

D. S. NEAL.  
Car Coupling.

No. 7,620.

Patented Sept. 3. 1850.

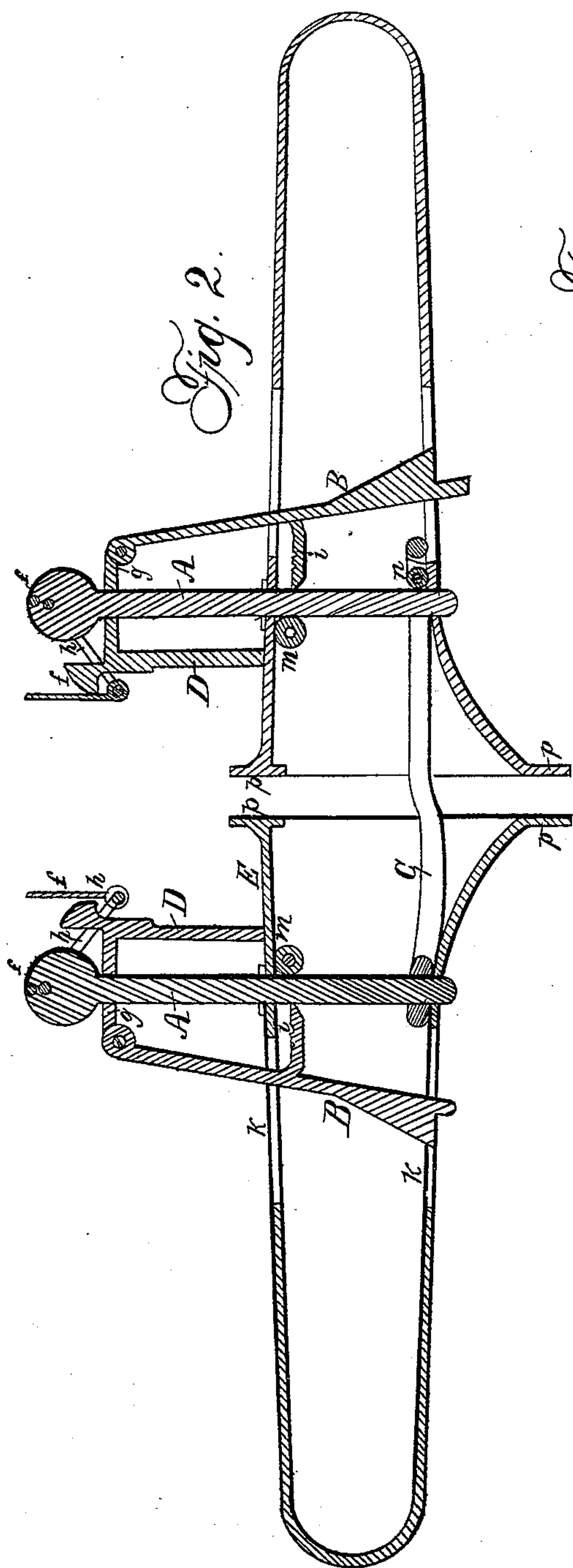
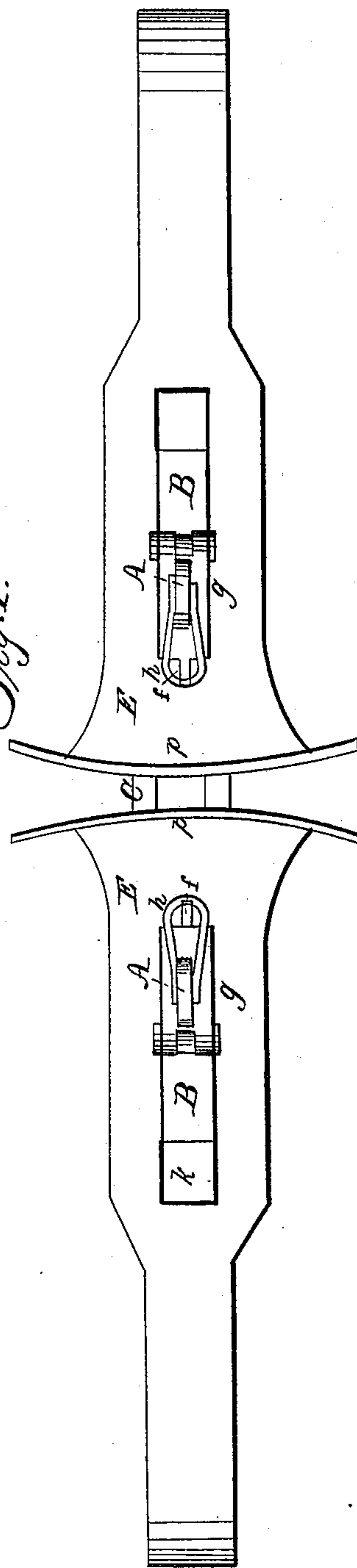


Fig. 3.



