A. ALLEN.

CAR-COUPLING.

No. 186,514. Patented Jan. 23, 1877.

Fig. 1.

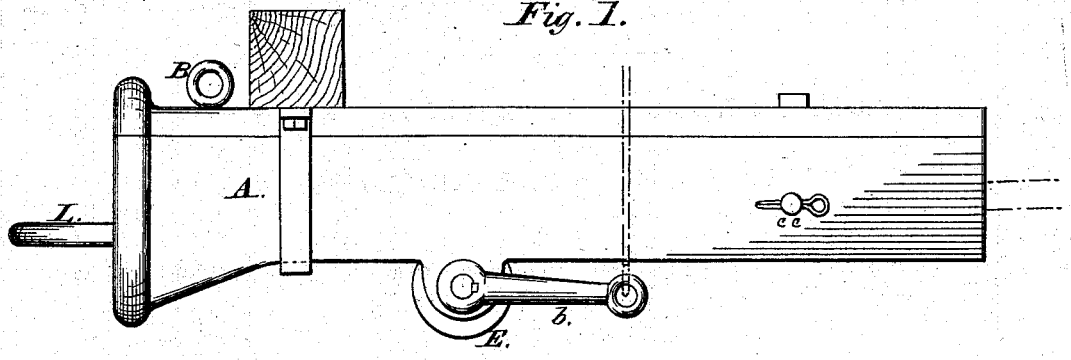


Fig. 2.

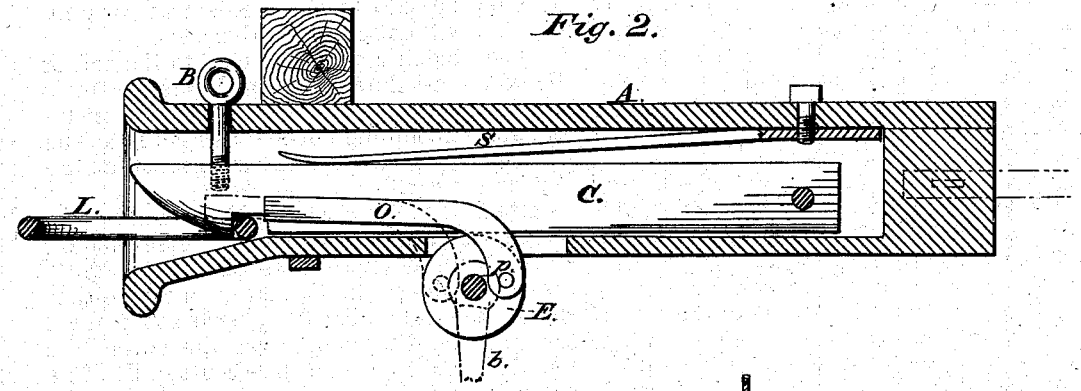
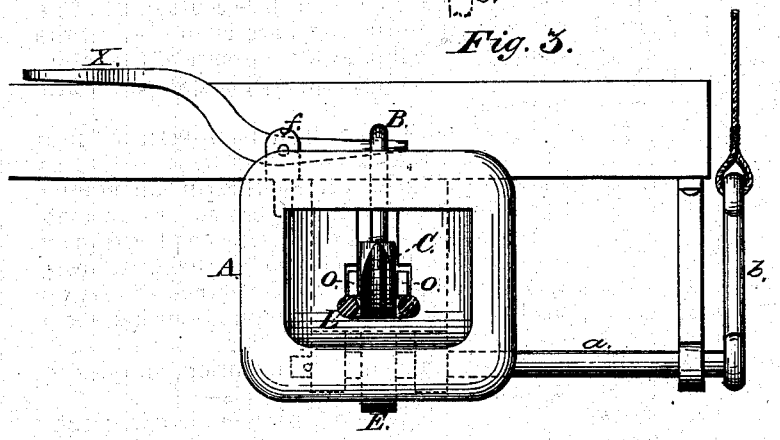


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

AMZI ALLEN, OF MARIETTA, OHIO.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **186,514**, dated January 23, 1877; application filed November 28, 1876.

To all whom it may concern:

Be it known that I, AMZI ALLEN, of the city of Marietta, State of Ohio, have invented certain Improvements in Car-Couplings, of which the following is a specification:

The object of my invention is the conversion of the common draw-head into a self-coupler, and to make coupling and uncoupling of cars simple, rapid, and safe.

This is effected by means of a catch-bar, C, spring S, eccentric E, or its equivalent, the sliding bars O, and the eyebolt B, operated by a lever or other suitable device outside of the car.

The catch-bar C, placed inside of the common draw-head, and attached at the rear end of the same by the bolt *c c*, and held down by the spring S, as shown in Fig. 2 of the drawing, catches and holds firmly in a horizontal position the ordinary coupling-link L when introduced into the draw-head. The link, held as described, is introduced into the opposite draw-head, and the coupling effected by the simple movement of the cars together.

The office of the spring S is sufficiently explained in the foregoing description of the catch-bar, its operation being simply to hold down the catch-bar.

The chief use of the eccentric E is in uncoupling cars. It is placed in an opening in the bottom of the draw-head, underneath the catch-bar C, and on a shaft which extends to the side of the car, as shown in Fig. 3. On the outer end of this shaft is an arm or its equivalent, which should hang down when the coupling is effected, as shown in Fig. 2. To uncouple, swing this arm upward to rear, when the eccentric, acting upon the catch-bar, and underneath it, will raise the bar and let go the link, at the same time throwing forward the sliding bars O over the end of the link. By bringing the arm a little farther upward to a perpendicular position, as shown in Fig. 3, the catch-bar will remain up, permitting the movement of cars by the engine, as in switching, &c., without coupling them.

By attaching a cord or chain to the end of the arm *b*, as shown in Fig. 3, the eccentric may be operated from the top of a box or flat car, and uncoupling effected as readily as the same could be done from the ground at the side of the car.

Attached to the eccentric E, by means of a pinion or wrist, *p*, one on either side thereof, and extending forward, as shown in Fig. 2, are the sliding bars O, placed one on either side of the catch-bar C. These are thrown forward, in uncoupling, over the end of the link by the action of the eccentric E. The office of these sliding bars is to prevent the raising of the link by the pressure of the catch-bar, when it is desired to uncouple cars while in motion.

For coaches, the eyebolt B, fastened into the top of the catch-bar C by a screw, as shown in Fig. 2, will be used in uncoupling by means of a lever, *x*, operated by the foot, upon the fulcrum *f*, which may be placed upon the upper right or left side of the draw-head, and by means of which the catch-bar may be easily raised and the uncoupling effected from the platform of the car.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the catch-bar C, eccentric E, sliding bars O, and link L, all substantially as described.

AMZI ALLEN.

Witnesses:
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