

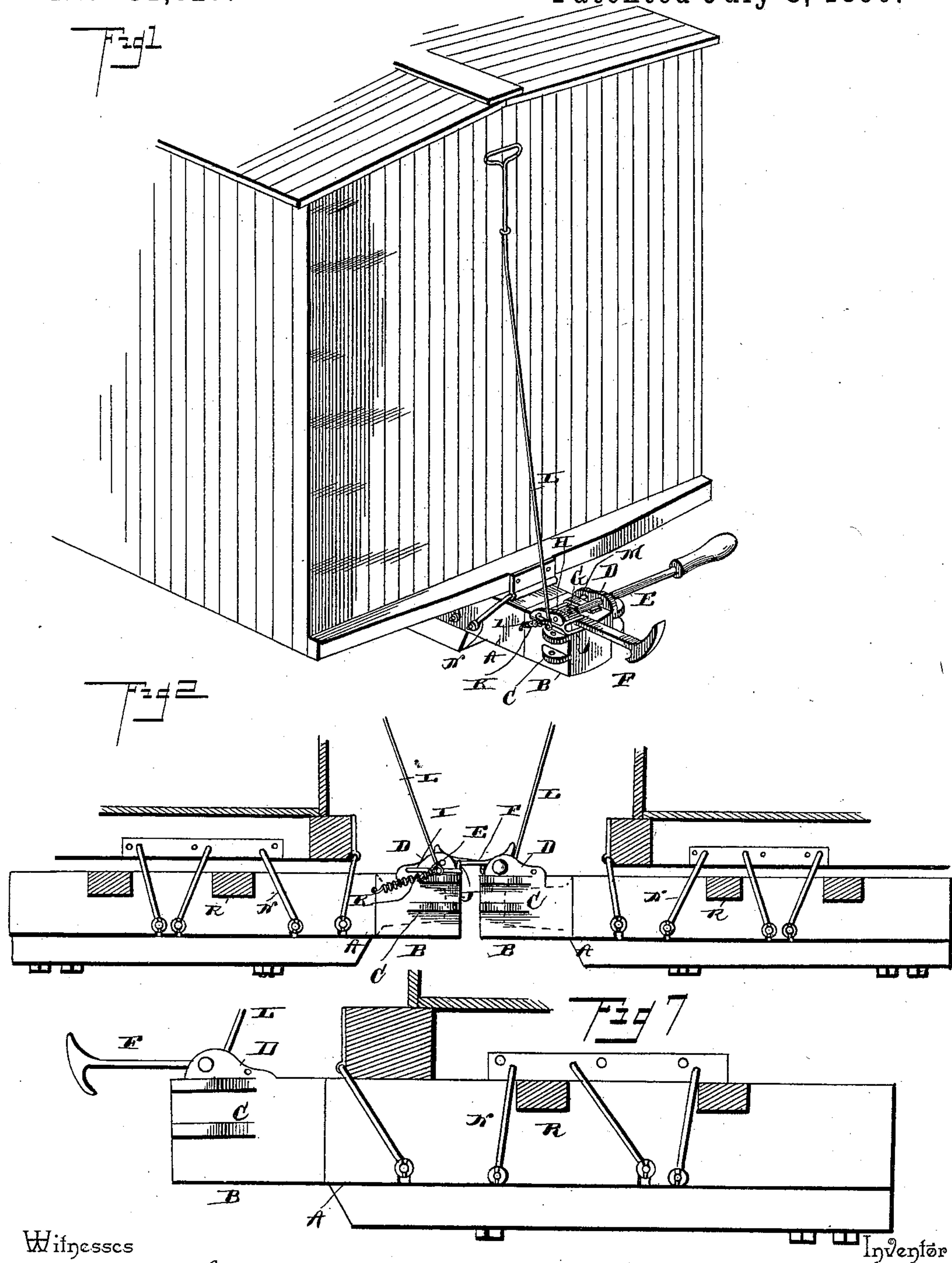
(No Model.)

2 Sheets—Sheet 1.

C. W. TERPENING.  
CAR COUPLING.

No. 431,627.

Patented July 8, 1890.



John Imrie  
R. H. Bishop,

By his Attorneys, Clinton W. Terpening  
C. A. Snow & Co.

