G. EDMONDS.
Car-Coupling.

No. 208,382. Patented Sept. 24, 1878.

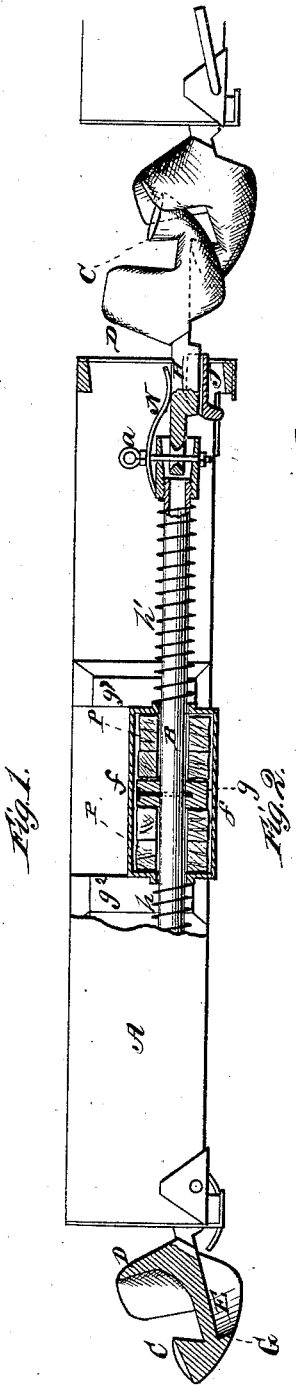

Fig. 1.

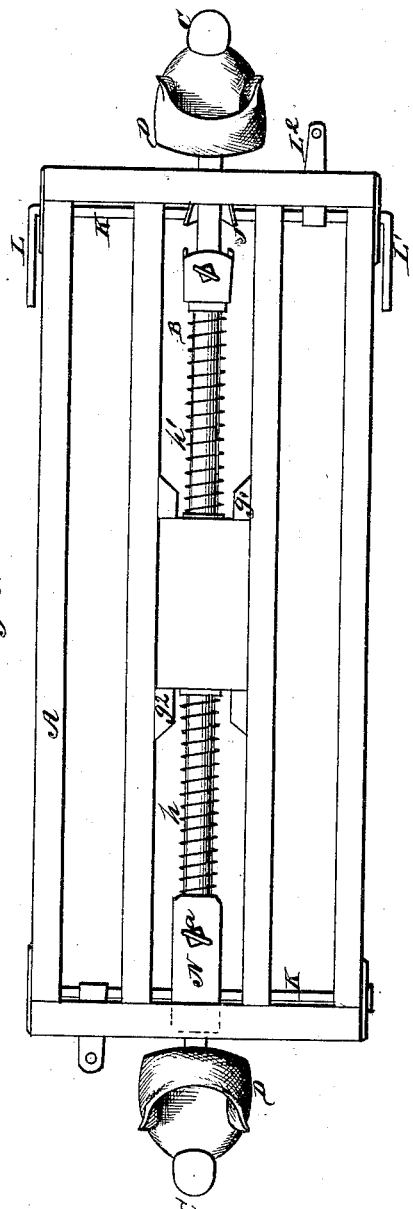

Fig. 2.

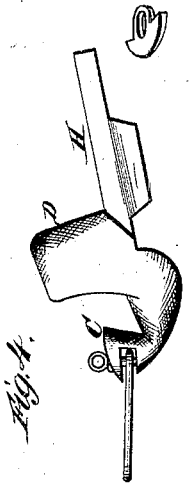

Fig. 4.

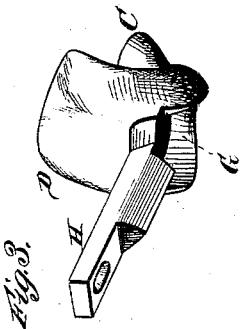

Fig. 3.

WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE EDMONDS, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part Letters Patent No. **208,382,** dated September 24, 1878; application filed September 11, 1878.

To all whom it may concern:

Be it known that I, GEORGE EDMONDS, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and valuable Improvement in Couplers, Bumpers, and Draw-Bars for Railroad-Cars; 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 a side-part section of my coupler, bumper, and draw-bar. Fig. 2 is a top-plan view of the same. Fig. 3 is a perspective detail view; and Fig. 4 is a detail thereof.

