

W. L. WRIGHT.
CAR COUPLING.

APPLICATION FILED APR. 15, 1909.

933,941.

Patented Sept. 14, 1909.

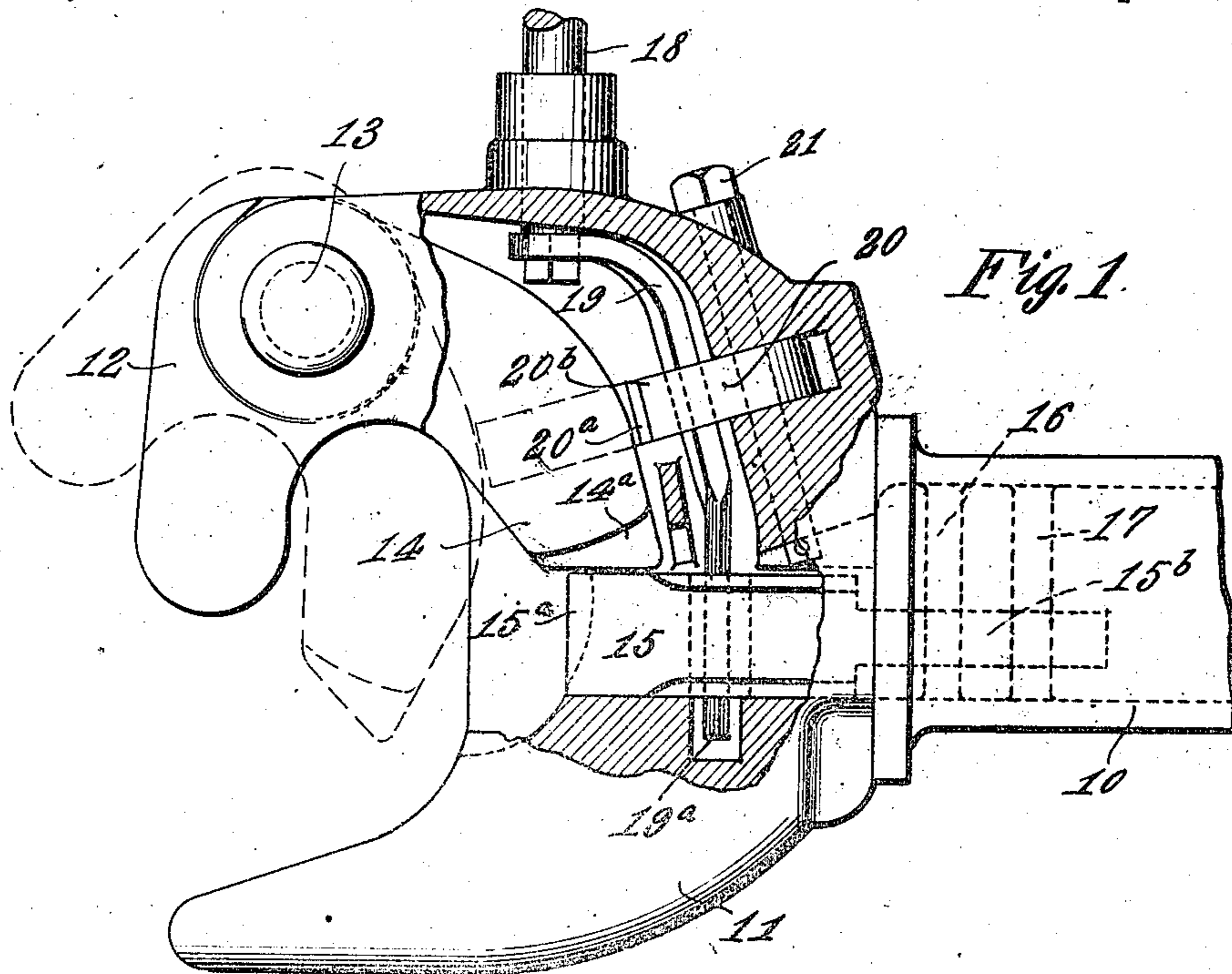


Fig. 1.

