

(No Model.)

J. R. IDE.
KNUCKLE PIN FOR CAR COUPLINGS.

No. 549,363.

Patented Nov. 5, 1895.

Fig. 1.

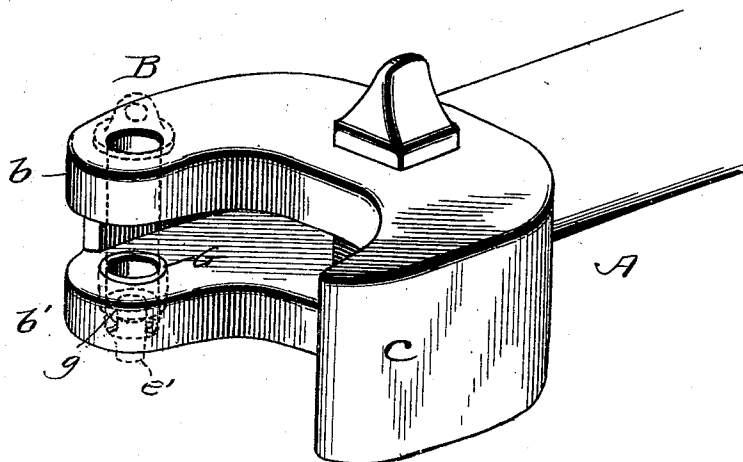


Fig. 2.

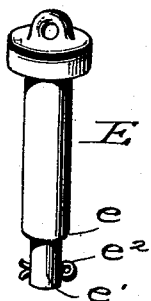
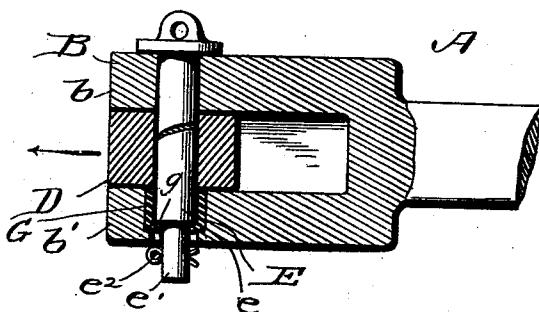


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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KNUCKLE-PIN FOR CAR-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 549,363, dated November 5, 1895.

Application filed July 12, 1894. Serial No. 517,389. (No model.)

To all whom it may concern:

Be it known that I, JOHN ROBERT IDE, a citizen of the United States, residing at Salisbury, in the county of Rowan and State of North Carolina, have invented certain new and useful Improvements in Knuckle-Pins for Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention aims to prolong the life and usefulness of that class of car-couplings known as the "Janney" coupler.

Much difficulty and loss has been experienced by the breaking of the knuckle-pin of the coupling in general use, resulting in the breaking off of the upper arm and crippling the coupling for further usefulness. The knuckle-pins being subjected to much strain and wear, will frequently break, usually at a point intermediate of their ends. Inasmuch as the pin-opening through the upper and lower arms of the knuckle-supporting jaw is of uniform diameter and corresponds with the diameter of the pin, the lower portion of the latter drops or falls away in the event of breakage, and the whole strain comes on the upper part of the pin which retains its position. Under these conditions the knuckle binds between the two arms of the said jaw, and the resultant direct and torsional strain coming on the said upper arm frequently breaks it off and renders the coupling unfit for further service.

By the present invention the lower half or portion of the knuckle-pin is independently supported in the lower arm. Hence, in the event of the said pin breaking, the strain and the load is evenly distributed on the two parts of the pin and transferred by them to the upper and lower arms of the knuckle-supporting jaw.

For a full understanding of the details of the invention, reference is to be had to the appended description and the accompanying drawings, in which—

Figure 1 is a perspective view of a coupling-head embodying my invention. Fig. 2 is a detail view of a pin for attaching the knuckle to its jaw, and Fig. 3 is a sectional detail view showing the parts in position and

the application of the invention when the knuckle-pin is broken.

The letter A represents a draw-bar of ordinary construction for the Janney form of coupling, having the jaws B and C. The jaw B supports the knuckle D and comprises the upper and lower arms *b* and *b'*, respectively, a pin E serving to hold the knuckle in operative position between the said arms. The respective pin-openings in the arms being of the usual shape and diameter, I find it necessary to countersink the pin-opening in the arm *b'* and set therein a cap or bushing G, having an opening through its bottom of less diameter than the knuckle-pin E, whereby an inwardly-projecting shoulder *g* is formed. The lower extremity of the knuckle-pin is turned down or reduced in diameter, as at *e'*, thereby forming a shoulder *e*, which rests on the shoulder *g* of the bushing when the parts are in position. A pinch-pin *e²* prevents vertical movement of the knuckle-pin through jolting.

In the event of the pin E breaking intermediate its ends, as shown in Fig. 3, its lower portion will be supported by means of the shoulders *e* and *g*, and as the pin is provided with the usual head, the upper portion will be held in place, as heretofore. Thus the strain on the arms *b* and *b'* will be equalized.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a car coupling, a knuckle carrying jaw comprising an upper and a lower arm, and having the usual pin openings formed in both arms, the lower pin opening being countersunk, a cap or bushing set in the countersunk pin opening and having a hole through its base whereby an inwardly projecting shoulder is formed, and a knuckle pin passing through the pin openings and the bushing and provided with a reduced portion whereby a shoulder is formed which is adapted to rest on the shoulder of the bushing, whereby should the pin break, intermediate the upper and lower jaws, the entire pin would be sustained, substantially as described.

In witness whereof I affix my signature in presence of two witnesses.

JOHN ROBERT IDE.

Witnesses:

W. L. YOUNG,
C. J. BINGHAM.