M. L. MATHIAS.

CAR-COUPLING.

No. 189,050. Patented April 3, 1877.

Fig. 1.

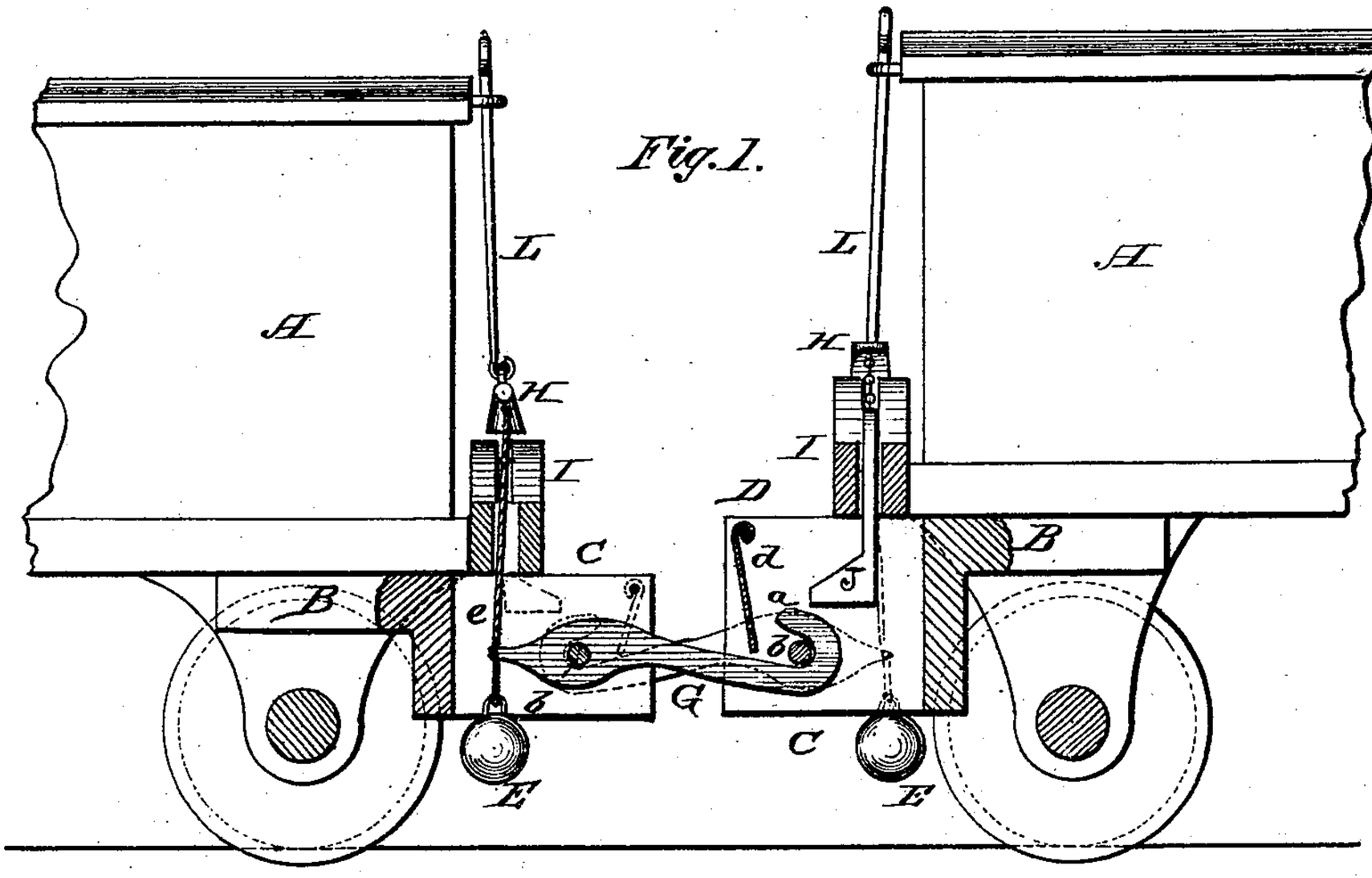


Fig. 2.

