

No. 756,217.

PATENTED APR. 5, 1904.

J. DARLING.

AUTOMATICALLY COUPLING OR UNCOUPLING RAILWAY CARRIAGES,  
WAGONS, OR SIMILAR VEHICLES.

APPLICATION FILED OCT. 16, 1903.

NO MODEL.

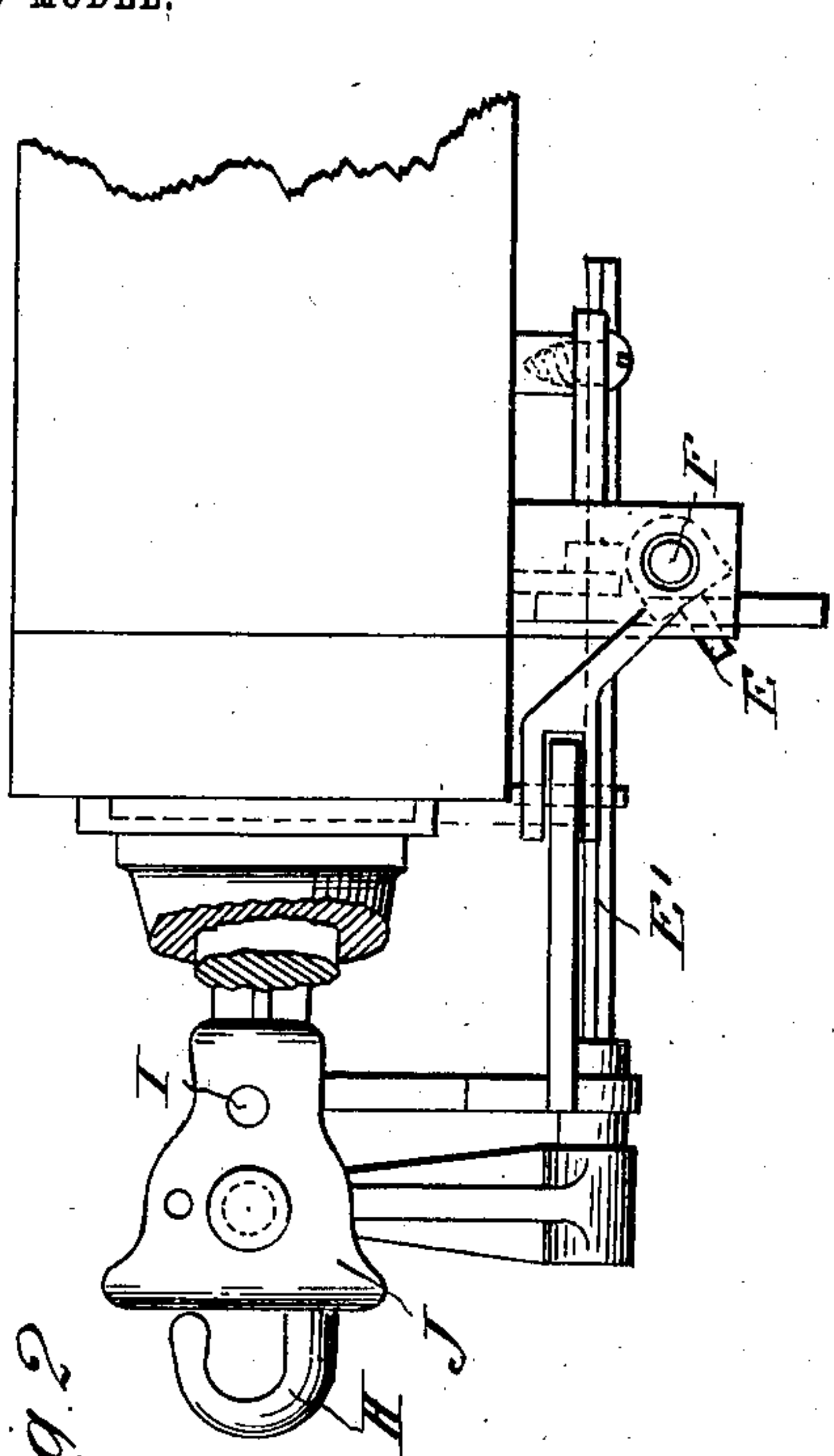


