

(No Model.)

F. A. PIERCE.

COUPLING DEVICE FOR STREET CARS.

No. 388,506.

Patented Aug. 28, 1888.

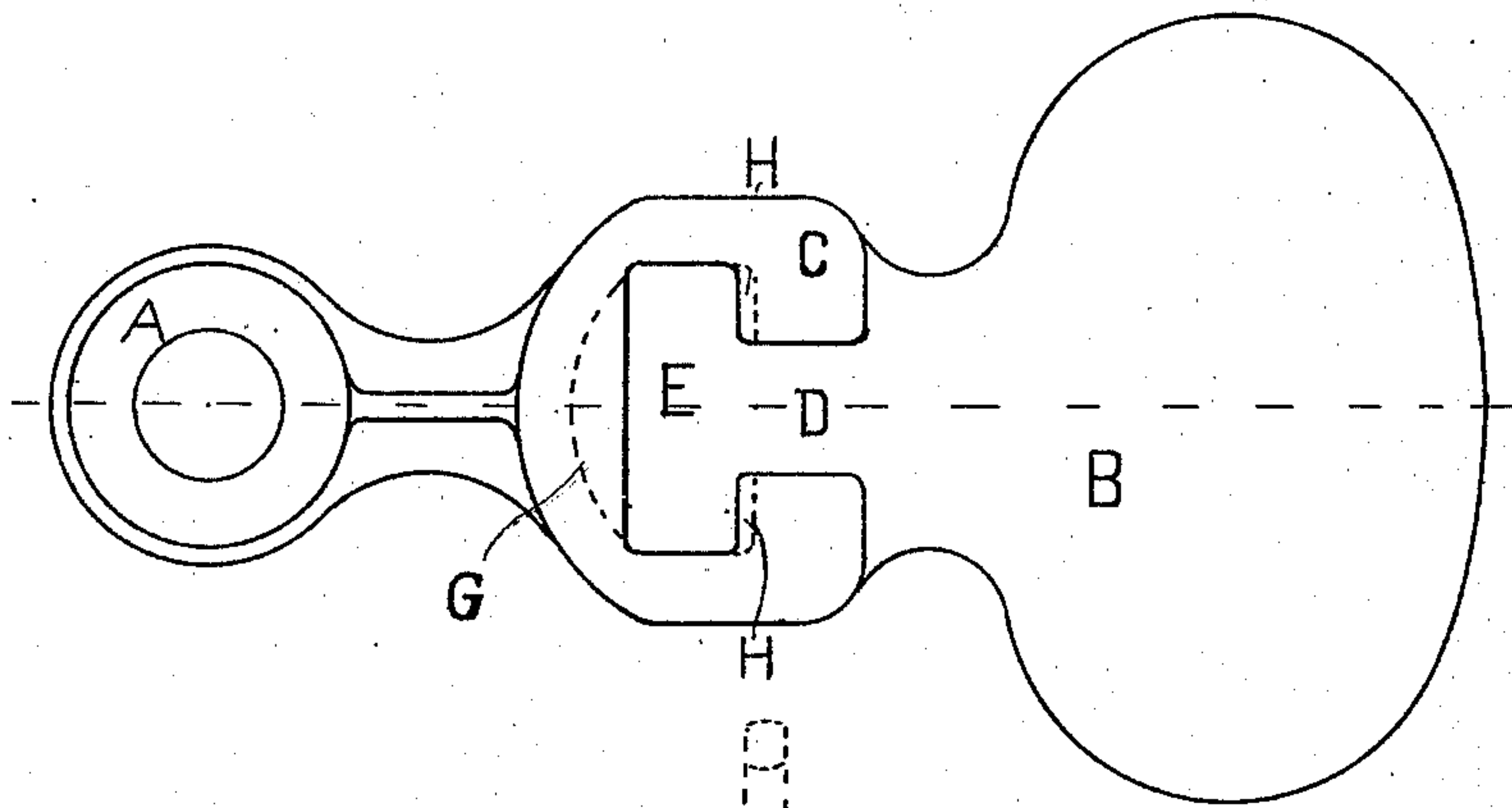


FIG. 1.



