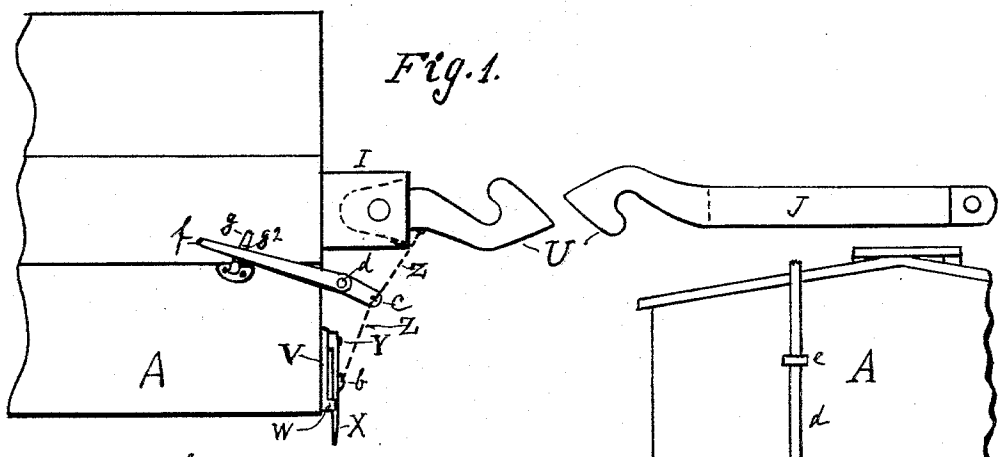
(No Model.)

A. M. GUSTAFSON.

CAR COUPLING.

No. 589,828. Patented Sept. 14, 1897.

Fig. 1.



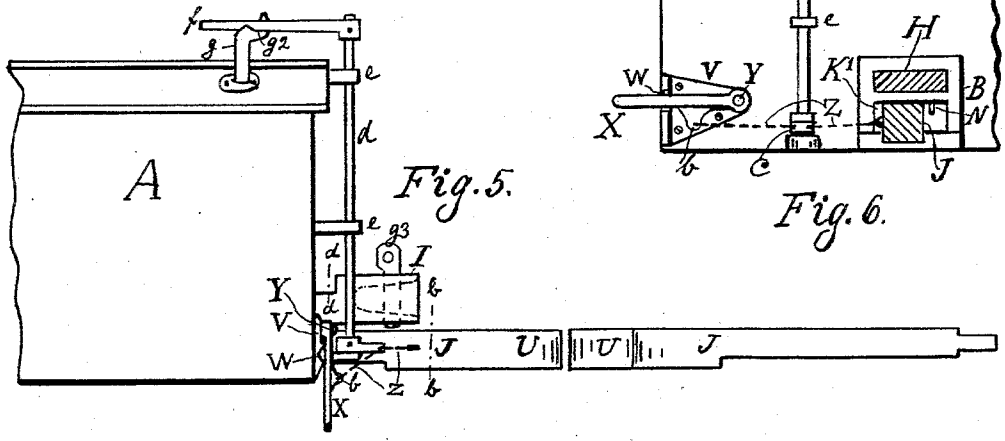


Fig. 5.

Fig. 6.

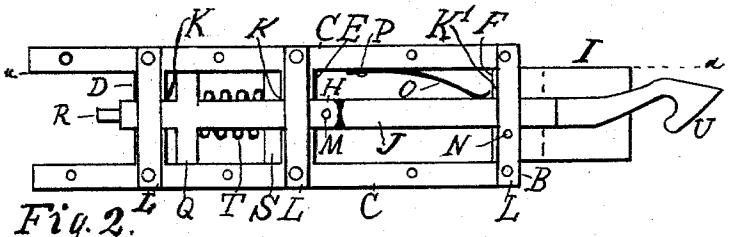


Fig. 2.

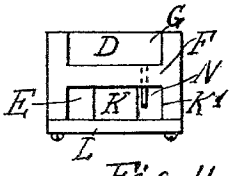


Fig. 4.

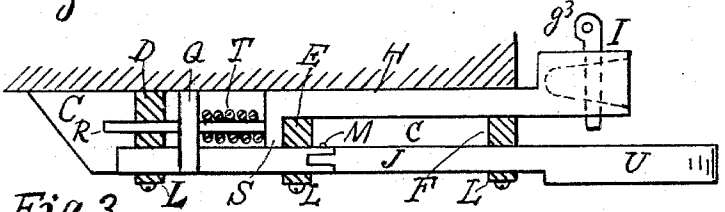


Fig. 3.

WITNESSES:

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BY his ATTORNEY.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

AUGUST M. GUSTAFSON, OF GILE, WISCONSIN, ASSIGNOR OF ONE-HALF TO ANDREW NELSON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 589,828, dated September 14, 1897.

Application filed February 11, 1897. Serial No. 622,983. (No model.)

