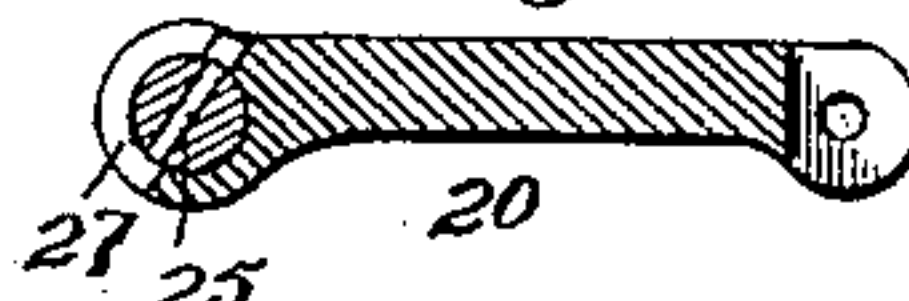
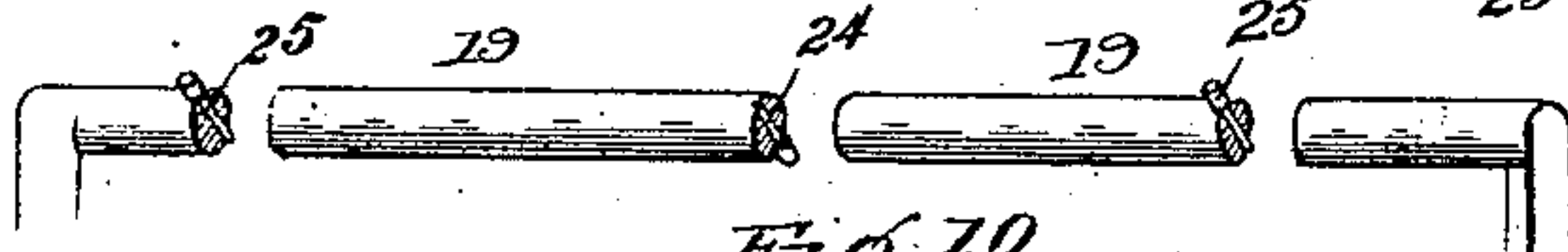


Fig. 10.



Witnesses

J. M. Johnson
J. K. Siggers

By their Attorneys.

Fredrick H. Newton
Linley G. Wade

C. A. Snow & Co.

(No Model.)

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Fig. 3.

