

I. R. TITUS & H. C. BOSSINGER.

CAR-COUPLING.

No. 174,033.

Patented Feb. 22, 1876.

Fig. 1.

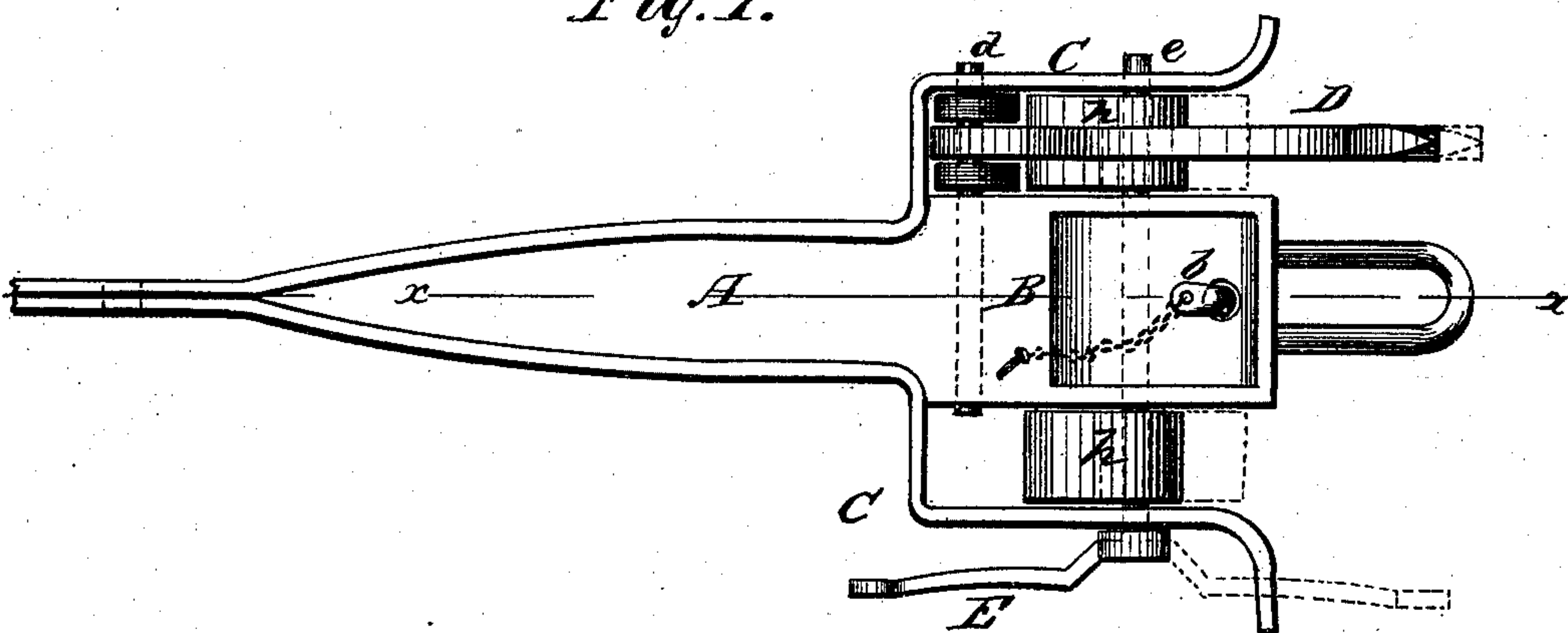
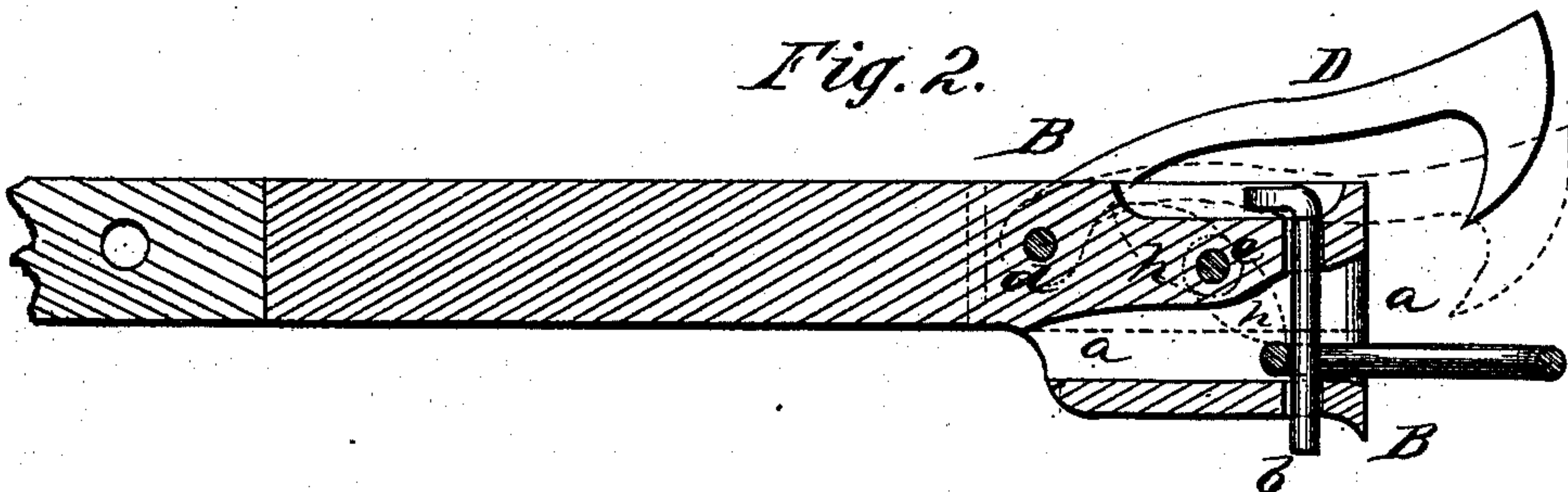


