

(No Model.)

D. L. JOHNSON & D. F. HOOTS.
CAR COUPLING.

No. 555,168.

Patented Feb. 25, 1896.

Fig. 1.

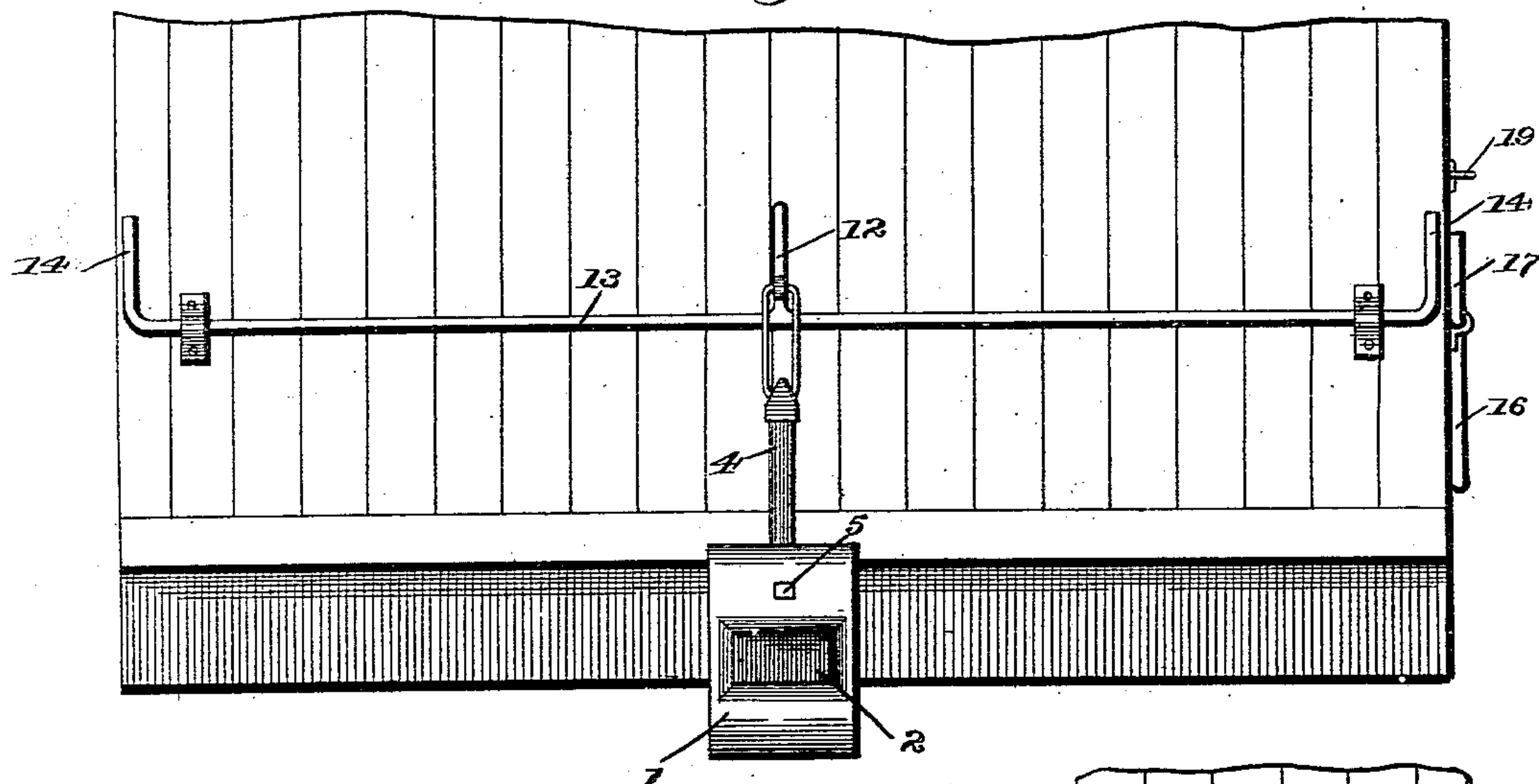


Fig. 2.

