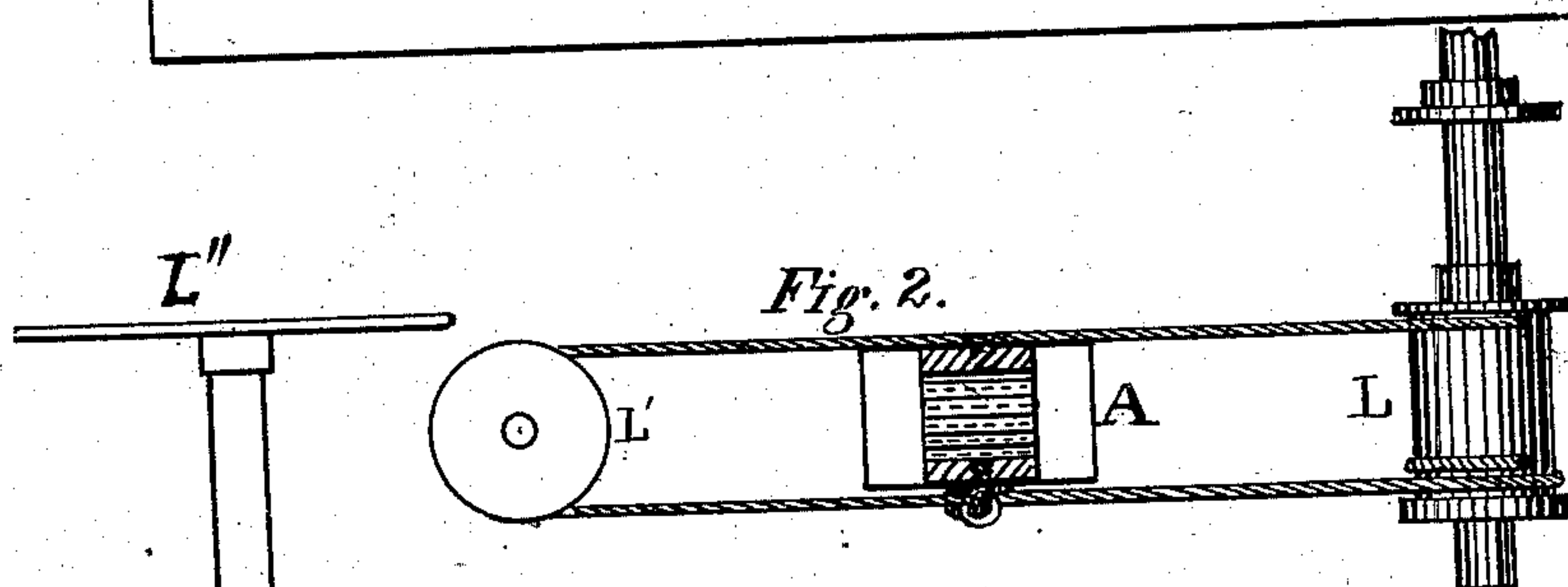
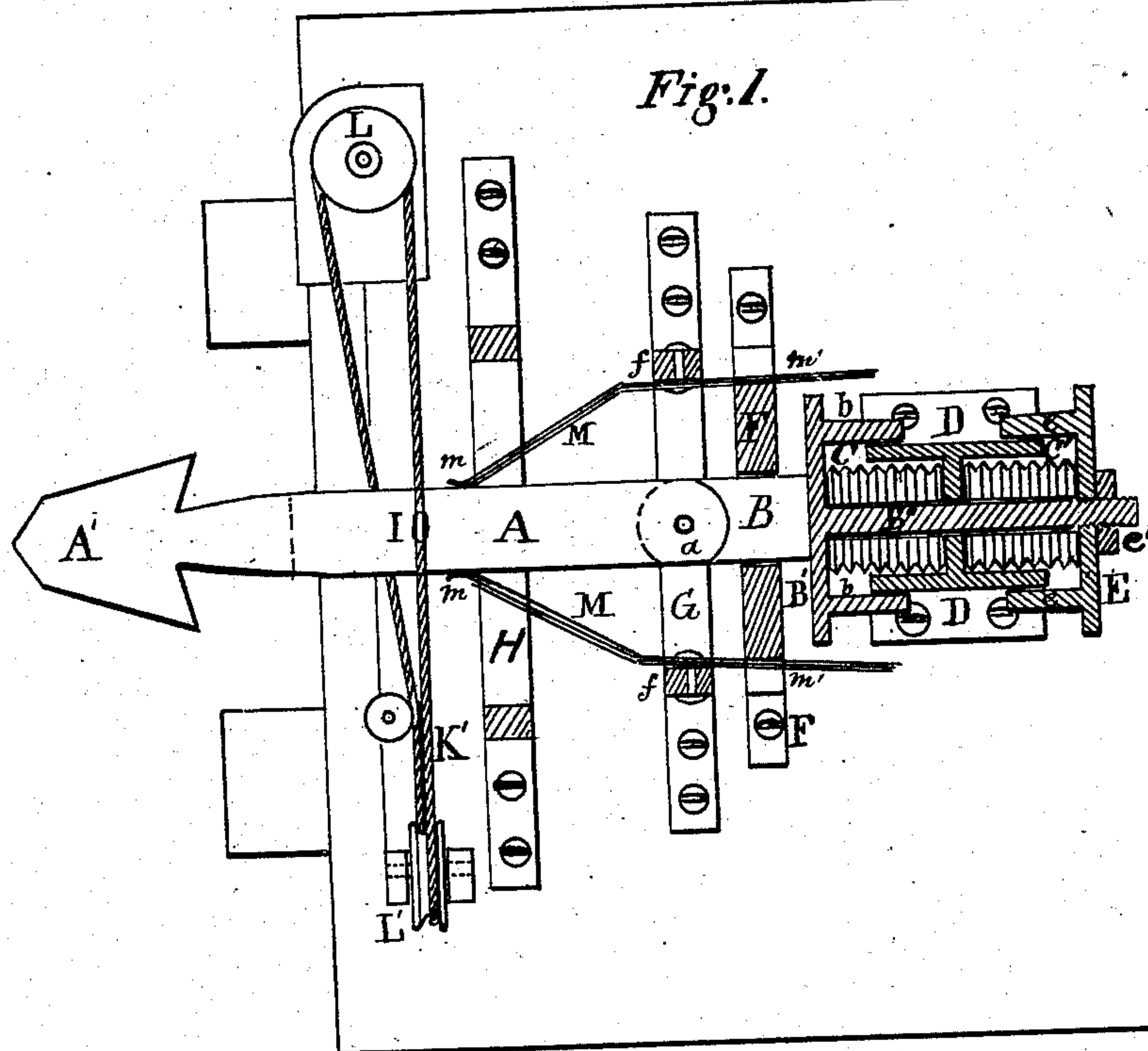


