(No Model.)

T. HYNES.

CAR COUPLING.

No. 407,012. Patented July 16, 1889.

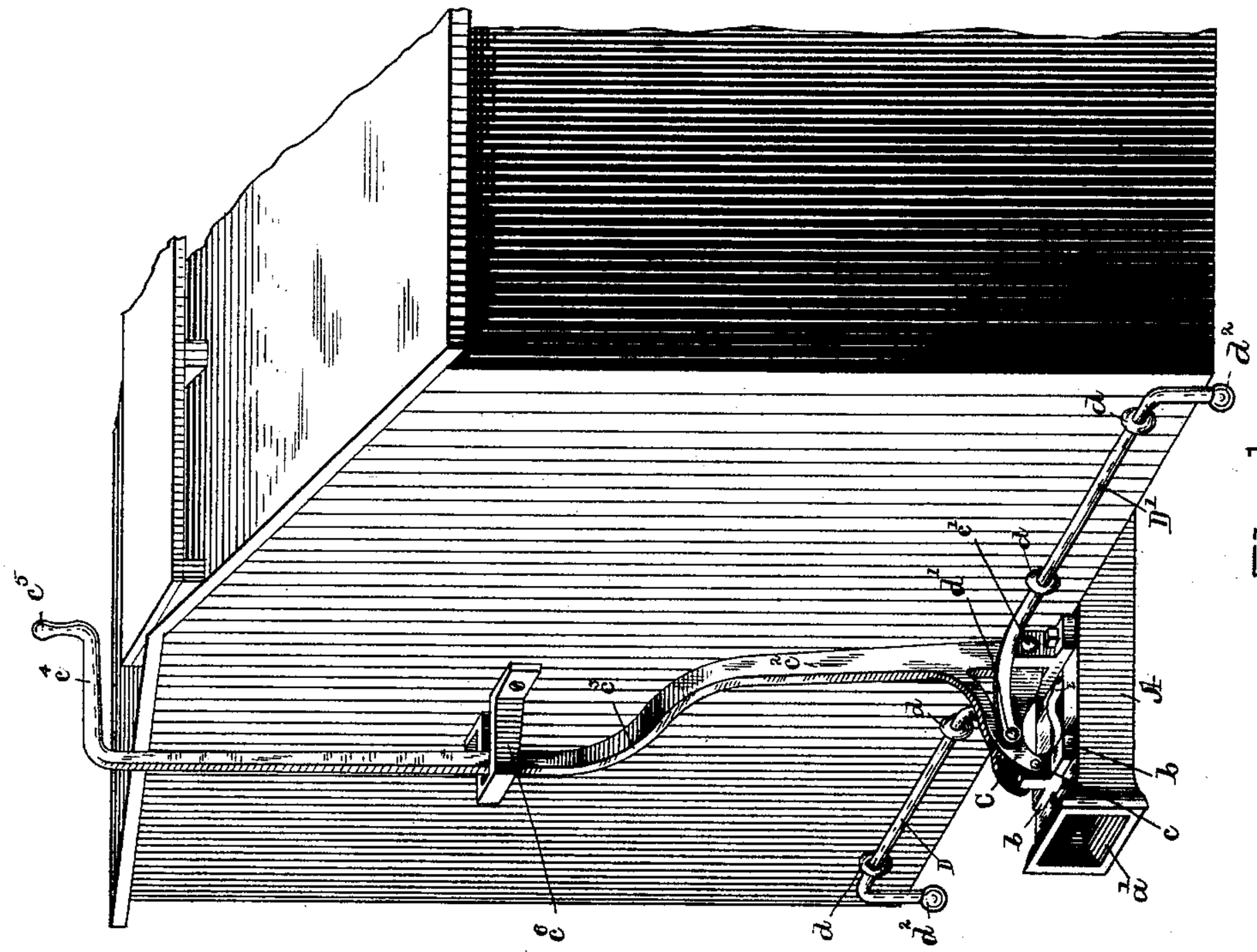

Fig. 1.