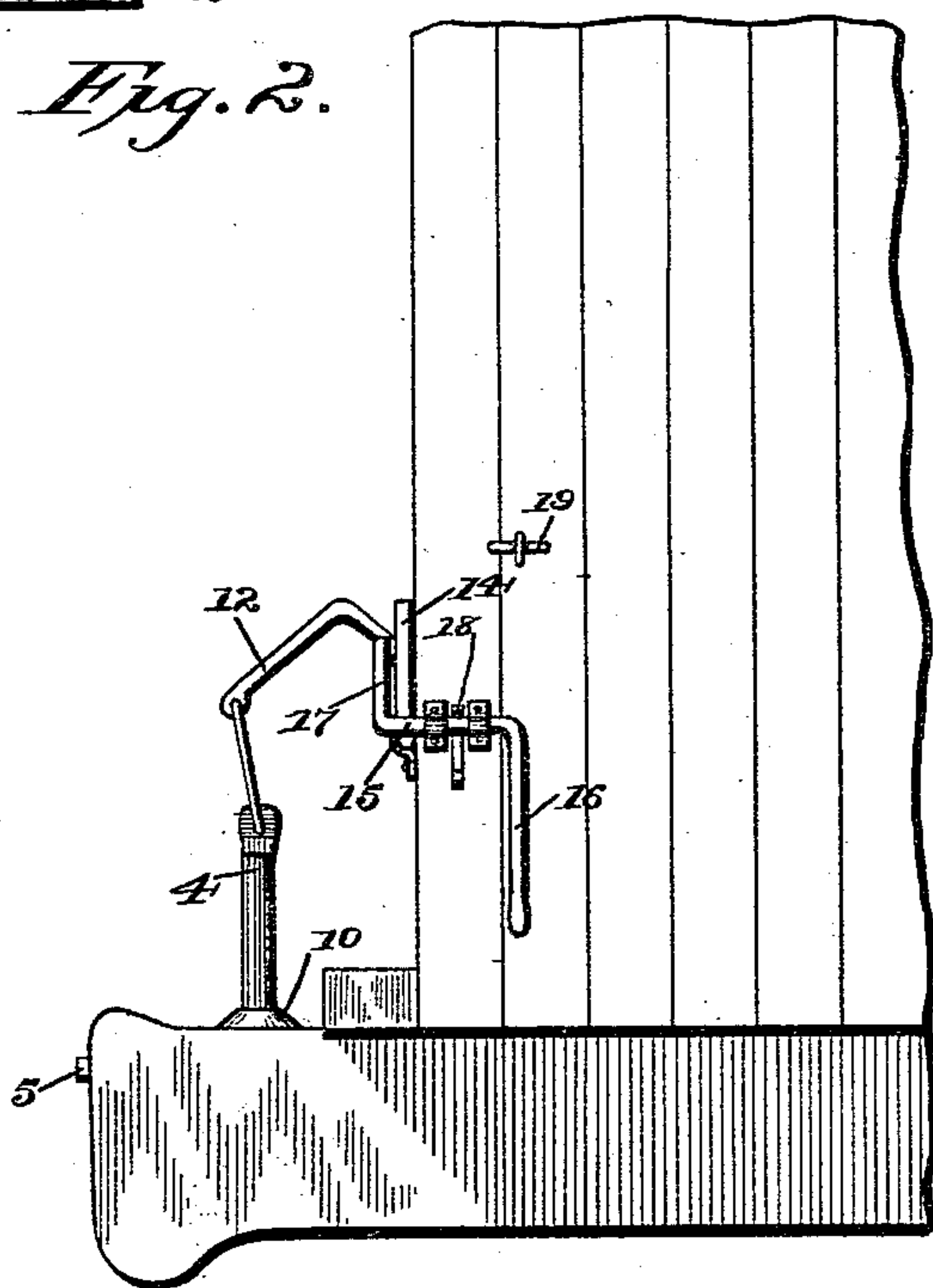


Fig. 3.

