

(No Model.)

W. J. WALKER & L. HAMMERSCHMIDT.
CAR COUPLING.

No. 489,770.

Patented Jan. 10, 1893.

Fig. 1.

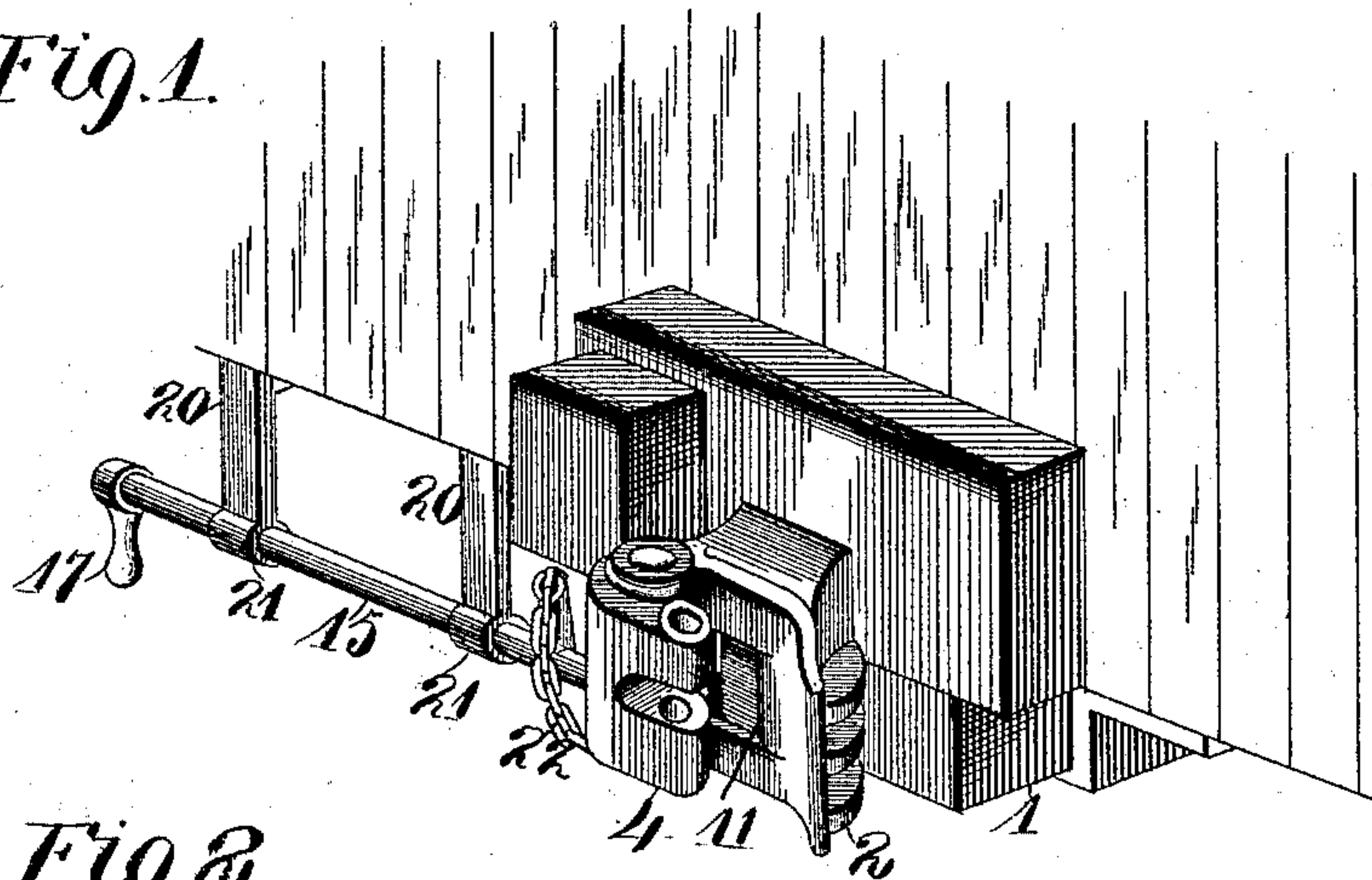


Fig. 2.

