

(No Model.)

J. W. FLYNN.  
CAR COUPLING.

No. 501,929.

Patented July 25, 1893.

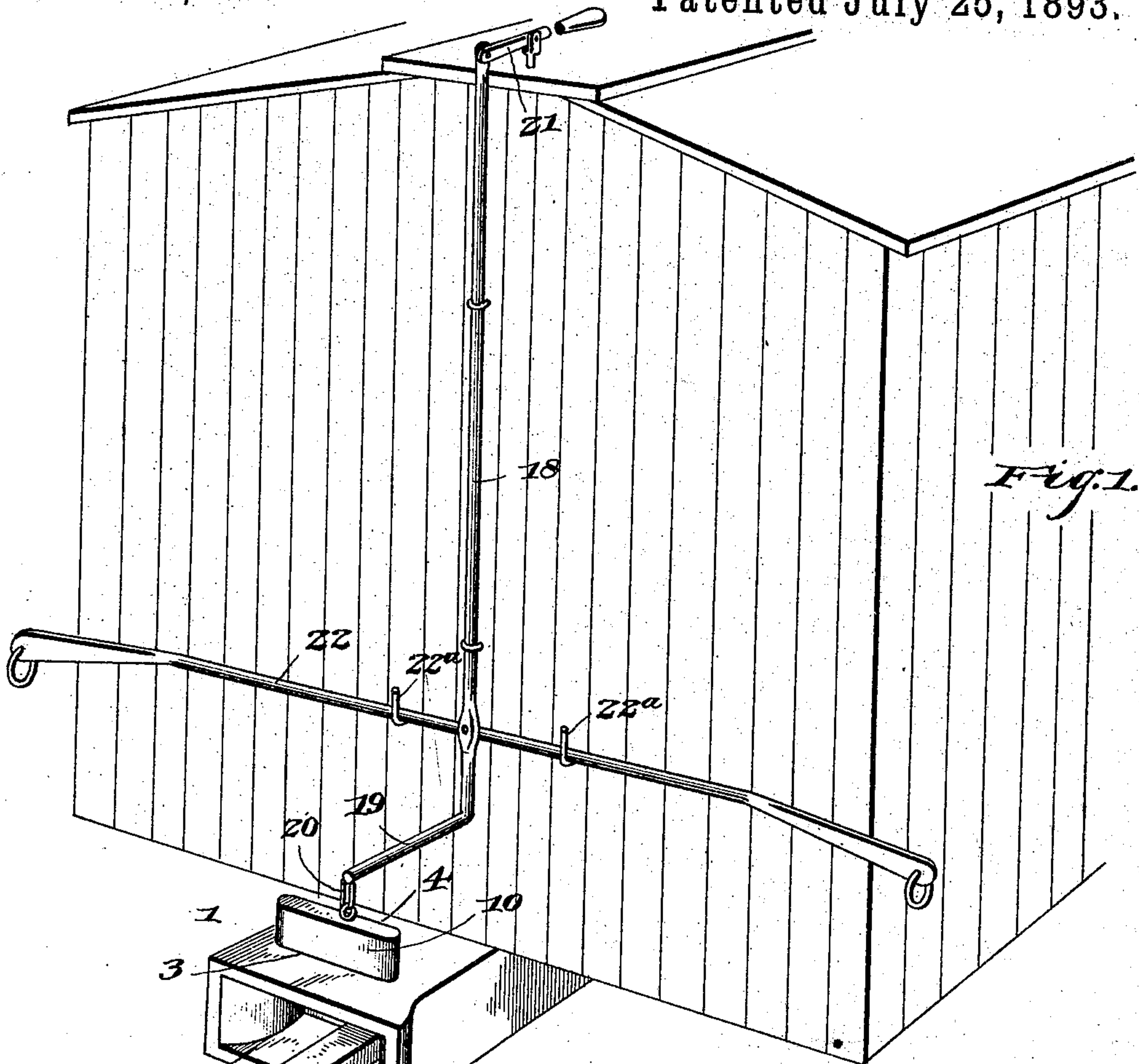


Fig. 1.

