

H. E. LOANE CAR COUPLING.

No. 19,705.

Patented Mar. 23, 1858.

Fig. 1.

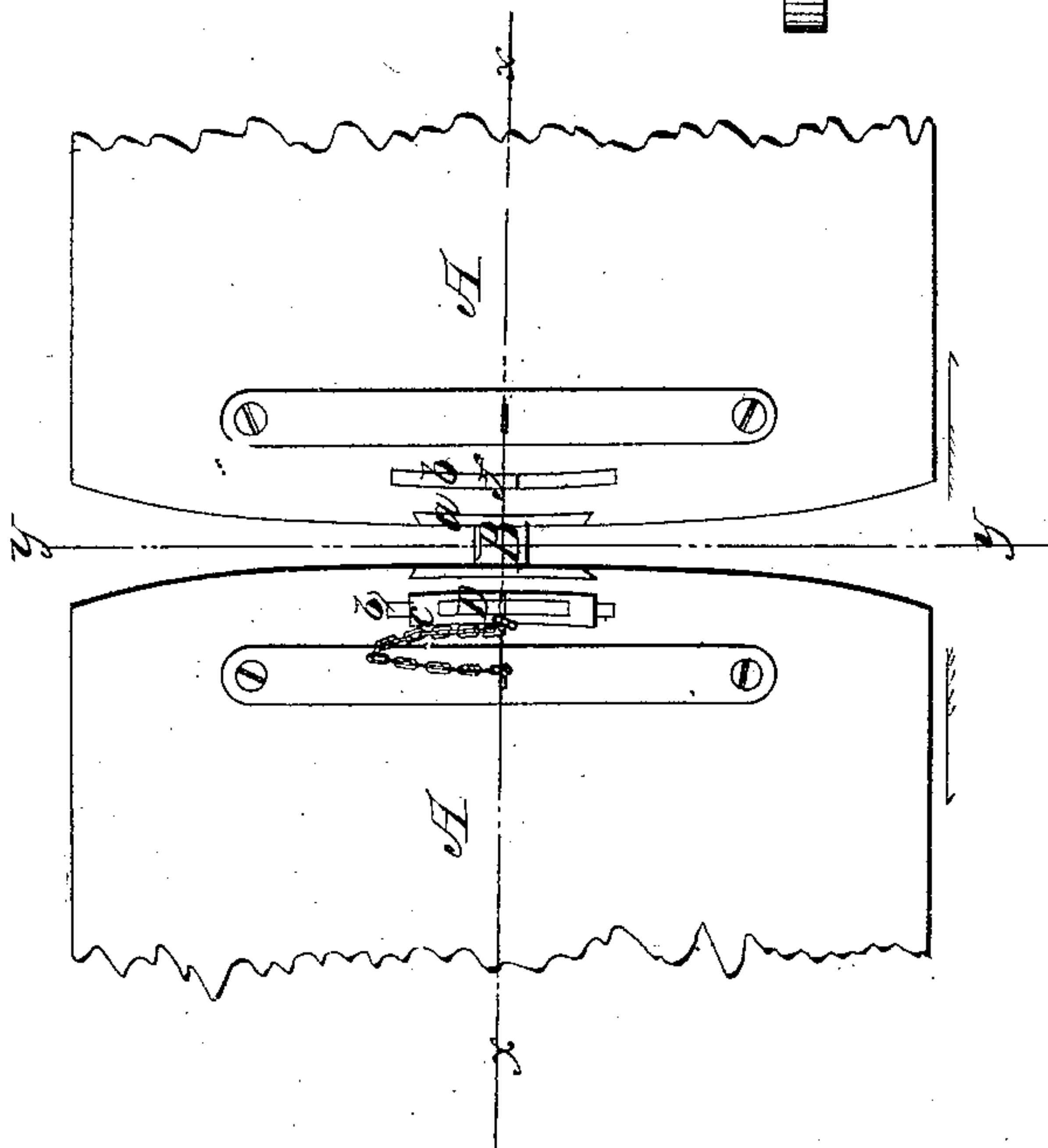


Fig. 5.