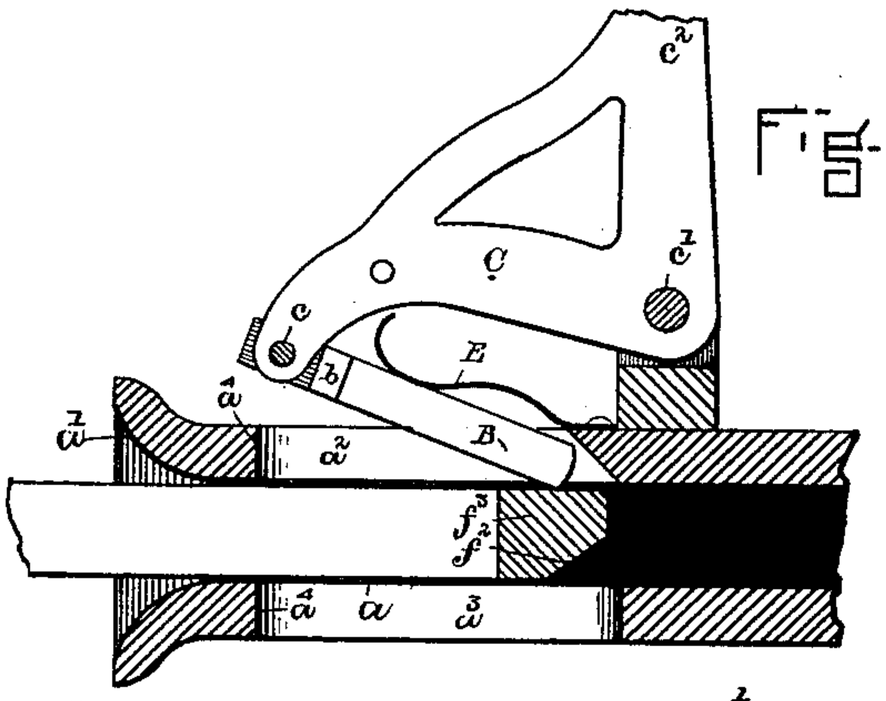

Fig. 2.

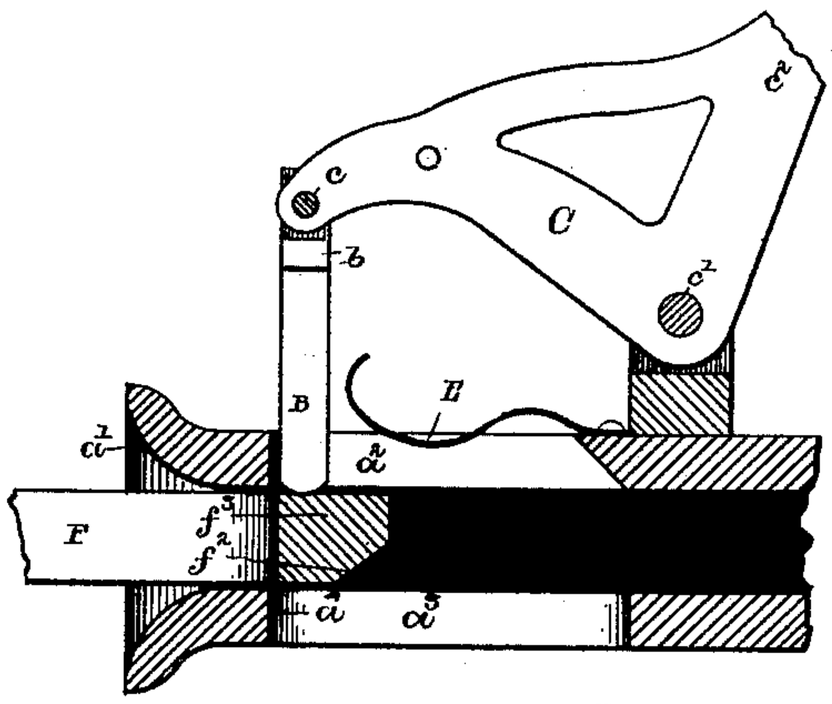

Fig. 3.