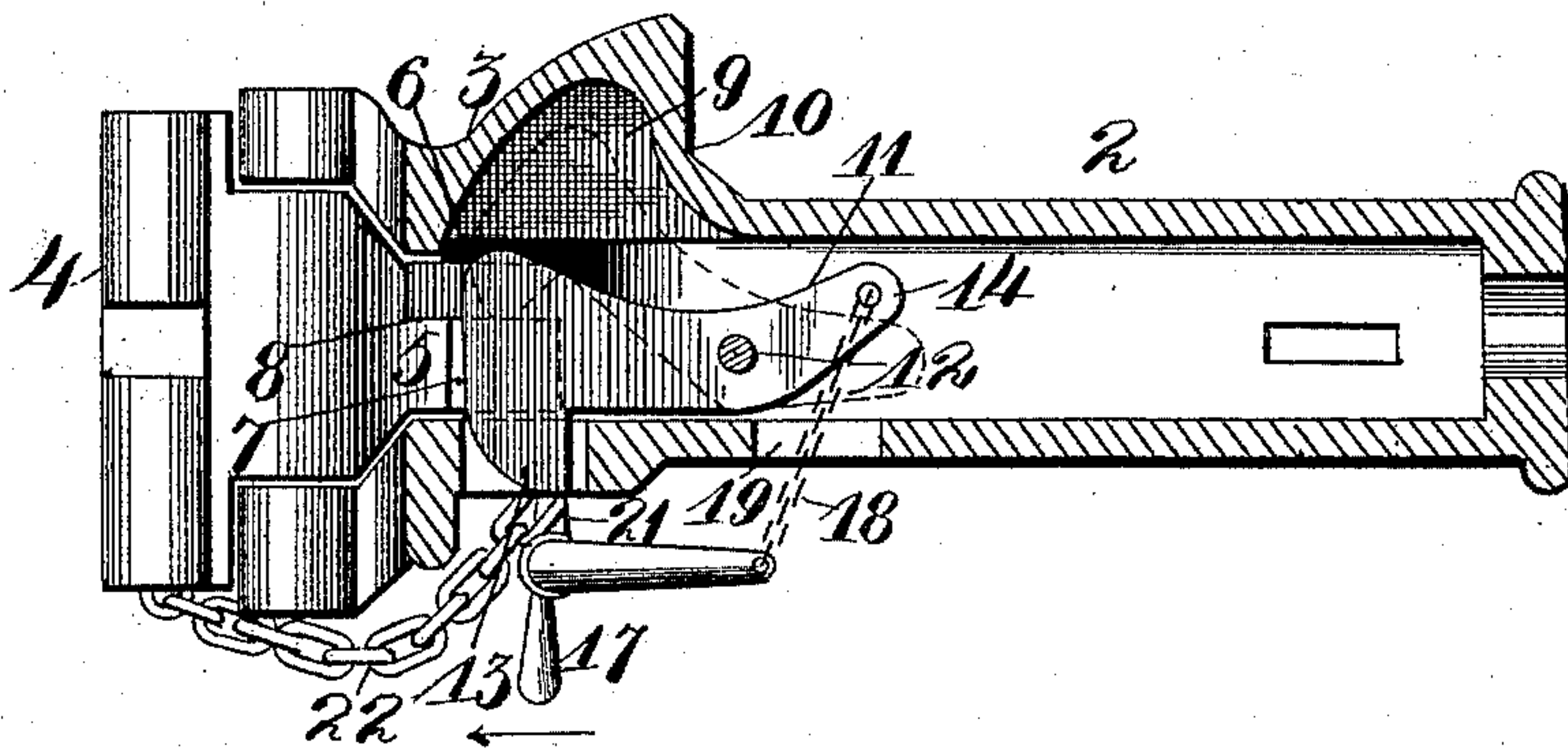


Fig. 3.