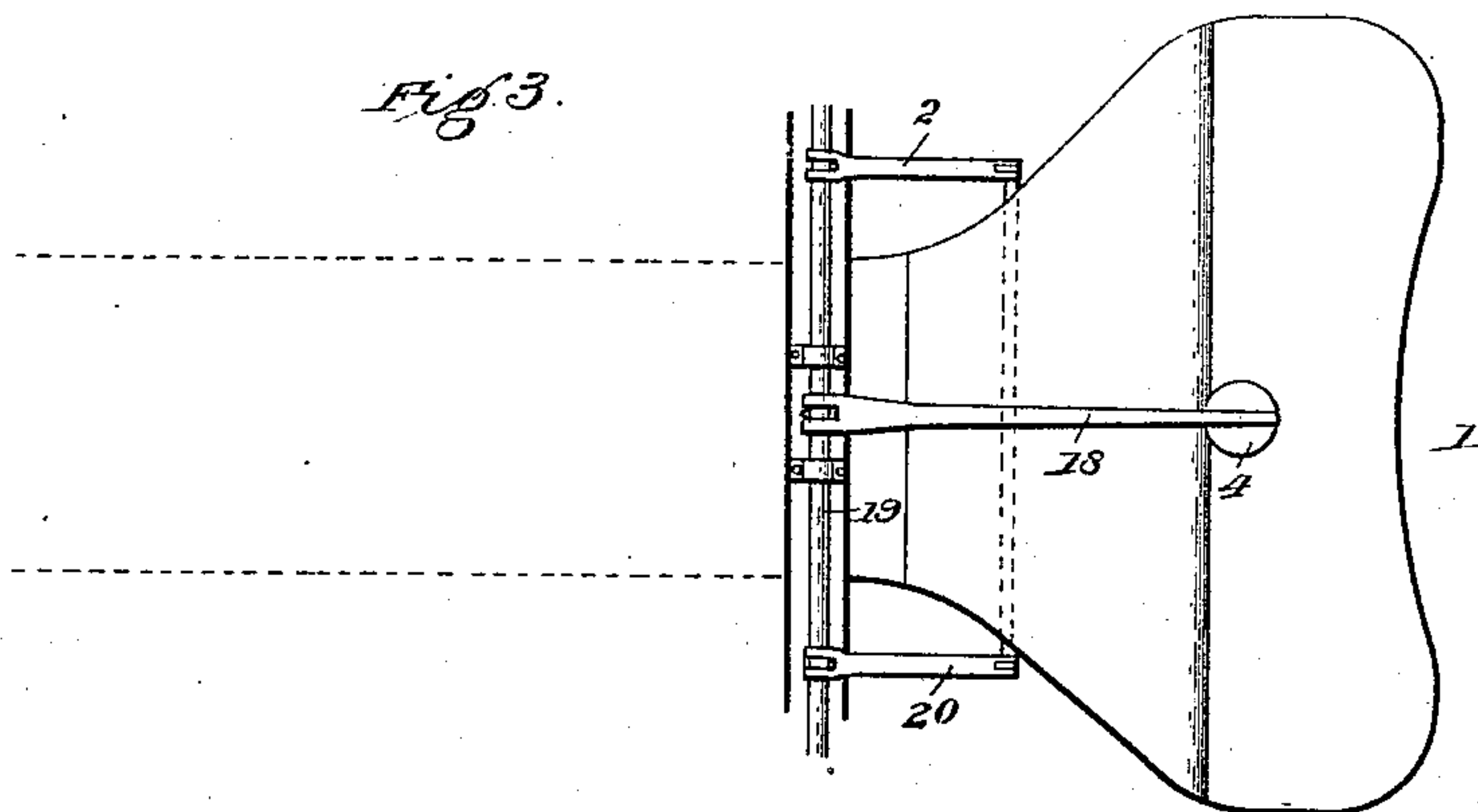


Fig. 4.