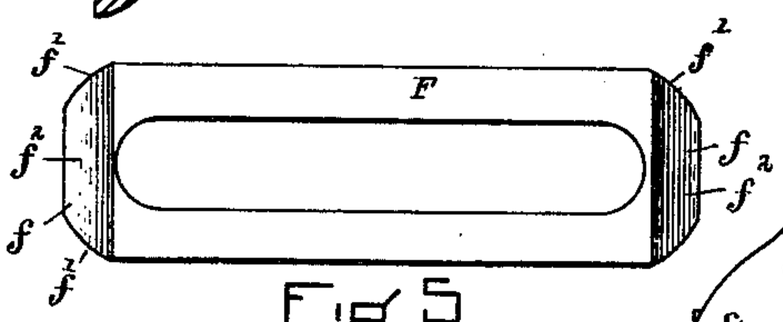

Fig. 5

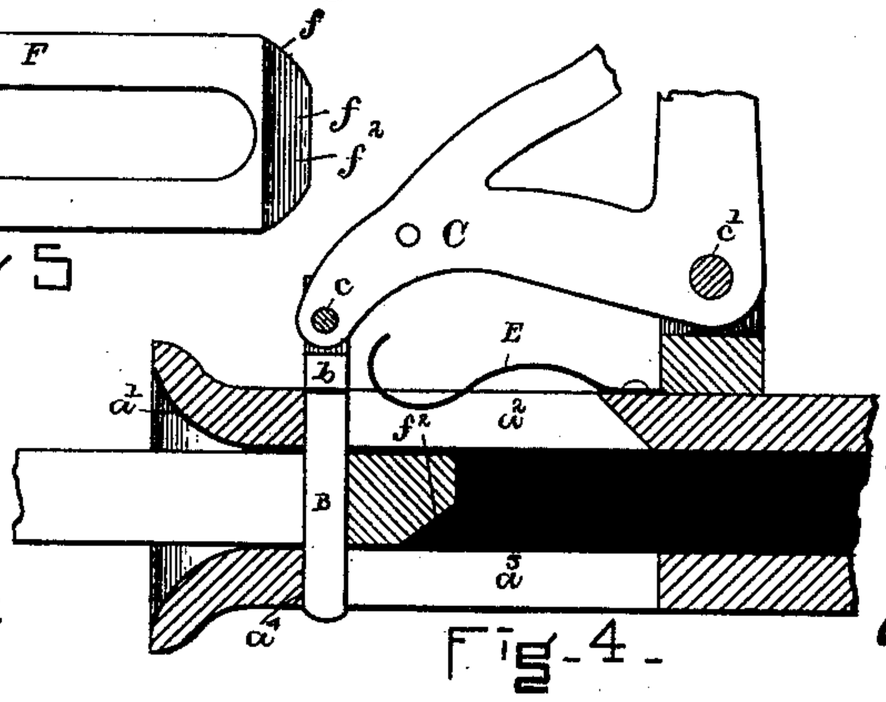

Fig. 4.

WITNESSES.

J. M. Dolan

A. B. Merrill.

INVENTOR.

Thomas Hynes

by his Attys.

Clarke & Raymond

UNITED STATES PATENT OFFICE.

THOMAS HYNES, OF NORTHBRIDGE, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 407,012, dated July 16, 1889.

Application filed March 15, 1889. Serial No. 303,495. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HYNES, of Northbridge, in the county of Worcester and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a partof this specification, in explaining its nature.

The invention relates to a car-coupler of peculiar construction, and means for operating the same from the top and from either side of the car.

