

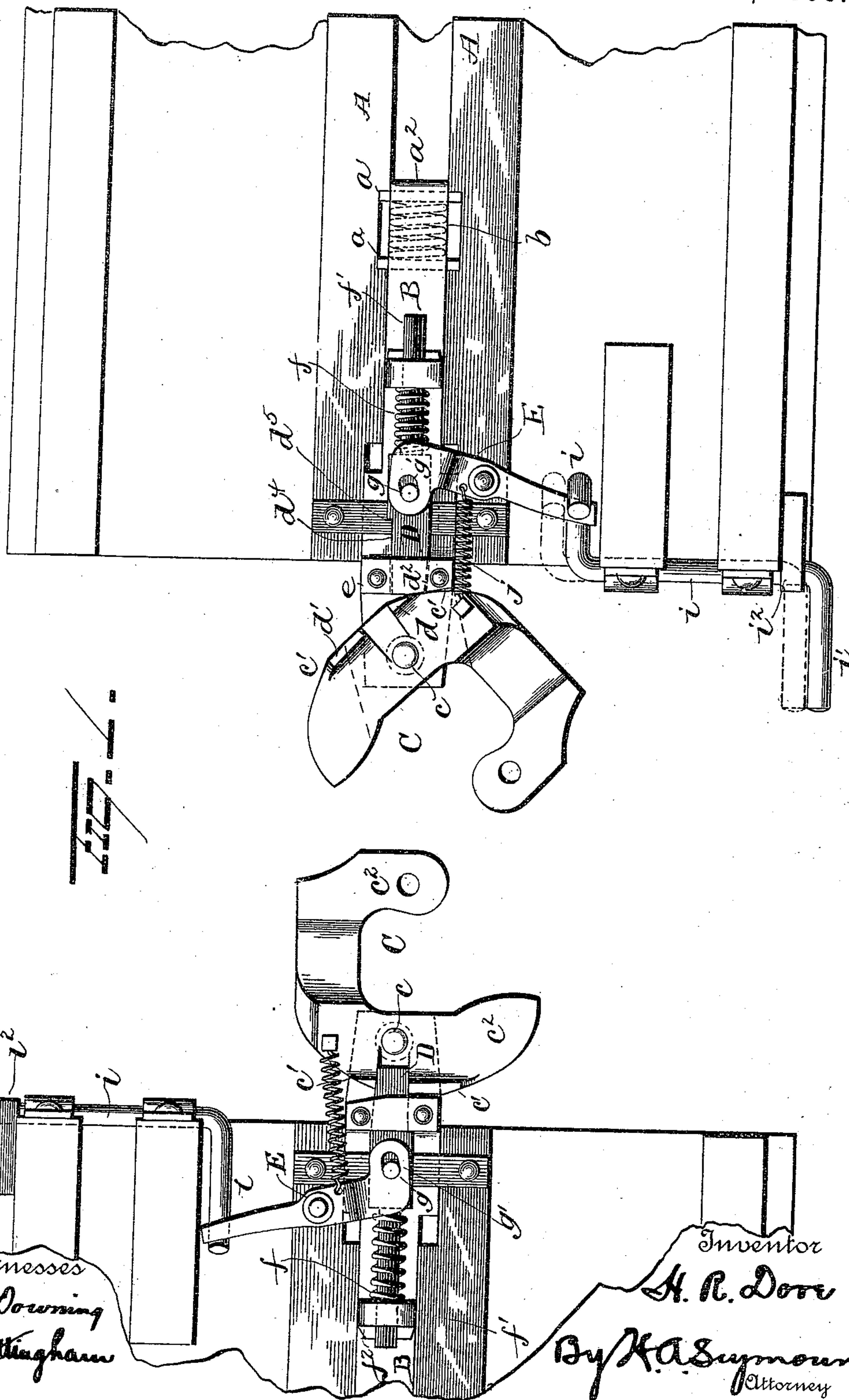
(No Model.)

2 Sheets—Sheet 1.

H. R. DORE.  
CAR COUPLING.

No. 550,952.

Patented Dec. 10, 1895.