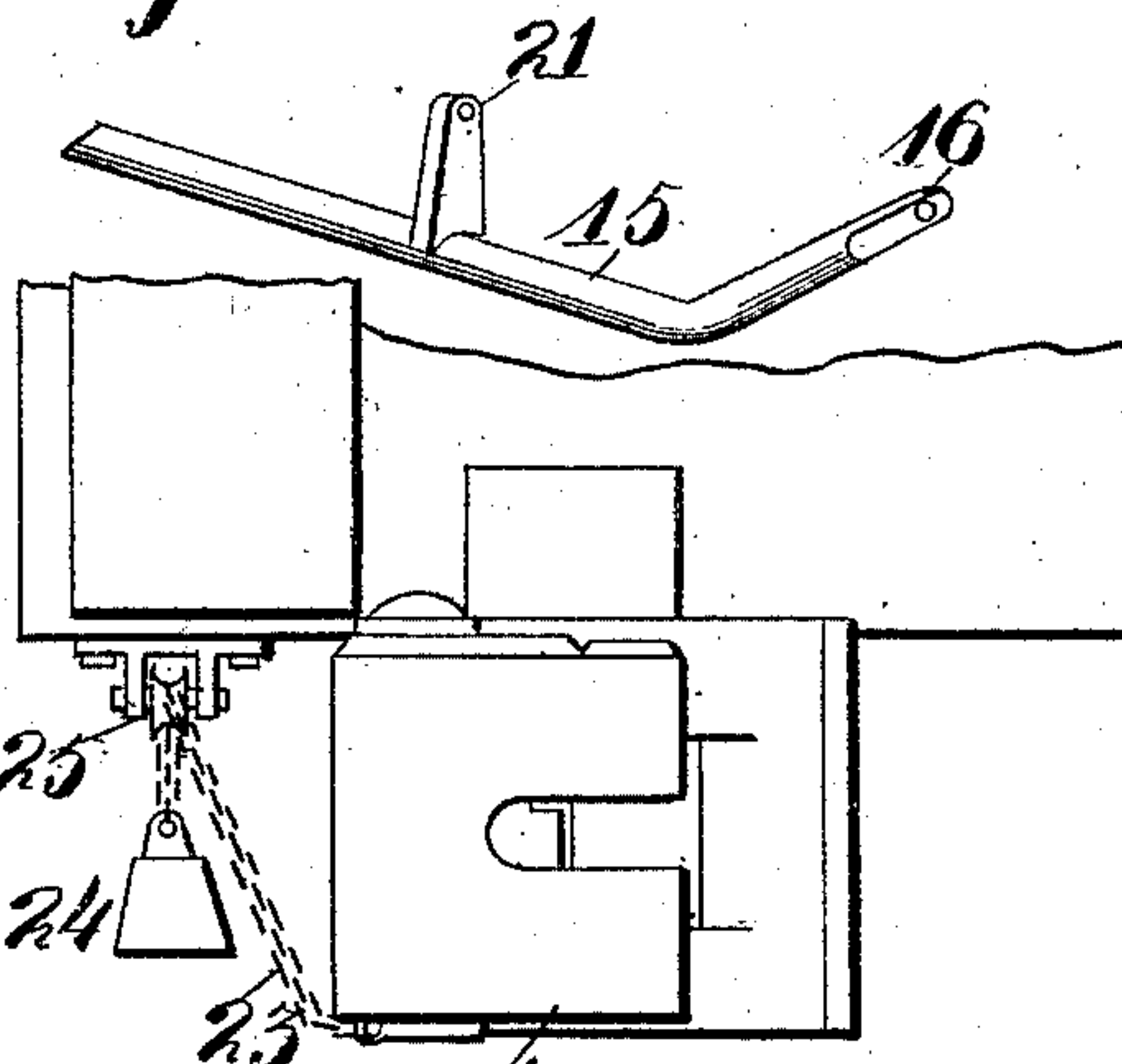


Fig. 4.

Witnesses
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 489,770, dated January 10, 1893.

Application filed July 30, 1892. Serial No. 441,698. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. WALKER and LOUIS HAMMERSCHMIDT, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to improvements in car couplings, and it consists in the novel combination and arrangement of parts as will be hereinafter more fully described and designated in the claims.

In the drawings:—Figure 1, is a perspective of a coupler constructed according to our invention and attached to a car. Fig. 2, is a vertical longitudinal section of the coupler with the parts in their normal position. Fig. 3, is a perspective view of our improved shaft for operating the coupler. and, Fig. 4, is a front elevation of a coupler having a device attached thereto for opening the knuckle, which is in this instance somewhat modified to that shown in the preceding figures.

Our invention principally consists in certain details in the construction of the locking device, whereby better results are obtained, and further in means for automatically opening the knuckle when the locking device is released, without in any way affecting the true workings of the coupler or complicating the same.

Referring to the drawings 1, represents the draft timbers which are usually found fixed to the ends of the car and to which the coupler 2, is secured in the well known manner. The shape of the coupler is such that will couple with that class of couplers known as the Janney type. The coupler 2, comprises a draw-head 3, which forms the forward stationary portion of the same to the, side of which a knuckle 4, is pivoted in the well known manner.

5, represents the tail end of the knuckle which is normally located within the throat 6, of the drawhead but moves from out of the same when the said knuckle is open.