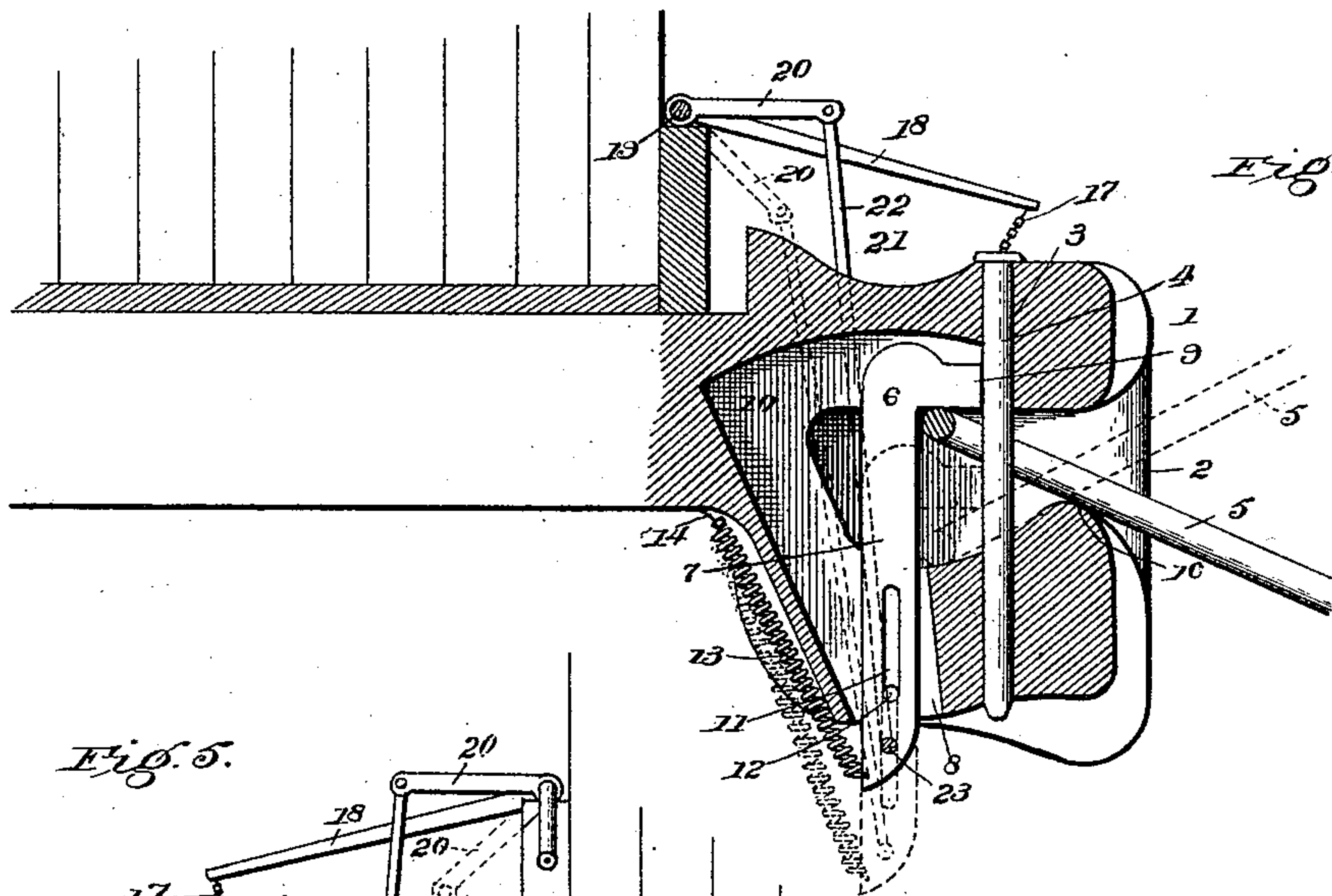
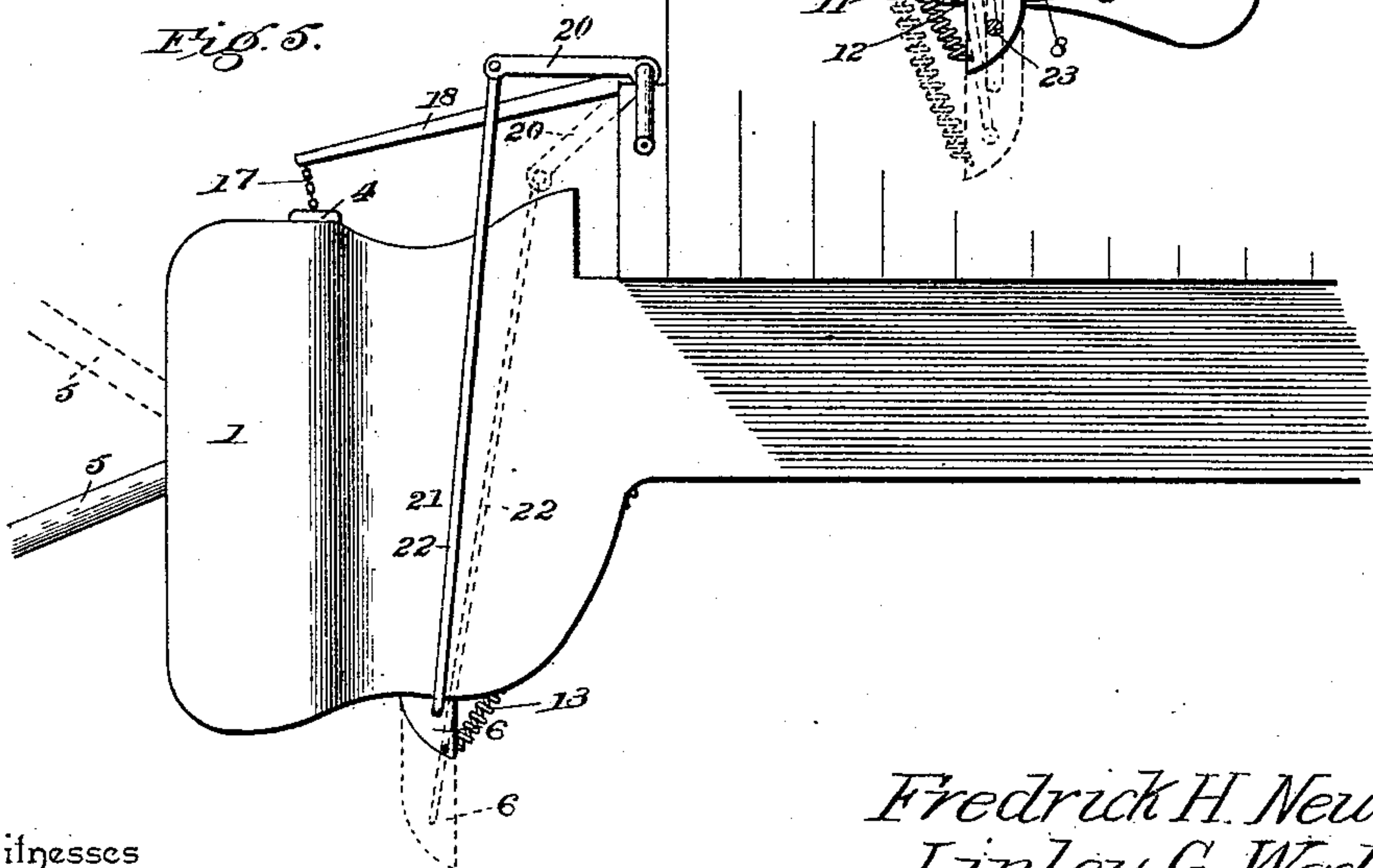