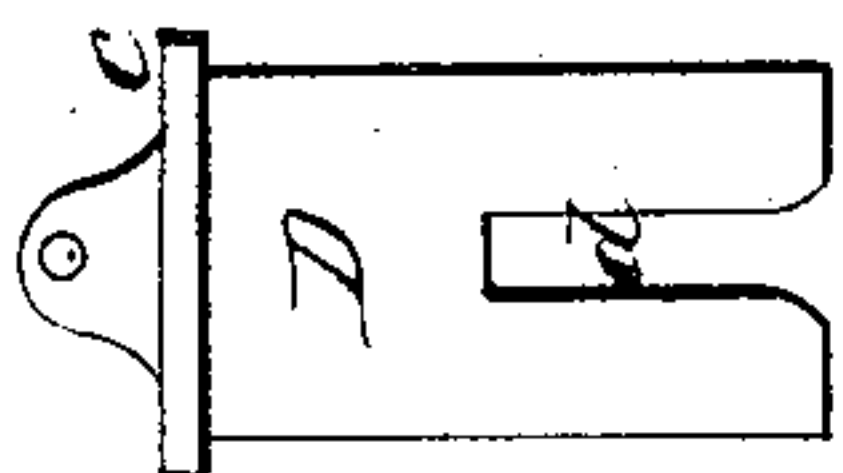


Fig. 6.



Fig. 7.



Fig. 3.