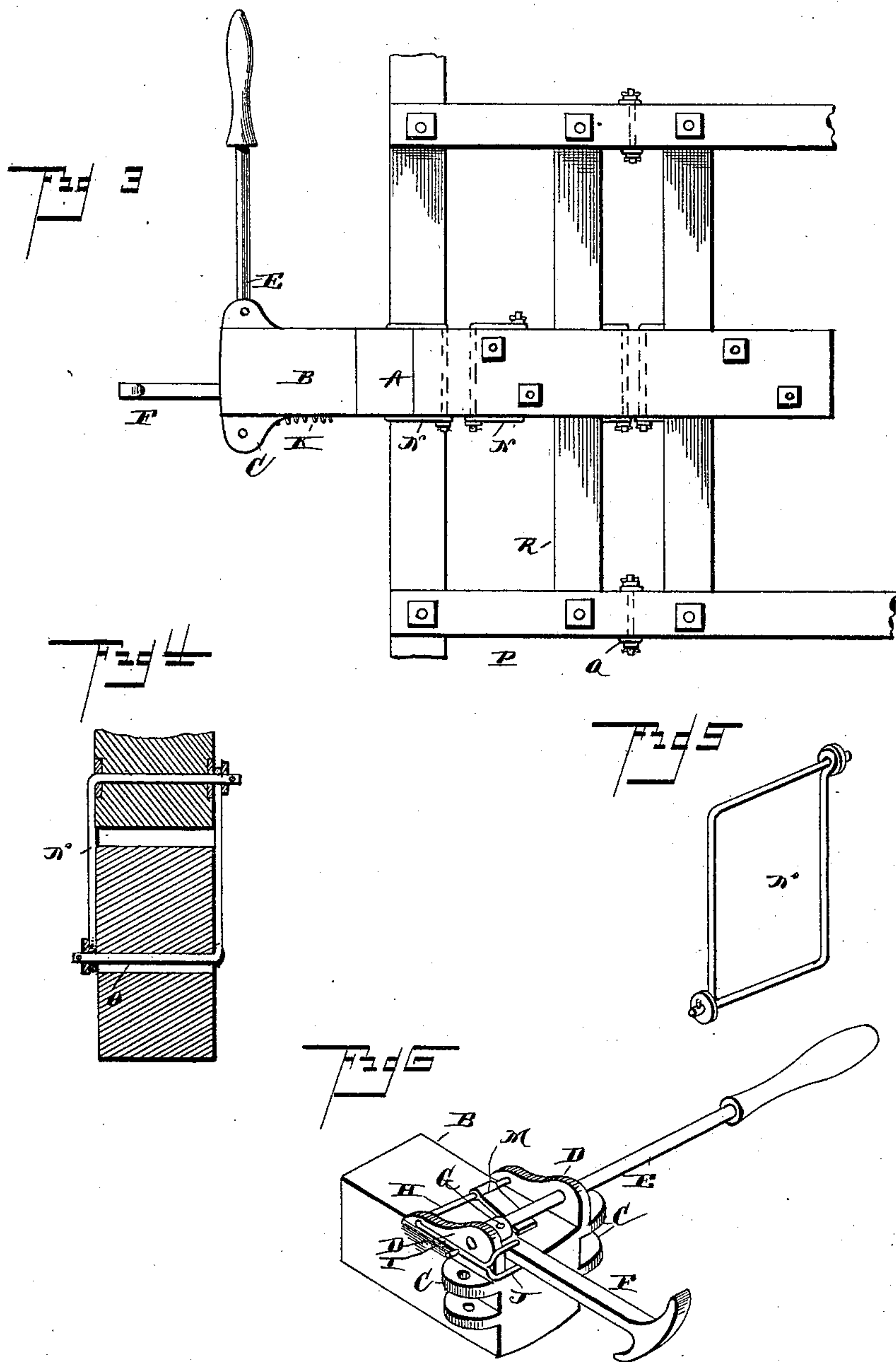
(No Model.)

2 Sheets—Sheet 2.

C. W. TERPENING.  
CAR COUPLING.

No. 431,627.

Patented July 8, 1890.



Witnesses

*John Amrie*  
*R. W. Bishop*

By his Attorneys,

*Clinton W. Terpening*

*C. A. Snow & Co.*

Inventor



# UNITED STATES PATENT OFFICE.

CLINTON W. TERPENING, OF BEDFORD, IOWA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 431,627, dated July 8, 1890.

Application filed October 26, 1889. Serial No. 328,232. (No model.)

### *To all whom it may concern:*

Be it known that I, CLINTON W. TERPENING, a citizen of the United States, residing at Bedford, in the county of Taylor and State of Iowa, have invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to improvements in car-couplings; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the end of the car, showing my improved coupling applied thereto. Fig. 2 is a central vertical section showing two draw-heads coupled together. Fig. 3 is a bottom plan view. Fig. 4 is a detail transverse section showing the construction of the hangers. Fig. 5 is an enlarged detail perspective view of the hanger. Fig. 6 is a perspective view of the coupling. Fig. 7 is a detail side elevation, enlarged, of one of the draw-heads and draw-bars.

