2 Sheets—Sheet 1.

D. B. EBERLY.

CAR-COUPLINGS.

No. 195,110. Patented Sept. 11, 1877.

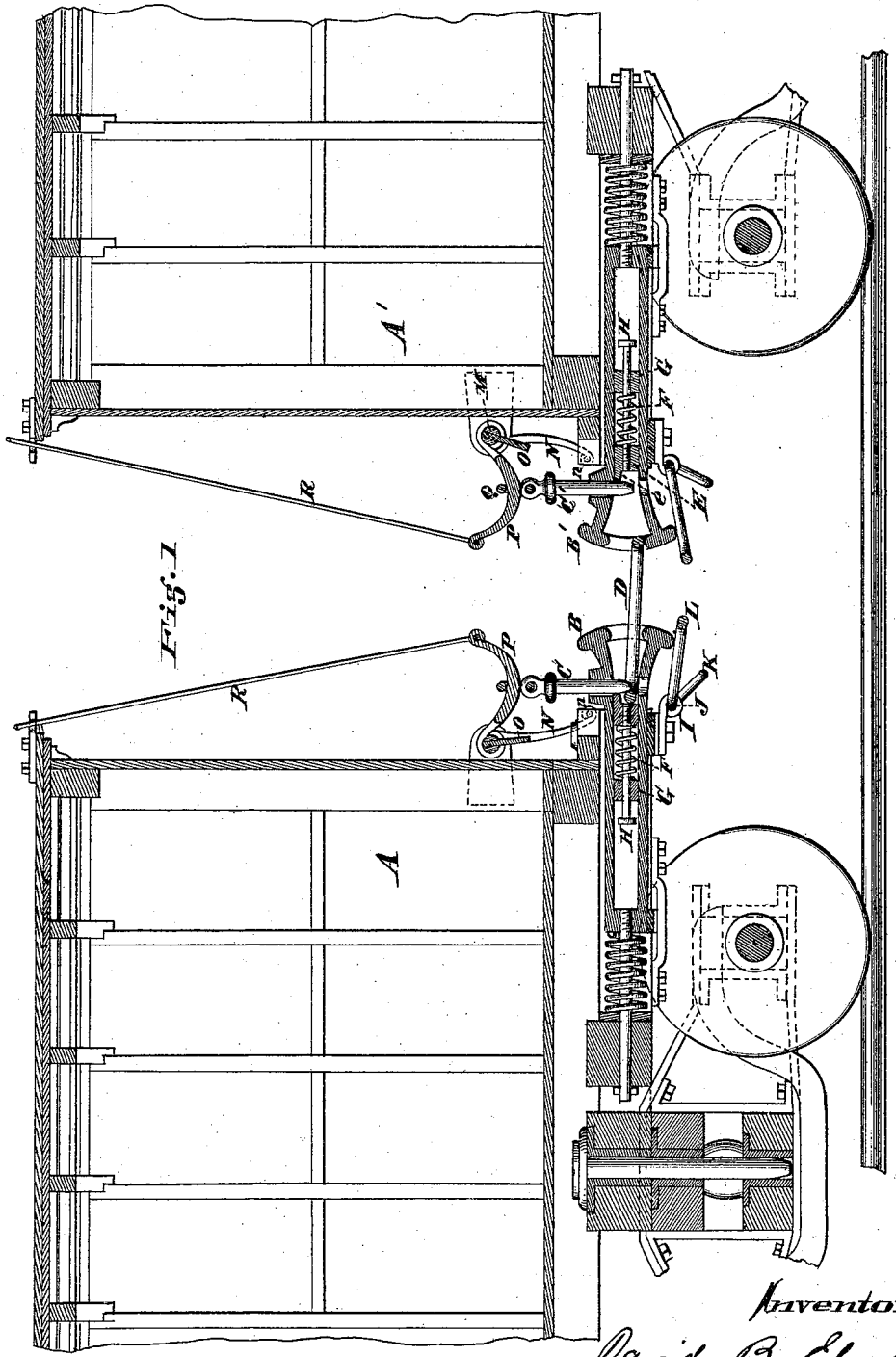

Fig. 1.

