

No. 814,831.

PATENTED MAR. 13, 1906.

C. A. CARSCADIN.

CAR COUPLING.

APPLICATION FILED APR. 7, 1905.

2 SHEETS—SHEET 1.

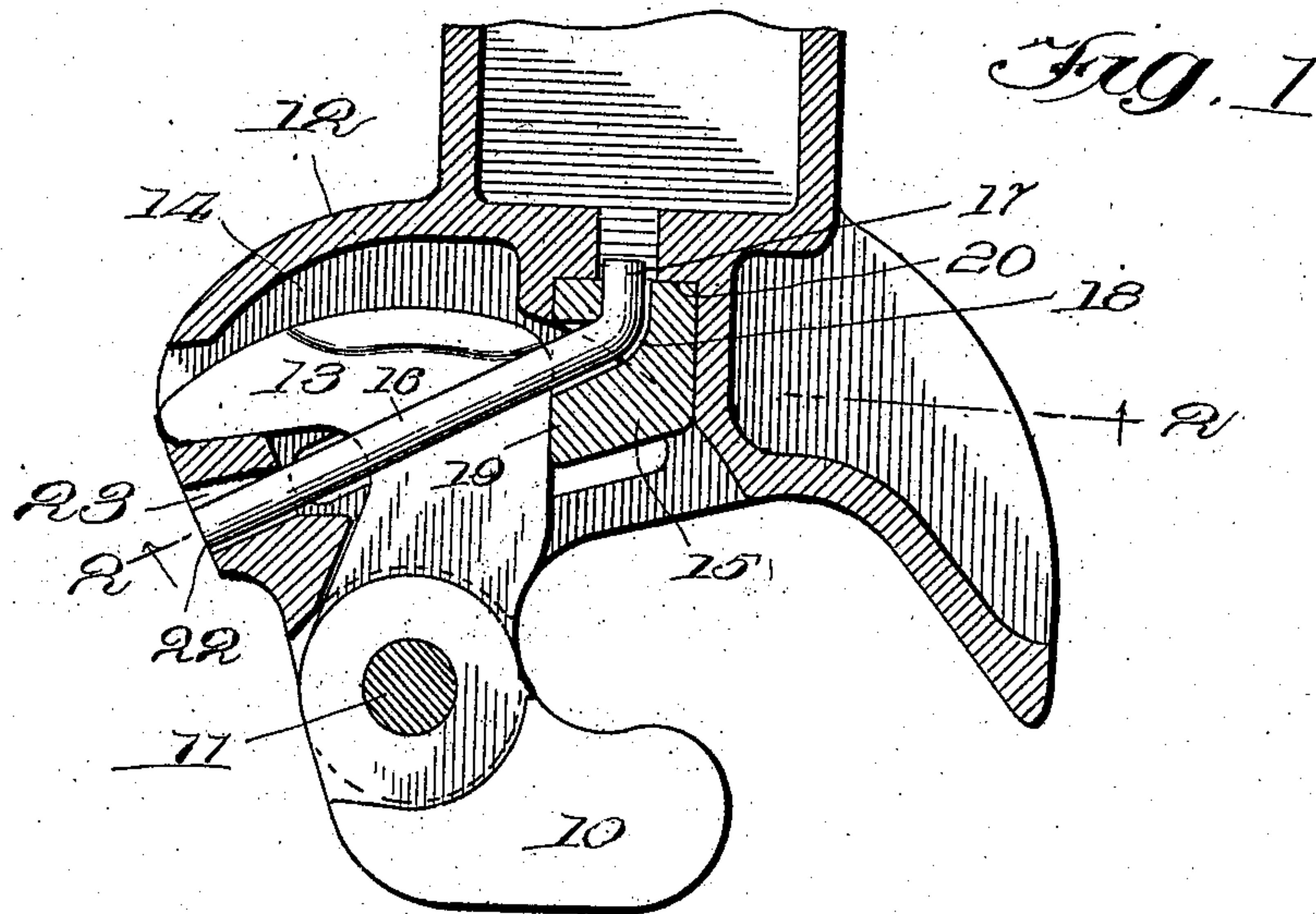
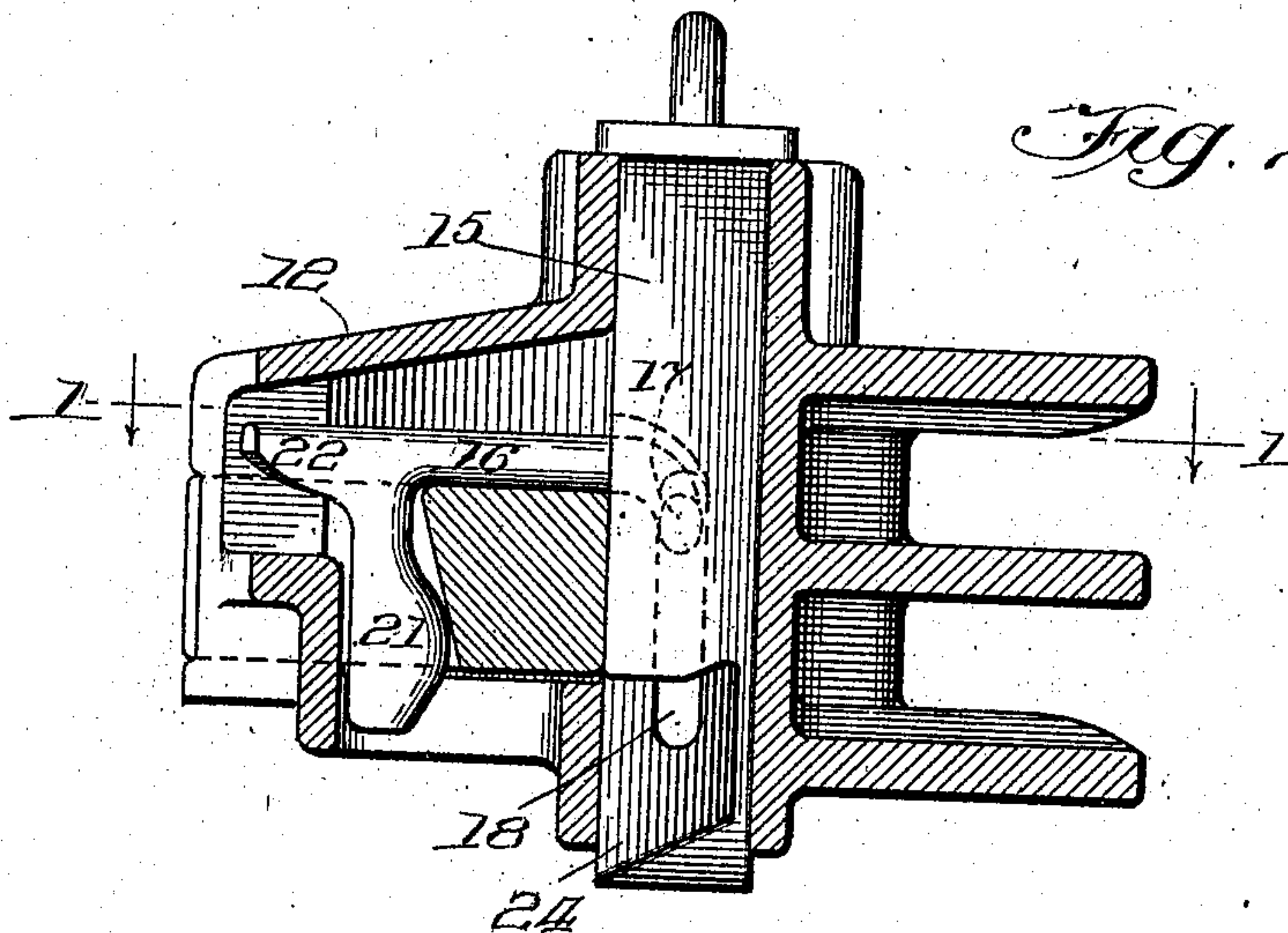