Fig. 2

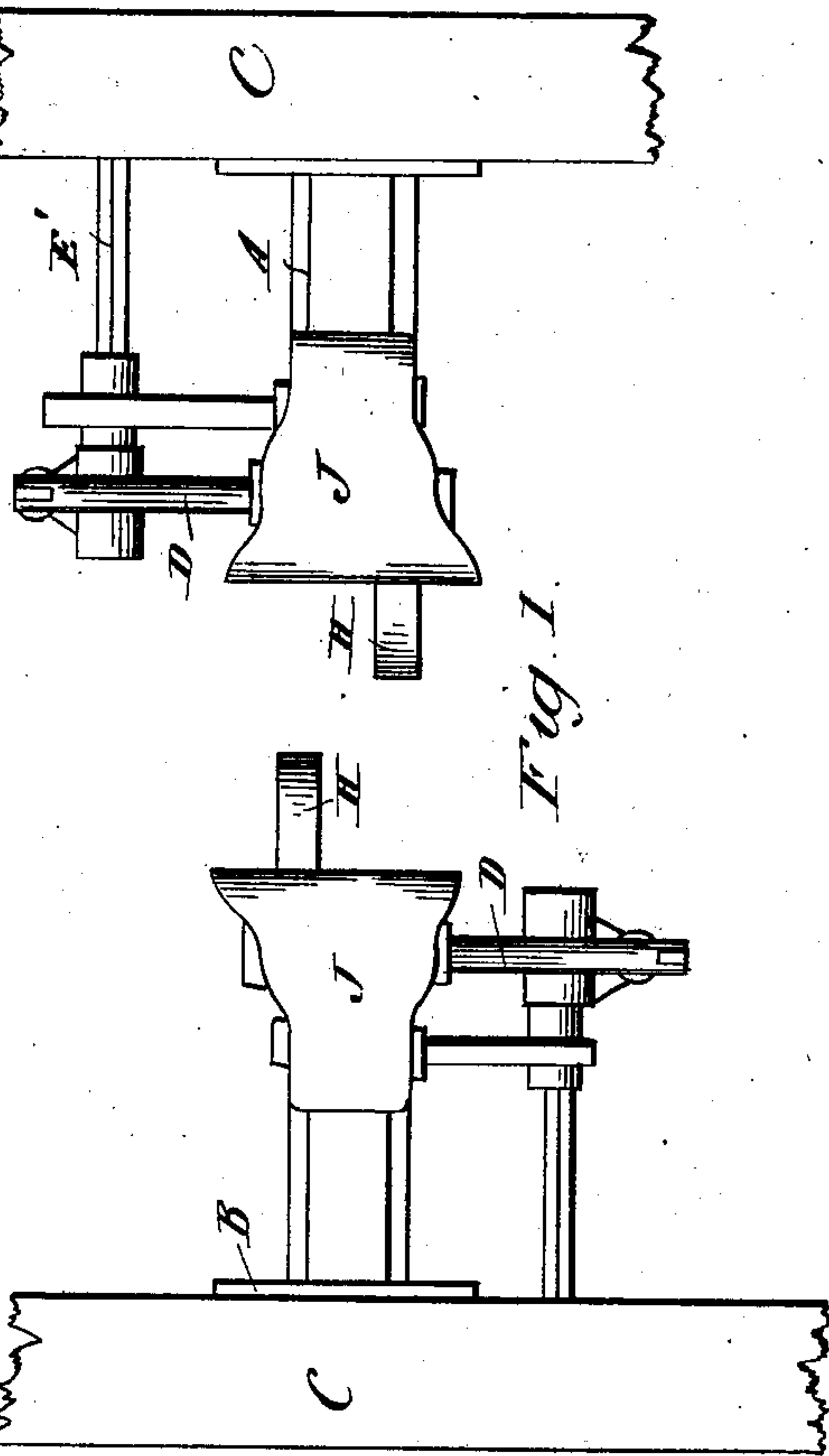
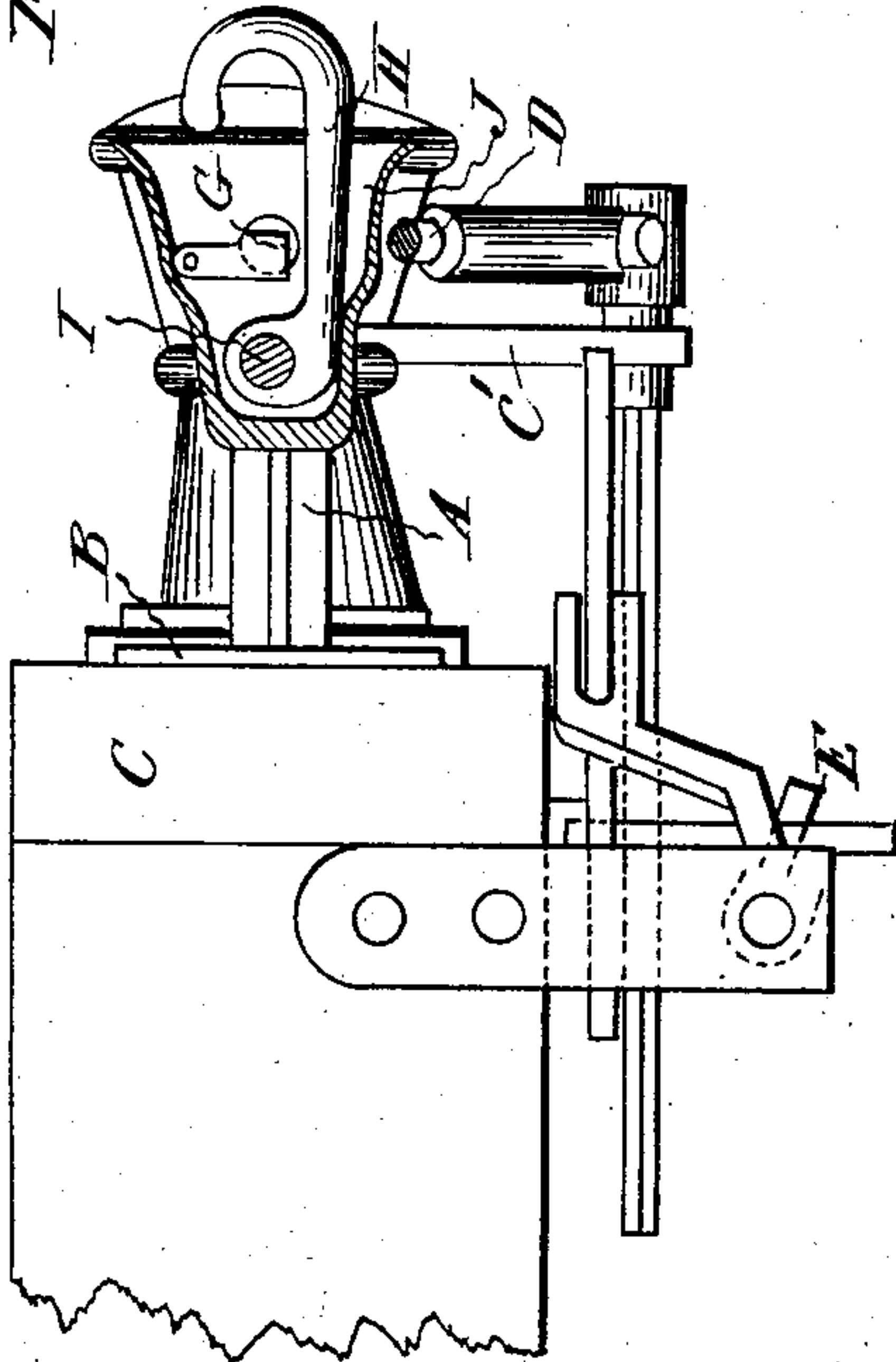