FIG. 4. P

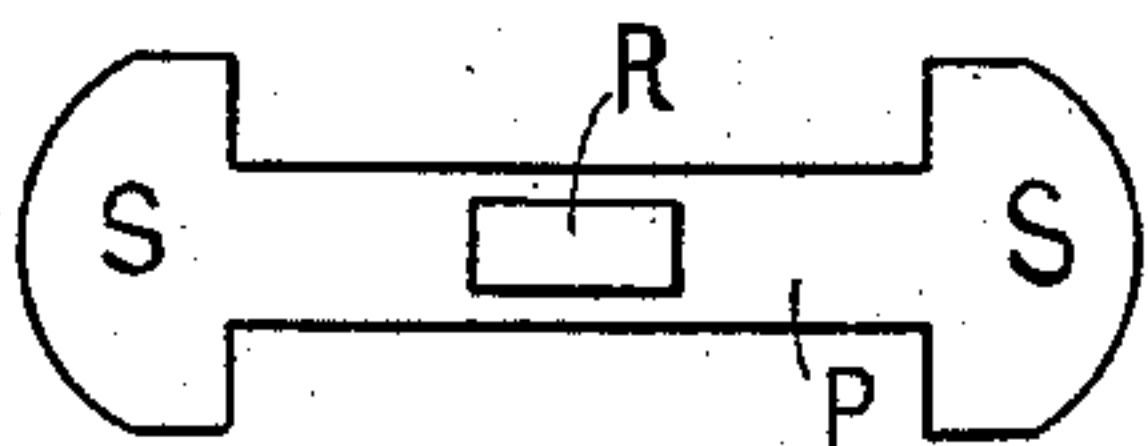


FIG. 5.