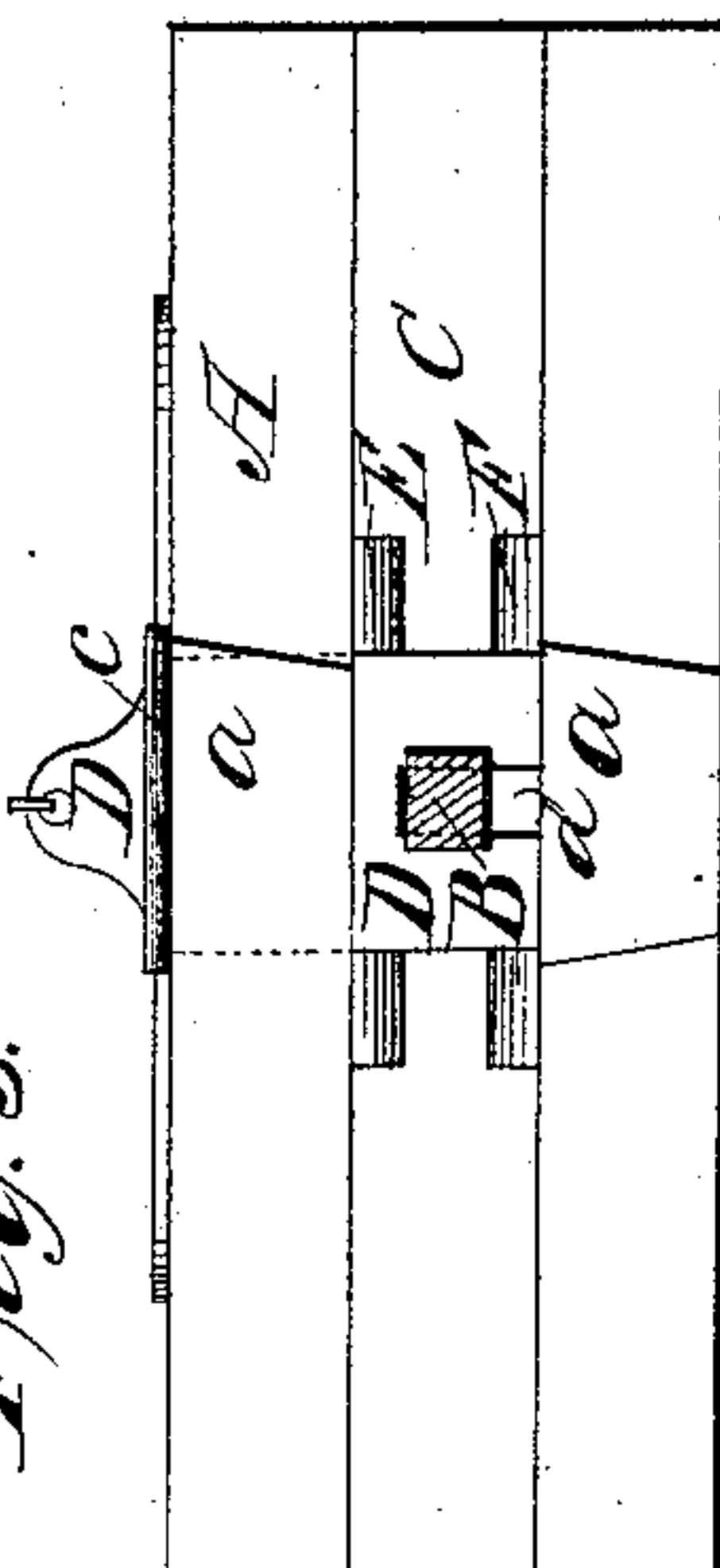


Fig. 4.