Fig. 2.



Witnesses:
H. S. Gaiter
M. A. Kiddie

Inventor:
Charles A. Carscadin
by Wm. J. Bell

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2 SHEETS—SHEET 2.

Fig. 3.

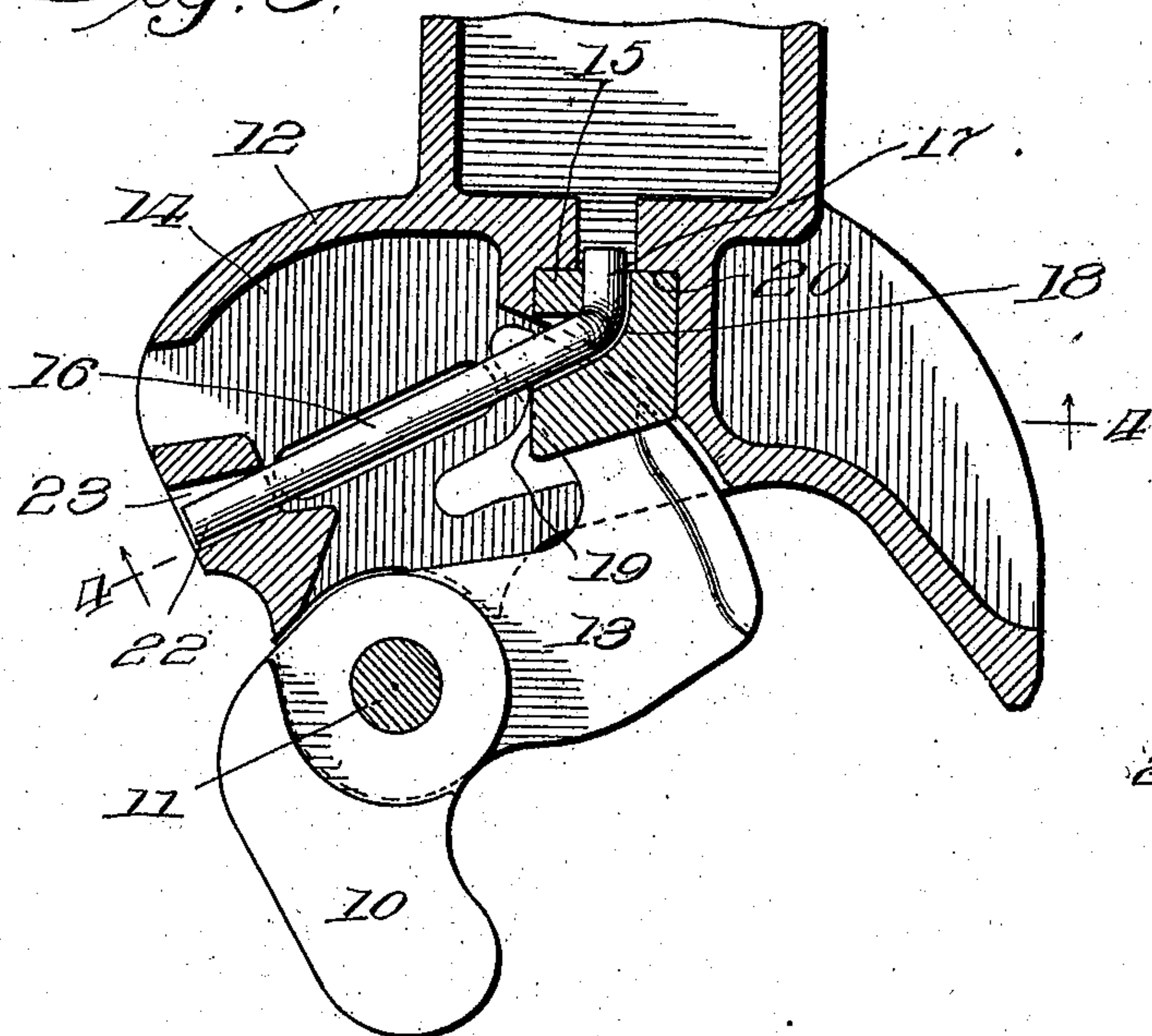


Fig. 5.

