

W. A. DEAN.
Car-Couplings.

No. 133,421.

Patented Nov. 26, 1872.

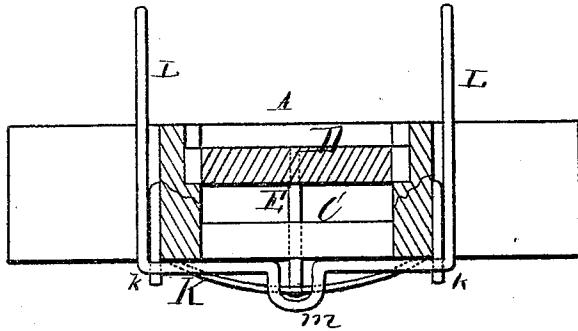


Fig. 1.

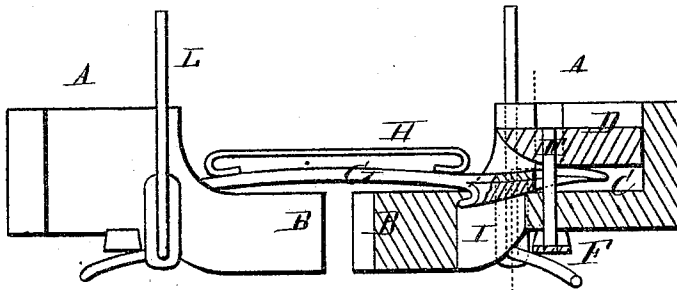


Fig. 2.

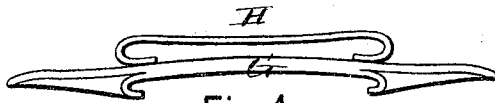


Fig. 4.

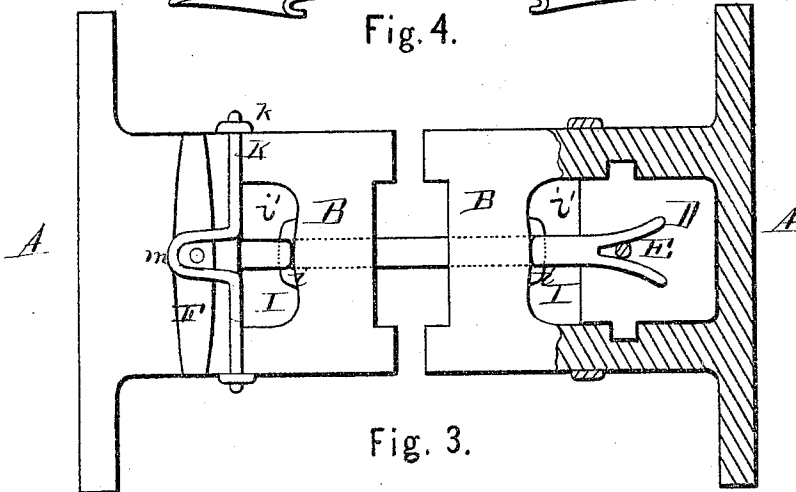


Fig. 3.

WITNESSES.

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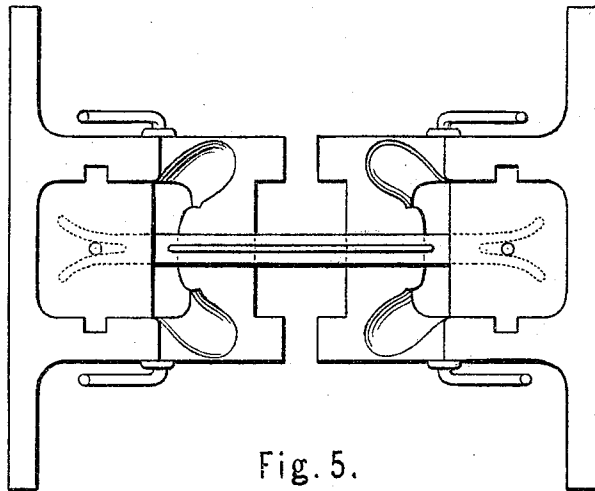


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM A. DEAN, OF NEW LEXINGTON, OHIO.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 133,421, dated November 26, 1872.

To all whom it may concern:

Be it known that I, WILLIAM A. DEAN, of New Lexington, in the county of Perry and State of Ohio, have invented a new and valuable Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical cross-section; Fig. 2 is a longitudinal section; Fig. 3 is a plan view; and Fig. 4 is a side view of the link.

My invention has relation to car-couplings; and consists in the construction and novel arrangement of the draw-heads, coupling-link, and other devices, whereby a strong and simple automatic coupling is produced, which, when the cars are thrown out of their regular order, as when displaced from the track or turned over, will uncouple itself, substantially as hereinafter described.

Referring to the accompanying drawing, A A designate a pair of bumpers or draw-heads, having each a step, B, projecting from its front part, and on a line with the floor of the link-cavity. C designates the link-cavity inclosed by the side walls of the bumper-head, by the floor, and by the sliding top D. The front and under part of said top is beveled to admit easily the end of the link. E designates a coupling-pin depending from the center of the top D, passing through a hole in the floor of the bumper or draw head, and attached to a semi-elliptic spring, F. G designates the link, having both ends barbed on their under sides. The shoulders of the barbs are recessed to form hooks, as shown. H represents a handle by which to lift the link. The ends of the link, besides being barbed, are bifurcated, and sockets thereby provided for the reception of the link-pins. The arms of the bifurcated portions are spread out and curved to insure the reception of the coupling-pins when the link enters the draw-heads. Between the step B and the floor of the link-cavity an opening, I, is formed. From the inner or back part of said step a flange, *i*, projects. When the link is inserted in the draw-heads and the cars then drawn the usual distance apart the hooks fasten themselves to the flanges *i* and

prevent the cars from uncoupling while in line. At the sides of the steps, from the back parts, channels *i'* are formed, so that when the cars are thrown out of line no purchase will be afforded the hooks, and that said hooks will release themselves from the draw-heads and allow the cars to uncouple themselves, thus preventing calamities to passengers or injury to the whole train. While the cars are in line the links in coupling force up the caps D, but allow them to fall when the hooks catch on the flanges, and to thus hold the links in place by preventing them from being thrown upward. A transverse bar, K, is pivoted below the floor of the draw-head and supported by arms *k*. The ends of said bar are bent up to form handles L. At the middle part of the bar a loop or projection, *m*, is formed. This loop passes under the spring; hence, when the handles L are turned down, this loop lifts the spring and raises the top D of the draw-head, allowing the link to be pulled out. The top D is provided with lugs *e*, which slide in grooves cut in the sides of the draw-head. The spring F holds the block up while the link is being inserted sufficiently to let the end of the link find the coupling-pin.

I claim as my invention—

1. The draw-head, having the cavity C and step D, with flange *i* and channels *i'*, substantially as specified.

2. The draw-heads A, having coupling-pin E and flanged step B, in combination with the coupling-link G, having one or both ends provided with barbs having hooked-like shoulders and bifurcated diverging ends or arms, substantially as specified.

3. The combination of the coupling-link having the barbed ends with the draw-head having the step B, channeled at *i'* and flanged at *i*, substantially as specified.

4. The combination of the rod K, having the handles L and stud *m*, with the spring F, pin E, and sliding block D, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM A. DEAN.

Witnesses:

CHARLES MCSHANE,
JAMES GRIFFITH.