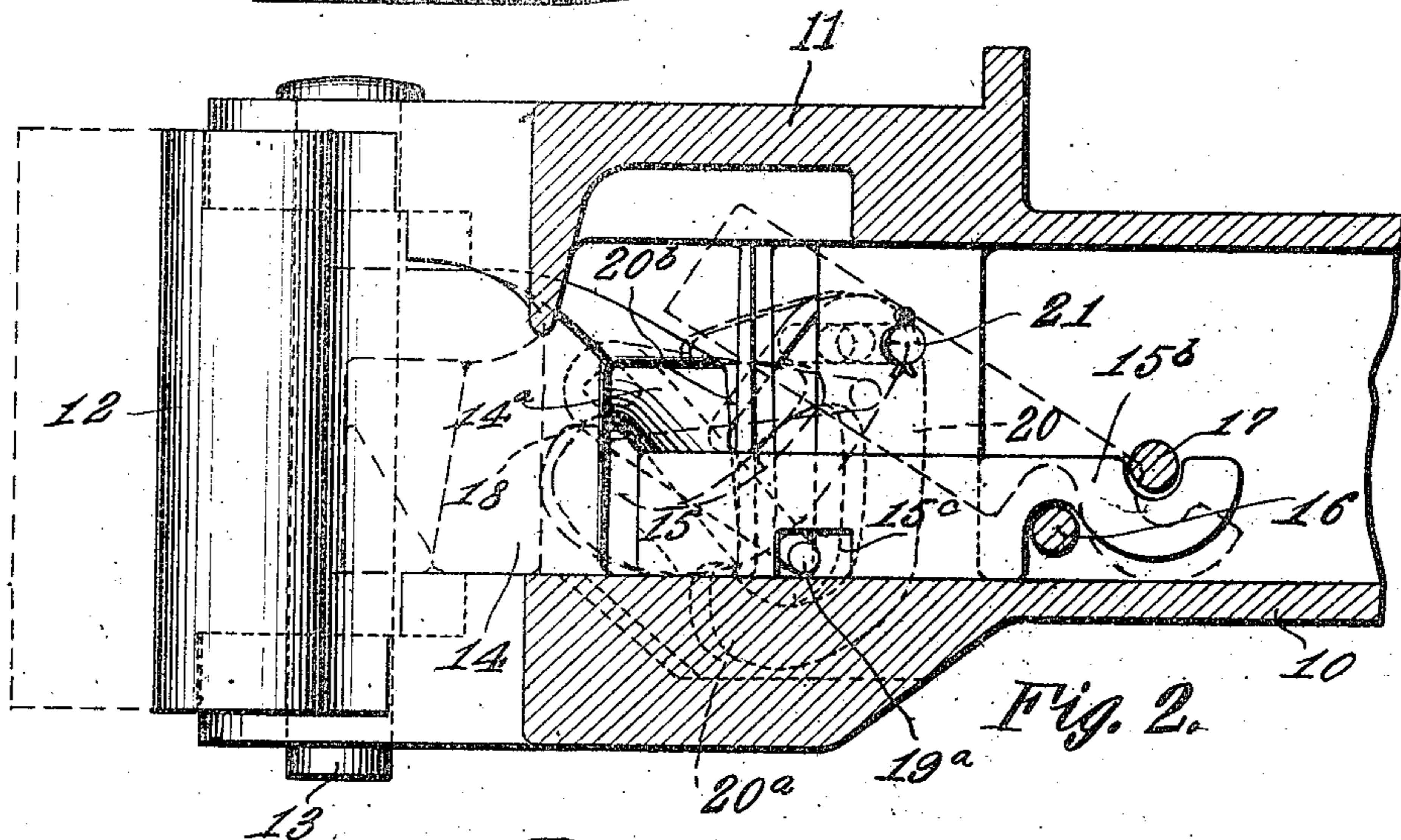


Fig. 2.