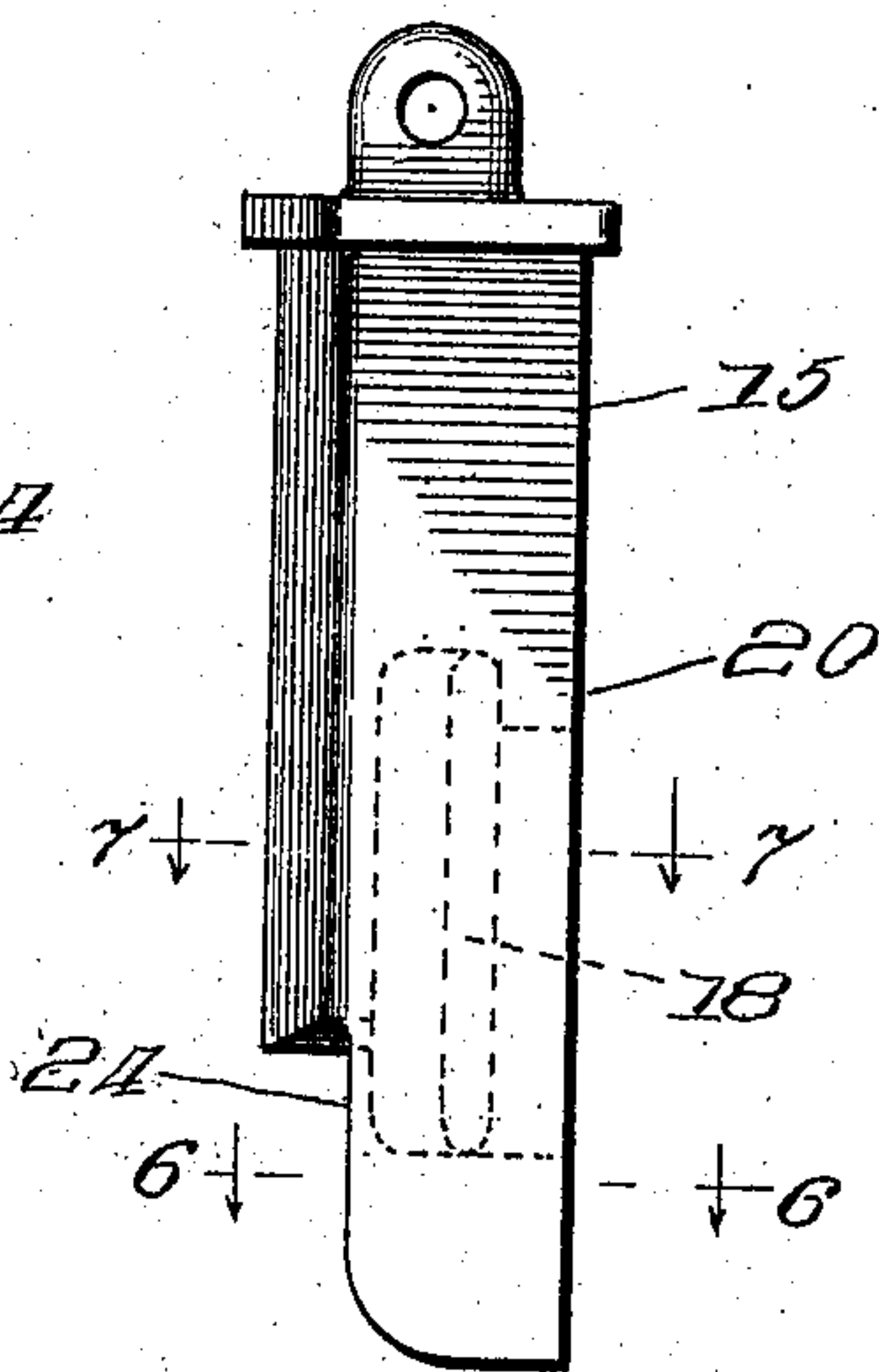


Fig. 4.