Inventor.
David B. Eberly
By Y. Millward
Attorney

Attest
Edgar J. Gross
John E. Jones

2 Sheets—Sheet 2.

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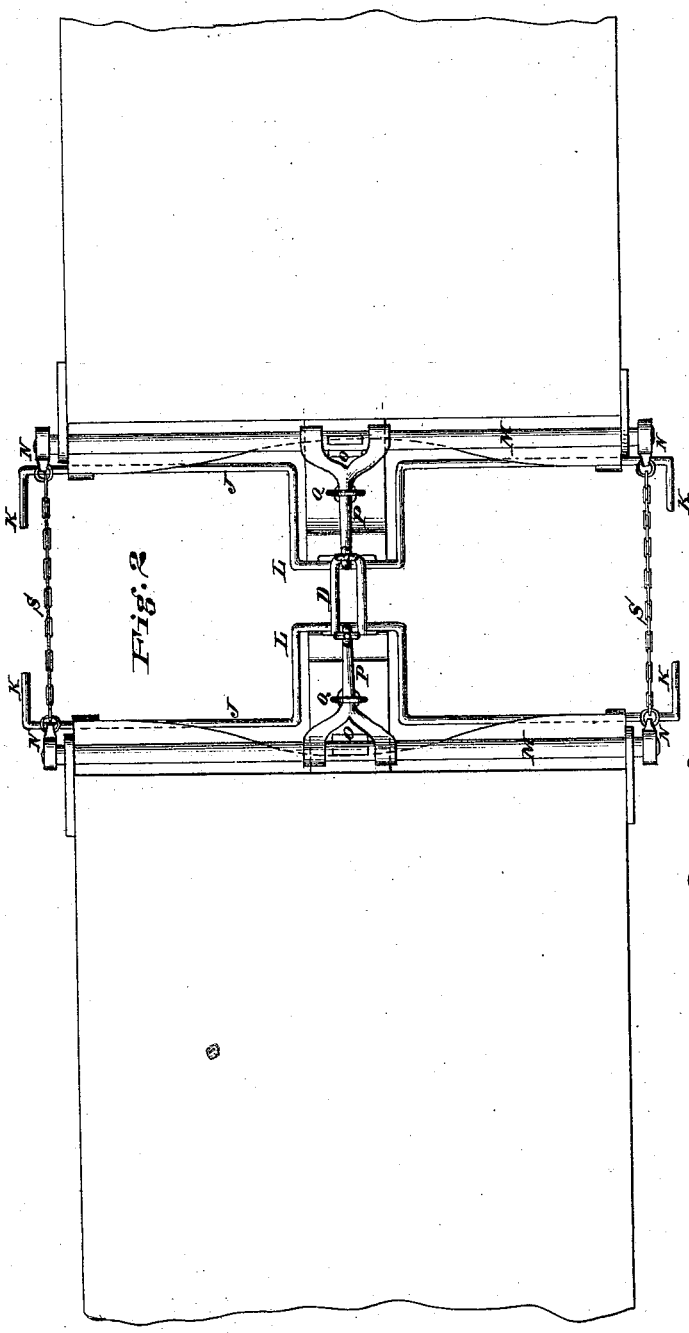

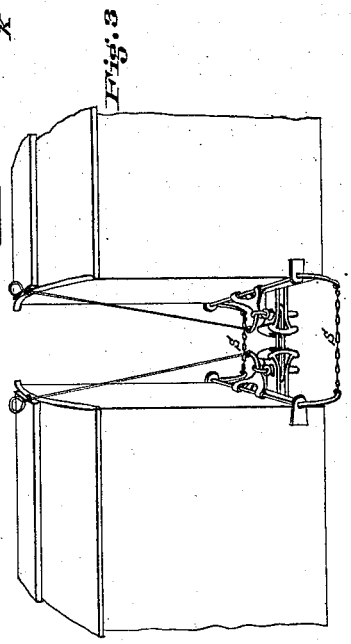

Witnesses
Edgar Gross
John E. Jones

Inventor
David B. Eberly
By Y. Millward
Attorney

UNITED STATES PATENT OFFICE.

DAVID B. EBERLY, OF PINE VILLAGE, INDIANA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 195,110, dated September 11, 1877; application filed April 14, 1877.