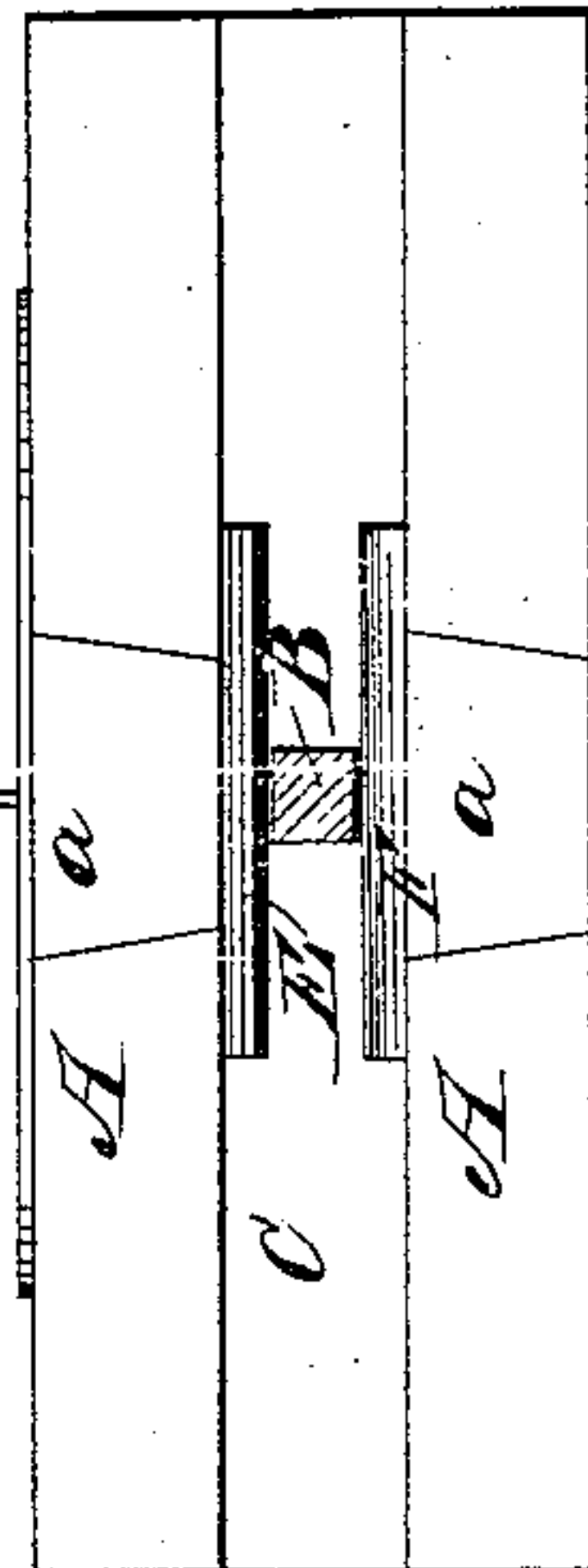
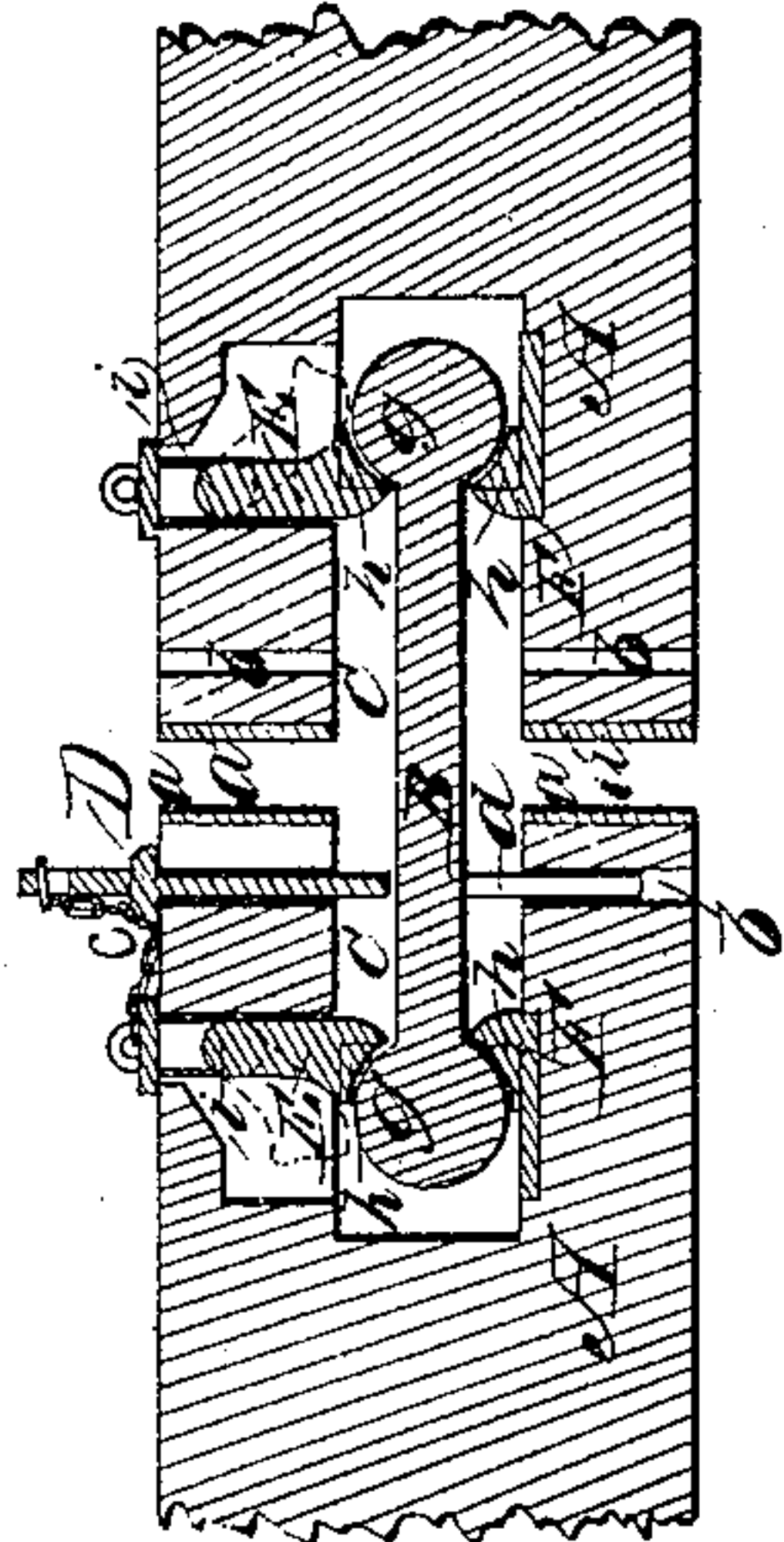


Fig. 2.



UNITED STATES PATENT OFFICE.

HENRY E. LOANE, OF BALTIMORE, MARYLAND.

RAILROAD-CAR COUPLING.

Specification of Letters Patent No. 19,705, dated March 23, 1858.