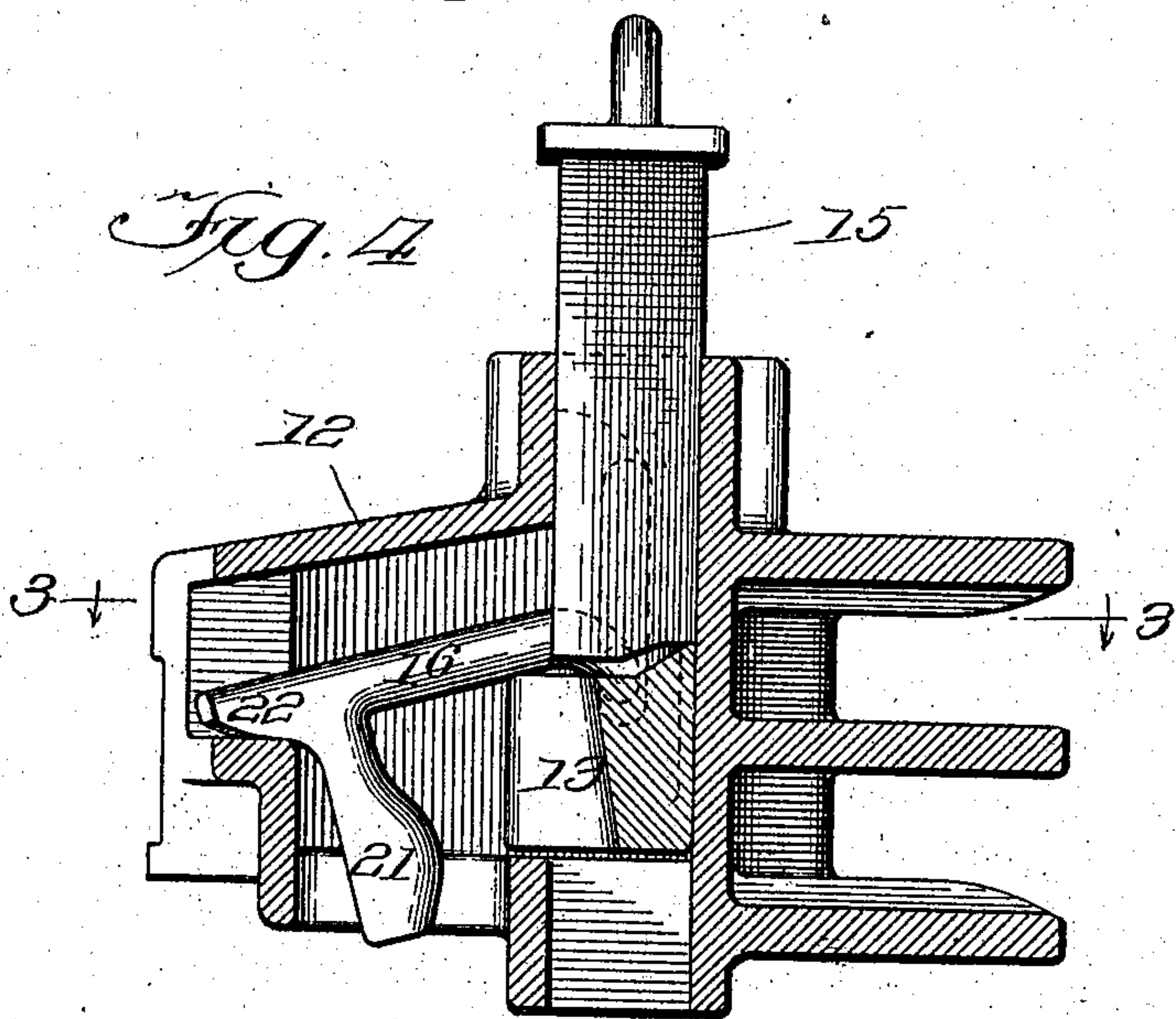


Fig. 6.