Fig. 2.



WITNESSES:

F. B. Dietrich

H. C. McArthur

INVENTORS:

Irr. R. Titus & H. C. Bossinger

per.

J. H. Alexander

ATTORNEY.

UNITED STATES PATENT OFFICE.

IVOR R. TITUS AND HENRY C. BOSSINGER, OF HUNTINGTON, WEST VIRGINIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **174,033**, dated February 22, 1876; application filed January 5, 1876.

To all whom it may concern:

Be it known that we, IVOR R. TITUS and HENRY C. BOSSINGER, both of Huntington, State of West Virginia, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of our invention consists in the construction and arrangement of a car-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, and Fig. 2 is a central vertical section on line *x x*, Fig. 1.

A represents a draw-bar for railroad-cars, formed at its outer end on the under side with the head B, which has an opening, *a*, in the rear and suitable holes for the passage of the ordinary coupling-pin *b*, to be used with the common link. To each side of the draw-bar A is secured a bar, C, which is bent outward and then forward parallel with the front end of the draw-bar and a suitable distance from the same. In the rear part of the space thus formed, on one side of the draw-bar, is pivoted a coupling-hook, D, by means of a pin, *d*, said hook projecting a suitable distance in front of the draw-head, as shown. Through the front ends of the side bars C C and the draw-bar A is passed a shaft, *e*, having a lever, E, upon one end, and upon each side of the draw-bar is a cam, *h*, attached to said shaft.

In coupling the cars, the hook D of one car passes over and catches on the cam in the opposite space of the other car, and the cars may be uncoupled from either car by simply raising the lever E, which turns its shaft *e* so that the cams thereon will raise both hooks.

In the construction of this coupling we have aimed to produce a perfectly self-adjusting automatic coupling, in combination with the ordinary pin-coupling, in such a way that either can be used irrespective of the other, or in combination, as the case may require, always ready to couple, acting quickly, and doing its work thoroughly, without previous adjustment or attention whatever.

After being uncoupled, the receding hook of the opposing car invariably readjusts the uncoupling-cam by which it was released, leaving both hooks in position to couple again whenever brought together. Provision is also made for links that may be left in the mouth of the pin-coupling head B to slide back out of the way by means of the opening *a* in the rear end thereof, where they can remain without in any way interfering with the automatic action of the hooks.

Cars of different heights can be as readily coupled as those of equal height by virtue of the two opposing inclined planes formed by the points of the hooks and uncoupling-cams. It is also exceptionally safe, inasmuch that it couples double, and, by using the link and pin simultaneously with the hooks, can be made a triple coupling, each of which is as strong as the ordinary coupling now in use.

The action of the hooks is such that while the vertical motion and great different height of cars may tend to slacken one of the hooks, the other must necessarily hold the tighter.

It can be arranged to uncouple from the top of cars while in motion as readily as from the ground while at rest.

It will also be observed that the strain is divided equally between the shaft of the uncoupling-cam and the pin passing through the back end of the hook, thereby rendering accidents less liable from the breaking of pins.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a car-coupling, of the pivoted hooks D and the shafts *e* with cams *h*, upon which the hooks catch and by which they are uncoupled, substantially as herein set forth.

2. The combination of the draw-bar A, head B, with rear opening *a* and pin *b*, the pivoted hook D, side bars C C, and rocking shaft *e*, with cams *h h*, all as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own, we affix our signatures in the presence of two witnesses.

IVOR R. TITUS.
HENRY C. BOSSINGER.

Witnesses:
CHAS. L. HAFNER,
M. E. MILES.