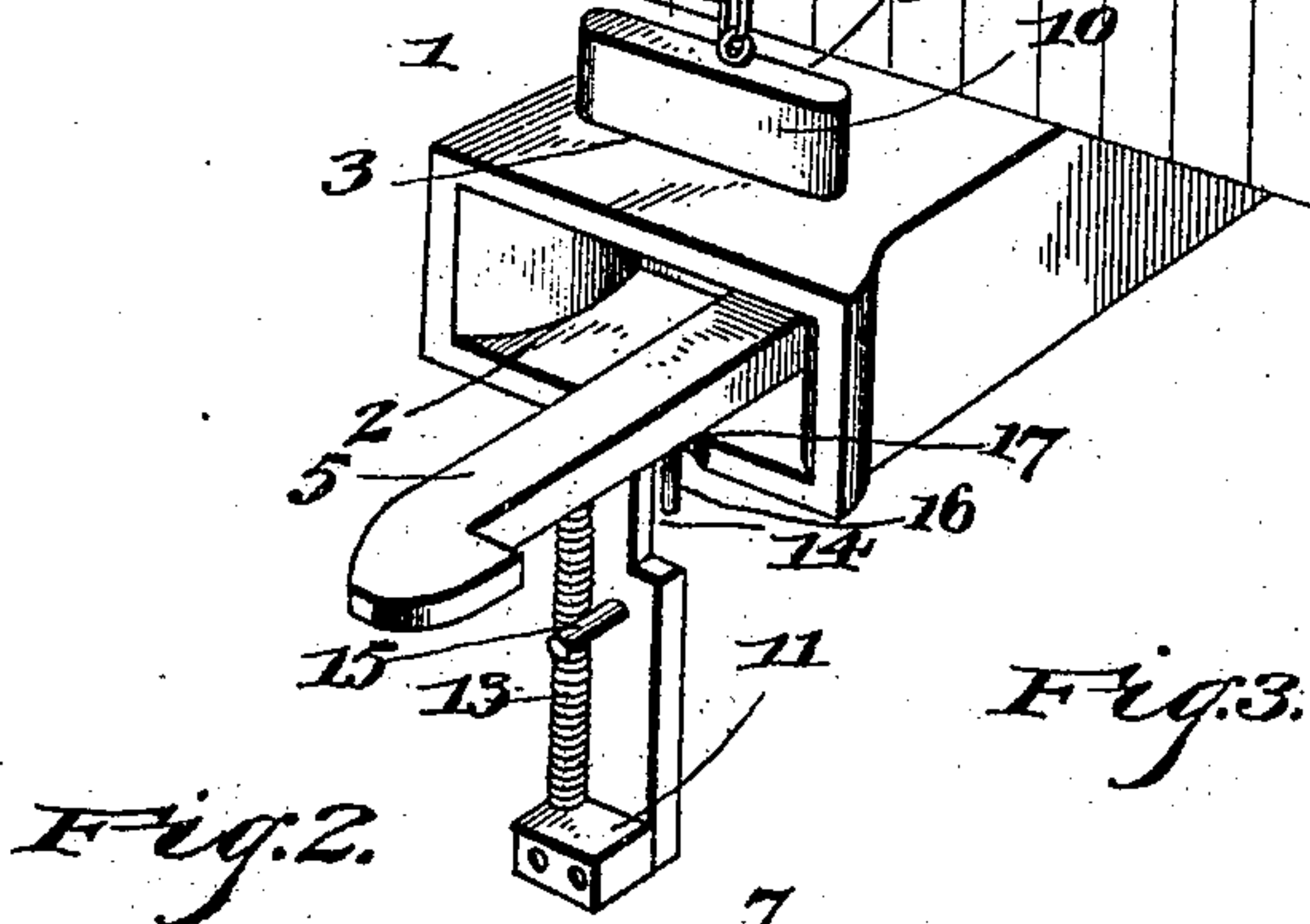


Fig. 2.