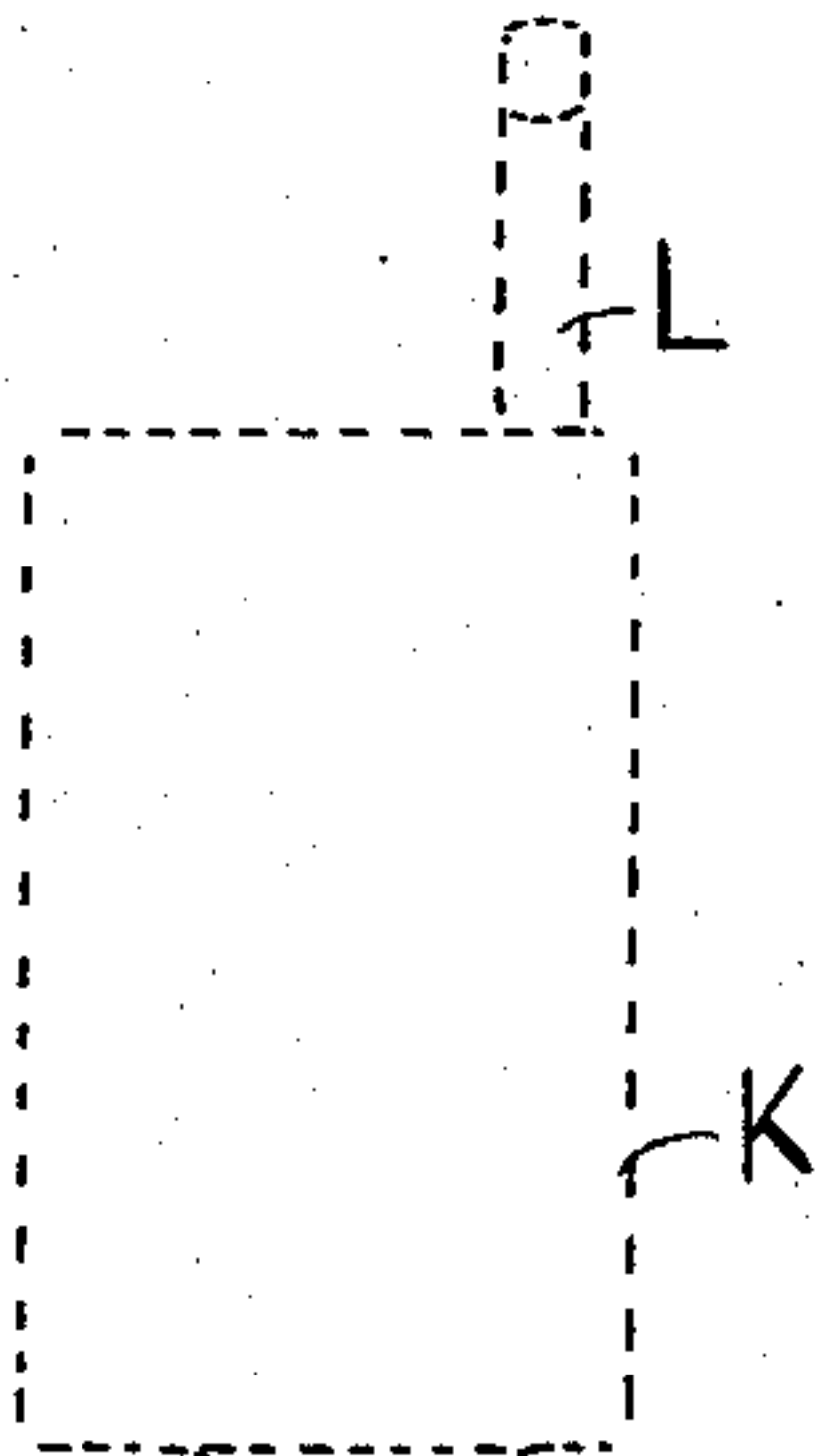


FIG. 2.

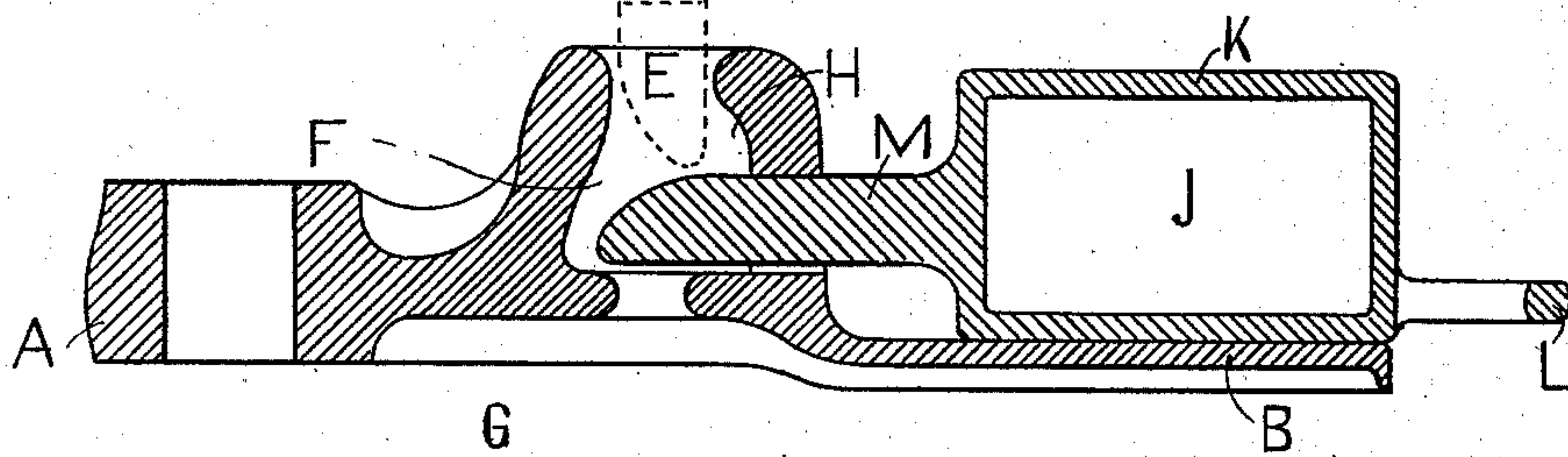


FIG. 3.

Witnesses:-

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UNITED STATES PATENT OFFICE.

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COUPLING DEVICE FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 388,506, dated August 28, 1888.

Application filed January 9, 1888. Serial No. 260,197. (No model.)

