

(No Model.)

J. D. NORMAN & W. A. BENSON.

CAR COUPLING.

No. 267,012.

Patented Nov. 7, 1882.

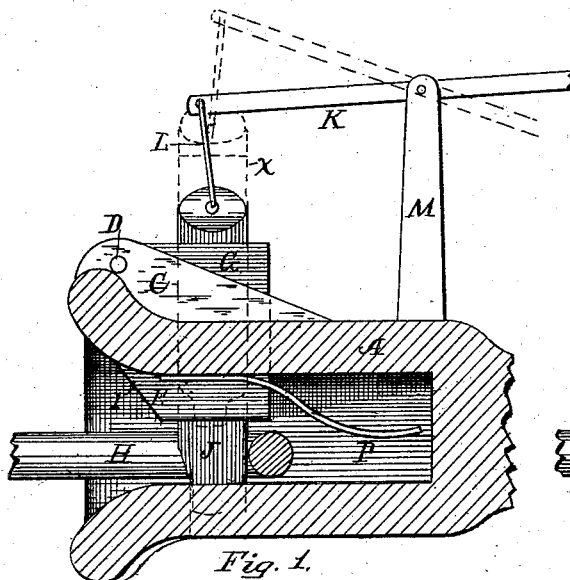


Fig. 1.

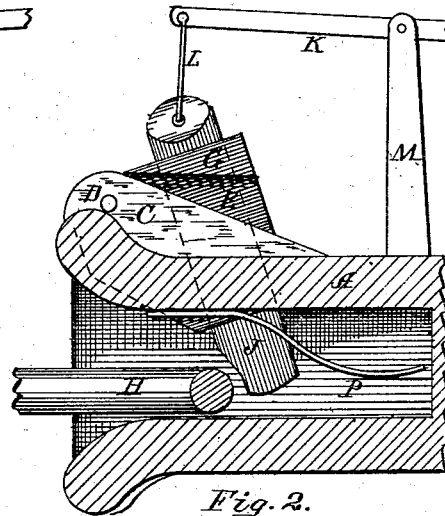


Fig. 2.

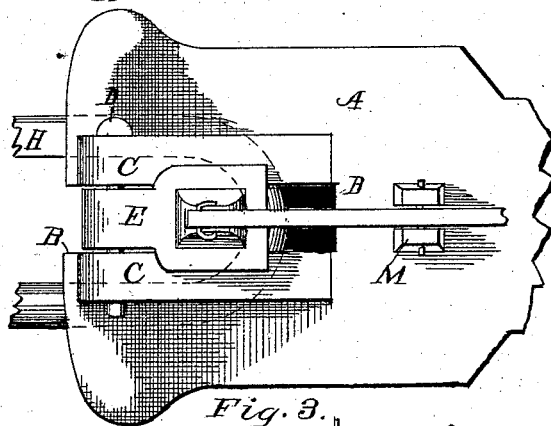


Fig. 3.

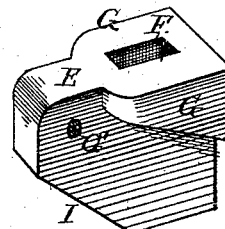


Fig. 4.

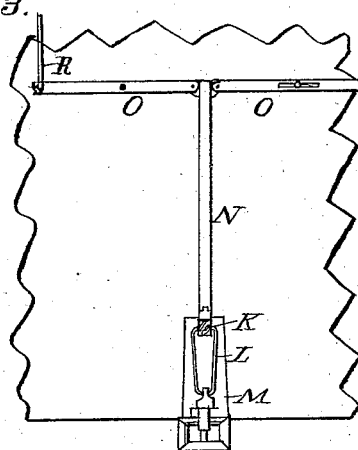


Fig. 5.

Witnesses:

A. L. Zerk

O. J. Pailey

Inventors:

J. D. Norman

W. A. Benson

By J. L. Zerk

UNITED STATES PATENT OFFICE.

JAMES D. NORMAN AND WILLIS A. BENSON, OF WELLFORD, S. C.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 267,012, dated November 7, 1882.

Application filed March 31, 1882. (No model.)

