No. 815,280 PATENTED MAR. 13, 1906.

J. E. FORSYTH.

TRAIN PIPE COUPLING SUPPORT.

APPLICATION FILED JULY 17, 1905.

Fig. 1.

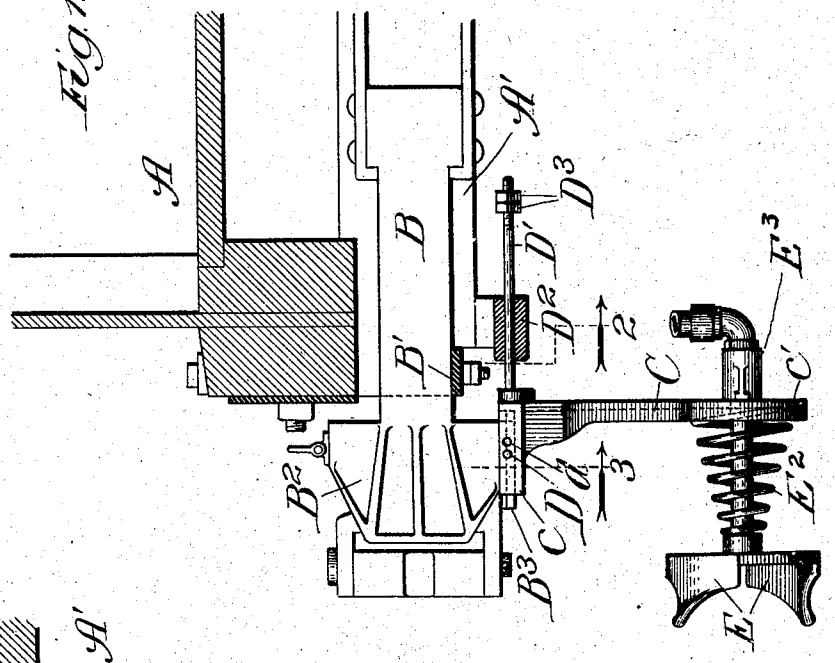


Fig. 2.

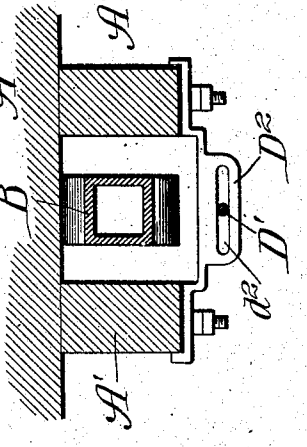
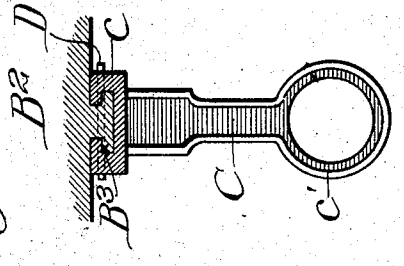


Fig. 3.



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TRAIN-PIPE-COUPLING SUPPORT.

No. 815,280. Specification of Letters Patent. Patented March 13, 1906.

Application filed July 17, 1905. Serial No. 269,969.

To all whom it may concern:

Be it known that I, JOSEPH E. FORSYTH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Train-Pipe-Coupling Support, of which the following is a specification.

My invention relates particularly to the means for supporting the coupling-heads of automatic train-pipe couplings.

My primary object is to provide for use in connection with the draw-bar of a car an automatically-disconnecting train-pipe-coupling support which is primarily carried by the draw-bar, but which will be disconnected therefrom in case of breakage of the draw-bar and maintained in an elevated position, thereby avoiding injury to the train-pipe coupling.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a broken longitudinal sectional view of the substructure of a car, showing my improvement applied thereto; Fig. 2, a broken section taken as indicated at line 2 of Fig. 1, and Fig. 3 a broken section taken as indicated at line 3 of Fig. 1.

