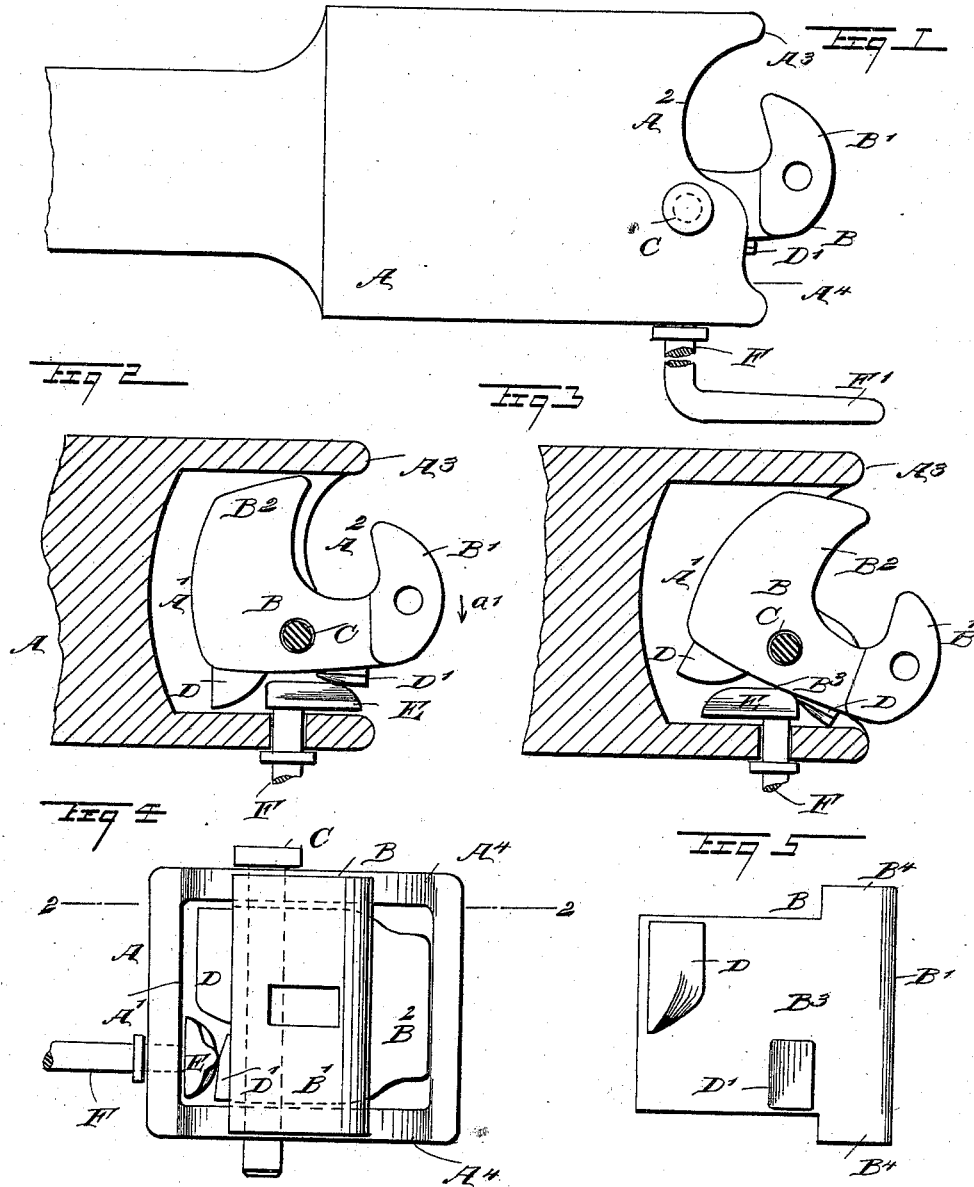


(No Model.)

J. J. SCHAIRER.  
CAR COUPLING.

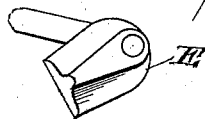
No. 526,202.

Patented Sept. 18, 1894.



WITNESSES:

*H. Walker*  
*C. Sedgwick*



INVENTOR

*J. J. Schairer*  
BY

*Munn*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN JACOB SCHAIRER, OF CLINT, TEXAS, ASSIGNOR OF SEVEN-TWENTY-THIRTS TO ALBERT O. HUBBARD, OF SAME PLACE, AND WILLIAM W. FINK AND FRANK E. HUNTER, OF EL PASO, TEXAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 526,202, dated September 18, 1894.

Application filed March 1, 1894. Serial No. 501,976. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN JACOB SCHAIRER, of Clint, in the county of El Paso and State of Texas, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved car coupling, which is comparatively simple and durable in construction, arranged to prevent accidental uncoupling, permit of coupling without the operator stepping between the cars, and adapted to couple cars of different heights.

