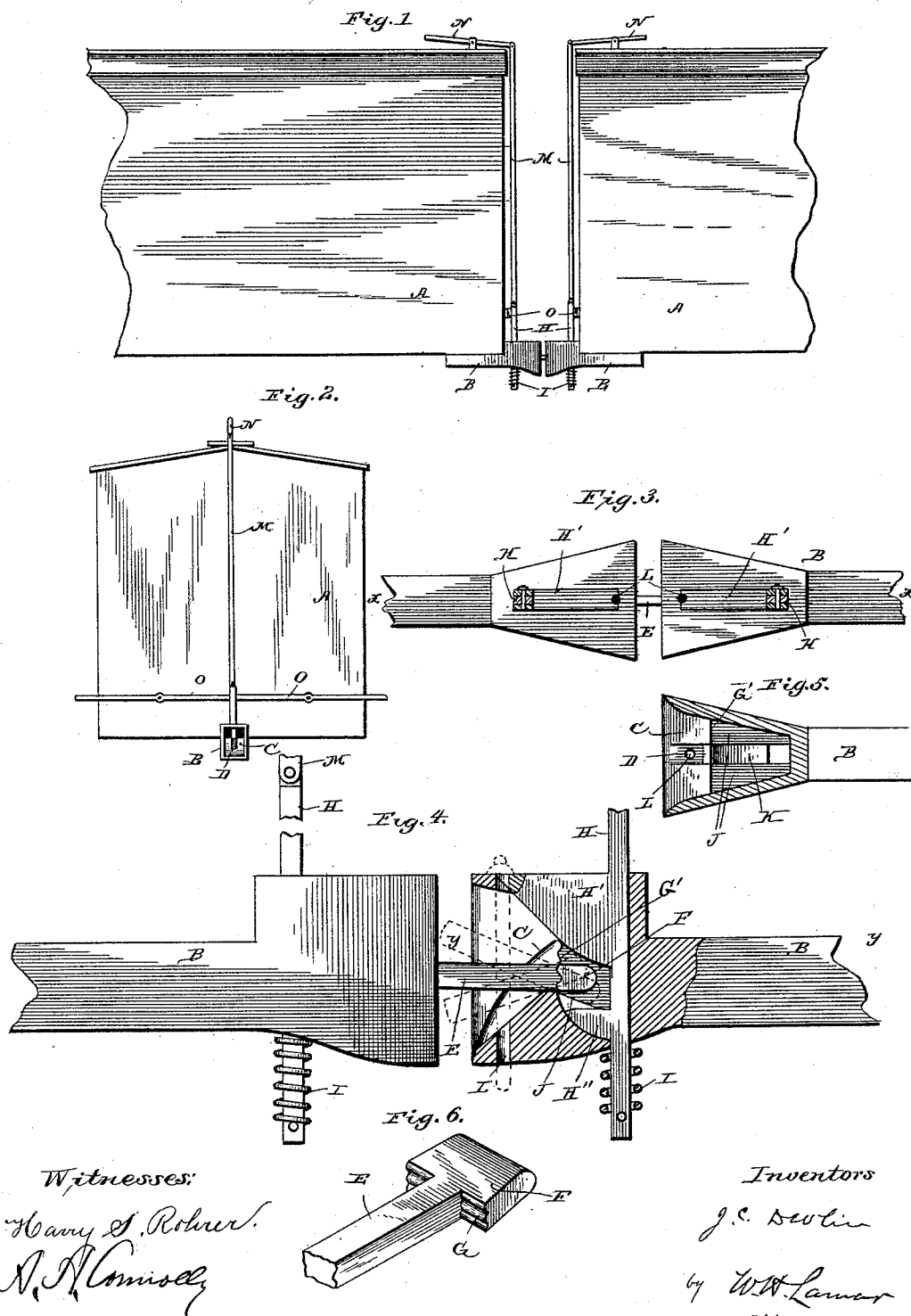


(No Model.)

J. C. DEVLIN.
CAR COUPLING.

No. 465,556.

Patented Dec. 22, 1891.



UNITED STATES PATENT OFFICE.

JAMES C. DEVLIN, OF HERNANDO, MISSISSIPPI, ASSIGNOR TO THE DEVLIN
AUTOMATIC CAR COUPLING COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 465,556, dated December 22, 1891.

Application filed May 5, 1890. Renewed May 13, 1891. Serial No. 392,549. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. DEVLIN, a citizen of the United States, residing at Hernando, in the county of De Soto and State of Mississippi, have invented certain new and useful Improvements in Car-Couplers; 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.