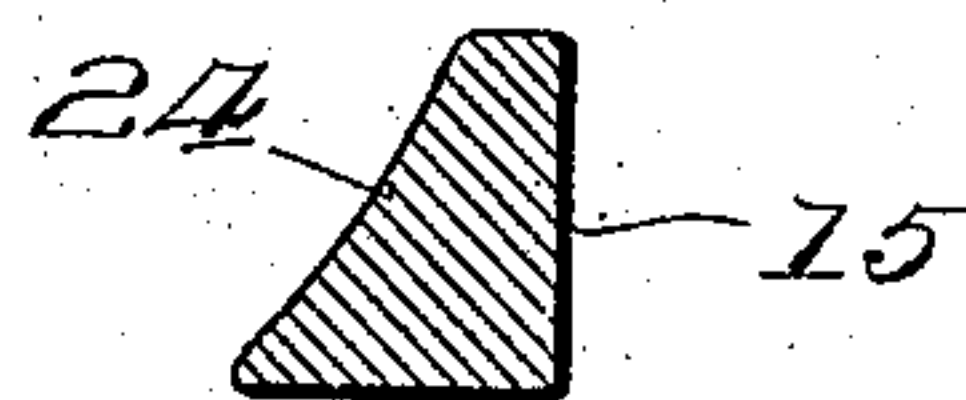
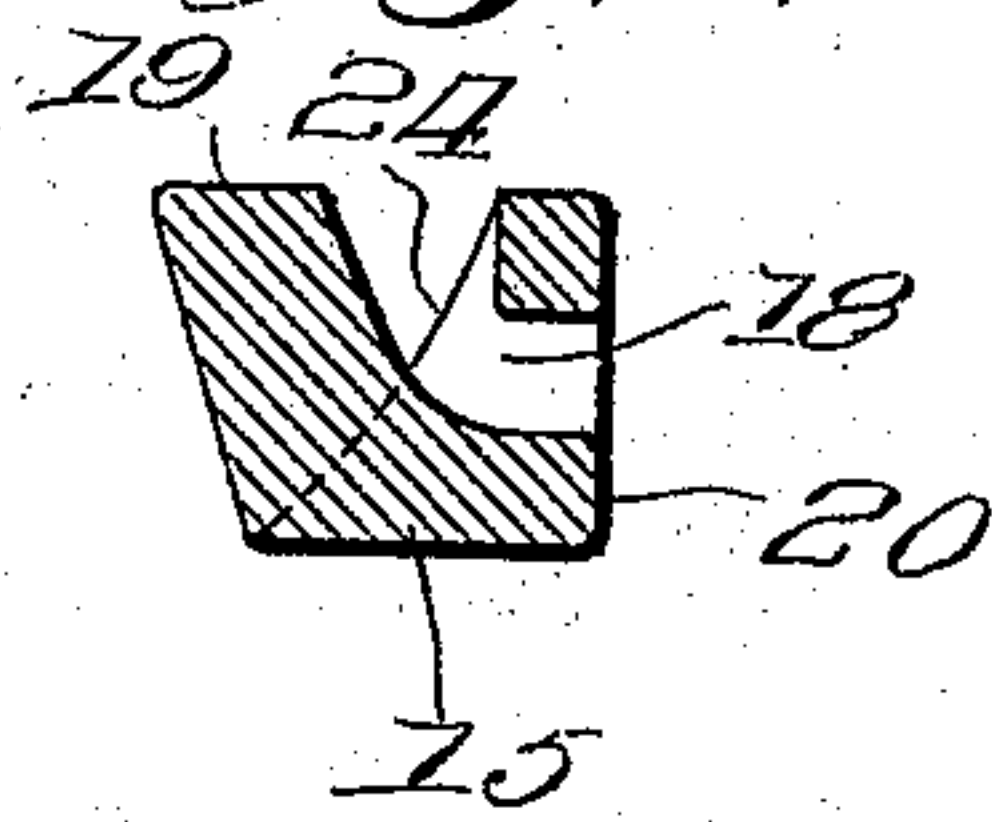


Fig. 7.



Witnesses:

H. S. Gaiter
M. A. Kiddie

Inventor:

Charles A. Carscadin
by Wm. F. Bell
att'y

UNITED STATES PATENT OFFICE.

CHARLES A. CARSCADIN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO GEORGE A. WOODMAN, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

No. 814,831.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed April 7, 1905. Serial No. 254,276.

To all whom it may concern:

Be it known that I, CHARLES A. CARSCADIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

The object of this invention is to throw the knuckle of a car-coupling into open position at the same time that the coupling is unlocked, whereby the coupling is immediately reset in position for coupling whether or not the cars are separated.

With these and other ends in view the invention comprises a kicker which is constructed and arranged to be actuated by the locking-pin to operate against the tailpiece of the knuckle and move the knuckle into open position when the locking-pin is withdrawn from locking position, so that the locking-pin when released will rest upon the tailpiece of the knuckle and the coupling will be set in open position for coupling as a part of the uncoupling operation.

I have illustrated one embodiment of the invention in the accompanying drawings, in which—

Figure 1 is a horizontal sectional view on the line 1 1 of Fig. 2. Fig. 2 is a vertical sectional view on the line 2 2 of Fig. 1. Fig. 3 is a horizontal sectional view on the line 3 3 of Fig. 4. Fig. 4 is a vertical sectional view on the line 4 4 of Fig. 3. Fig. 5 is an elevation of the locking-pin. Figs. 6 and 7 are cross-sectional views on the lines 6 6 and 7 7, respectively, of Fig. 5.

Referring to the drawings, 10 is a knuckle of any suitable construction pivoted at 11 in the head 12 and provided with a tailpiece 13, which is arranged to operate in the chamber 14 in the head. A vertically-movable locking-pin 15 is arranged to engage the tailpiece and hold the knuckle in closed or locked position, as shown in Figs. 1 and 2, and suitable means common in the art are provided for raising the pin to release the knuckle. When the knuckle is swung into open position, Fig. 3, the locking-pin rests upon the tailpiece, and when the knuckle is swung inwardly into closed position the pin falls by gravity into locking engagement with the tailpiece, Fig. 1, in the manner well known in this class of couplings.