Fig. 1.





# UNITED STATES PATENT OFFICE.

DAVID S. NEAL, OF LYNN, MASSACHUSETTS.

## CAR-COUPLING.

Specification of Letters Patent No. 7,620, dated September 3, 1850.

*To all whom it may concern:*

Be it known that I, DAVID S. NEAL, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a top view of two car-couplings connected together, Fig. 2, a longitudinal vertical section of the same, and Fig. 3, a view of the coupling link detached.

Similar letters indicate like parts in all the figures.

E, E, are the bodies or frames of the respective couplings, which are combined with the ends of cars and with the requisite springs, in any well-known or usual manner.

p, p, are the bumpers which project outward from the open flaring mouths at the outer ends of the coupling frames.

On the top of a coupling frame E, there rises a standard D; from which standard the arm g, projects inwardly, to the extremity of the arm g, there is hinged the pendent B; which pendent passes through and swings freely in the longitudinal slots k, k, in the top and bottom plates of the coupling frame. A shelf i, projects from the side of the pendent B, as shown in the drawings.

The connecting bolt A, passes through a hole in the arm g, and also through holes in the upper and lower plates of the coupling frame. A loop h, is hinged to the head of the bolt A, and a guard pin s, projects from the side of the bolt head just above the fulcrum of the loop h, which prevents the loop from being thrown inward, and causes it to always fall outward by force of gravity, whenever the hand is removed from it after it has been raised. A catch head f, rises from the angle of the standard D, and the arm g, over which catch, the loop h, falls when the connecting bolt A, descends to its place—as shown in the drawings—and thereby securely retains the bolt in that position until the loop h, has been turned upward by the hand. When the connecting bolt A, is down in the position shown in the drawings, the shelf i, projecting from the side of the pendent B, will bear against the bolt, and force the pendent into an inclined position; and when the bolt A, is elevated to detach it from the coupling link C—the pendent will swing into a vertical position, and thereby

throw the shelf i, under the point of the bolt, and retain it in an elevated position until the shelf has been moved from under the same.

The fastening link C, has a hole t, at one end, and a roller n, pivoted at its opposite end. When it is desired to connect a couple of cars to each other, the connecting link C, is confined to the coupling in the end of one of the cars, by inserting the bolt A, through the hole t, in one end of the link; and the connecting bolt A, in the coupling attached to the other car is then raised to such a height that it will be caught and retained by the shelf i, on the pendent B; when by bringing the ends of the two cars in contact, the projecting end of the link C, from the coupling on one of the cars, will be forced into the open mouth of the coupling on the other car, and striking against the pendent B, will force it back, and thereby remove the support from under the bolt A, and cause it to descend through the link and thereby connect the cars together.

A bearing roller m, (or rollers,) is located in a transverse horizontal position within the coupling frame by the side of the bolt A, in such a position as to receive the principal portion of the strain exerted upon the bolt. The roller n, in one end of the connecting link C, receives the strain exerted by the bolt A, on that end of the link. The bearing rollers m, and n, it will therefore be perceived, prevent notches from being worn in the sides of the connecting bolt A, and consequently, enable the bolt to be easily withdrawn by means of a cord or chain while it is being acted upon, whenever it may be necessary to detach a car from the train when it is in motion. The fastening loop h, and the catch f, serving to prevent the connecting bolt A, from being thrown out of its place by any jar or concussion while the cars are in motion.

Having thus fully described my improved car coupling, what I claim therein as my invention and desire to secure by Letters Patent, is—

The bearing roller (or rollers) m, placed within the body of the coupling, and the bearing roller n, located in one end of the connecting link C, for the purpose of enabling the connecting bolt A, to be easily detached from the link C, when the cars are in motion; when this arrangement of the said rollers and connecting bolt, is combined with

the loop *h*, the catch head *f*, and cord for uncoupling in such a manner that the loop will be disengaged when force is applied to withdraw the bolt but will prevent the connecting bolt from being accidentally thrown out  
5 of place when the cars are in motion.

The above specification of my improved

car coupling signed and witnessed this 31st day of May 1850.

DAVID S. NEAL.

Witnesses:

Z. C. ROBBINS,  
WM. D. WASHINGTON,  
PHIL. BEV. HOOE.