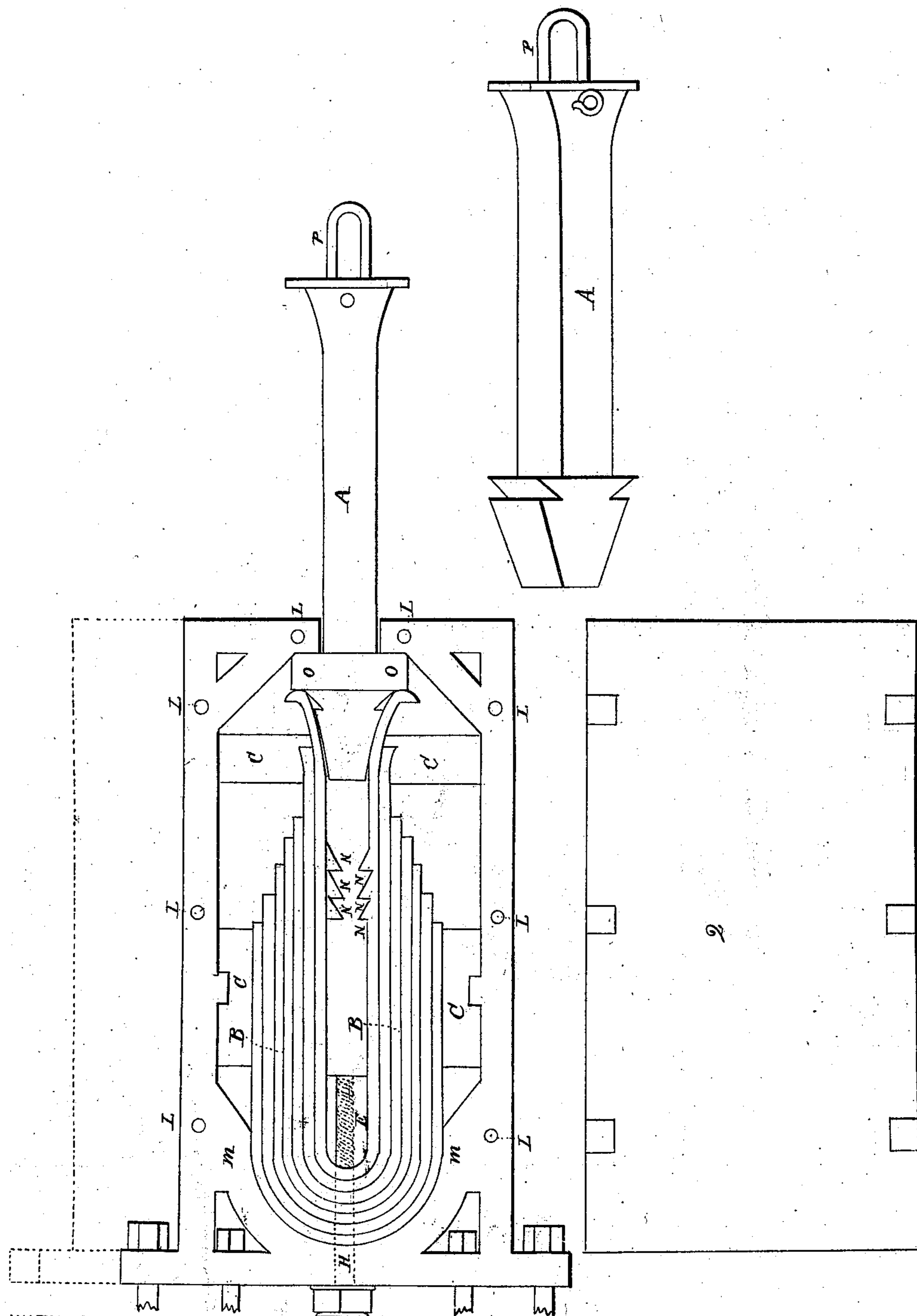


A. H. ROWAND.  
CAR COUPLING.

No. 31,036.

Patented Jan. 1. 1861



WITNESSES:

*N. B. Hatch*  
*Francis Browne*

INVENTOR:

*A. H. Rowand*

# UNITED STATES PATENT OFFICE.

ARCHIBALD H. ROWAND, OF ALLEGHENY, PENNSYLVANIA.

## COUPLING FOR RAILROAD-CARS.

Specification of Letters Patent No. 31,036, dated January 1, 1861.

*To all whom it may concern:*

Be it known that I, ARCHIBALD H. ROWAND, of the city and county of Allegheny and State of Pennsylvania, have invented a new and improved mode of constructing a bumper, coupling, or connection for railroad-cars or other vehicles, whereby in case of sudden check in the speed of any car the violence of the concussion is relieved and injury to the car, passengers, or freight is greatly limited and decreased; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in providing within a case or box a series of metallic springs, so arranged as to operate with a lateral pressure on opposite sides of a wedge shaped bar, and so arranged as to allow said bar to press its wedge shaped end between the opposing and lateral pressure presented by said springs, the resistance of said metallic springs being increased by india rubber or other springs placed on the outer or supporting sides of said springs, and between them and the sides of the box or case in which the whole is secured. The general form of the springs and the mode of fastening the same, also the general form of the wedge ended bar, by which the springs are operated and by which by means of a movable link in the front end the coupling to the next car is effected, are all shown in the annexed drawing, which shows a perspective view of the springs, pads, coupling bar, with its wedge shaped end, when not covered.

L L L L presents the frame or case in-

closing springs, also bolts and nuts by which top and bottom are secured, also the covering of said box or case and coupling or draw bar detached, M M the bearings in which the several leaves of the metallic spring is bedded and fastened by the bolt H, passing through and entering the nut E.

B B show the leaves of the principal spring.

C C are additional pad springs placed to aid the springs in opposing the entrance of the wedge ended bar *a*.

O O are pad springs or cushions near the front end and inside of the box or case to assist the main spring when the car is drawn forward by the power in advance of it.

A shows the general form of the connecting bar with its bumper head, and loose link P for coupling to the next car, also its wedge shaped end which operates on the main spring in its forward and backward motion.

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

The application and use of the compound metallic springs, supported by the elastic spring pads or cushions C C and its socket or bed M M operating by lateral resistance or pressure, also elastic spring pads or cushions O O near the ends of the main metallic spring so as to increase the lateral resistance of said spring when the car is drawn forward, the above parts being arranged as herein shown, and operating in the manner and for the purpose as set forth.

A. H. ROWAND.

Witnesses:

WESTON ROWAND,  
JACOB M. WINDER.