Fig. 1

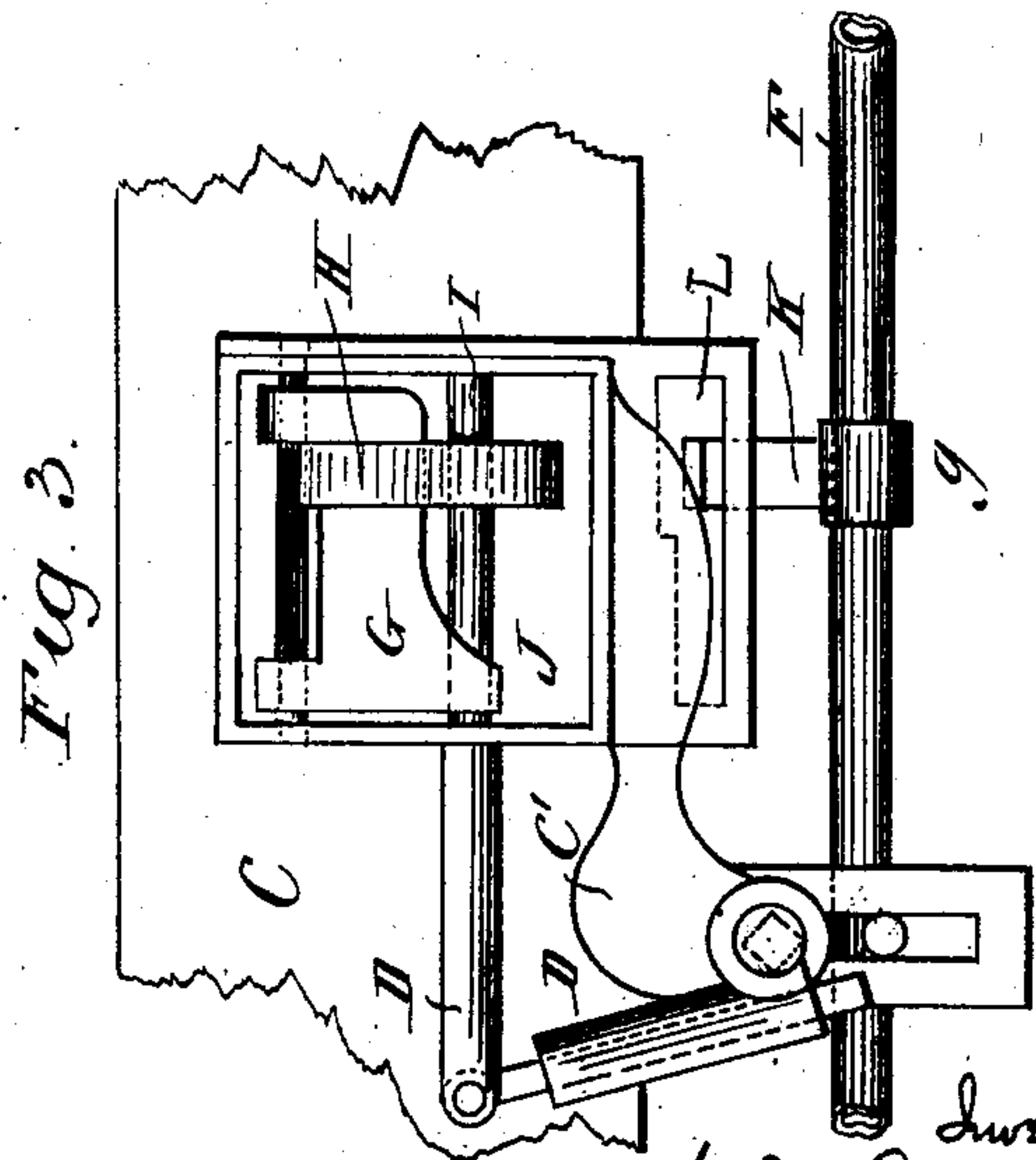


Fig. 3

Witnesses:  
*Harold*  
*M. B. Hayes*

Inventor  
*John Darling*  
*Knight Bros & Co*



# UNITED STATES PATENT OFFICE.

JOHN DARLING, OF RUTHERGLEN, SCOTLAND, ASSIGNOR TO DARLING'S PATENT AUTOMATIC COUPLING, LIMITED, OF GLASGOW, SCOTLAND.

AUTOMATICALLY COUPLING OR UNCOUPLING RAILWAY CARRIAGES, WAGONS, OR SIMILAR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 756,217, dated April 5, 1904.