To all whom it may concern:

Be it known that we, J. DAYTON NORMAN and W. A. BENSON, of Wellford, in the county of Spartanburg and State of South Carolina, have invented a new and useful Improvement in Car-Couplings, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a central vertical longitudinal sectional view of the improved coupler. Fig. 2 is a view of same, showing the link in the act of coupling. Fig. 3 is a top view. Fig. 4 is a perspective view of the swinging sheath for the pin, and Fig. 5 is an end view of portion of car to which this improved device is attached.

The object of our device is, first, to provide an automatic coupling device for cars; second, to provide a receptacle for the pin, whereby the pin is adapted both to swing and to be vertically movable, by which means injury to the pin will be obviated, and at the same time it will be kept free from binding to a certain extent when only partially withdrawn, as will be hereinafter more fully set forth.

In the accompanying drawings, A represents an ordinarily-formed draw bar and head in dimensions and in interior construction. The upper wall of the head is slotted, B, extending back to a point equal more than half the depth of the mouth. On each side of this slot is a rib or enlargement, C, extending back as far as the slot B and sloping downwardly to the rear. This rib may be cast with the head or attached thereto. In this slot, and hinged to the rib or enlargement C near the forward end, at D, is a swinging sheath, E. This sheath has a vertical aperture, F, at a point to the rear of its hinge to receive the coupling-pin. On the sides of the sheath are shoulders G, which rest on the sloping surface of the ribs C when the sheath is in its normal condition. The sheath as it rests on its shoulders projects down through the upper wall of the head into the mouth, allowing sufficient space between its lower end and the lower wall of the mouth for the link H to rest between. The lower forward corner of the sheath is cut away, providing a sloping surface, I, as shown.

The pin J may be either round, square, or rectangular, and is adapted to fit loosely in

the aperture F of the sheath E. It is also preferably provided with a head, so as to prevent it from passing down into the sheath too far. The pin may be attached to the forward end of a horizontal lever, K, by means of a link, L. The lever K in this instance is centrally hinged to standards M, projecting from the draw-bar. The rear end of the lever K is connected with a vertical link bar or rod, N, whose upper end is in turn hinged to the inner ends of the levers O, the outer ends of which extend to the side of the car, so that the pin J may be withdrawn without passing in between the cars, also from top of cars by means of rod R.

Within the mouth of the draw-head, secured to the upper wall on each side of the slot B, is a rearwardly and downwardly projecting spring, P. The object of this is to guide the link H on entering, keeping the same close to the lower wall or floor of the mouth, thus permitting said link to readily pass the lower end of the pin, and enabling the pin to more quickly spring forward to its normal position.

The operation of the device will now be described.

The pin J, being independent in its vertical movements of the sheath, can be elevated to assume the position indicated by the dotted lines *x* in Fig. 1. The link can thus be withdrawn. In coupling, the link H enters the mouth, striking the sheath or pin, causing it to swing back, as shown in Fig. 2. The pin is therefore not raised from its seat in the sheath; but since the forward end of the sheath is hinged to the draw-head the rear end of the sheath rises in proportion to the rearward action of the link. Hence the link is not required to move rearwardly through the same space to pass under the pin that it would be obliged to if the sheet were hinged at a point nearer the pin or to the rear of the pin. At the same time, by having it arranged as herein shown, the weight of the pin and the rear end of the sheath will cause the pin to more quickly assume its normal position after the link has passed the end of the pin.

When the sheath is in position it will be noticed that the shoulders G rest on the ribs C. If, therefore, the lower end of the pin should break or the pin should not catch on

the lower wall of the mouth, the shoulders would prevent the pin from swinging forward.

It is obvious that by having a long bearing-point for the pin, as is furnished by the sheath, there will be no danger of the pin binding from any cause, as the sheath furnishes a positive working condition for the vertical movements of the pin at all times.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In car-couplers, the draw-head having the slot B in the upper wall and the ribs or enlargements C, in combination with the sheath E, having the pin-aperture F and shoulders G, hinged to the draw-head, and the pin, substantially as and for the purpose herein shown.

2. In car-couplers, the draw-head having the slot B and enlargement C, in combination with the sheath E, having the pin-aperture F and shoulders G, hinged thereto, and with the pin J, spring P, and link H, substantially as and for the purpose herein shown.

In testimony that we claim the foregoing we have hereunto set our hands this 21st day of March, 1882, in the presence of witnesses.

JAMES DAYTON NORMAN.
WILLIS A. BENSON.

Witnesses:

H. S. BALL,
N. F. WALKER.