The invention consists principally of a knuckle pivoted in the drawhead and provided with cam surfaces, and an arm mounted to swing and adapted to engage the said cam surfaces to open and close the knuckle.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is an enlarged sectional plan view of the improvement with the knuckle closed, the section being taken on the line 2—2 in Fig. 4. Fig. 3 is a similar view of the same with the knuckle open. Fig. 4 is a front elevation of the same. Fig. 5 is a side elevation of the knuckle; and Fig. 6 is a perspective view of the arm for acting on the knuckle.

The improved car coupling is provided with a drawhead A formed in its front end with a recess or pocket A' in which is arranged a knuckle B held on a vertically-disposed pivot C secured in the top and bottom of the drawhead A. The knuckle B is made approximately U-shaped as plainly shown in Figs. 2 and 3, and is provided with a vertically-disposed coupling head B' and a curved back B<sup>2</sup> between which and the said head is adapted to pass the head B' of the knuckle in the opposing drawhead.

The top and bottom of the pocket A' are cut out as at A<sup>2</sup>, so as to permit the knuckle

head B' of the opposing drawhead to move up and down when cars of a different height are to be coupled, but an accidental uncoupling of the coupled knuckles is prevented, as the point A<sup>3</sup> on the side of the pocket A' prevents sidewise disengagement of the coupling heads of the two knuckles.

On the front side B<sup>3</sup> of the knuckle B are arranged two cam surfaces or wedge-shaped lugs D and D', see Fig. 5, arranged on opposite sides of the pivot pin C and adapted to be engaged by a cam-like arm E secured on the inner end of a shaft F mounted to turn in the front side of the drawhead A, and extending to one side of the car, the outer end of this shaft F being provided with a suitable handle F' adapted to be taken hold of by the operator to turn the said shaft F, so as to move the arm E either in engagement with the cam surface D to open the knuckle or with the cam surface D' to close the knuckle. See Figs. 3 and 2 respectively. It is understood that when the several parts are in the position shown in Fig. 2, then the arm E engages the cam surface D' and thus holds the knuckle B in a closed or coupled position, so as to prevent accidental opening or uncoupling of the said knuckle. Now, when the operator turns the handle F', so as to swing the arm E upward, then the latter finally moves in contact with the cam surface D, whereby a swinging motion is given to the knuckle B in the direction of the arrow a', so as to open the knuckle for uncoupling and for holding it in an open position to receive an entering knuckle when coupling two cars. It will be seen that by this arrangement the knuckle B is locked in either an open or a closed position by the arm E. The top and bottom of the head B' of the knuckle preferably project slightly, as shown at B<sup>4</sup> in Fig. 4, so that the said head is flush with the top and bottom surfaces of the head A. Now, in order to permit the knuckle to be opened to its full extent, the front edge of the top and bottom of the pocket A' is slightly cut out as at A<sup>4</sup> to form a seat for the projecting top and bottom parts B<sup>4</sup> of the head B'. See Figs. 1 and 4. Now, it will be seen that by the arrangement described,

the cars can be readily coupled and the knuckles locked in place to prevent accidental opening and uncoupling, and cars of different heights can be readily coupled, as the heads B' are of a sufficient height to compensate for any difference in the heights of the cars.

The head B' of the knuckle B is preferably provided at or near its middle with a horizontally-extending recess for the reception of an ordinary link, held in place in the head by a pin passing through the head in a corresponding aperture formed for the purpose. It is understood that when the operator turns the handle so as to swing the arm E upward, to move the arm out of contact with either cam surface D or D', then the knuckle will swing freely and will not be accidentally coupled.

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

1. A car coupling, comprising a knuckle pivoted in the drawhead and provided with cam surfaces on opposite sides of its pivot, and an arm mounted to swing and adapted to engage the said cam surfaces, to open and close the knuckle and to lock the same in either an open or closed position, substantially as shown and described.

2. A car coupling, comprising a knuckle pivoted on a vertically-disposed pivot and

provided with a coupling head and a curved back, cam surfaces formed on the front side of the said knuckle and on opposite sides of the pivot, and an arm mounted to swing and adapted to engage the said cam surfaces, to open and close the knuckle and to lock the same in either an open or closed position, substantially as shown and described.

3. A car coupling, comprising a knuckle pivoted on a vertically-disposed pivot and provided with a coupling head and a curved back, cam surfaces formed on the front side of the said knuckle and on opposite sides of the pivot, an arm mounted to swing and adapted to engage the said cam surfaces, to open and close the knuckle and to lock the same in either an open or closed position, and a handled shaft mounted to turn and carrying the said arm, substantially as shown and described.

4. A car coupling provided with an approximately U-shaped knuckle mounted to turn and having one end formed with a coupling head and the other end with a curved back, the front side of the said knuckle being provided with cam surfaces, substantially as shown and described.

JOHN JACOB SCHAIRER.

Witnesses:

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R. J. CARR.