

R. P. LAMONT.
 RETAINER FOR KNUCKLE PIVOT PINS.
 APPLICATION FILED FEB. 12, 1908.

929,864.

Patented Aug. 3, 1909.

Fig. 1.

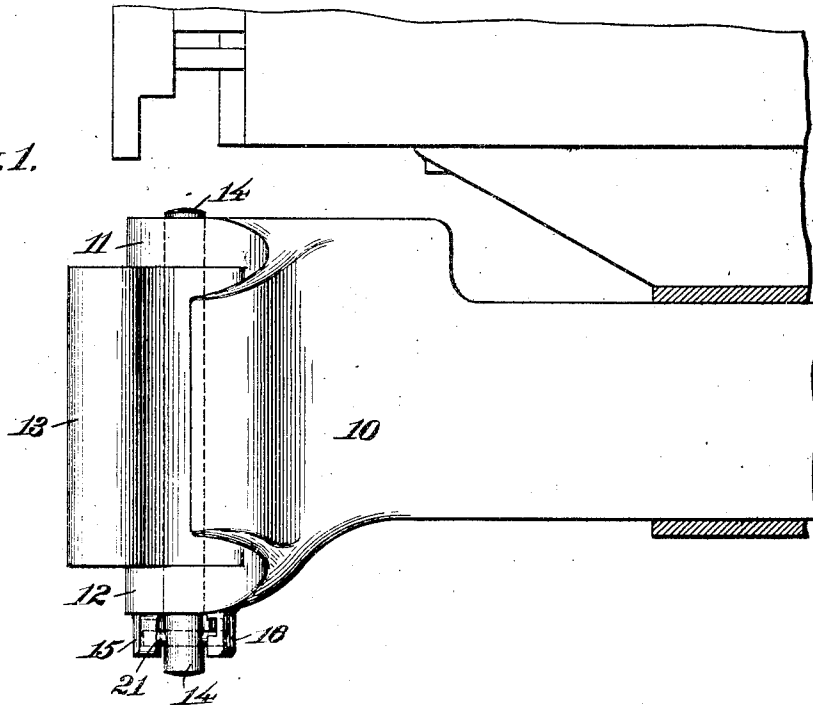


Fig. 3.

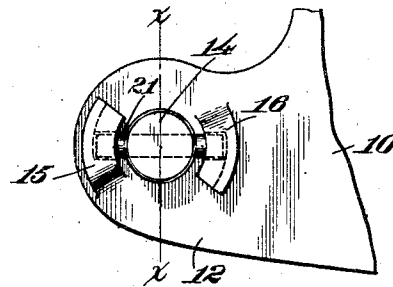
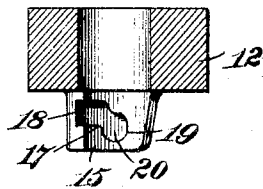


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

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RETAINER FOR KNUCKLE PIVOT-PINS.

No. 829,864.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed February 12, 1903. Serial No. 415,532.

To all whom it may concern:

Be it known that I, ROBERT P. LAMONT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Retainers for Knuckle Pivot-Pins, of which the following is a specification.

It is the aim and object of my invention to provide a simple and easily constructed device for holding in place the knuckle pivot pin of a passenger car coupler, which has to be inserted from the under side of the coupler-head, owing to the presence of the platform and vestibule directly above the coupler-head, thereby precluding the possibility of inserting the pin from above. This retaining device not only prevents the pin from falling out of place, but also prevents it from working or riding up out of operative position.

One embodiment of my invention may have a pair of lugs or projections cast on the under surface of the coupler-head on opposite sides of the lower end of the knuckle pin, each lug or projection having on its face toward the pin a curved slot or groove closed at one end, open at the other end, and adapted to receive an end of a retaining pin lodged in a transverse hole at the bottom end of the knuckle pin and projecting from both sides thereof. Each slot or groove at its inner end is deflected downwardly, forming a retaining pocket or cavity to hold the end of the transverse pin from unintentional vertical movement or horizontal turning.

