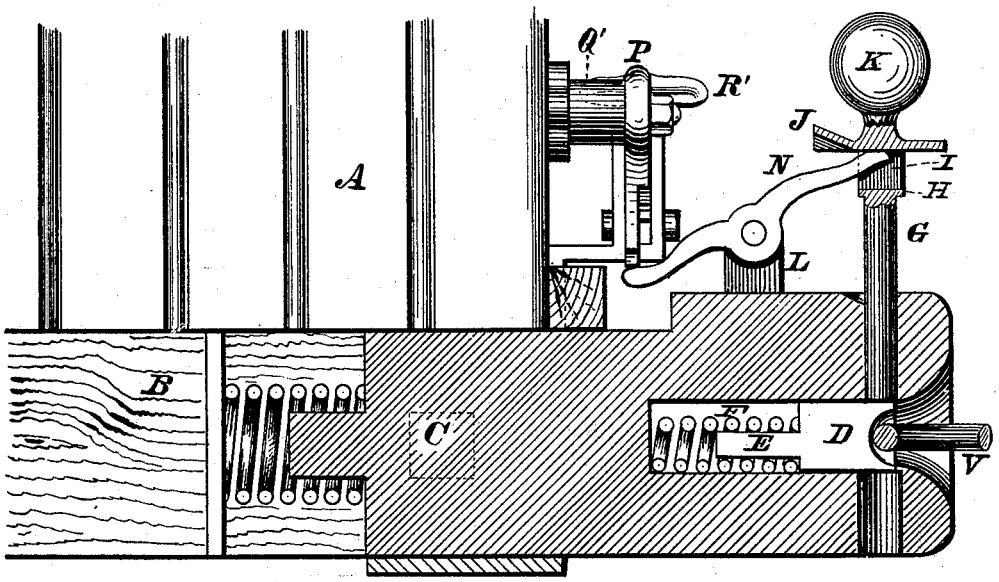
H. J. L. DETTE.

Car-Coupling.

No. 198,736. Patented Jan. 1, 1878.

Fig. 1.



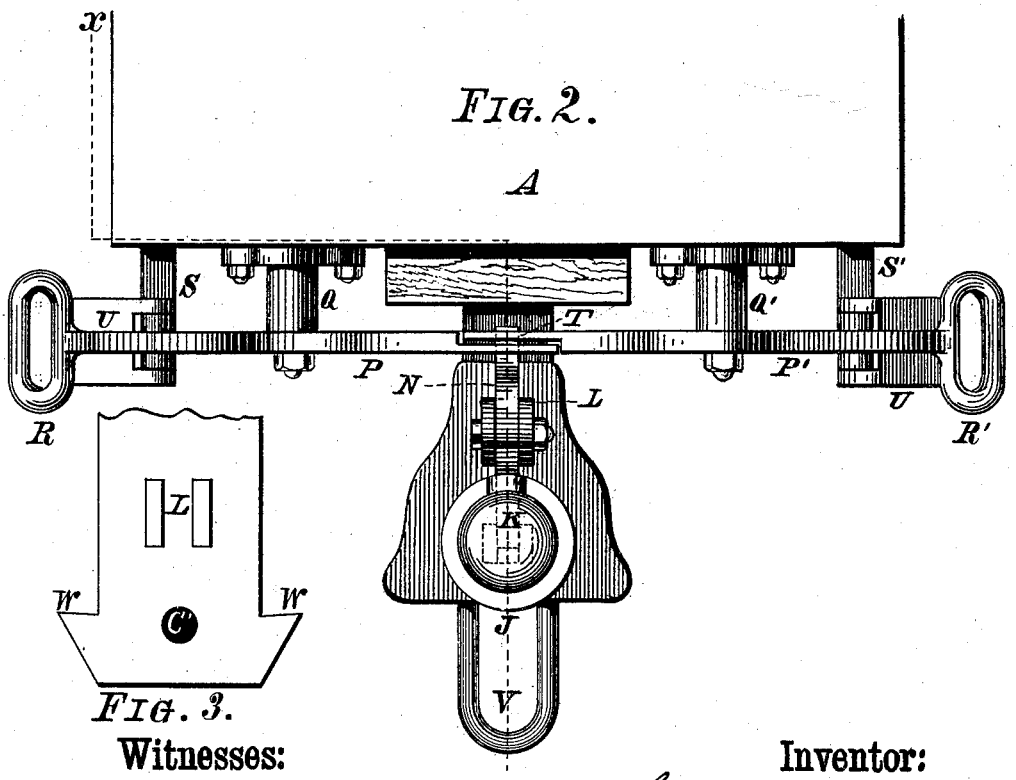


FIG. 2.

FIG. 3.

Witnesses:

Frank Hirsch

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by Michael J. Stark

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UNITED STATES PATENT OFFICE.

H. J. LEWIS DETTE, OF BUFFALO, NEW YORK, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO JULIUS COHEN AND HENRY MILLING, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **198,736**, dated January 1, 1878; application filed December 3, 1877.

To all whom it may concern:

Be it known that I, H. J. LEWIS DETTE, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Car-Coupling; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has special reference to car-couplings; and its object is, and it consists in, the production of a connection for railroad-cars which shall be self-coupling, and may be uncoupled from the sides or platform of a car, to dispense with the necessity of stepping between the cars to withdraw or insert the coupling-pin, thus guarding against the frequent accidents to life and limbs of railway-employés when engaged in coupling and uncoupling cars.