7, represents the flat bearing surface of the tail 5, which comes in contact with the vertical flat surface of the locking device when the knuckle is in a closed position. The said

tail end of the hook is also provided with a horizontal bearing surface 8, upon which the end of the locking device is adapted to rest when the knuckle is in an open position.

9, represents a cavity which is formed in the upper wall of the drawhead which receives the forward end of the locking device when elevated in order to allow the knuckle to be turned. The outer rear wall of the drawhead or that which forms the cavity is flat as shown at 10, which acts as a buffing surface when the cars come together.

11, represents the locking device which is movably secured within the coupler, by a bolt 12, passed through the same and the said coupler.

13, represents the forward hooked end of the locking device the lower portion of which is normally located with a space formed for its reception in the bottom of the drawhead. The width of the locking device is such that will fill the throat of the drawhead when in its lowest position as best shown in Fig. 1.

By inspecting Fig. 2, it will be seen that the locking device 11, is pivoted to the drawhead intermediate of its ends, leaving a rearward extension 14, which extension projects at an incline in order to allow the forward end of the locking device to be elevated.

From the foregoing description it will be seen that the forward end of the locking device when in its lowest position is interposed between the tail end of the knuckle and the solid inner wall of the throat of the drawhead.

15, represents a shaft of suitable length one end of which is bent at a right angle thereto as shown at 16, and the opposite end of the said shaft is provided with a handle 17, for manipulating the same in a manner as hereinafter described.

18, represents a chain one end of which is attached to the rearward extension 14, of the locking device and its opposite end attached to the bent end of the shaft 15, premising however that said chain passes through a space 19, formed in the bottom of the coupler. In this instance it will be seen that the opening in the top of the drawhead is dispensed with and consequently no dirt or other like substance can gain access to the interior of the coupler.

20, represents two brackets the upper ends

of which are attached to the bottom of the car in any desirable manner, and their lower ends provided with bearings 21, through which the shaft 15, is passed for supporting the same.

The next and very important feature of the coupler is the device employed for automatically opening the knuckle after the locking device is elevated. This is accomplished in a very simple and effective manner by attaching to the shaft 15, an arm 21, to the upper end of which is attached one end of a chain 22, and the opposite end of the said chain fixed to the lower surface of the knuckle 4, in any desirable manner. When the handle 17, is operated in the direction of the arrow Fig. 2, the locking device is first released and by a further movement of the said handle in the same direction the knuckle 4, will be pulled open the slack in the chain 22, being exhausted. Of course when the knuckle begins to move the locking device will continue to move and consequently a suitable amount of space is left by the cavity for said movement.

In Fig. 4 we have shown a modification of the opening device for the knuckle 4, in which instance a chain 23, is employed similar to that previously described, one end of which is attached to the lower surface of the knuckle 4, and to the opposite end of the said chain is suspended a weight 24, which operates to open the said knuckle when the locking device is released. 25, represents a pulley which is fixed to the bottom of the car at any suitable position over which the said chain 23, passes, effecting the result desired.

The devices heretofore employed for automatically opening the knuckle are not only expensive but owing to their construction are liable to get out of order. The construction of the parts employed by us is very simple and consequently should any of them become disabled a short time would only be required to renew the same.

Having fully described our invention what we claim is:—

1. A car coupler of the class described, having a vertically operating locking device pivoted within the drawhead intermediate of its length, the forward end of which is adapted to be interposed between the flat surface of the tail end of the hook, and the solid inner wall of the drawhead, a chain or other like device attached to the rear inner end of the said locking device and passing through a hole in the bottom of the drawhead, and means for operating said chain, substantially as described.

2. A car coupler of the class described, comprising a drawhead, a hook pivoted to the same, a cavity formed in the top of the said drawhead and in communication with the interior of the same, a locking device pivoted intermediate of its length the forward end of which is adapted to be interposed between the flat surface of the tail end of the hook and the solid inner wall of the drawhead, and means attached to the rear inner end of the said locking device and passing through a hole in the bottom of the coupler, substantially as described.

3. A car coupler consisting of a draw head and knuckle, a cavity formed in the top of the said drawhead, a locking device pivoted intermediate of its length the forward end of which is adapted to be interposed between the tail end of the knuckle and the drawhead, a rearward extension 14, formed on the said locking device, a shaft 15, having a bent end 16, a chain 18, connecting the locking device with the end of the said shaft, an arm 21, fixed to the said shaft, and a chain 22, connecting the said arm with the said knuckle, for opening the same substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM J. WALKER.
LOUIS HAMMERSCHMIDT.

Witnesses:

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