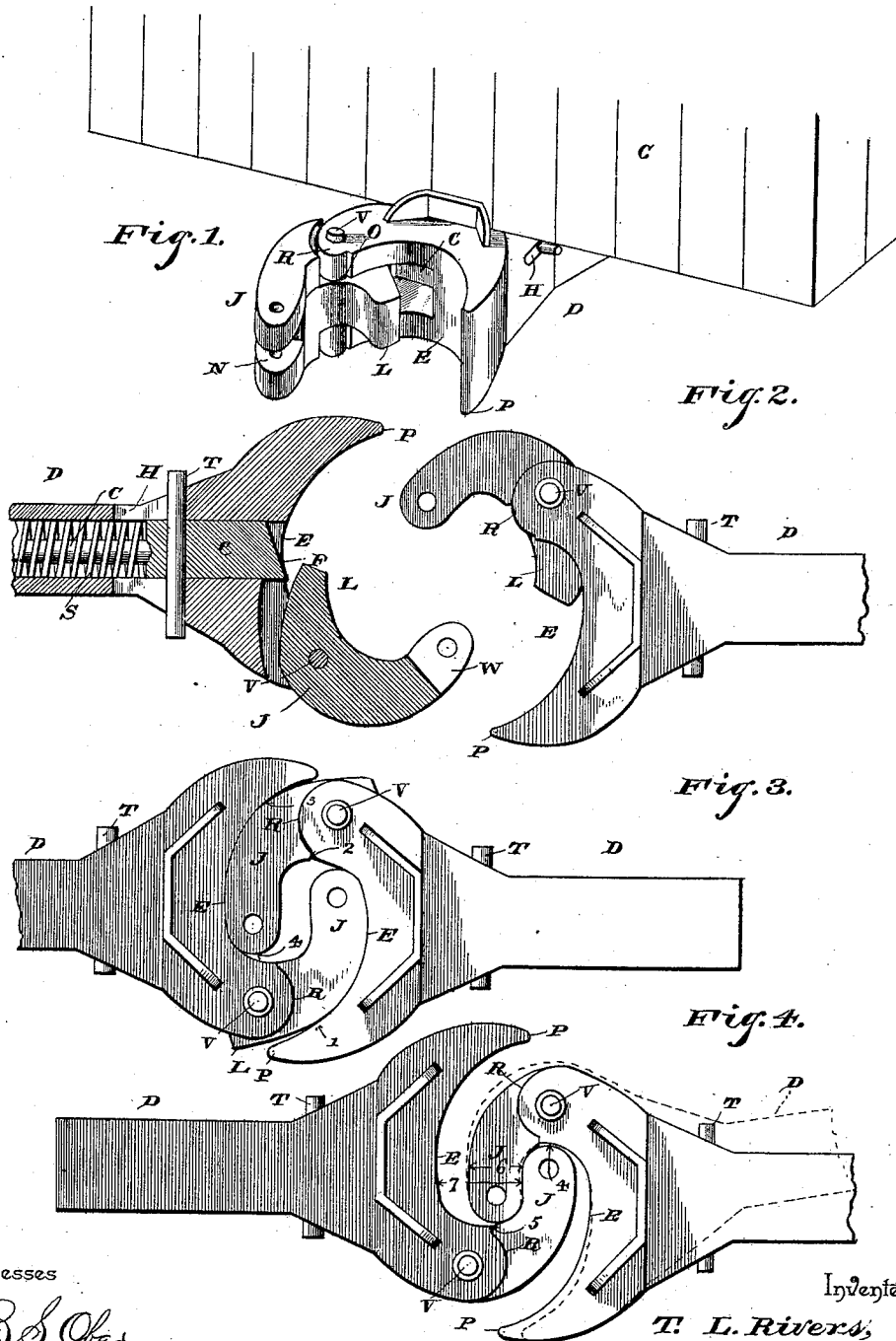


(No Model.)

T. L. RIVERS.
CAR COUPLING.

No. 472,395.

Patented Apr. 5, 1892.



Witnesses

B. S. Over
J. J. Collamer.

Inventor

T. L. Rivers,

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS LANGDON RIVERS, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-THIRD TO JONAS THIELEMAN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 472,395, dated April 5, 1892.

Application filed October 6, 1891. Serial No. 407,894. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LANGDON RIVERS, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car-couplings, and more especially to that class thereof known as "twin jaws;" and the object of the same is to produce certain improvements in the shapes of the parts of such couplings.