Fig. 5.



Witnesses

A. Johnson.
J. H. Siggers.

By their Attorneys.

Inventors

Fredrick H. Newton
Linley G. Wade

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

FREDRICK H. NEWTON AND LINLEY G. WADE, OF HOLLY, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 538,178, dated April 23, 1895.

Application filed November 23, 1894. Serial No. 529,775. (No model.)

To all whom it may concern:

Be it known that we, FREDRICK H. NEWTON and LINLEY G. WADE, citizens of the United States, residing at Holly, in the county of Oakland and State of Michigan, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car couplings.

The object of the present invention is to improve the construction of car couplings, to provide one capable of coupling automatically, and of being readily uncoupled from the sides and top of a car, and to enable a link to be readily guided into the mouth of a draw-head without going between cars.

The invention consists in the construction and novel combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings: Figure 1 is a vertical longitudinal sectional view of a car coupling constructed in accordance with this invention. Fig. 2 is an elevation of the same. Fig. 3 is a plan view. Fig. 4 is a view similar to Fig. 1, but showing the link coupled, and illustrating in dotted lines the manner of guiding the link. Fig. 5 is a side elevation of the draw-head. Figs. 6 to 10, inclusive, are detail views illustrating the construction of the rock-shaft and the arms thereof.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates a draw-head, having a longitudinal link-opening 2, and provided with a vertical coupling-pin perforation 3, receiving a coupling pin 4, which is adapted to engage a link 5, in the ordinary manner. The coupling pin is supported in an elevated position preparatory to automatic coupling, as illustrated in Fig. 1 of the accompanying drawings, by a substantially inverted L-shaped combined pin-support and link-guider 6, consisting of a shank 7, arranged in an opening 8 of the bottom of the draw-head, and an arm 9, extending forward from the top of the shank. The draw-head is provided with a substantially L-shaped groove 10, extending rearward from the coupling-pin perforation in the top wall of the draw-head, on a slight

curve, and having an inclined portion or branch located at the back of the draw-head and into which the pin-support and link-guider is received when thrown rearward, by reason of a link entering the draw-head, to permit the coupling pin to fall, and to allow the link to come in contact with the rear wall of the draw-head to avoid injury to the pin-support and link-guider.

The L-shaped pin-support and link-guider is provided in the lower portion of its shank with a longitudinal slot 11, through which passes a fastening device 12, which secures it to the draw-head. The shank has attached to its lower end a spiral spring 13, which normally holds the pin-support and link-guider elevated and thrown forward, as shown in full lines in Fig. 1 of the drawings, whereby when the coupling pin is elevated by means hereinafter described, the link-guider and pin-support will immediately move forward and assume a position directly beneath the coupling pin for supporting the same in position for automatic coupling. The spring is located in a groove or recess at the bottom of the draw-head, and at the back thereof, and it is retained in proper position on bolts by flanges 14, which protect the spring and form the groove for the same.