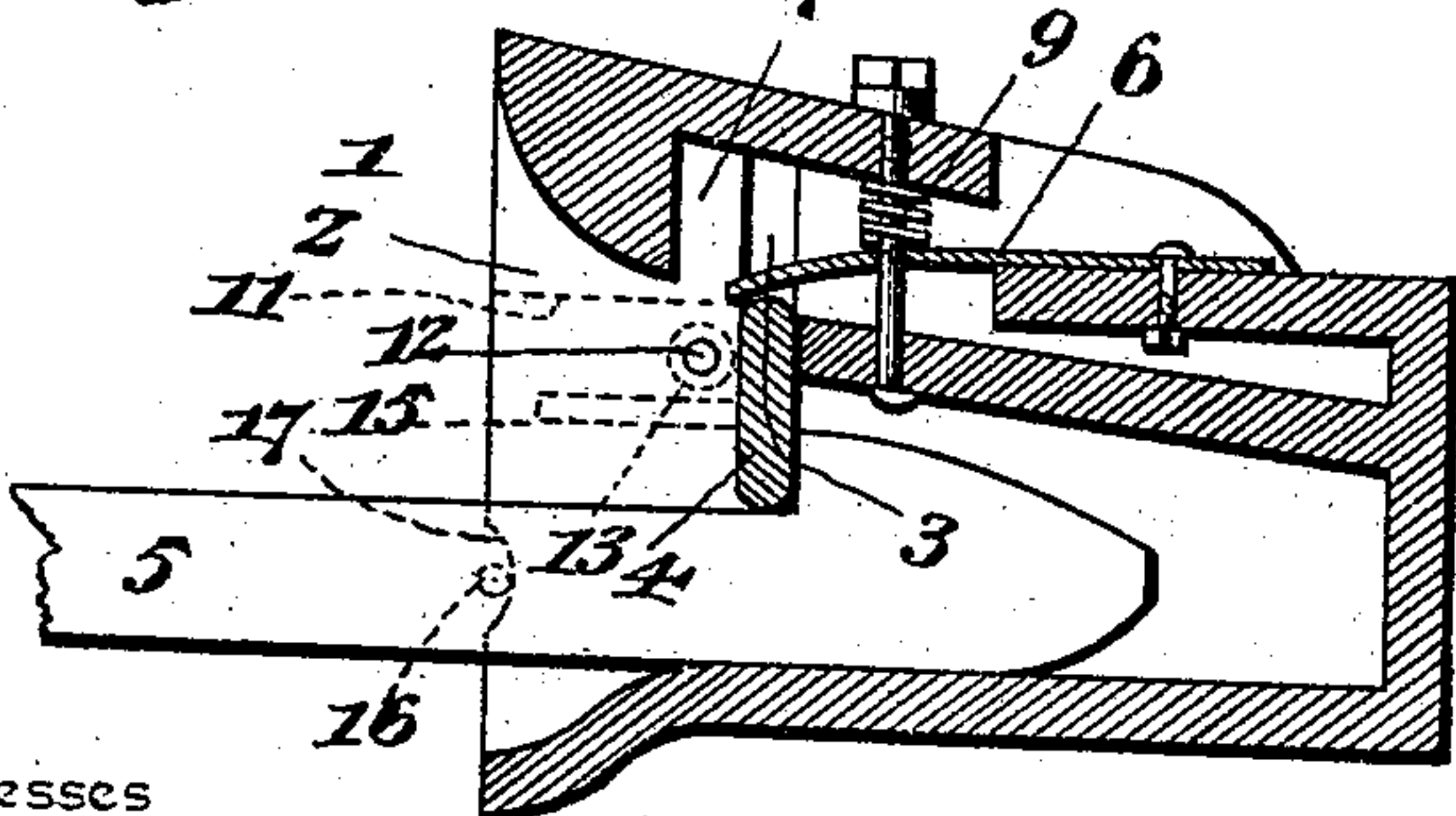
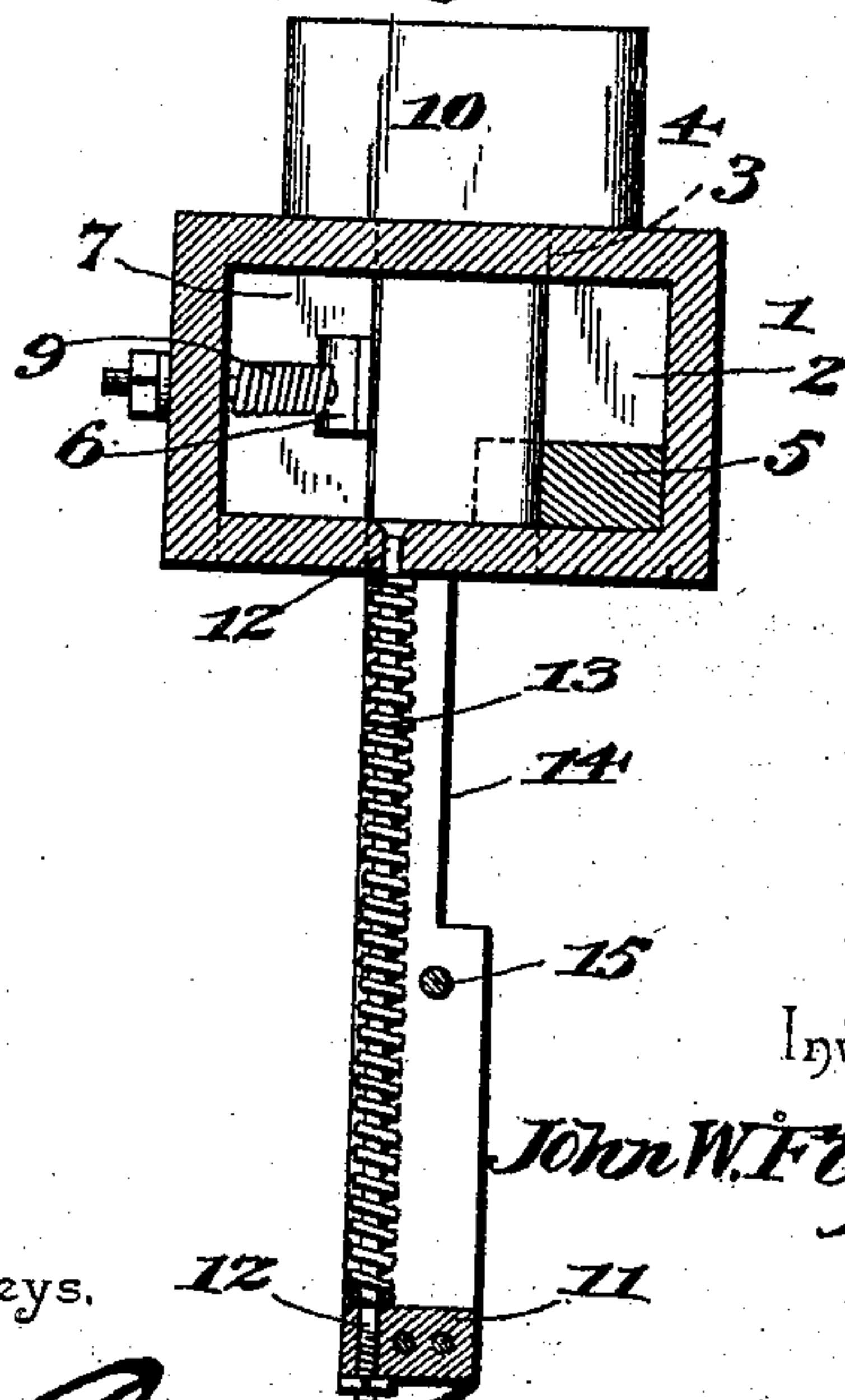