On the accompanying drawings, forming a part of this specification, I have illustrated an embodiment of my invention, like reference characters referring to the same parts throughout the various views.

On said drawings.—Figure 1 is a side elevation of a coupler-head embodying my invention, the location and position of the car platform with relation to the coupler being also shown; Fig. 2 is a bottom plan view of a portion of the coupler-head and illustrates my improved pivot-pin retaining means; and Fig. 3 is a cross-section on line $x-x$ of Fig. 2, the pivot pin being omitted. The coupler-head 10 has the usual forwardly-projecting apertured extensions 11 and 12, a knuckle 13, and a knuckle-pin 14

adapted to pass through the holes of the extensions and knuckle to maintain the latter in place. On the bottom face of the extension or arm 12 and on opposite sides of the pivot pin aperture I cast a pair of curved lugs or projections 15 and 16 concentric with the axis of the pivot pin aperture. The inner face of each of these lugs or projections is supplied with a slot 17 open at one end at 18 and closed at its downwardly-deflected end 19, the off-set or depressed portion 20 of the slot forming a pocket or recess adapted to receive and accommodate an end of a retaining pin 21 extended transversely through a hole at the lower end of the pivot pin 14. As will be apparent, each slot 17 and the corresponding end of the retaining pin 21 form a bayonet joint or connection to prevent displacement of the pivot pin.

Assuming that it is desired to insert the pivot pin 14 into place and form the fulcrum or hinge pin of the knuckle, the pin is pushed upwardly through the apertures of the extensions 12 and 11 and the knuckle 13, during this upward movement the pivot pin being in such position that the transverse stop pin 21 will pass between the brackets 15 and 16. When thus raised sufficiently the pivot pin 14 is turned so as to enable the ends of the stop pin 21 to enter the open mouths 18 of the slots 17, and further turning brings the ends of the pin 21 into the depressions or off-set portions 20 of the slots. The pin 14 is prevented from falling out or from working up because of the cooperation of the ends of pin 21 with the off-set portions of the slots. The pin is also prevented from turning around for the same reason. It will be apparent, however, that if the pin is turned and raised at the same time it can be readily removed, but, inasmuch as there is but slight if any possibility of this duplex or compound action taking place in the normal condition of operation of the coupler, unintentional displacement of the pin is effectually prevented. It is apparent, however, that intentional withdrawal or removal of the pin can be accomplished with facility.

To those skilled in the art it will be obvious that many changes may be made in the structural features of the retaining means shown and described without depar-

ture from the substance and essence of my invention or the sacrifice of any of its benefits and advantages.

I claim:

5 1. In a construction of the character described, the combination of a coupler-head, a knuckle, a knuckle pivot pin, one or more lugs on the bottom of said coupler-head, and a bayonet joint connection between said
10 pivot pin and each of said lugs, substantially as described.

2. In a construction of the character described, the combination of a coupler-head, a knuckle, a knuckle pivot pin, a lug on the
15 bottom of said coupler-head having a groove open at one end and closed at the other end, said groove also having a depressed portion, and a transverse supporting pin at the lower
20 end of said knuckle pivot pin adapted to enter and leave said groove by turning said pivot pin and adapted to rest in said de-

pression to prevent displacement of said knuckle pivot pin, substantially as described.

3. In a construction of the character described, the combination of a coupler-head, 25 a knuckle, a knuckle pivot pin, one or more lugs on the bottom of said coupler-head each having a curved groove a portion of which is downwardly-deflected, each of said grooves being open at one end and closed at the 30 other, and a transverse supporting pin at the lower end of said knuckle pin the ends of which are adapted to enter and leave said groove by turning said pivot pin and also adapted to rest in the deflected portion of 35 said groove or grooves to prevent displacement of the knuckle pivot pin, substantially as described.

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Witnesses:

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