To all whom it may concern:

Be it known that I, DAVID B. EBERLY, of Pine Village, Warren county, State of Indiana, have invented an Improvement in Car-Couplings, of which the following is a specification:

My invention relates to improvements in methods of coupling and uncoupling the ordinary link-couplings of railroad-cars, and in the provision of means for uncoupling automatically when one of the cars which the coupling unites leaves the track accidentally, the automatic uncoupling serving to prevent the remaining cars from leaving the track.

My invention consists of a combination of levers and shaft, by which the coupling-pin may be elevated by the operator from the side of the car and permitted to fall to connect the coupling-link, the levers being so combined that when the pin is coupled it shall rest with its full weight, and the weight of the lever which operates it, down upon the coupling-box, and at the same time freedom is given to the shaft and its operating-lever for accidental movements, shocks, slight displacements, &c., without any effect being produced thereby on said coupling-pin.

My invention consists, secondly, in combination, with the shafts which operate the two pins of the coupling, of connecting-chains at the sides of the cars, loosely connecting the levers of said shaft, so that when either of the cars leave the track the chain upon the opposite side to that on which the car leaves will be drawn taut and serve to detach the coupling, so as to permit the car which has left the track to proceed without dragging the remaining cars from the track, the connecting-chains breaking after the coupling is detached.

In the accompanying drawings, Figure 1 is a vertical section of the ends of two cars in the act of coupling. Fig. 2 is a plan of the same; and Fig. 3 is a perspective view, showing the actions of the side chains.

A A′ represent the contiguous ends of two cars; B B′, the coupling-box of the same. C C′ represent the two coupling-pins, and D the link. Each coupling-box is provided with a sliding block, E, having a forward lip, *e*, to support the pin when it is up, this block being forced outward by a coiled spring, F, when the pin has been raised sufficiently to enable it to do so, the spring resting against the fixed partition G, and the block being secured in place by a guiding and sliding pin, H. When the cars come together, and the link is in place, the end of the link forces this block E back against its spring and permits the pin to drop, the space between the lip and the face of the block giving room for the thickness of the link, so that when the pin drops it shall not fall upon the end of the link, but into its place.

To the framing of the car I attach bearings I, which support the cross-shaft J; and at each side of the car I provide the shaft with hand-levers K, by which it may be rotated partially, the shaft at the middle having a double-arm lever, L, which encompasses the coupling-box, and is adapted to rest against the under side of the link and carry the same when either of the levers K is operated.

By means of this shaft and levers the operator is enabled to lift the link from a position at the side of the car, so that, as the cars come together, the link enters properly into the opposite coupling, and makes its connection automatically.

Across the ends of the cars I also provide a shaft, M, having levers N at each end, by which it may be operated; and on this shaft, at the middle, I form a rigid arm, O, as shown, by which the lever P is lifted. The lever P, which lifts the pin, has a loose swiveling action upon the shaft M, and passes through the ring Q, which supports the pin.

In stock-cars and freight-cars the levers P may have eyes formed at the ends for the attachment of rods or cords R, through which an operator at the top of the cars may operate the coupling-pins.

By means of the loose shackling connection between the levers N O, shaft M, and the levers P, the latter are permitted to rest firmly with their entire weight upon the pins when coupled, and at the same time the shafts and levers N O may be displaced, struck accidentally, or otherwise interfered with to some extent without any interference with the position of the pins being occasioned thereby.

By reason of this shackling connection the levers N have to be moved a considerable dis-

tance before any lifting action takes place upon the pins, and this is an important construction. The ends of the levers N are formed into hooks or eyes *n*, and when the cars are coupled I connect these ends of the levers N by the side chains S, hanging somewhat loosely when attached.

In case of accident, resulting in one of the cars leaving the track, the chain S upon the side opposite to that upon which the car leaves the track is drawn taut, so much so that either one or both of the coupling-pins is lifted from the link, which is thereby released, and the car which has left the track is permitted to pass off without dragging the remaining cars behind from the track, the chains S breaking after the cars are uncoupled.

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

1. The combination, substantially as specified, of shaft M, with hand-levers at both ends and the rigid arm O at the center, the lifting-lever P loosely pivoted on said shaft and the coupling-pin.

2. In combination with the hand-levers N and the coupling-pins C C′, the connecting-chains S, operating substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

DAVID B. EBERLY.

Witnesses:

JOHN E. JONES,

EDGAR J. GROSS.