My invention relates to means for coupling and uncoupling railway-cars; and it consists, first, in a novel coupling-head, bumper, and coupling-recess; second, in a novel rest guide and lifter for the extended portion of the draw-bar; third, in draw-bar springs formed of cork, arranged within metal plates and separated by a metal block, and combined with the draw-bar and ribs; and, fourth, in an adjustable spring arranged above the draw-bar and its extension, all substantially as hereinafter described, and pointed out in the claims.

A, of the drawings, represents a truck-frame for an ordinary railway-car, and B the draw-bar, which extends through said frame longitudinally, as shown. This bar B has a pivoted extension or connecting bar, H, to the end of which is attached a coupling-head, a bumper, and coupling-recess, all of which are preferably cast in one piece of metal.

My coupling-head is represented by the letter C, and it consists in a knob cast on the extreme front end of the connecting-bar, resembling somewhat an inverted frustum of a cone, the front wall projecting forward from its base to its top, and the summit being inclined from the rear to the front, and slightly curved from its sides to its center, as shown in Fig. 1 of the drawings.

My bumper consists of the concavo-convex projection, (marked D on the drawings,) the inner wall being concave, and arranged with reference to the coupling-head in such a manner as to provide for requisite play for the working parts. On the under side of the head of my connecting-bar, and immediately below the bumper, extending to a point contiguous to the base of the coupling-head, and a short distance from the rear of said head, is the coupling-recess E. This recess is open at its rear, and has vertical walls, which terminate in front in an under bevel. (Marked G on the drawings.)

The letter H represents a bar extending rearward from the bumper and recess to the pivot-pin *a*, by which it is united with the draw-bar proper. This bar is preferably made in V shape on its lower surface.

The letter J represents my rest guide and lifter, which consists in a V-shaped plate of metal arranged directly below the bar H, and upon or within which said bar rests when off duty, and by which it is raised for uncoupling. This plate J is connected with the transverse rod K and lifting-arms L L^1 L^2, by either of which it may be operated.

The letter N represents a spring, the rear end of which is arranged upon the draw-bar B, while the front rests upon the top of bar H, as shown in Fig. 1 of the drawings. The adjustment and tension desired for this spring are secured by means of the pivot-bolt *a*.

The letter P represents my spring for the draw-bar, which consists in a series of cork laminæ arranged side by side, so as to form a block rectangular in shape, as represented. This block of cork so formed is arranged in the truck-frame within plates of metal *f f*, and separated by the metal block *g*, which is rigidly secured to the draw-bar, and the plates *f*, in turn, are secured within ribs or flanges g^1 g^2, or in any other suitable manner.

It is obvious that the cork may be inclosed within a tube properly arranged, and still prove efficient; and it is also obvious that in case solid blocks of cork can be procured of sufficient thickness for the purpose, the layers thereof may be dispensed with.

In the drawings I have shown auxiliary coiled springs *h h'*. These springs are sometimes found serviceable in conjunction with the cork springs P; but their use is not indispensable.

It is further obvious that the connecting-bar H, the coupling-head bumper, and recess

E may be forged as well as cast, and that it is not always necessary to make them of one piece of metal only. For dispatch in manufacture as well as cheapness, I prefer to cast them in one piece of steel or other suitable metal.

I prefer to use said spring at the center, to avoid the duplication of parts.

I find by experiment that cork for springs is most effective and durable when it is prepared by steeping in a solution of saccharine matter—such, for example, as molasses and water in about equal quantities. In this application I do not desire to claim this method of treating cork, inasmuch as I intend to file a separate application for that invention.

In Fig. 4 of the drawings I have shown a transverse recess, and a pin in the coupling-head. This device is designed to enable the operator to couple cars by the use of an ordinary coupling-pin, when desirable so to do.

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

1. The combination of draw and coupling head C with the coupling-recess E, which recess is open at its rear, and has vertical walls that terminate in front in the under bevel G, substantially as specified.

2. The combination of the draw and coupling head C, coupling-recess E, bumper D, and connecting-bar H, substantially as shown and described.

3. The V-shaped guide and lifter J, in combination with the bar H and lifting-levers L, substantially as set forth.

4. The adjustable spring N, in combination with the bar H and pivot-bolt *a*, substantially as and for the purpose set forth.

5. The draw-bar B, provided with collar *g*, in combination with cork spring P, arranged on either side of the collar and confined in the casing *f*, said casing being arranged centrally of the car-frame and held in position by lugs g^1 and g^2, substantially as specified.

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

GEORGE EDMONDS.

Witnesses:
LEMUEL BURSLEY,
GEORGE E. UPHAM.