

(No Model.)

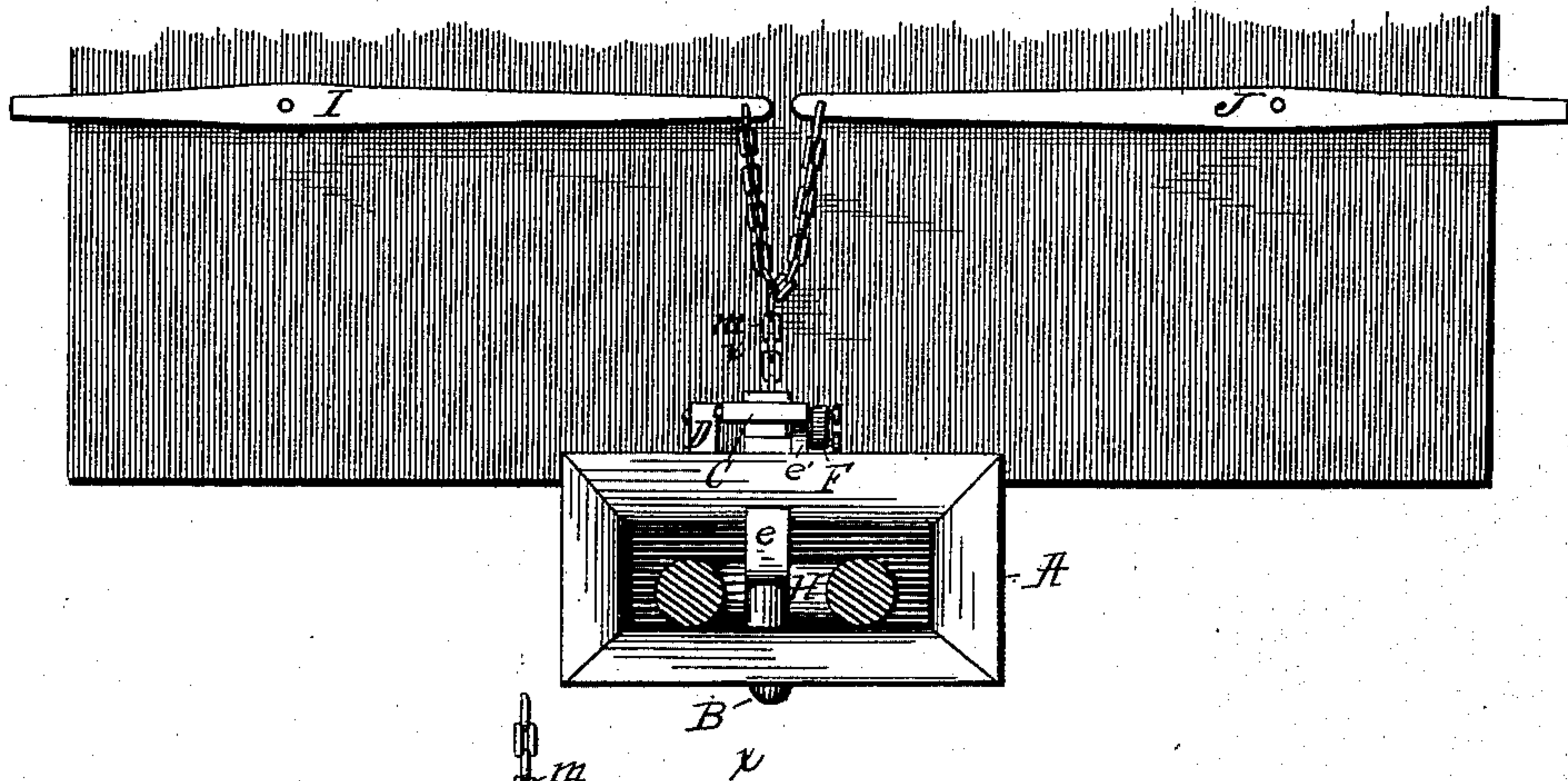
J. G. E. ARMEAH.