To this end the invention consists in a car-coupling of the specific construction herein-after more fully described and claimed, and as illustrated on the accompanying sheet of drawings, wherein—

Figure 1 is a perspective view of the end of a car with my coupling attached. Fig. 2 is a horizontal section through one draw-head with the jaw open and a plan view of another coupling approaching with its jaw open. Fig. 3 is a plan view of two couplings connected, showing them in the position they occupy when the train is being backed. Fig. 4 is a similar view, the train being under way, showing one draw-head in dotted lines as in rounding curves.

Referring to the said drawings, the letter C designates a car-body, beneath the center of which is secured a draw-head D, whose front end E is approximately U-shaped in plan, coming to a sharp edge or point P at the left side and terminating in a rounded edge R at the right side, as seen in the various plan views. Within the body of this draw-head is a large opening O, which is extended to the right and through the right side of the front end, as seen in Fig. 1, so that this side is bifurcated, and through the ears thus formed is passed a vertical pivot bolt or pin V.

J is the swinging jaw, having a lug L at its rear end, which is pivotally mounted on said bolt and whose rear extremity passes into said opening O as the jaw is turned inwardly.

Moving longitudinally within the body of the draw-head is a catch C, having a beveled front face F, that projects into said opening O, the catch being borne normally forward by a spring S, and T is a transverse rod passing through this catch and through horizontal

slots H in the sides of the draw-bar. When this rod is drawn to the rear, (by means not shown and forming no part of the present invention,) the face of the catch will move out of the path of the lug L; but at other times said face stands in such position that as the lug moves into the opening O when the jaw is closed the corner of the lug will engage said face, bear it to the rear, pass over its edge, and then be caught and held thereby as the catch springs forward under the force of its springs S. The front end of the jaw is preferably provided with the usual horizontal notch N, intersected by a vertical pin-opening, whereby this draw-head may be connected with another employing the ordinary pin-and-link coupling.

Referring now to Fig. 3 it will be seen that the face of the front end E of the draw-head from the point 1, which is adjacent the sharp edge P at the left side of said front end, to the point 2, where the rounded edge R commences, is struck on a curved line exactly coincident with the outer face of the jaw from a point 3 on its back to a point 4 at the extremity of its free end. Hence when the draw-heads are driven together the face of each draw-bar will exactly fit the back of each jaw. This is especially advantageous in the act of coupling, because it insures the automatic turning of the jaws on their pivots to such positions that the catches will engage their lugs, the reason being that at any time before these faces are in complete contact throughout their lengths the draw-head will be bearing the free end of the jaw to the rear.

Referring now to Fig. 4, it will be seen that the inner faces of the jaws from a point 4 at the extremity of the free end of each to a point 5 on the line of the inner face, where the body ends and the lug commences, are struck on curved lines, which are also exactly coincident. It will also be noticed that the width of the jaw indicated by the line 6 is less than the width of the opening in rear of it, or between its inner face and the face of the draw-head indicated by the line 7. From this construction it follows that after the cars have been coupled and tension is again exerted thereon the faces 1 2 and 3 4 draw out of contact, as seen in Fig. 3, and the two faces 4 5

come into contact, this contact being perfect, as seen in Fig. 4, and affording a powerful interlocking of the two couplings. Furthermore, the space outside each jaw then becomes useful in permitting the turning of the couplings out of alignment, as seen in dotted lines in Fig. 4, and in this case the inner side of the outer extremity of the jaw on the coupling of that car which is turned rocks or rolls on its seat against the inner face of the opposite jaw if the turn is to the left, as shown, or oppositely if the turn is to the right. The specific construction of the several faces of the parts of this draw-head conduce to the successful operation of the whole, the production of a powerful and substantial coupling, and the direct contact, either under tension or in backing, of the greatest possible area of faces consistent with the looseness in the interlocking of parts necessary to permit the coupled cars to round a curve of the smallest radius employed in road-building. By having the front end and jaw unimpeded vertically two couplings of this character will operate success-

fully, even though they be in different horizontal planes. The sizes of parts, their materials, and their specific construction with respect to details, other than those hereinafter claimed, are matters of no moment in the present invention. 30

What is claimed as new is—

In a car-coupling, the combination of a draw-head provided with a longitudinal opening and having horizontal slots in its sides, a pivoted jaw provided at its inner end with a lug, a spring-actuated catch arranged in the longitudinal opening of the draw-head and having its outer end beveled and adapted to engage the jaw, and a transverse pin passing through the catch and arranged in said slots, substantially as described. 40

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS LANGDON RIVERS.

Witnesses:

S. A. SMITH,

GEORGE D. MAHR.