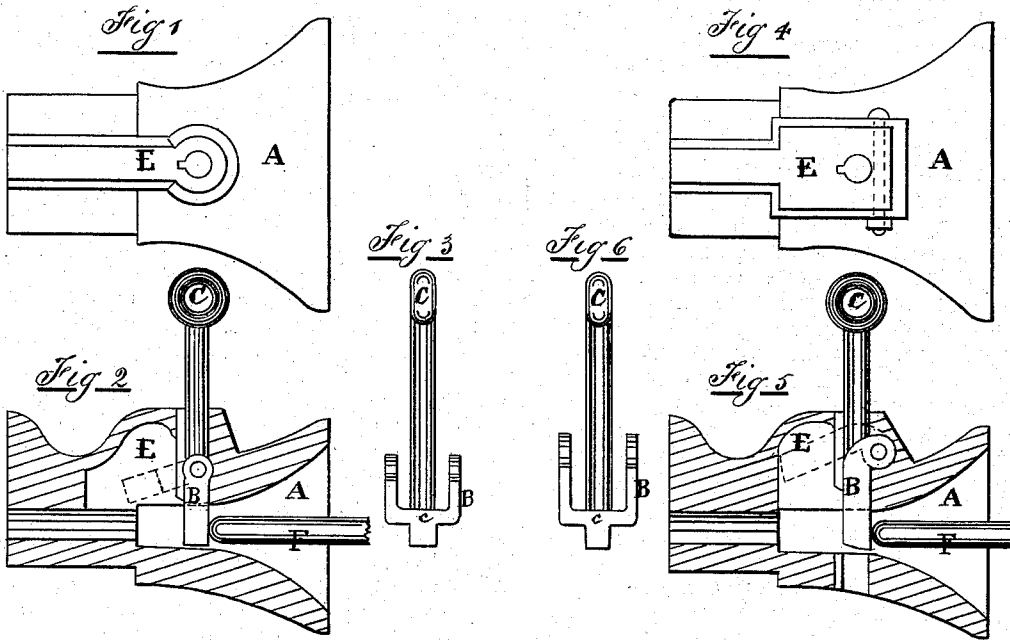


J. J. LAPPIN.
Car-Couplings.

No. 156,889.

Patented Nov. 17, 1874.



Witnesses,
O. A. Gill
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UNITED STATES PATENT OFFICE.

JOHN J. LAPPIN, OF TORONTO, CANADA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **156,889**, dated November 17, 1874; application filed July 2, 1874.

To all whom it may concern:

Be it known that I, JOHN JOSEPH LAPPIN, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented new and useful Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the same, whereby others skilled in the art may make and use the same, reference being had to the accompanying drawings, and to this specification.

My invention consists in constructing or casting the draw-head with a concave dome above the usual outer top line or surface of the draw-head, within which to suspend a pendulous trip at a point about in or above such line, in order that the trip, when so hung, may have a long leverage between such point of suspension and the point where the bolt shall rest upon it before being tripped by the action of the coupling-link against the trip, whereby the bolt shall promptly drop, and the coupling be promptly effected as soon as practicable after the bight or bend of the link has passed beyond the bolt, and combining with it a trip spanning a tube or downward projection from such dome, such tube serving to support and guide the bolt in a vertical direction.

The operation of my self-adjusting or automatic trip is such that, when the trip has been pushed inward from its vertical position by the inner end of the coupling-link in the process of coupling, and the coupling has been effected, the trip, during the period in which the cars remain coupled, rests against the side of the coupling-pin, and in such a position as to be secure from injury in consequence of any jolting of the link; and on the uncoupling again taking place, the trip, being now at liberty, by means of its own gravity, swings back to its normal position, being again ready for the coupling-pin, which it will sustain in position, and ready to fall on recoupling the car.

I construct my self-acting trip somewhat in the character or form of a pendulum forked at the top, the forks being connected by cross-bar, having a downward projection, piece, or bar at its bottom, against which the

link acts at the period of its entrance inside the draw-head in the act of coupling, the point of suspension of the trip being at as high a point as practicable, and the trip, when pushed inward, by reason of its leverage and position, quickly freeing itself from the bolt, causing the pin or bolt to drop within the link about at the instant that the thickness of the bend of the bolt has passed the bolt-hole.

In the accompanying drawings the same letters of reference indicate the same parts in all the views, and also in this specification.

Figure 1 is a plan of that portion of the draw-head in which is placed the mechanism comprising my invention, and is marked A; also, the enlargement or dome on top, marked E. Fig. 2 is a longitudinal vertical section of the same portion of draw-head A, with the automatic pendulous trip B in two positions, and showing the coupling-pin C and coupling-link F. Fig. 3 is a front view of the aforesaid trip B and coupling-pin C. Fig. 4 is a plan of the same portion of draw-head A, with enlargement E on the top of the same, in which is hinged the automatic pendulous trip B. It is in two positions, and constructed with the joint or hinge in front of the coupling-pin C, simplifying and improving in this form the construction of the device shown in Fig. 1. Fig. 5 is a longitudinal vertical section of the same portion of draw-head A, showing enlargement E and hinged trip B in front of coupling-pin C.

Referring now to Figs. 2 and 5, it will be seen that the automatic pendulous trip B is constructed somewhat in the form of a pendulum, hinged at its top at a point about in or above the usual top line of the draw-head, and free to swing in an inward direction when pushed in this direction by the coupling-link F of a car in the process of coupling, and that in being so pushed the cross-bar *c* of the trip B, because of its high point of suspension, and consequently long leverage, quickly slips from below the coupling-pin C, and will cause it to fall inside the link F, and thereby complete the process of coupling. It will also be seen from these figures that, as soon as the link F is removed from the draw-head A, the

trip B will swing back by its own gravity to its normal position, and is, therefore, a self-acting or automatic trip.

I am aware that trips or stirrups have been used to sustain the bolt vertically, until released by the entrance of the link. This, therefore, I do not claim; but

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

The combination, with the draw-head, hav-

ing its dome or enlargement E, of the pendulous trip B, suspended within or near the baseline of such dome, and spanning the tube or downward projection, in which is the bolt-hole, as set forth.

J. J. LAPPIN.

Witnesses:

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