The bottom of the draw-head is provided, at its front, with a raised portion or fulcrum 16, having oppositely-beveled front and rear sides. The link rests upon the fulcrum 16, and when it is desired to guide the same into the mouth of a draw-head, its inner end is depressed by the forward-extending arm of the combined pin-support and link-guider, as illustrated in dotted lines in Fig. 4 of the accompanying drawings.

The coupling pin is connected by a short chain 17, with the outer end of an arm 18, of a transverse rock-shaft 19; and the combined pin-support and link-guider is connected with similar arms 20, of the rock-shaft 19, by an inverted rectangular bail 21, having upward-extending sides 22, and provided with a transverse portion 23, which passes through a perforation of the lower end of the shank 7. The sides 22 have their upper ends attached to the arms 20, in bifurcations thereof, and they are located at opposite sides of the draw-head

on the exterior thereof. The rock-shaft is journaled in suitable bearings of a car, preferably on the dead wood thereof, and it terminates in crank-handles located at opposite sides of the car. It is provided, intermediate of its ends adjacent to the arms 18 and 20, with lugs 24 and 25, preferably formed by pins or the like projecting from the rock-shaft. The lug 24 is located in a bifurcation 26, of the arm 18, at the bottom thereof, and is arranged to engage the same at that point, whereby, when the handles of the rock-shaft are swung upward, the lug 24 will be carried into engagement with the bottom of the lever or arm 18, to lift the coupling pin. The lugs 25 are arranged in bifurcations 27, of the arms 20, at the tops thereof, whereby when the handles of the rock-shaft are swung downward the lugs will engage the arms 20 and, through the medium of the bail 21, force the combined pin-support and link-guider downward against the action of the spiral spring 13, to tilt the link for guiding the same. By this construction the arms of the rock-shaft are operated independently, and when the pin is lifted the pin-support and link-guider is not affected by such movement of the rock-shaft; and on the other hand, when the arms 20 are swung downward, the rock-shaft does not affect the arm to which the coupling pin is attached.

Any suitable means may be employed for operating the rock-shaft from the top of the car, and for preventing the coupling pin from being entirely withdrawn from the draw-head.

It will be seen that the car coupling is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, that it is capable of coupling automatically, and that it may be readily uncoupled from the top and sides of a car. It will also be seen that car coupling is capable of enabling a link to be readily guided into the mouth of a draw-head without going between cars.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. In a car coupling, the combination of a draw-head, an approximately L-shaped pin-support and link-guider mounted for vertical

movement in the draw-head and arranged to swing rearward, and a spring connected with the pin-support and link-guider for normally throwing it forward and holding it upward, substantially as described.

2. In a car coupling, the combination of a draw-head having a coupling-pin perforation and provided with a link-opening and having a raised portion on the bottom thereof forming a fulcrum, said draw-head being provided in its bottom with an opening and having in its upper and rear walls an approximately L-shaped groove, an inverted L-shaped pin-support and link-guider arranged in the draw-head and having a limited vertical movement and arranged to swing rearward in the said groove, a spring connected with the bottom of the pin-support and link-guider for normally holding the same elevated and thrown forward, and means for depressing the link-guider and pin-support, substantially as described.

3. In a car coupling, the combination of a draw-head provided in its bottom with an opening, a combined pin-support and link-guider mounted in the draw-head and extending through the opening of the bottom of the same, a spring for holding the pin-support and link-guider elevated, a bail connected with the bottom of the same and having upward-extending sides located on the exterior of the draw-head, and a rock-shaft having arms connected with the sides of the bail, substantially as described.

4. In a car-coupling, the combination of a draw-head, a coupling pin, a pin-support and link-guider, a rock-shaft, a central arm loosely arranged on the rock-shaft and connected with the coupling-pin, the opposite side arms similarly mounted on the rock-shaft and connected with the pin-support and link-guider, a lug 24 projecting from the shaft and arranged to engage the bottom of the centrally-located arm, and the lugs 25 arranged on the shaft and adapted to engage the tops of the side-arms, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

FREDRICK H. NEWTON.
LINLEY G. WADE.

Witnesses:

EMERSON M. NEWELL,
WILLIAM G. NEWTON.