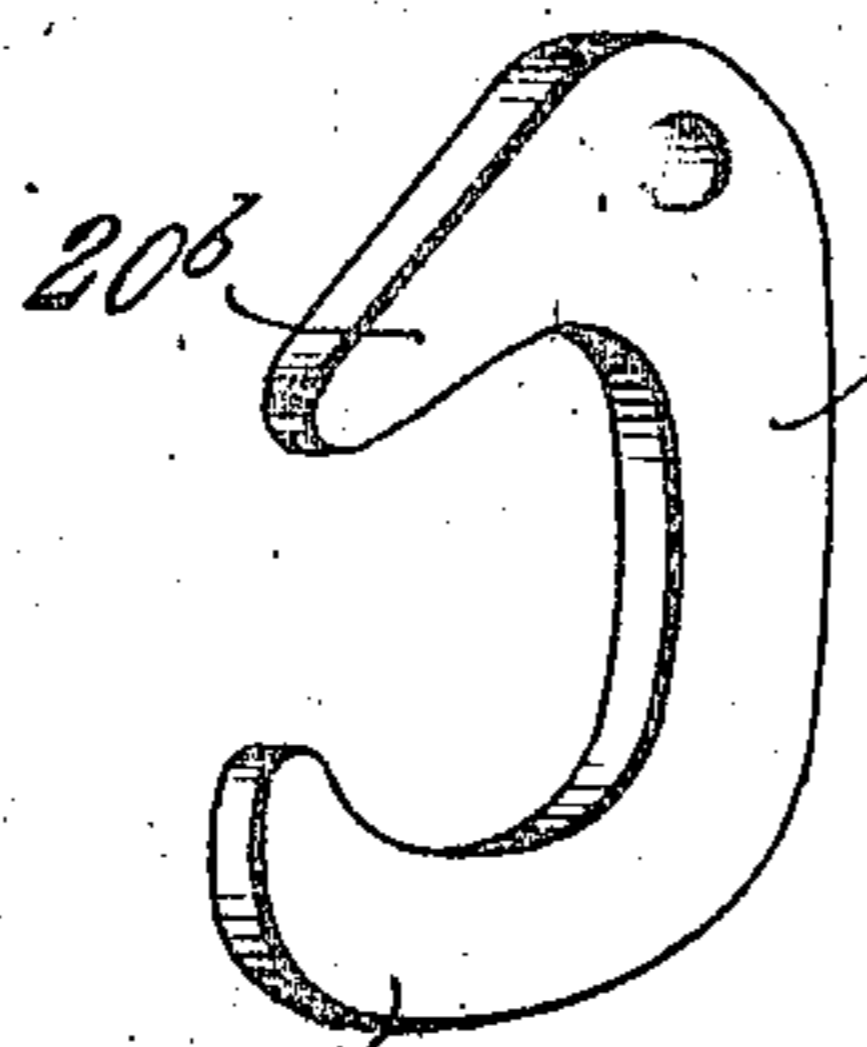


Fig. 3.

Witnesses

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CAR-COUPLING.

933,941.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed April 15, 1909. Serial No. 490,046.

To all whom it may concern:

Be it known that I, WILLIAM L. WRIGHT, a citizen of the United States, residing at Newport News, in the county of Warwick and State of Virginia, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

This invention relates to automatic car couplers, and has particular reference to the Janney type of car couplers provided with improved means for unlocking the coupler and opening the knuckle.

For a full understanding of the invention, including its construction and characteristic advantages, reference is to be had to the following detail description and the accompanying drawings, in which—

Figure 1 is a plan view, partly in section of the improvement, the knuckle being shown in full lines in locked position, and in dotted lines in open position; Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is a detail perspective of one of the parts hereinafter described.

Throughout the following detail description, and on the several figures of the drawings similar parts are referred to by like reference characters.

The drawbar 10 and the draw head 11 are very similar to those now in use, and the knuckle 12 is pivoted at 13 at one side of the draw head in the usual manner. The tail-piece 14 of the knuckle when in locking position extends into a seat or cavity in the draw head and is held therein by a vertically movable pin 15 which drops down in front or in the path of said tail-piece preventing the knuckle from swinging on the pivot pin 13. The tail-piece 14 is provided with a bevel 14^a which coöperates with a corresponding bevel 15^a on the forward end of the locking pin, whereby the knuckle will automatically lift the pin during the locking operation. The pin 15 is carried in a cavity in the draw bar 10 and is provided at its rear end with a hook 15^b which extends over a pin 16 and under another pin 17. By this construction the locking pin may be readily introduced or withdrawn from the drawbar through the cavity in the draw head whenever desired, after removing the knuckle.