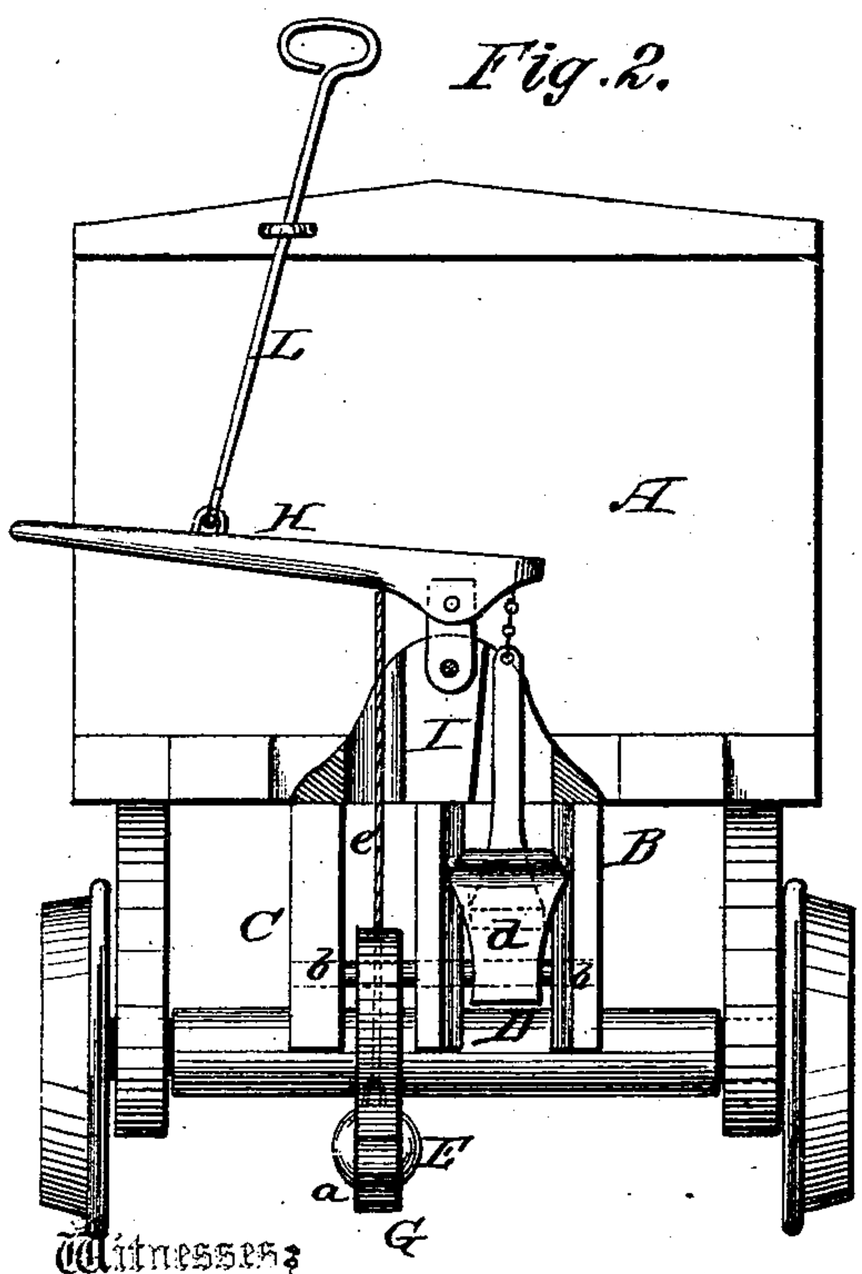
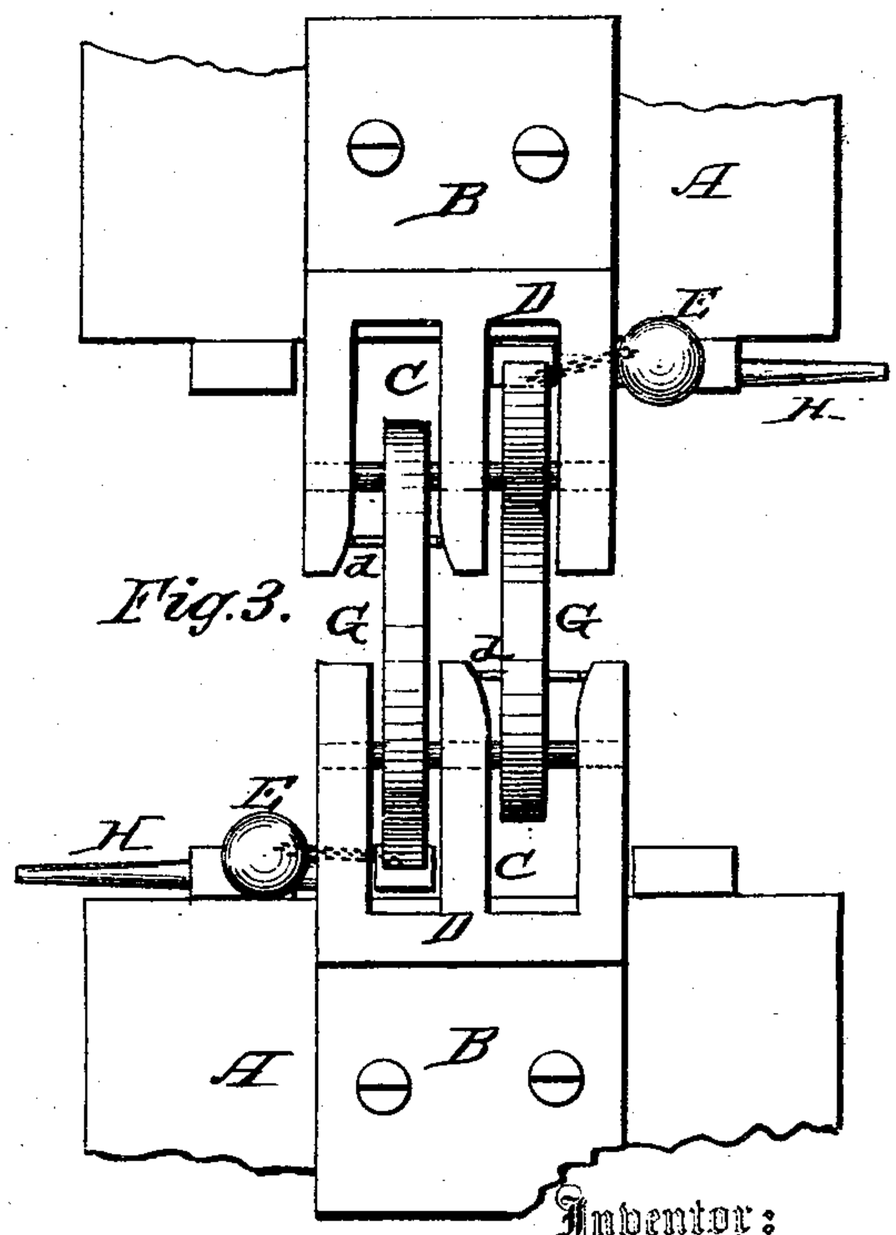