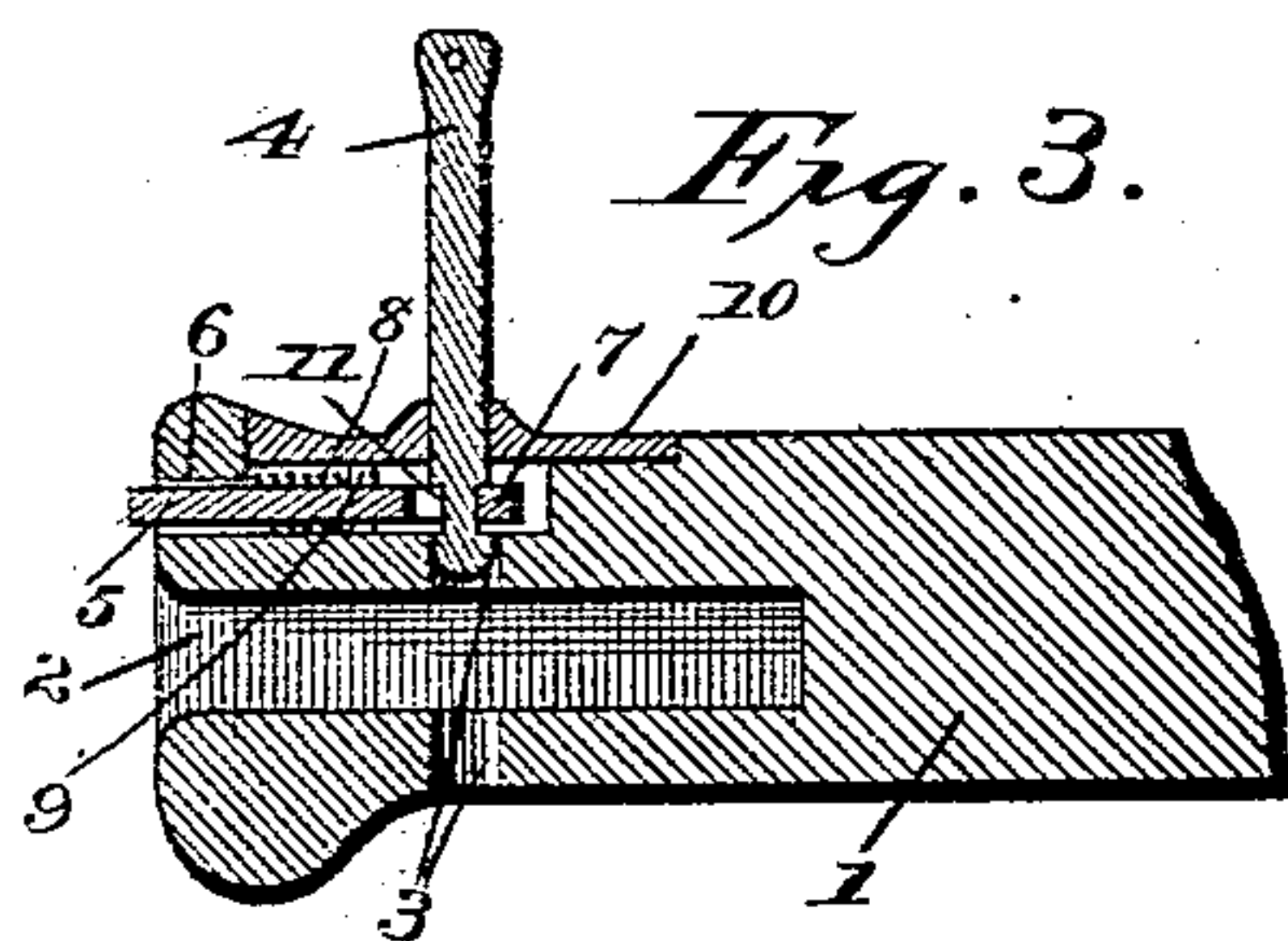


Fig. 4.