The construction and operation of the coupling thus far described are familiar in the art and form no part of my present invention, and I desire to have it understood that the invention can be embodied in couplings of a great variety of different constructions and is in no respect limited or restricted to use with the particular type of coupling or the specific construction of its parts shown in the accompanying drawings and heretofore described.

The invention comprises means for swinging the knuckle into open position simultaneously with the withdrawal of the locking-pin, and this is accomplished by means of a kicker 16, which is shown loosely arranged in the chamber of the head and projecting across the top of the tailpiece. The toe of the kicker is bent at an angle and loosely arranged in an angular slot 18, extending longitudinally of the locking-pin, said slot opening upon the rear face 19 and the side of the pin, Fig. 7. This elongated slot in the pin permits the locking-pin to be moved upward a considerable distance without affecting the kicker, as will be readily understood from Fig. 2. The heel 21 of the kicker is enlarged and rounded and arranged to bear against the tailpiece opposite to the locking-pin, Figs. 1 and 2. This heel is in the form of a projection extending downward at or about right angles to that part of the kicker which projects across the tailpiece. The kicker is provided with a guide 22, which is arranged to operate in a pocket 23 of suitable character formed in the head, the object of this guide being to maintain the kicker in upright position and in proper relation to the tailpiece. The lower end of the locking-pin is cut away to enable the tailpiece to swing outward when the pin has been raised to the position shown in Fig. 4. When the knuckle is open, the pin will rest on the tailpiece, as shown in Figs. 3 and 4. The kicker operates with more or less of a jerky motion and acts upon the tailpiece with sufficient force to throw it into open position, Fig. 4. The angularity of the slot in the pin and of the toe of the kicker permits these parts to be easily removed and permits them from becoming disengaged during the movement of the parts.

My invention is very simple in construction and can be readily and easily applied to coup-

lings employing pivoted knuckles of various types. The kicker is operated automatically near the conclusion of the upward movement of the locking-pin and is returned to the position shown in Fig. 2, when the pin falls into locked position.

The invention provides not only for automatically throwing the knuckle into open position when the locking-pin is withdrawn from its locking position, but it throws the tailpiece into supporting position beneath the locking-pin at the same time that the locking-pin is raised. Thus the operation of uncoupling is greatly simplified, for it is only necessary to raise the locking-pin, and this results in throwing the knuckle open and the support for the locking-pin into position beneath the pin.

Without limiting myself to the exact construction and arrangement of parts herein shown and described, what I claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination of a head, a knuckle pivoted to the head and provided with a tailpiece, a pin for locking the knuckle in closed position and provided with a longitudinal slot, and a kicker loosely arranged within the head, said kicker having its toe arranged in said slot and its heel arranged to engage the tailpiece.

2. In a car-coupling, the combination of a head, a knuckle pivoted to the head and provided with a tailpiece, a pin for locking the knuckle in closed position and provided with a longitudinal slot, and a kicker loosely arranged within the head, said kicker having a toe arranged in the slot in said pin, a heel ar-

ranged to engage the tailpiece and a guide operating in a pocket in the head.

3. In a car-coupling, the combination of a head, a knuckle pivoted to the head and provided with a tailpiece, a pin for locking the knuckle in closed position, a kicker operated by the pin for throwing the knuckle into open position, said pin having an elongated longitudinal slot, opening on two faces of the pin, said kicker having an angularly-bent toe to operate in said slot.

4. In a car-coupling, the combination of a head, a knuckle pivoted to the head and provided with a tailpiece, a pin for locking the knuckle in closed position and provided with a longitudinal slot opening on two faces of the pin, and a kicker loosely arranged within the head, said kicker having an angularly-bent toe to operate in said slot and a heel arranged to engage the tailpiece and a guide operating in a pocket in the head.

5. In a car-coupling, the combination of a head, a knuckle pivoted to the head and provided with a tailpiece, a pin for locking the knuckle in closed position and provided with an elongated angular longitudinal slot, and a kicker loosely arranged within the head, said kicker having an angularly-bent toe to operate in the angular slot in said pin, an enlarged heel arranged to engage the tailpiece and a rearwardly-extending guide operating in a pocket in the head.

CHARLES A. CARSCADIN.

Witnesses:

WM. O. BELT,
G. A. WORDMAN.