Referring to the drawings, Figure 1 is a view in perspective of the end of a car making a coupling containing the features of my invention. Figs. 2, 3, and 4 are detail views, in section, illustrating various positions of the link of the coupling-pin; and Fig. 5 is a view in plan of the coupling-link.

In the drawings, A represents the draw-head. It has the usual horizontal cavity a and a flaring mouth a'. It is also provided with the long slot a^2 in the upper wall and the long slot a^3 in the lower wall, both of which open into the cavity a.

B is the coupling-pin. It is provided near its head with the shoulders b, and is connected to an operating-lever C by a pin or pivot c. The end of the lever preferably is split or divided into two forks, and the head of the pin extends between them and the pivot enters both. The lever C for lifting the pin is pivoted at c' to a suitable bracket or support bolted to the draw-head or made integral therewith, and it has the long arm c^2, which is bent at c^3 to one side of the center-line of the draw-head, and from there continued to the top of the car, where it has the horizontal extension c^4 and handle c^5, extending toward or upon the top of the car, but to one side of the center of the roof. The guide and holder c^6 is used in connection with the lever, and serves to hold it in proper position. By this means the pin is adapted to be drawn or lifted from the top of the car. To draw or lift it from the side of the car, I employ the turning-rods D D′, one for the right and one for the left. Each turning-rod is secured to the car by eyebolts d, and each is attached to the short arm of the lever C by a bolt or pivot d', and each turning-rod has at its outer end, preferably inside the line of the car, a downward-depending handle d^2. (See Fig. 1.) By lifting or turning this handle from a vertical to a horizontal position the coupling-pin is lifted or withdrawn. The coupling-pin B is of a size to enter the slots a^2 a^3 and to be movable lengthwise the same, and there is arranged to bear against one side of the pin a spring E. The coupling-link F has its ends f preferably formed with rounded corners f' and inclined or tapering lower edge f^2. This is to facilitate the entrance of the end of the link into the flaring entrance of the draw-bar cavity.

The entrance or insertion of the link causes the automatic operation of the coupling-pin in the following way: The end of the link coming in contact with the pin throws its lower end inward upon the pivot c, so that the principal part of the pin is contained in the upper slot a^2 of the draw-head or moved to the position represented in Fig. 2—that is, to very nearly horizontal position. The continued movement of the link moves its end cross-bar f^3 past the lower end of the pin, and the pin then falls by gravity and is pressed downward by the spring E from the position represented in Fig. 2 to that represented in Fig. 4—that is, to a vertical position—and it then bears against the surfaces a^4 at the forward ends of the slots a^2 a^3. (See Fig. 4.) The pin when withdrawn to release the link occupies the position shown in Fig. 3.

The advantages of the invention arise from its simplicity and from the fact that it may be applied to a vertical form of draw-head, and also because the coupling-pin may be drawn or released from either side and the top of the car, and also because, of course, the coupling is automatic.

It will be seen that the lever C has a brace extending from the lower end of its short arm to the long arm c^2, whereby it is strengthened. It will also be seen that the shoulders b of the coupling-pin rest upon the upper surface of the draw-bar when the pin is in vertical position.

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

1. The combination, in a car-coupler, of the

draw-head having the long slots a^2 a^3 in its upper and lower walls, respectively, the coupling-pin B, movable in said slots, as specified, the draw-lever C, the spring E, and the link F, substantially as described.

2. The combination of the draw-head having slots a^2 a^3, the coupling-pin B, the lever C, connected with the head thereof and having a long arm c^2, offset c^3 extending above the top of the car, and having the horizontal extension c^4, and handle c^5, substantially as described.

3. The combination of the draw-head having the slots a^2 a^3, the coupling-pin B, the lever C, and the turning-rods D D′, having the handles d^2, substantially as described.

THOMAS HYNES.

Witnesses:
L. H. BALCOME,
E. C. BALCOME.