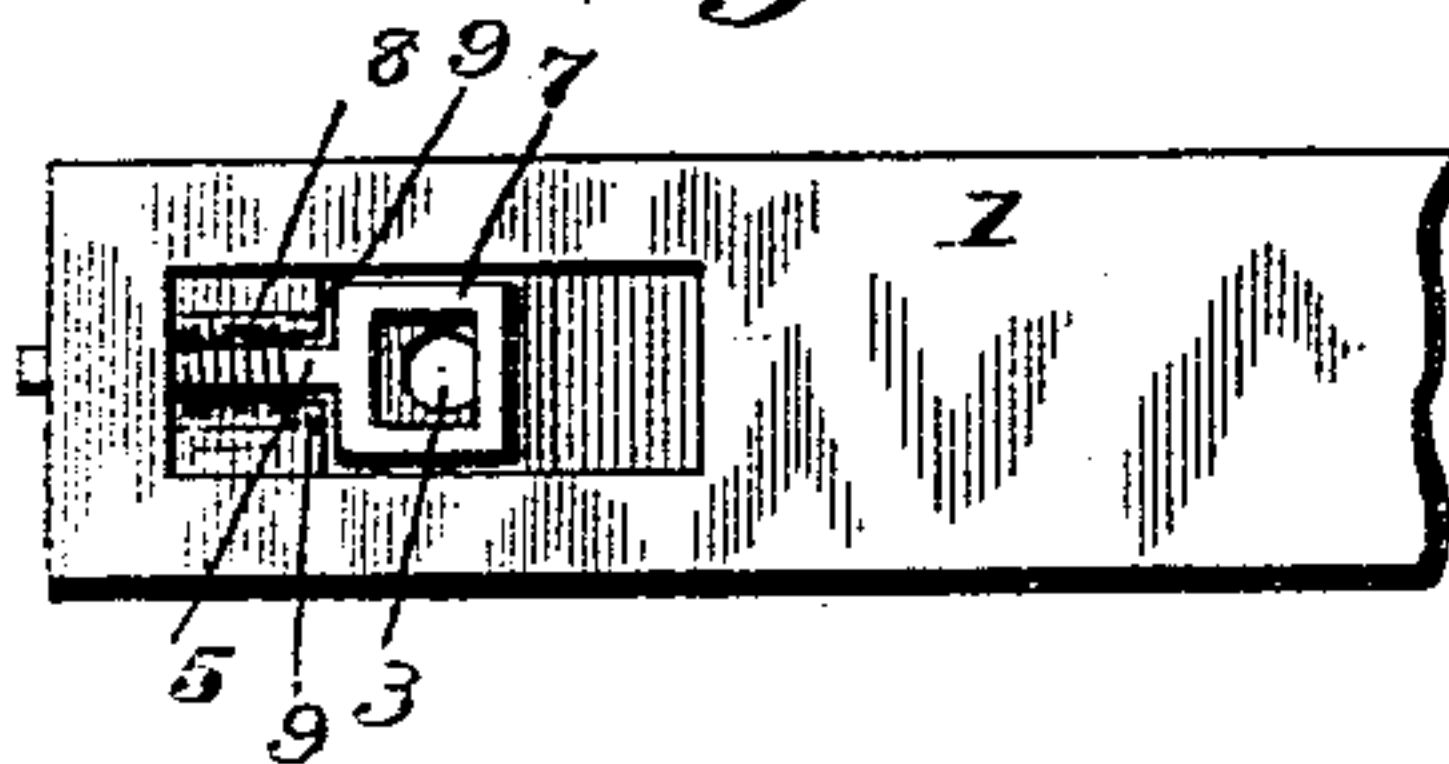


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

DENNIS L. JOHNSON AND DAVID F. HOOTS, OF COOK'S MILLS, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 555,168, dated February 25, 1896.

Application filed May 15, 1895. Serial No. 549,419. (No model.)

To all whom it may concern:

Be it known that we, DENNIS L. JOHNSON and DAVID F. HOOTS, citizens of the United States, residing at Cook's Mills, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Automatic Car-Couplers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in automatic car-couplers, having for its object to provide a device of this character which will be automatically coupled by the coming together of the two adjacent draw-heads of two cars and which may be uncoupled without passing between the cars and may also be held in its uncoupled position.