Application filed October 16, 1903. Serial No. 177,325. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DARLING, engineer, of 8 Jedburgh avenue, Wardlawhill, Rutherglen, in the county of Lanark, Scotland, have invented certain new and useful Improvements in Automatically Coupling or Uncoupling Railway Carriages, Wagons, or Similar Vehicles, of which the following is a specification.

This invention relates to improvements in automatically coupling and uncoupling railway carriages, wagons, and similar vehicles, and is a further development of my prior patents, No. 646,361, of March 27, 1900, No. 700,625, of May 20, 1902, and No. 699,082, of April 29, 1902.

In order that my invention may be properly understood and readily carried into effect, I have hereunto appended one sheet of drawings, of which—

Figure 1 is a plan of a part of two vehicles mounted with the automatic coupling embodying my invention and standing in a position ready for coupling. Fig. 2 is a part side elevation and part section of the wagons and coupling corresponding to Fig. 1. Fig. 3 is a front or end view looking between the buffers of one of the wagons and one of the automatic couplings drawn to a slightly-larger scale.

In carrying out this invention I provide a bar A, which lies in the same direction as the draw-bar and moves out and in along with it, one end of which bar A rests in a boss or box B, fitted in the head-stock of the wagon C and having a depending eyepiece C', forming part thereof, while the other end has the coupling-pin D, which in the present instance is in two sections jointed together to facilitate the withdrawal of the said coupling-pin D when the wagons are being uncoupled. A pin E, fixed to the cross-bar F, engages in the eyepiece referred to, so that in uncoupling a wagon C, when the operating-handle is pulled the pin E, engaging with the side of eyepiece, causes the bar E' on which the coupling-pin is carried to turn, and in so doing the coupling-pin becomes disengaged from its hold on the link. The end of the coupling-pin, however, remains

in the wall of the jaws referred to in the former patents and is held there by means of a catch G ready for the next operation of coupling.

The coupling-link H according to the present improvements is carried on a pin I, passing through the jaws J behind the catch G for releasing the coupling-pin D, and thus is always in the position ready for coupling. The catch G is in the form of a kind of plate having an arm or projecting piece at its back end against which a spring presses, so that when the uncoupling has been effected the catch will return to its normal position by means of this spring, or, as shown in the drawings, the lower end is of heavier formation, and it therefore falls into the engaging position by gravity.

The jaws J, forming part of the draw-bar, are so arranged as to be capable of adjusting themselves to the buffers, and thus obviating any danger of breaking or damage—that is to say, they are able to recoil back and to return to their original position by means of a spring provided for the purpose.

For locking against coupling I have a collar g on the cross-bar F, with a projecting piece or plate K, which engages with a catch or checked recess L on under side of head-stock of wagon and as seen in Fig. 3.

A similar arrangement, as described, is fitted on each wagon to be coupled, so in point of fact I have a double coupling.

The mode of operation is as follows: As already explained, the coupling-links H are always in such a position ready for coupling so that when two wagons C come together the coupling-link H on each end passes in between the jaws J on the opposite wagon and in so doing releases the catches G from their hold on the coupling-pins D, which, engaging with the links, effects a double coupling. In uncoupling, the handle of each wagon is simultaneously pulled, when the pins E on the cross-bars F, already referred to, engaging with the sides of the eyepieces C', cause the bars E' to turn, which action causes the coupling-pins D to become released, and immediately the

catches G spring forward and lock them against coupling until the next operation.

I claim—

5 The arrangement and combination of parts for automatic coupling of railway-vehicles and the locking of the same consisting of jaws so formed as to accommodate a coupling-link which is mounted in its rear and the entrance therein of its opposite coupling-link, also a  
10 catch which drops by gravity into a position to lock the coupling-pin against coupling, which is operated by the movement of a cross-

bar of square formation brought into action by a pin formed on a cross-bar and actuated by the handles which are mounted on each side 15 of the wagons, substantially as and for the purposes hereinbefore described and illustrated on the accompanying sheet of drawings.

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

JOHN DARLING.

Witnesses:

JOHN LIDDLE,

JOSEPH HENRY PEARSON.