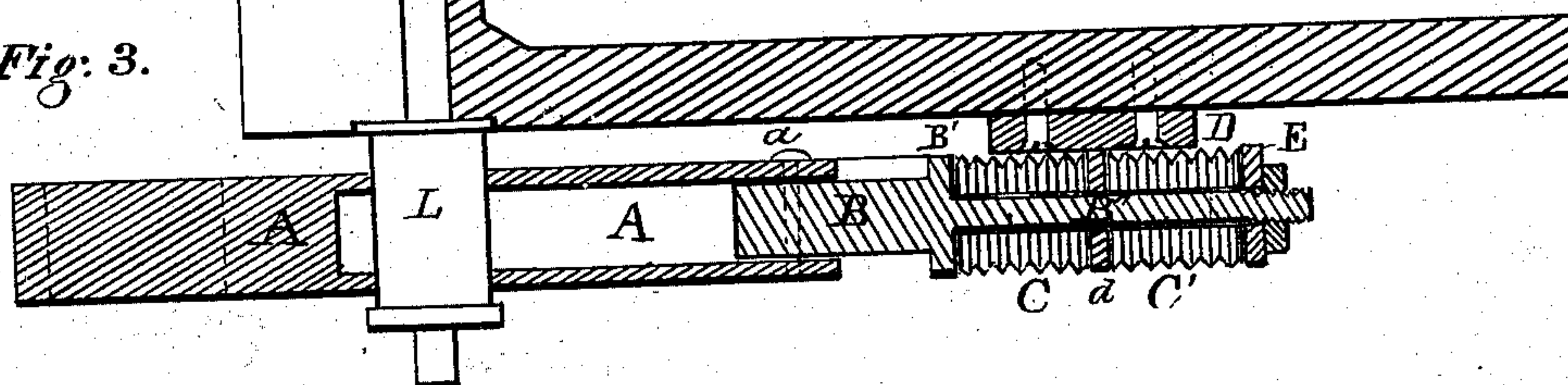
J. BALLARD.  
Car-Couplings.