Fig. 3.



Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN W. FLYNN, OF BORDENTOWN, NEW JERSEY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 501,929, dated July 25, 1893.

Application filed May 20, 1893. Serial No. 474,967. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. FLYNN, a citizen of the United States, residing at Bordentown, in the county of Burlington and State of New Jersey, 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, and to provide a simple, inexpensive, and effective one which will couple automatically and which will possess the advantage of the ordinary pin-and-link coupling in that it will permit the play or movement incident to pin-and-link couplings to enable the cars of a train to be successively started.

A further object of the invention is to enable the car-coupling to be readily uncoupled without going between cars.

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

In the drawings, Figure 1 is a perspective view of a car provided with a coupling constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a transverse sectional view.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a draw-head, having a longitudinal link-cavity 2, and provided with a vertical slot 3, communicating therewith and receiving a vertically and laterally movable locking-bar 4, which is adapted to engage a hook or arrow headed link 5. The vertically-movable bar is held in engagement with the link 5 by a spring-actuated plate 6, secured at its rear end to one side of the draw-head and projecting forward into a cavity or recess 7 thereof and having its front end bearing against the outer edge of the bar 4. The plate 6 is provided with a perforation and is arranged on a horizontal guide-bolt and has interposed between it and the adjacent side of the draw-head a spiral spring 9 which is disposed on the horizontal bolt, washers being provided to form bearings for the ends of