To all whom it may concern:

Be it known that I, HENRY E. LOANE, of Baltimore, in the State of Maryland, have invented a new and Improved Railroad-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 part of this specification, Figure 1 being a plan of the coupling-heads of two cars connected by my improved coupling; Fig. 2, a longitudinal vertical section thereof in the plane indicated by the line *x x*, Fig. 1; Fig. 3, a transverse sectional view thereof in the position indicated by the line *y y*, Fig. 1, and looking toward the left; Fig. 4, a similar view thereof in the same plane and looking in the opposite direction; Figs. 5, 6, and 7, views of parts detached.

Like letters designate corresponding parts in all the figures.

Each coupling-head A, is provided with a horizontal mouth C, open at both sides. The coupling-bar B, has a rounded or wedge-like head *g*, at each end thereof, wider in a vertical direction than the body between, but narrower than the width of the body in a horizontal direction, especially at *f, f*, where the forked holding-plate strides it, as hereinafter set forth.

At the bottom of the mouth C, is firmly secured a fixed jaw F; and from the upper side of the mouth is suspended a swinging jaw E, in a position directly over the fixed lower jaw. The outer surfaces of these jaws are rounded so as to allow the head of the coupling-bar to enter freely between them by its own wedging action; and the inner surfaces thereof are concave or abrupt, in order to securely hold the head of the bar, when once entered, from being withdrawn. The journals *i, i*, of the swinging jaw E, are mounted in suitable bearings in the coupling-head; and a space is made in the head behind it to enable it to swing backward as far as necessary. It is prevented from swinging forward beyond a vertical position, by striking a shoulder in the coupling-head. The jaws are made of sufficient length to securely hold the head of the coupling-bar in its ordinary movements to the right or left in turning curves on the road, but not so long but that the said jaws will be freed from the coupling-bar if either car is thrown very much out of the line of the train.

In front of the jaws E, F, is a transverse vertical slot *b*, in the coupling-head, for the purpose of receiving a forked holding-plate D, in the manner represented in the drawings. The slot may be made somewhat longer than the width of the plate D, which it receives, provided it does not allow the coupling-bar to slide off from the ends of the jaws E, F, in the ordinary motions of the cars. The said plate has a notch or aperture, *d*, as represented in Figs. 5, of just sufficient width to freely stride the coupling-bar at *f, f*, thereby keeping said coupling-bar in a vertical position. The upper end of the holding-plate may have a lip, or enlargement, *c*, to hold it at the proper height. The holding-plate of one car only is to be used in coupling two cars; and by this arrangement the coupling is enabled to be disengaged without fail, if one car should be thrown from the track, so that, if such an accident should happen, it would not draw the other car or cars coupled thereto, off with it. For, since, if one end of the coupling-bar is not held by a holding-plate, there being nothing at the ends of the jaws to prevent the coupling-bars sliding out sideways, and since the mouth C, of the coupling-head, is open at both sides, there is nothing to prevent the free disengagement of the coupling-bar from the coupling-head when either car is thrown sufficiently to one side to allow the coupling-bar to slip from the ends of the jaws, as it would, if one of the cars should be thrown from the track. Thus, while a sure and convenient coupling is obtained, there is nothing to hold the cars together in case of such an accident to either. When it is desired to uncouple the cars, the holding-plate D, is removed from the slot *b*, and the coupling-bar turned over at right-angles to its former position, when the head slides freely out from between the jaws.

The middle, inner portions of the jaws being subjected to the greatest wear by the head of the coupling-bar, they may be made of separate hardened pieces *h, h*, to fit into corresponding spaces in the bodies of the jaws, so that, when one is worn out another may be substituted in its place without the loss of the whole jaw. Hardened plates *a, a*, may also be secured to the ends of each car to prevent the battering of the coupling-heads, when brought together in the act

of coupling, or by the movements of the train.

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

5 The arrangement and combination of the coupling-bar B, jaws E, E, F, F, and holding-plate D, in the open-mouthed coupling-heads, substantially in the manner and for the purpose specified.

In witness that the above is a true specification of my improved railroad car-coupling, I hereunto set my hand this 18th day of February, 1858. 10

HENRY E. LOANE.

Witnesses:

JAMES T. GRAY,
DANIEL H. SHANE.