Witnesses  
G. F. Downing  
S. G. Nottingham

Inventor  
H. R. Dore  
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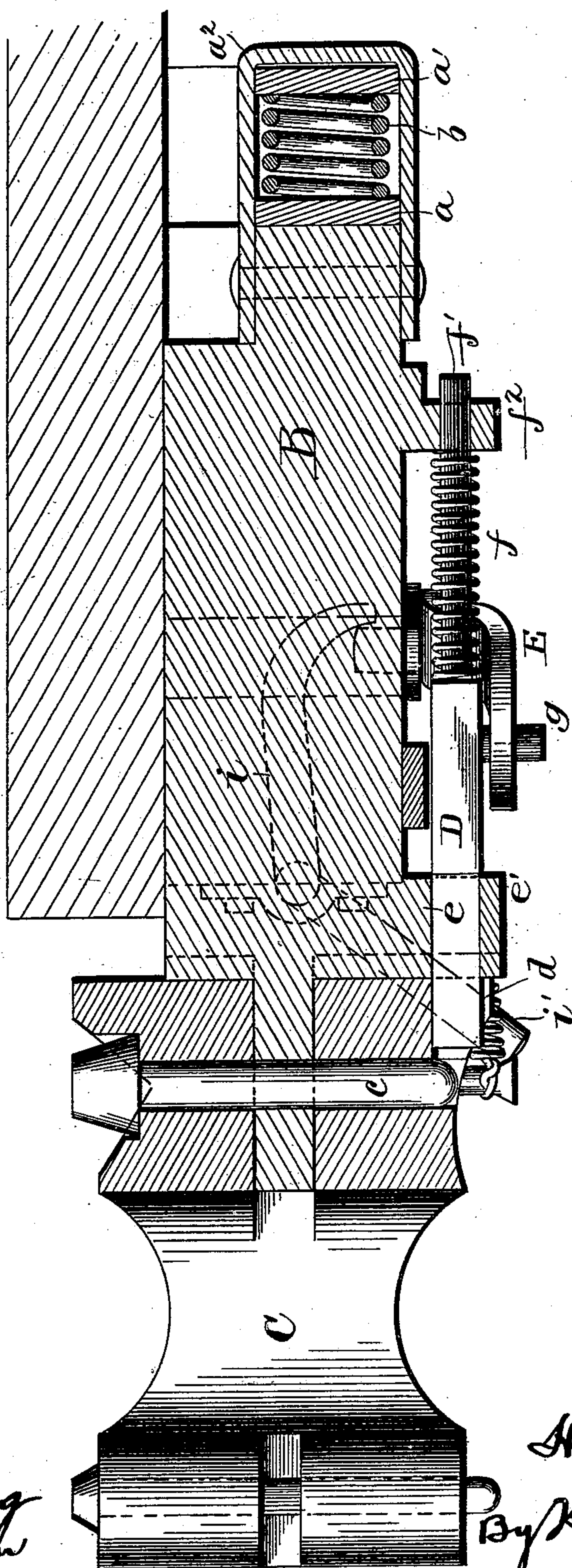
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# UNITED STATES PATENT OFFICE.

HERMAN R. DORE, OF MOULTONVILLE, NEW HAMPSHIRE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 550,952, dated December 10, 1895.

Application filed May 2, 1895. Serial No. 547,902. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN R. DORE, a resident of Moultonville, in the county of Carroll and State of New Hampshire, have invented certain new and useful Improvements in Car-Couplings; and I 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.

My invention relates to an improvement in car-couplings, one object of the invention being to so construct an automatic car-coupling that it can be readily applied to and operated upon any style of car and so that pivotal parts on which strain is likely to fall shall be reduced to a minimum.

A further object is to construct a car-coupling having a draw-head which in configuration shall be similar to the Janney type of draw-head, but which shall be made in a single casting and the pivoted jaw dispensed with.

A further object is to provide a car-coupling in which the draw-head is pivoted to swing laterally, with simple locking device, so located and constructed that they shall be protected and be carried by the draw-bar, so as to partake of the longitudinal movements thereof and of the draw-head.

A further object is to produce a car-coupling which shall be simple in construction, sure in operation, and effectual in all respects in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a bottom plan view of a portion of two cars having my improvements applied thereto. Fig. 2 is a sectional view.

A A represent the draft-timbers secured to the car-bottom in any suitable manner, between which the draw-bar B is disposed and adapted to have a slight longitudinal movement. The rear end of the draw-bar is provided with a disk or plate *a*, adapted to bear against a buffing-spring *b*, the other end of the latter having its bearing against a plate *a'* between the draft-timbers. A yoke *a<sup>2</sup>* is secured at its ends to the draw-bar and em-

braces the plates *a a'* and spring *b*. A draw-head C is pivotally connected to the forward end of the draw-bar by means of a pin *c* and made with beveled rear faces *c'*, so as to permit it to swing freely when released.

The general configuration of the draw-head is similar to that of the draw-head of the Janney type, but is made in a single piece, having a rigid hook-shaped jaw *c<sup>2</sup>*, recessed or rounded at *c<sup>4</sup>*, and a beveled jaw *c<sup>3</sup>*. From the under face of the draw-head, at the rear end thereof, lugs *d d'* project for the reception between them of a locking-bar D, the inner face of the lug *d* being preferably beveled for the reception of the beveled end *d<sup>2</sup>* of the locking-bar. The forward portion of the locking-bar is beveled, as at *d<sup>4</sup>*, and made with a shoulder *d<sup>5</sup>* at the rear end of said beveled portion to engage one of a pair of lugs *e*, which project from the draw-bar and form an integral part of the latter. One of the lugs *e* is beveled for the accommodation of the beveled face *d<sup>4</sup>* of the locking-bar. The locking-bar is prevented from escape from between the lugs *e* by means of a plate *e'*, secured at its ends to the latter. By making the locking-bar and lugs beveled the coupler can be readily operated on curves.