the spring. The locking-bar, which is vertically movable in the transverse slot 3 of the draw-head, is provided at its upper end with a head 10, to prevent it from dropping through the slot and has secured to its lower end, at its front side, a block 11, which is provided with a vertical opening receiving a rod 12 depending from the bottom of the draw-head and having disposed on it a spiral spring 13, which is interposed between the block and the draw-head to force the locking-bar downward. At its inner side the locking-bar is provided with a link-releasing recess 14, and the locking-bar is adapted to be raised against the action of the spring 13 to make the recess 14 register with the link-cavity or longitudinal opening of the draw-head to permit the link 5 to be withdrawn for uncoupling. The locking-bar is provided, a short distance below the recess 14, with a projection or pin 15, to abut against the bottom of the draw-head to form a stop to limit the upward movement of the locking-bar to cause the latter to be lifted the proper distance to bring its recess 14 at the link-cavity of the draw-head, and to prevent the locking-bar from being lifted too great a distance. The link 5, which is provided at each end with an arrow-head or hook, has intermediate of its ends a depending pin 16, to prevent the link entering too far into the draw-head. The bottom of the draw-head is provided with a notch 17 to receive the depending pin and prevent the draw-heads when the cars come together for coupling from coming in contact with the pin and injuring the same.

The coupling may be uncoupled from the top of sides of the car, and to effect this result a vertically-disposed lifting-bar 18 is mounted in suitable guides on the car and is provided at its lower end with an outwardly-extending arm 19, which is connected by a chain 20 with the top of the locking-bar. The chain affords a loose connection and permits the draw-head to move longitudinally and laterally incident to the passage or coupling of a train without straining the mechanism for uncoupling. The upper end of the lifting-bar 18 is pivotally connected to a foot-lever 21, which is fulcrumed on the car within easy reach of the foot of a train hand. The uncoupling is performed from the sides of the car by a transversely-disposed lever 22, ter-



minating in handles and pivotally connected at its center to the lifting-bar. The transversely-disposed lever is arranged on fulcrum supports 22<sup>a</sup>, and by depressing either side of the transverse lever the lifting-bar is raised, carrying with it the locking-bar and releasing the link.

It will be apparent that the car-coupling is simple and inexpensive in construction and 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 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 the invention.

What I claim is—

1. In a car-coupling, the combination of a draw-head having a longitudinal opening and provided with a transverse slot communicating therewith, a vertically and laterally movable locking-bar arranged in the transverse slot of the draw-head and provided with a link-receiving recess and adapted to be raised to cause the recess to register with the opening of the draw-head, and springs for holding the locking-bar in engagement with the link, substantially as described.

2. In a car-coupling, the combination of a draw-head having a longitudinal opening and provided with a transverse slot communicating therewith, a vertically and laterally movable locking-bar mounted in the slot and provided with a link-releasing recess, a spring-actuated plate engaging the outer edge of the locking-bar and forcing the latter inward to engage a link, and a spring for holding the locking-bar downward, substantially as described.

3. In a car-coupling, the combination of a draw-head provided with a transverse slot, a locking-bar mounted therein and provided with a link-releasing recess, a plate attached at its rear end to the draw-head and having its front end bearing against the locking-bar, a horizontal bolt mounted in the draw-head and

forming a guide for the plate, and a spring disposed on the bolt and engaging the plate, substantially as described.

4. In a car-coupling, the combination of a draw-head provided with a transverse opening, a locking-bar mounted in the transverse opening and provided with a recess for releasing the link and capable of vertical and lateral movement, a spring-actuated plate engaging the outer edge of the locking-bar, a block secured to the lower end of the locking-bar and provided with an opening, a rod depending from the draw-head and arranged in the opening of the block, a spring disposed on the rod and interposed between the draw-head and the block to hold the locking-bar downward, and a projection extending from the locking-bar forming a stop and limiting the upward movement of the locking-bar, substantially as described.

5. In a car-coupling, the combination of a draw-head provided in its bottom at its outer end with a notch, a locking-bar, and a link adapted to be engaged by the locking-bar and provided with a depending projection for limiting its movement into the draw-head, substantially as described.

6. In a car-coupling, the combination of a car, a draw-head having a transverse slot, a locking-bar arranged therein, a vertically-disposed lifting-bar mounted on the car and connected at its lower end to the locking-bar, a foot-lever connected with the upper end of the lifting-bar and fulcrumed on the top of the car, fulcrum supports arranged on the car at opposite sides of the lifting-bar, and a transversely-disposed lever pivotally connected to the lifting-bar and arranged on the fulcrum supports, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN W. FLYNN.

Witnesses:

H. F. RILEY,  
J. H. SIGGERS.