In appliances of this character it is necessary that the coupling and uncoupling may be accomplished without necessitating the operator from entering between the cars or

taking hold of the coupler proper at any time with his hands. In the present instance a rock shaft 18 extends horizontally outward to the side or corner of the car, the same being suitably journaled for partial rotation by any convenient means (not shown). At the inner end said bar 18 extends into the cavity in the drawhead and has connected thereto a crank 19, as by means of a squared portion, and the crank extends from the shaft downwardly and rearwardly and thence laterally in a direction parallel to the axis of the shaft 18 and coöperates with the pin 15 for the purpose of elevating the latter upon rotation of the shaft. The outer end 19^a of the crank has a loose connection with the pin 15 as by means of a notch 15^c. The normal position of the pin 15 is as indicated in full lines in the drawings, where it is always in position to be engaged by the tail of the knuckle during the locking operation and to drop into place thereafter to lock said knuckle as before described. Upon turning the rock shaft 18 and crank 19 the pin will be lifted to release the knuckle. This, however, is not sufficient for the practical demands of railway authorities for it is essential that the pin not only be lifted to unlock the knuckle but some means be provided for positively swinging the knuckle open. To this end I provide a means operable by the same mechanism as used for unlocking the knuckle, and it will be operable either simultaneously or during the said operation.

A dog 20, indicated in detail in Fig. 3, is pivoted in the draw head on a stationary bolt 21, said bolt being disposed in a horizontal plane and in a line forming an acute angle with the axis of the drawbar, as indicated in Fig. 1. The dog 20 is provided at its lower end with a curved extension or foot piece 20^a which extends normally downward into a recess in the bottom of the draw head and at its upper end it is provided with a finger 20^b which projects over the crank 19, the said crank being disposed between the extension 20^a and finger 20^b but normally spaced from the said finger as shown in Fig. 2. It will be observed therefore that by virtue of said space between the crank and the finger 20^b the first effect of the swinging of the crank will be to lift the locking pin 15 out of the path of the tail-piece 14 and subsequently the crank on continued movement will bear against the lower surface of the

finger 20^b thereby causing the dog to swing on its pivot and causing the extension 20^a to swing outward against the tail-piece and swinging the knuckle outward as indicated in dotted lines in Fig. 1. The parts 15, 19, and 20 may thereafter resume their normal downward position, while the knuckle will remain open until struck by a corresponding knuckle for coupling.

10 Having thus described the invention but without desiring to be limited to the precise details illustrated except as may be necessitated by the state of the art, what I claim as new and desire to protect by Letters Patent 15 of the United States is:

1. The hereindescribed car coupler, comprising a draw-bar, a draw-head, a knuckle pivoted in the draw-head and having a tail-piece extending thereinto, a movable pin co- 20 operating with said tail-piece to lock the knuckle, a dog pivoted in the draw-head on a stationary bolt and having a finger and a foot-piece, a rock shaft journaled in the draw-head, a crank connected to the rock 25 shaft for moving the pin and normally spaced from said dog, but adapted to engage the finger of the dog after movement of the pin whereby the foot-piece of the dog will swing the knuckle open.

30 2. In a car coupler, the combination of a draw-bar, a draw-head carried thereby, a knuckle pivoted in the draw-head and having a tail-piece extending into the draw-

head, a pin extending from the interior of the draw-bar into the path of said tail-piece, 35 a rock shaft journaled in the draw-head, a crank connected to the rock shaft within the draw-head and having loose connection with the pin to lift the same, a dog pivoted in the draw-head on an axis inclined to the axis of 40 the draw-bar and spaced normally from said crank, said dog being operable by the crank during the latter part of its movement for the purpose of swinging the knuckle open after being unlocked. 45

3. In a car coupler, the combination of a draw-bar having a pair of transverse pins, a draw-head carried by the draw-bar, a knuckle pivoted in the draw-head and having a 50 tail-piece extending thereinto, a pin movable into and out of the path of said tail-piece, said pin having a rearwardly extending hook extending over one of said pins, and under the other and also having a notch, a rock shaft, a crank operable by said rock shaft 55 and having an end loosely cooperating with the pin through said notch, and means operable from the said crank for swinging the knuckle open after being unlocked.

In testimony whereof I affix my signature 60 in presence of two witnesses.

WILLIAM L. WRIGHT.

Witnesses:

T. A. FOWLER,
W. E. MESSICK.