To all whom it may concern:

Be it known that I, AUGUST M. GUSTAFSON, a citizen of the United States, residing at Gile, in the county of Iron and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in car-couplings, and has for its object to provide a durable, safe, and convenient coupling for railway-cars in general. I attain this object by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of a portion of a box-car provided with my new coupling. Fig. 2 is a bottom view of the coupling alone. Fig. 3 is a longitudinal sectional side view, as on the line *a a* in Fig. 2, but with the coupling in its proper position top side up. Fig. 4 is a front end view of the coupling with the draw-bars removed. Fig. 5 is a side elevation of Fig. 1, and Fig. 6 is an end view of Fig. 5 with the upper draw-bar in section on the line *d d* and the lower draw-bar in section on the line *b b*.

The parts of the coupling secured upon the adjacent ends of two cars are so exactly alike that a description of those on the end of one car will answer also for those on any other end of a car provided with my coupling.

In the drawings, A designates a box-car, in the end of which is secured the frame or box B, formed of the two side walls C and the cross-partitions D, E, and F. In the upper edge of the transverse walls E and F, I provide the notches G, in which slides the upper draw-bar H, the front end of which is of the usual shape for receiving the old and well-known link and pin in case of coupling with a car having said old style of coupling. The draw-head I projects, however, upward above the draw-bar, but not below it, and is thus out of the way for a second draw-bar J, which is slidingly inserted in the notches K in the lower edge of the cross-walls D, E, and F and retained in said notches by the supporting-strips L. The draw-bar J is near its middle provided with a joint M, so that its front end, which is of the hook shape shown, may swing in the horizontal plane in the elongated notch K′ in the front wall F.

N is a rigid pin against which the front section of the draw-bar J is normally held by the flat spring O, secured at P. The rear section of the lower draw-bar is formed with an upwardly-projecting wing Q, through which passes the rod R, extending rearwardly from the downwardly-projecting wing S, formed on the rear end of the upper draw-bar H.

T is a coil-spring interposed between the wings Q and S and encircling the rod R.

Upon the end of the car I secure a bracket V, provided with a V-shaped notch W, into which may be sprung the end of the hand-lever X, which is pivoted at Y to the bracket V.

Z is a chain connecting the coupling-hook U with the short side arm *b* of the lever X. To the chain Z is also attached the horizontally-swinging arm *c*, secured on the rocking rod *d*, which extends through the bearings *e* to the top of the car, where it is provided with a swinging hand-lever *f*, adapted to be sprung into a V-shaped notch g^2 in the top of the bracket *g*, secured to the roof of the car.

In operation when two cars are moved together to be coupled the draw-heads I serve as bumpers, and after the springs T are compressed the hooks U slip over each other and interlock, or if one of the cars have only the link-and-pin coupling then the link is inserted in the draw-head I and the usual coupling-pin g^3 dropped in.

If the hooks U are used, the spring T serves as a cushion to pull against, whereby the much-desired yielding connection between railway-cars is obtained.

The coupling and uncoupling of the hooks U may be effected from the top of the car by forcing the hand-lever *f* out of or into the notch g^2 in the bracket *g*, thereby operating the rod *d*, arm *c*, chain Z, and swinging the hook U, or from the side of the car by swinging the lever X out of or into the notch W in the bracket V. When either one of the le-

vers X and *f* is swung into its retaining-notch, the hook U is thereby held back from engagement with the opposite hook, and when released from the notch the hook is free to engage the opposite hook. The two hand-levers are so arranged that the operator may uncouple the hooks from the top of the car and couple them again from the side of the car, or vice versa. Further, it will be observed that the coupling-hook U projects both sidewise and is returned toward the car, so that when two of them engage each other they cannot become disengaged accidentally by the jarring of the cars. This, together with the springs O and T, both of which tend to hold the hooks in engagement, combine to make my coupler extraordinarily safe against accidental uncoupling. Finally, the upper and lower draw-bar enables one to use two couplings in going up steep grades with a heavy train and to have an extra coupling ready for use if one should get broken or out of order.

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

1. In a car-coupling, the combination with the swinging spring-pressed hook U, of the chain Z, spring-lever X, secured thereto and the bracket V, secured upon the end of the car and having a **V**-shaped notch for receiving said spring-lever, and the rocking rod *d*, extending to the top of the car and having its lower end provided with a horizontally-swinging arm engaging the chain Z, and its upper end provided with a spring-lever adapted to be sprung into a **V**-shaped notch in a bracket, and the bracket *g*, secured upon the top of the car and having a **V**-shaped notch for holding said lever when the hook U, is to stand disengaged ready for the cars to move apart, substantially as and for the purpose set forth.

2. In a car-coupling the combination with the box or frame B, having the cross-walls D and E, of the draw-bar H, having the head I, adapted to receive the ordinary link and pin and having its rear end formed with a vertical flange or wing and a spring guiding-rod extending rearwardly therefrom, and the hook-shaped, jointed draw-bar J, having the upwardly-projecting wing Q, provided with a hole in which the guiding-rod R, of the upper draw-bar slides, and the spring T, interposed between the wings Q and S, of said draw-bars; said wings being located between and butting against the transverse walls D and E of the frame, substantially as shown and described.

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

AUGUST M. GUSTAFSON.

Witnesses:
G. BAKER,
C. ADAMS.