2 Sheets—Sheet 1.

G. W. WILLIAMSON.

CAR-LINK ADJUSTER.

No. 180,083. Patented July 18, 1876.

Fig. 1.

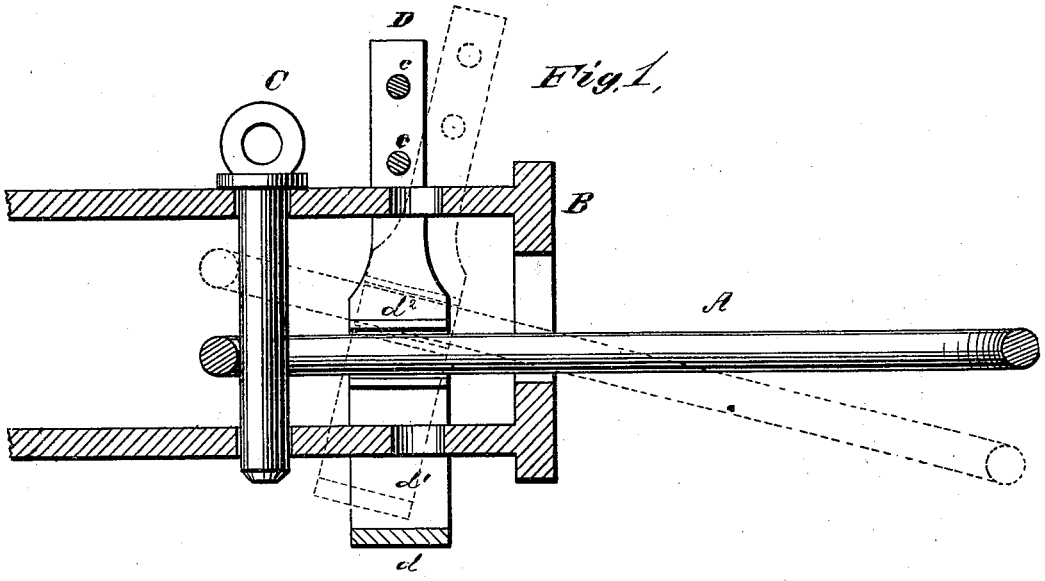


Fig. 2.

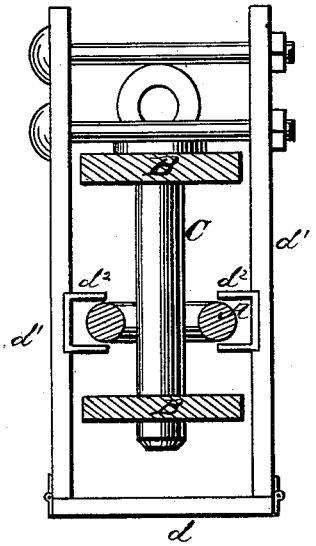
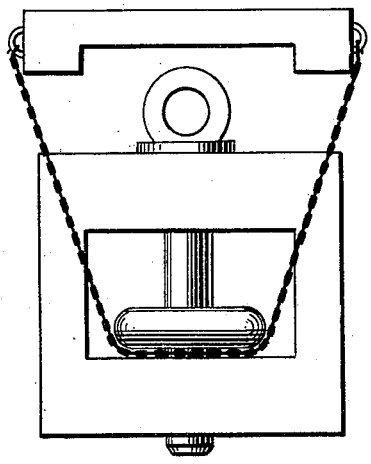


Fig. 3.



WITNESSES.
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ATTORNEYS.

2 Sheets—Sheet 2.

G. W. WILLIAMSON.

CAR-LINK ADJUSTER.

No. 180,083. Patented July 18, 1876.

Fig. 4.

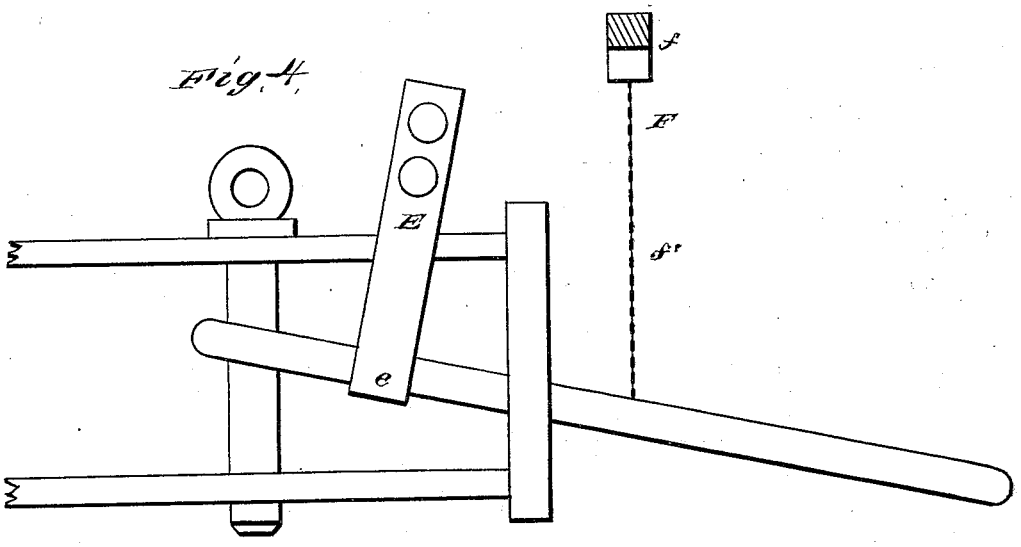


Fig. 5.