To all whom it may concern:

Be it known that I, F. ARTHUR PIERCE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Coupling Device, of which the following is a specification.

My invention relates to improvements in coupling devices, particularly such as are designed for use with street-cars, and has for its object to provide a convenient coupling device which can be used for attaching the doubletree to the car when horses are employed, and which may at the same time serve to attach the car to the cable or other car when the street-car is switched from a horse-car line to a cable line. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of the coupling-piece attached to the car, with parts shown in dotted lines. Fig. 2 is a cross-section of the same coupling-piece with the coupler in position and the coupler shown in dotted lines as it is being introduced into the coupling-piece. Fig. 3 is a plan view of the coupler. Figs. 4 and 5 are reduced detail views of a modified form of coupler adapted to couple the car to a cable car.

Like parts are indicated by the same letter in all the drawings.

A is the inner end of the coupling-piece, which is swiveled to the axle or body or other suitable portion of the car. B is a supporting-plate, which forms the opposite end of said coupling-piece.

C is the enlarged elevated central portion of the coupling-piece, which is provided with the slot D, opening upon the supporting-plate B, and the transverse slot E, which terminates below in an enlarged cavity, F, provided with the retreating walls G and H H.

J is a doubletree, which passes through the box portion K of the coupler. The coupler has at one end the eye L and at the other the projecting portion M, provided with the head N. This head N is laterally enlarged and adapted to rest in the cavity G, its points O O bearing against the walls H H. The part M and head N are narrow vertically, so as to admit of introduction through the slot E, as indicated by the dotted lines in Fig. 2.

P is a modified form of coupler, having the central eye, R, and the heads S S, the latter being shaped substantially the same as the head N.

A hinged covering may be placed over the slot E to protect against snow, rain, and the like.

The use and operation of my invention are as follows: The coupling-piece is suitably attached to a car or vehicle, and it may be swiveled, as indicated above, if desired. Its enlarged central portion is shaped, as shown, so as to leave the slot E for the introduction of the head N, the slot D for the part M to rest in, and the cavity G for the head N to rest in. The plate B supports the coupler and doubletree J, upon which it is attached. It is obvious, of course, that this coupler may be secured to the doubletree J in any convenient manner, and that the said coupler may be attached to the power-supplying device in any convenient way. I have shown it as applied to a doubletree, and in that case its operation is very convenient. When the team is backed into position in front of the car or carriage to which the coupling-piece is attached, the driver of the car may, with the hook which is commonly employed, seize the eye L and bring the coupler into the position shown in Fig. 2. Here it is allowed to descend until the head occupies the cavity G. The driver then releases his hold upon the eye L and permits the parts to drop into the position shown in full lines. In this position the points O O bear against the walls H H, while at the same time the head N, by reason of its peculiar shape, cannot escape from said cavity. If, now, the horse-car is to be in conjunction with the cable system, it is only necessary to provide a coupler like that shown in Figs. 4 and 5, and to attach to the cable car a coupling-piece somewhat similar to the one shown herein, but with the slot E of the same width as the head N. In this case one of the heads S is inserted into the coupling-piece on the horse-car and the other end is allowed to fall into the enlarged cavity in the coupling-piece. In this manner, by the use of a coupler similar to that shown in Fig. 2 with the doubletrees, the use of a coupling-piece like that shown in Fig. 2 on all the horse-cars, the use of a similar coupling-piece, but with a wider slot, E, on the cable car, and

the use of couplings like those shown in Figs. 4 and 5 with the cable car, I am able to provide a convenient method for coupling vehicles, and especially for the coupling of street-cars in combined horse and cable systems.

Having thus described my invention, what I claim, and desire to secure by means of Letters Patent, is as follows:

In a coupling device for vehicles, the combination of a coupling-piece having an internal cavity with a narrow slot above and a vertical slot in front with a coupler provided with a head to rest in said cavity, a narrow portion,

M, adapted to rest in the vertical slot, and an eye on the back of said coupler, whereby it may be elevated into a vertical position, so that its head may be inserted into the narrow slot, as described, and a supporting-plate projecting from said coupling-piece and adapted to support the coupler when the same is in position.

December 28, 1887.

F. ARTHUR PIERCE.

Witnesses:

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