No. 207,094.

Patented Aug. 13, 1878.



*Fig. 3.*



Witnesses

*W. H. Chandler*  
*D. C. Reinohl*

Inventor

*John Ballard*  
Per *W. R. Singleton* Atty



# UNITED STATES PATENT OFFICE.

JOHN BALLARD, OF COHOES, NEW YORK.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **207,094**, dated August 13, 1878; application filed June 21, 1878.

*To all whom it may concern:*

Be it known that I, JOHN BALLARD, of Cohoes, in the county of Albany and State of New York, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to car-couplings wherein the draw-bar is hinged to the stock and moves sidewise for coupling or uncoupling, and which has a double-barbed end, all of which will be hereinafter more fully described.

Figure 1 is an under-side view, partly in section. Fig. 2 is an end view, showing the windlass. Fig. 3 is a side view of the draw-bar and partial section.

A is the draw-bar, having the end A' double-barbed. The draw-bar A is attached, by a hinge-joint, *a*, to the stock B of a cap-piece, B', which has extending from the opposite side a long bolt, B'', with a screw-thread and nut at the end; also a flange, *b*, on each side of the bolt, near the end of the cap.

The screw-bolt B'' passes through two serrated india-rubber springs, C C', which are placed within a frame, D, of H form, the middle bar, *d*, serving as an abutment on the side next to the draw-bar for an abutment of the springs C C' in either direction.

At the screw end of bolt B'' is a cap-piece, E, having flanges *e e* to correspond with flanges *b b* on cap-piece B'. These flanges work easily outside of the frame D to serve as guides for the movement of the cap-pieces B' and E.

The springs C C' are dentated on all sides, to admit of easier compression. The nut *e'* is for giving the proper tension to the springs.

F is a guide, through which the stock B passes. G is a yoke covering the side springs

M M, which are riveted to its sides *f f*. H is also a yoke, to keep the draw-bar A in place. I is a loop or eye, by which the cords or chains K K' are fastened to the draw-bar A. L is the windlass, supported in a frame secured to the car on one side at the end, and L' is a pulley on the opposite side, on a line with the windlass, supported in standards or pulley-box. M M are flat springs, riveted to the yoke G at *f f*. The ends of springs M M at *m m*, where they bear upon the sides of draw-bar A, are slightly curved. The other ends bear upon the outside of the guide F at *m' m'*.

The cord or chain K passes from the loop I around the windlass L, to which it is fastened. The cord K' passes from the loop I over the top, around the pulley L', and under the draw-bar A to the windlass L, and is fastened also to it. By turning the hand-wheel L'' the draw-bar will be moved in either direction for uncoupling it from the connection.

I claim—

1. The arrow-headed spring-acted draw-bar A, swiveled to the stock B, having cross-head B', in combination with the cross-head E and the box D, inclosing the springs C and C', which encircle the bolt B'', substantially as and for the purpose described.

2. The combination of the windlass L, the two cords K K', pulley L', and draw-bar A, substantially as and for the purpose described.

3. The combination of the draw-bar A, springs M M, springs C C', inclosed in the box B, the cross-heads B' and E, the windlass L, cords K K', and pulley L', all substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

JOHN BALLARD.

Witnesses:

T. BALLARD,  
GEO. F. GRAHAM.