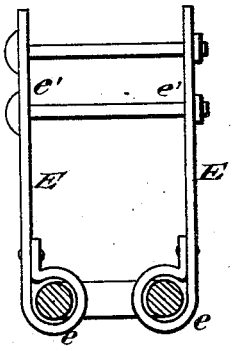
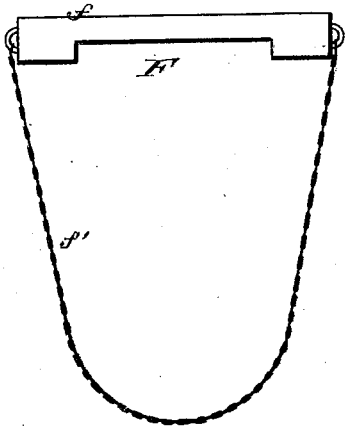


Fig. 6.



WITNESSES

E. H. Bates

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UNITED STATES PATENT OFFICE.

GEORGE W. WILLIAMSON, OF PITTSTON, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH HIS RIGHT TO GIRARD HILLERS, OF SAME PLACE.

IMPROVEMENT IN CAR-LINK ADJUSTERS.

Specification forming part of Letters Patent No. **180,083**, dated July 18, 1876; application filed June 3, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. WILLIAMSON, of Pittston, in the county of Luzerne and State of Pennsylvania, have invented a new and valuable Improvement in Link-Adjuster; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of longitudinal vertical section of my link-adjuster; and Fig. 2 is a transverse vertical sectional view, and Fig. 3 is a front view, of the same. Fig. 4 is a side view, and Figs. 5 and 6 are detail views, thereof.

This invention consists in a car-coupling link-adjuster which is operated by a direct vertical lifting motion, without the use of side appliances, to enable the link to enter an opposite draw-head.

In the accompanying drawings, A designates a link; B, a draw-head; C, an ordinary coupling-pin; and D a device for adjusting the outer part of link A, so as to enable it to enter an opposite draw-head, which may be either higher or lower than draw-head B.

Link-adjuster D may be made in any one of several forms without departing from the spirit of my invention, and may be applied either inside of the draw-head B, or outside thereof, and it may be attached to said draw-head, or entirely separate therefrom; but said link-adjuster must be capable of operation from the car-platform by a vertical movement of the operator, and without the use of side attachments to the link or draw-head.

In Figs. 1 and 2 link-adjuster D consists of a bottom piece, *d*, side pieces d^1, which are hinged thereto, and which are connected at the top by detachable bolts *c*. On the inside of said pieces d^1 are attached flanged plates d^2 d^2, which grasp the opposite sides of link A within draw-head B, and operate to raise or depress the outer end of said link, so as to make said link enter the opening in the opposite draw-head.

Side pieces d^1 d^1 move vertically on the outside of draw-head B, if an open draw-head is used, or in slots cut in the upper and lower sides of draw-head B, if a closed draw-head be used; and cross-bolts *c* make convenient handles for the grasp of the operator; or the upper ends of side pieces d^1 may be so shaped as to answer the same purpose.

Link-adjuster or grapple D is freed from engagement with the link by detaching cross-bolts *c*, and turning back hinged arms d^1 d^1 until the flanged plates d^2 d^2 will pass freely up and down without touching link A. Said link is adjusted longitudinally by moving link-adjuster D out or in, when the friction of flanged grappling-plates d^2 d^2 against the bottom and sides of said link will carry it with said link-adjuster.

In place of the grappling link-adjuster D, as shown in Fig. 1, I may use a modification shown in Figs. 4, 5, and 6.

E E, Figs. 4 and 5, designate two plate or sheet-metal arms, which are hooked or looped at their lower ends *e e* about the link A, and which may be connected at their upper ends *e′ e′*. Plates E E may be used to adjust link A longitudinally, or to elevate the inner part of link A, and thereby depress the outer part of said link. F, Figs. 4 and 6, designates a device for elevating the outer part of said link; and it consists of handle or bar *f*, and chain *f′*, secured to both ends of said handle, so as to form a loop below. This loop slips under the outer part of the link A for the purpose of lifting the same when the operator raises the cross-bar or handle *f*.

What I claim as new, and desire to secure by Letters Patent, is—

Link-adjuster D, provided with hinged side arms d^1 d^1 and flanged grappling-plates d^2 d^2, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE W. WILLIAMSON.

Witnesses:

JOHN F. ACKER,

GEORGE E. UPHAM.