The draw-bar of my improved coupling consists of the buffer A, having its front end tapered or reduced, and the draw-head B, secured on the said tapered or reduced end of the buffer. The draw-head is constructed of metal, and is provided on its sides with the horizontal perforated lugs C to permit the device to be used with the ordinary pin-and-link coupling, and on its upper side it is provided with the lugs D, in which the rock-shaft E is journaled. The coupling-hooks F are secured rigidly to the rock-shafts E and are prevented from lateral movement thereon by the adjacent lug D and the pin G on the upper side of the draw-head. This rock-shaft projects laterally to near the side of the car, so that the coupling may be effected without the attendant going between the cars. In rear of the rock-shaft E, I journal on the upper side of the draw-head a rock-shaft H, having a forwardly-extending arm I, provided at its front end with the hooks J, which are adapted to engage the coupling-hook, as clearly shown. This arm I is normally drawn downward; so that the coupling-hook will be in engagement with the rock-shaft E on the opposite draw-head by a spring K, having its upper end secured to the arm I and its lower end secured to the side of the draw-head, as shown. A lifting-rod L is secured to the arm

I and extends upward to the top of the car, so that the device may be operated from the roof of the car. A releasing-plate M is secured on the rock-shaft H and adapted to engage under the end of the coupling-hook, so that when the said rock-shaft is rotated the plate will be raised and the coupling-hook thereby disengaged from the rock-shaft E.

The draw-bar is supported by means of hangers N, which are suspended from the bottom of the car and passed through the vertically-elongated openings O in the buffer. The buffer is thus permitted to yield to the blow put on it by contacting with the opposing draw-head, so as to prevent fracture of the parts. The hangers consist of L-shaped rods, which are reversely arranged, so that they together form a rectangle, the shorter arm of one bar or rod passing through the longitudinal beam on the bottom of the car, while the shorter arm of the other bar or rod passes through the openings O in the buffer. The buffer is further supported by means of the side bars P, which are suspended in hangers Q, similar to the hangers N, and are connected to the buffer by the springs R.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my device are thought to be obvious.

When it is desired to couple two cars together, the cars are made to approach and the coupling-hooks will ride over and engage the rock-shafts E. When it is desired to uncouple the cars, the lifting-bar is raised or the rock-shaft rotated so that the hook will be elevated, and the rock-shaft H also rotated so that the hooks will be positively released and the cars separated. When both hooks are down, the coupling will be automatically effected by the coupling-hook on each draw-head dropping into engagement with the rock-shaft on the opposite draw-head. Should one or both of the hooks be up, however, the cars will not be coupled automatically; but the rock-shaft must be rotated so as to throw one hook into engagement with the proper rock-shaft, and the said hook will strike against the lifting-plate on the opposite draw-head, and thereby actuate the several parts to throw the remaining hook into engagement with the unengaged rock-shaft.



It will be observed that my device is composed of very few parts, and that these parts are simple in their construction, compact in their arrangement, and are strong and durable.

When the two draw-heads abut in the act of coupling, the buffers A swing rearwardly upon their hangers N. It will be noticed that these hangers are not vertically suspended, and consequently their backward swing is limited to a degree less than if they were so suspended. The result of this inclined suspension is that the buffers draw downwardly; and to meet this strain in a yielding manner the springs R are employed, and from the springs the strain is transferred to the side beams and their suspended hangers, so that the concussion caused by two abutting heads is entirely consumed before it reaches the car-body.

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

1. The combination of the car-beams, the buffer, and the hangers mounted on the car-beams and having their lower ends converging toward each other and supporting the buffer, as set forth.

2. The combination of the car-beams, the buffer, the side bars suspended therefrom, and the springs connecting the side bars and the buffer, as set forth.

3. The combination of the car-beams, the

buffer, and the hangers, consisting of two L-shaped rods reversely arranged, and one having its shorter arm passing through the car-beam and the other one having its shorter arm passing through the buffer, as set forth.

4. The combination of the draw-head, the coupling-shaft mounted thereon, the rock-shaft mounted on the draw-head, and having a forwardly-extending arm engaging the coupling-hook, and the spring secured to the draw-head and acting on said arm, as set forth.

5. The combination of the draw-head, the coupling-shaft mounted thereon, the coupling-hook secured to the draw-head the rock-shaft mounted on the draw-head, and the arm extending forward from the rock-shaft and provided with hooks engaging the coupling-hook, as set forth.

6. The combination of the draw-head, the coupling-shaft mounted thereon, the coupling-hook secured to said shaft, the rock-shaft mounted on the draw-head and having a forwardly-extending arm engaging the coupling-hook, and the lifting-plate secured to the rock-shaft, as set forth.

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

CLINTON W. TERPENING.

Witnesses:

LUFED COMBS,  
W. F. EVANS.