The locking-bar D will be normally projected forward between the lugs *d d'* by means of a spring *f*, which encircles a stem *f'*, projecting from said locking-bar and passing through a lug *f<sup>2</sup>* on the draw-bar, said spring bearing at its respective ends against the locking-bar and lug *f<sup>2</sup>*. A pin *g* projects from the locking bar D and enters an elongated slot *g'* in one end of a lever E, the latter being pivotally connected between its ends to one of the draft-timbers, and having its free end bent slightly upwardly and in the path of a curved arm *h* at the end of a crank-shaft *i*, mounted in suitable brackets secured to the car. The crank-shaft *i* extends laterally to the side of the car and at its outer end is provided with a crank-arm *i'*, by means of which to operate it. The crank-shaft is so mounted as to be movable lengthwise, so as to cause the crank-arm *i'* to engage an arm or stop *i<sup>2</sup>* on the car when it is desired that the locking-bar shall be maintained at the rear end of its movement and prevent the coupling of two couplings. A spring *j* is secured at one end to the



lever E and at the other end to the draw-head, so that when the locking-bar is withdrawn the draw-head will be swung laterally by the action of said spring and permit the automatic uncoupling of the cars. If desired, the connection between the lever E and the draw-head may be composed partly of a spring and partly of a chain. From the construction and arrangement of parts above described it will be seen that when the crank-shaft is operated the arm *h* will engage the curved arm of the lever E and turn it on its fulcrum, thus causing the withdrawal of the locking-bar, whereupon the draw-head will be pulled laterally by the combined action of the spring *j* and the lever E. When two couplings are brought together, the engagement of the jaw *c*<sup>2</sup> of one with the curved recess *c*<sup>4</sup> of the other will cause them to automatically assume their normal operative positions, and the locking-bar will be forced between the lugs *d* *d'* on the draw-head by the action of the spring *f*.

My improvements are exceedingly simple in construction, dispense with pivoted jaws, reduce the number of pivotal parts on which strain will fall to a single one, and are effectual in all respects in the performance of their functions.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a draw-bar, an approximately U-shaped draw head pivotally connected thereto, lugs depending from the under face of said draw head, bearings on the under face of said draw bar, an exposed locking bar carried by the draw bar and adapted to engage said lugs, and means carried by the car for actuating the locking bolt.

2. The combination with a draw bar, of an approximately U-shaped draw head pivotally connected thereto and provided with rear beveled faces, bearings on the lower side of the draw bar, a locking bolt carried in said bearings and means carried by the car for actuating said bolt.

3. The combination with a draw bar and a draw head pivotally connected thereto, of a spring actuated locking bar carried by the draw bar adapted to engage the draw head, a lever having a movable connection with said locking bar, and crank for operating said lever to withdraw the locking bar, substantially as set forth.

4. The combination with a draw bar and a draw head pivotally connected thereto, of a spring actuated locking bar adapted to engage said draw head, a pivoted lever having a movable connection with said locking bar, means for operating said lever whereby to withdraw the locking bar and release the draw head, and a spring connection between said draw head and said pivoted lever, substantially as set forth.

5. The combination with a draw bar and a draw head pivotally connected thereto, of a locking bar carried by the draw bar and adapted to engage the draw head, a pivoted lever having a movable connection with the draw bar, a rock shaft having an arm to engage said lever and an operating arm on said rock shaft, substantially as set forth.

6. The combination with a draw bar and a draw head pivotally connected thereto, of a locking bar carried by the draw bar and adapted to engage the draw head, a pivoted lever having a movable connection with the locking bar, a rock shaft having an arm to engage the said pivoted lever, an operating arm on the rock shaft, and an arm adapted to be engaged by the locking arm whereby to maintain the rock shaft and locking bar in position to prevent the locking of the draw-head in its operative position, substantially as set forth.

7. The combination with a draw bar, of a draw head pivotally connected thereto and having lugs, a beveled locking bar adapted to engage said lugs and having a shoulder at the rear end of its beveled portion, lugs projecting from the draw bar for the reception of the locking bar between them, a plate on said lugs, a spring adapted to force the locking bar forward in engagement with the lugs on the draw head, a pin projecting from the locking bar, a pivoted lever having an elongated slot for the reception of said pin, a crank shaft adapted to engage the free end of said lever, and a spring connection between the draw head and said pivoted lever, substantially as set forth.

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

HERMAN R. DORE.

Witnesses:

MARY A. ABBOTT,  
FRANK WEEKS.