In the preferred construction, A represents the substructure of a car having as a part thereof a pair of longitudinal beams or draft-timbers A′; B, a draw-bar slidably supported in a hanger B′, connected with the buffer-beam of the car in the usual manner and yieldingly connected in the usual manner (not shown) with the car; B^2, the coupling-head of the draw-bar equipped at its lower side with a flanged longitudinal guide B^3; C, a support or hanger provided at its upper end with a grooved head *c*, connected with the guide B^3 and equipped at its lower end with a ring and spring-socket *c′*; D, a transverse pin shearably securing the hanger C to the guide B^3; D′, a bolt having its front or outer end connected with the hanger C adjacent to the guide B^3, the bolt having sliding connection with a bracket D^2, applied to the beams A′; D^3, a nut limiting the sliding motion of the bolt with relation to the bracket D^2; E, a train-pipe extending through the ring *c′* and equipped with a coupling-head E′; E^2, a conical coil-spring having its base entered in the socket with which the ring *c′* is provided and which serves to hold the head E′ yieldingly projected, and E^3 a stop on the pipe E back of the hanger C and which limits the forward movement of the pipe-coupling.

The bolt D′ is of sufficient strength to shear the pin D and support the hanger C in case of breakage of the draw-bar or its connections and, on the other hand, the pin is of ample strength, taken in connection with the binding action which occurs at the guide when force is exerted at the lower end of the hanger, to maintain the pipe-coupling in operative engagement with the companion coupling (not shown) when the cars are coupled. The bracket D^2 should allow sufficient space for the rear end of the draw-bar to get clear in case of accident, so that the auxiliary support for the pipe-coupling will not be injured.

The gist of the invention lies in providing one connection between the hanger C and the draw-bar of sufficient strength to insure that the pipe-couplings shall work with the draw-bar and another connection with the substructure of the car independently of the draw-bar of sufficient strength to disconnect the hanger from the draw-bar and support it against falling in case of breakage of the draw-bar or its connections.

I have shown the head *c* of the support C provided with a perforation *d* in the rear of the pin D. This perforation will receive the pin D when the support is moved forward on its guide for adjustment purposes. Preferably the bolt D′ extends through a slot d^2 in the bracket D^2 to permit lateral movement when the draw-bar swings, as when rounding a curve.

Various changes in details of construction may be made. Hence no undue limitation should be understood from the foregoing detailed descript on.

What I regard as new, and desire to secure by Letters Patent, is—

1. The combination with the draw-bar of a car, of a pipe-coupling support carried thereby to move therewith, and an independent support operative to support the pipe-coupling in case of accident to the draw-bar, for the purpose set forth.

2. The combination with the draw-bar of a car, of a pipe-coupling support carried thereby to move therewith, and means serving to disconnect said support from the draw-bar

and sustain the pipe-coupling in case of accident to the draw-bar, for the purpose set forth.

3. The combination with the substructure of a car and a draw-bar connected therewith, of a shearingly-connected pipe-support carried by said draw-bar, and an independent supporting device for the pipe-support having lost-motion connection and possessing sufficient strength to detach the pipe-support from the draw-bar and sustain said support and its load, in case of breakage of the draw-bar or its connections.

4. The combination with the substructure of a car and a draw-bar connected therewith, of a pipe-coupling support having slide connection with the draw-bar, relatively weak means for causing said support to move operatively with the draw-bar, and relatively strong lost-motion connections between said support and the substructure of the car, for the purpose set forth.

5. The combination with the substructure of a car, and a draw-bar connected therewith, of a pipe-coupling support shearingly and slidably connected at its upper end with the coupling-head of the draw-bar, a bracket connected with the substructure of the car, and a relatively strong rod connected with said coupling-support and bracket and having limited sliding movement with relation to said bracket, for the purpose set forth.

6. The combination with the substructure of a car, of a draw-bar having a coupling-head provided at its lower portion with a guide, a coupling-support having its upper end slidably mounted on said guide, a transverse shearable pin connecting the coupling-support with said guide, a bracket depending from the substructure of the car, a bolt connecting the upper end of the coupling-support and bracket and permitting limited relative motion therebetween, and a pipe-coupling connected with the lower end of said coupling-support.

7. A device for the purpose set forth, comprising a coupling-support provided at its upper end with a guide and at its lower end with a pipe-receiving head, and means for connecting said coupling-support with the substructure of a car independently of the draw-bar of the car, for the purpose set forth.

JOSEPH E. FORSYTH.

In presence of—
L. HEISLAR,
J. W. LANDES.