The invention consists of a draw-head having a suitable elongated slot therein for receiving the coupling-link and a central vertical opening therethrough for the passage of the coupling-pin, said draw-head being recessed on its upper edge and receiving a bolt, which is urged normally outward by means of a coiled spring and projects slightly from the forward end of said draw-bar and has a loop at its inner end, which surrounds the coupling-pin and is adapted to engage a shoulder in said pin, formed by a circumferential groove near the lower end thereof. The coupling-pin itself is supported from its upper end from the central arm of a bar pivotally secured to the front end of the car and having flanges at its outer end. Pivoted to one side of the car is a bar or lever having a handle by means of which it may be operated and a flange at its opposite end, which extends inwardly along the front of the car and is adapted to engage one of the outer flanges on the bar upon which the coupling-pin is supported. By means of this lever the coupling-pin may be elevated and the cars uncoupled by an operator working from the side of the car, thereby doing away with the necessity of passing between the cars for this purpose. The said pin may also be held in its upper position by means of the engagement of this lever with the bar upon which said pin is supported.

The invention also consists in other details

of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming a part of this specification, Figure 1 represents a front elevation of a car with our coupling device attached thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a central longitudinal section. Fig. 4 is a detail view of the upper side of the draw-head of the car with the protecting-plate removed. Fig. 5 is a detached view of the coupling-pin.

Like reference-numerals indicate like parts in the various views.

By reference to the drawings it will be seen that the forward end of an ordinary freight or passenger car is represented, having the draw-head 1 provided with a slot or recess 2 therein for the passage of the coupling-link. Said draw-head also has a vertical hole 3 extending therethrough for the passage of the coupling-pin 4. The upper surface of the draw-head 1 is recessed, as shown in Fig. 3, and fitting said recess is a bar 5, projecting through a slot 6 and extending slightly beyond the forward end of the draw-head 1. This bar 5 is formed with a loop 7 at its rear or inner end, which surrounds the coupling-pin 4 and is urged outwardly by means of a coiled spring 8, acting against a shoulder 9 in the recess in said draw-bar. This recess is normally closed or covered by a cap 10.

The coupling-pin 4 has a circumferential groove 11 at a point near its lower end, the shoulder formed by which is engaged by the looped portion 7 of the bar 5 when said pin is in its raised position. The pin 4 is suspended from its upper end from an arm 12 projecting outwardly from the center of a bar 13 pivoted along the front of the car. The outer ends of said bar 13 are formed with flanges 14, by means of which said bar may be conveniently moved on its pivot and the coupling-pin 4 raised thereby.

Pivoted to the side of the car at a point near its forward end is a bar or lever 15 having a handle 16 and a flange 17 on its forward end, which flange is adapted to engage the flange 14 on the bar 13. A projection 18 is formed on the lever 15 between its two pivotal points for the purpose of frictionally

holding said lever in contact with the side of the car when the handle 16 is in its lower position. This handle is held in its upper position by means of a loop or catch 19 secured 5 to the side of the car.

The operation of our device is as follows: Assuming that the cars are coupled and the coupling-pin 4 is in its downward position the manner of uncoupling is as follows: The 10 flange 14 on the bar 13 is turned upwardly, thereby moving said bar on its pivot, raising the central arm 12 and at the same time elevating the coupling-pin 4. When said coupling-pin has been raised a proper distance the 15 groove 11 in said pin is brought opposite the loop 7 in the bar 5, and said bar being urged forwardly by the coiled spring 8 the rear end of said loop engaging the shoulder in the pin formed by the groove 11 holds the pin in its 20 raised position. When the draw-heads of two adjacent cars are brought into contact the bar 5 is forced inwardly, which releases the pin 4 and permits the same to drop through the hole 3 in the draw-head 1. The bar 13 may 25 be turned on its pivot by drawing down the handle 16 of the lever 15, throwing the flange 17 upwardly, which, engaging the flange 14 on the bar 13, turns said bar on its pivot. If it is desired to hold the pin 4 in its raised or

uncoupled position the flange 17 on the lever 30 15 and the flange 14 on the bar 13 are held in contact in the upper positions.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is— 35

The combination with a car, having a suitable draw-head thereon perforated vertically, of a horizontal bar pivoted to the front end of said car, having flanges at its outer end by means of which said bar may be moved on its 40 pivot, and an arm at its center, a coupling-pin supported by said central arm and adapted to fit the vertical opening in said draw-head, a lever pivoted on the side of said car having an operating-handle at one end and a 45 flange at its forward end adapted to engage one of the outer flanges on said pivoted bar, substantially as and for the purpose described.

In testimony whereof we have signed this 50 specification in the presence of two subscribing witnesses.

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Witnesses:

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