It shall, furthermore, be so constructed as to fit the majority of cars now in use without changes or alterations on the car body or frame, so that my improved coupling may be readily substituted for the common link-and-pin coupling; and it is to be so arranged as to connect with the link-and-pin couplings now in use.

To this end, I construct my car-coupling as illustrated in the drawings hereinbefore referred to, in which—

Figure 1 is a longitudinal sectional elevation of my improved car-coupling as attached to the body of a car. Fig. 2 is a plan of the same, and Fig. 3 shows a modification.

Like letters of reference indicate corresponding parts in all the figures.

In these drawings, A represents a fragment of a freight, stock, grain, coal, or other railroad-car, of the ordinary or any special construction. On each end of this body are securely fastened two draw-timbers, B, placed a sufficient distance apart to admit the shank of the draw-head C between them, and they are made of the usual length. This draw-head C has a longitudinal bore, into which is inserted a push-block, D, having a stud, E, serving as a guide for a spiral spring, F, placed between said push-block D and the end of the said bore to push the said block forward toward the link-opening in said draw-head C. The draw-head is traversed vertically by a cylindrical passage near its face for the reception of the coupling-pin G. This pin has, near its upper extremity, an angular enlargement, H, which is traversed by an aperture, I. Above this enlargement is a circular disk, J, and above that a ball, K. Upon the draw-head C is provided a bracket, L, within which is pivoted a lever, N, the forward end of which engages the pin G in the aperture I, while the rear end is acted upon by the extremity of either one of two levers, P P′, which levers are centrally pivoted to the car-body A by means of the flanged studs Q Q′ screwed to said body. The ends of these levers P P′ are provided with handles R R′, for convenience in actuating said levers, and they are provided each with bifurcated guide-brackets S S′, to keep them in proper position. The opposite ends of these levers are reduced in width, as shown at T, so as to enable them to pass one another, and to act upon the lever N, as near as possible, upon the same spot. To the guides S S′ are pivoted stops U, to support the outer end in an elevated position, when necessary, so that the push-block D may readily move forward in uncoupling cars by upholding the pin G.

The push-block D consists of an angular piece, having its face cup-shaped, or provided with a semi-spherical depression.

The operation of my improved coupling is as follows, to wit: Assuming two cars are being uncoupled, the levers P P′ are elevated to depress the rear end of the lever N and elevate the coupling-pin G. Now the cars are disconnected, and can be shifted at any time, the stops U being placed under said levers P, to uphold the said coupling-pin until the link V is withdrawn by separating the cars, when the push-block D will shoot forward, through the action of the spring F, and carry the pin G.

The coupling of cars is effected in a reverse manner of that described for uncoupling.

One of the features of my push-block D is that, when the pin and link are in position, the spring F, acting upon said block, presses the link tightly against the pin, and thus keeps the same in any position, either elevat-

ed, horizontal, or depressed. In this the push-block is assisted by the spherical depression in its face, which fits the said link on its semicircular end, and thus brings sufficient bearing-surface to act upon said link for the purpose mentioned. This spherical depression serves a further useful purpose, inasmuch as it takes in the link V for a short distance, so that the pin G, when dropping off the push-block, will at once fall clear of the link and catch the same, which might not always be the case were the said block square-faced, in which case the pin G may fall upon the link and not readily catch.

It is obvious that in uncoupling cars only one of the pins on each car is withdrawn, and that one of the links always remains in the draw-head C, and is held there by the push-block D, in the position it was in when leaving the opposite draw-head, and is thus ever ready to make connection without guiding the link into the opposite draw-head.

It is further evident that, the levers P being duplicates, coupling and uncoupling may be effected from either side of the car.

In passenger-cars having front and rear platforms I shall alter the shape of the levers P P′ to fit that style of cars—that is to say, I shall bend these levers upward directly behind their fulcrums, so as to bring the end having the handle into a vertical, instead of a horizontal, position, and so that they may be readily manipulated from such platform, and shall attach the guide-brackets S S′ accordingly. No further changes are required to fit my coupling to a car of the before-mentioned style.

To enable my draw-head to connect with the style of hook-couplings known as the "Miller coupler," which is extensively used on passenger-cars, I may provide my draw-head C with wings W, Fig. 3, behind which said hook may catch. As a matter of course, in uncoupling such a connection the Miller coupler will have to be manipulated.

When two cars are to be coupled having each a pin-and-link coupling, but one being considerable higher than the other, I shall use the crooked links now employed for a like purpose.

I have heretofore mentioned that the coupling-pin G has a disk, J. This serves as a protector in winter-time, to prevent ice and snow from locating in the pin-hole, and thus prevent the proper and instantaneous action of the pin G.

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

1. The car-coupling hereinbefore described, consisting essentially of the draw-head C, having the link-aperture fitted with the push-block D, provided with the spherical depression in its face, the spring F on its shank, the coupling-pin G, having the collar J and the angular perforated part H, the lever N, and the levers P, said levers P being pivoted to the car-body, and operating within bifurcated brackets S S, having the stops U pivoted to said brackets, the whole constructed and arranged to operate substantially as and for the purpose specified.

2. The mechanism for actuating the coupling-pin G, consisting essentially of the pivoted lever N, pivoted levers P P′, and guide-brackets S S, provided with the pivoted stops U, as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereto set my hand and affixed my seal in the presence of two subscribing witnesses.

H. J. LEWIS DETTE. [L. S.]

Attest:
MICHAEL J. STARK,
FRANK HIRSCH.