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

MARTIN L. MATHIAS, OF HILLIARD, OHIO.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **189,050**, dated April 3, 1877; application filed February 14, 1877.

To all whom it may concern:

Be it known that I, MARTIN L. MATHIAS, of Hilliard, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my 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, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, partly in section. Fig. 2 is a rear elevation. Fig. 3 is a bottom view.

A represents a railroad-car of any suitable construction. B is the draw-bar, attached to the same in any of the known and usual ways, the front end thereof forming the draw-head C, and on one side of said draw-head is formed a chamber, D. The draw-head C and chamber D are both open at the top and bottom, as shown, and in the chamber D is pivoted the coupling-bar G, the front end of which forms an upwardly and rearwardly bent hook, *a*. The rear end of the coupling-bar D is provided with a weight, E, for holding the hook *a* at the front end thereof up to its work. In the lower portion of the draw-head C, near the front end, is a horizontal pin, *b*, permanently attached in the sides of the draw-head. At the extreme front end, at the top of the draw-head, is hinged a gate, *d*, which hangs downward, and when swung backward a short distance its lower edge strikes the stationary pin *b*.

When two cars are brought together to be coupled, the coupling-bar G of each car strikes the gate *d* of the opposite draw-head, and pushes the same against the pin *b*, said gate then forming an inclined guide to conduct the hook *a* downward below the pin *b*, and as soon as the end of said hook passes beyond the pin the weight E at once raises said hook, so that it will catch on the pin, and thus couple the cars, the weight holding the hook to its place.

For the purpose of uncoupling the cars, a lever, H, is pivoted in a box or upward extension, I, of the draw-head, and this lever is, by a cord, chain, or rod, *e*, connected with the rear or inner end of the coupling-bar G, in such a manner that by raising the outer or longer end of the lever the inner weighted end of the coupling-bar will be lifted, and the outer or front end depressed, so that the hook *a* will be clear from the pin *b*. The other end of the lever H is connected to a movable foot, J, within the draw-head C, which, by operating the lever as above described, is pressed downward on the hook of the coupling-bar from the adjacent car, and forces the same down below the pin *b*, so that by the operation of the lever H on one car only both hooks are released.

The lever H projects beyond the side of the car, so that the operator need not go in between the cars to uncouple the same. A rod, L, extends from said lever to and above the top of the car, for the purpose of uncoupling from the top, if desired.

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

1. The combination of the draw-head C, with stationary horizontal pin *b*, the chamber D, and the coupling-bar G, provided at its front end with the upwardly-bent hook *a*, and at the rear end with the weight E, substantially as and for the purposes herein set forth.

2. The swinging gate *d*, in combination with the draw-head C and pin *b*, to form an inclined guide for the coupling-bar, as herein set forth.

3. The combination of the hooked and weighted coupling-bar G, connection *e*, lever H, with rod L, and the movable foot J, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

MARTIN L. MATHIAS.

Witnesses:
WM. B. UPPERMAN,
FRANK H. DUFFY.