The object of this invention is to produce an improved automatic car-coupler adapted to couple cars of the same or of different heights and that can be disengaged from the top or from either side of the car. It is fully illustrated in the accompanying drawings, in which—

Figure 1 is a partial side elevation of two cars coupled with my device. Fig. 2 is an end view of one of the cars. Fig. 3 is an enlarged plan view of the coupled draw-heads. Fig. 4 is an enlarged side view of the same draw-heads, one being shown in section on the line $x x$, Fig. 3. Fig. 5 is a section on the line $y y$, Fig. 4. Fig. 6 is a perspective view showing one end of the coupling-link.

In the drawings, A A are cars, and B B are identically-similar draw-heads secured thereto in any suitable manner. Each draw-head has an enlarged end longitudinally recessed to receive a peculiar link E, having at each end an approximately arrow-like or T-shaped head F, terminating in a rounded end. The internal walls of the recess converge, so that the link in passing inward is carried toward the axial line of the recess. The lower inclined wall C has at its inner limit an abrupt offset G', with horizontal corrugations, and is provided with a slot or groove D in the vertical plane of said axis and of a width slightly greater than the width of the body of the link. As the link enters the recess it advances, guided by the converging walls, until its head F passes the offsets in the lower incline, when its body falls into the groove D and the laterally-projecting head passes behind the corrugated surface G', which is preferably slightly inclined forward at the bottom. The faces G of the head are corrugated like the surface against which they rest, and this, together with the slight inclination, causes traction

upon the link to maintain it in position. Beyond the surface G' the recess is enlarged, and its lower wall slopes downward and rearward in order to permit the depression of the head in case the adjacent draw-head is higher than the one under consideration. If it is lower, the link may be depressed, as indicated in dotted lines, the bottom of the groove being inclined downward and outward. A little in the rear of the inner end of the link, when in engagement, is a vertical sliding bar H, passing entirely through the draw-head and projecting above and below. Upon the front of this bar is an approximately quadrantal projection H', that normally rests in a slot in the upper part of the head, with its upper surface flush with the upper surface of the latter and with its inclined lower edge in contact or nearly in contact with the end of the link. In this position it counterbalances the weight of the outer end of the link and keeps the latter always in a horizontal position, except when it is forced up or down by impinging upon the inclines of a higher or lower draw-head. This edge is struck by the entering link, and the bar is thus raised with the projection, permitting the link-head to pass to the rear of the offset above described. When the link falls into the slot D, it is followed by the projection, impelled by gravity alone or by gravity aided by a spring I, coiled about the projecting lower end of the bar and reacting against the lower side of the draw-head. If it is not desired to use the spring, the bar may be of any weight, there being ample space for enlarging it above the draw-head. The bar also bears a second projection H'' in the plane of the first and below the lowest point reached by the link-head, where it lies in a depression in the floor of the recess and at all times extends forward beneath the head when the latter is in its coupling position. The upper projection, besides holding the link in a horizontal position, prevents its accidental rising when "slacked" or released from the corrugations, and the lower projection serves under the same circumstances to raise the link for uncoupling. To thus raise it a rod M is attached to the upper end of the bar and carried to the top of the car, where it engages a pivoted lever N, to be operated

either by the hand or by the foot. Other levers O, pivoted upon the end of the car, also engage the bar or rod and extend outward upon either side in convenient position to be reached by one upon the ground or upon the car-ladder. It being sometimes necessary to couple to a car having only the ordinary link, the draw-head is perforated at L to receive the usual coupling-pin.

10 What I claim is—

1. The combination, with the draw-head having the converging axial recess, the offset in the bottom wall thereof, and the groove in the middle of said wall, of the T-headed link adapted to drop into said groove and engage said offset.

2. The combination, with the draw-head having the converging axial recess, and the forwardly-inclined offset G' in its wall, of the link having a head F, adapted to fall behind said offset, and the spring-actuated bar H, having the projection H' normally resting upon the inner end of the link, substantially as and for the purpose set forth.

25 3. The combination, with a draw-head having integral internal offsets to be engaged by

a suitable link falling behind them, of a bar sliding vertically in the draw-head and provided with projections above and below the link, respectively, and adapted, respectively, to prevent accidental disengagement and to lift the link out of engagement when the bar is raised.

4. The combination, with the draw-head having the converging axial recess, and the offset and the groove in the lower wall of the recess, of the T-headed link adapted to lie in said groove and engage said offset, the bar H, sliding vertically in the draw-head and provided with the projections above and below the link-head, the spring holding the bar at its lowest point, the rod M, connected to the upper end of the bar, and the levers N O for raising the rod and bar, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES C. DEVLIN.

Witnesses:

MARTIN S. DECKER,
FREDK. P. RUSSELL.