CAR COUPLING.

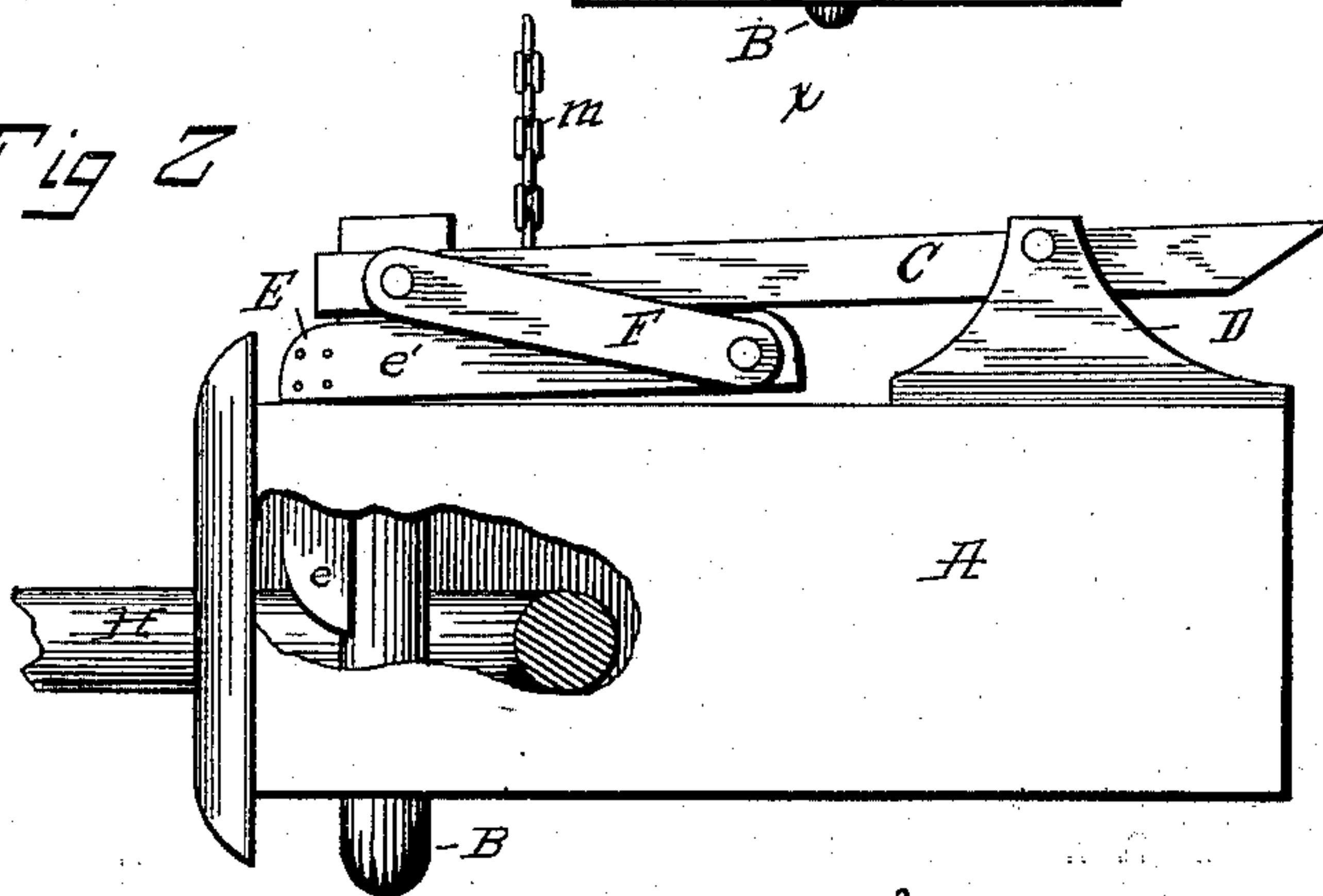
No. 384,671.

Patented June 19, 1888.

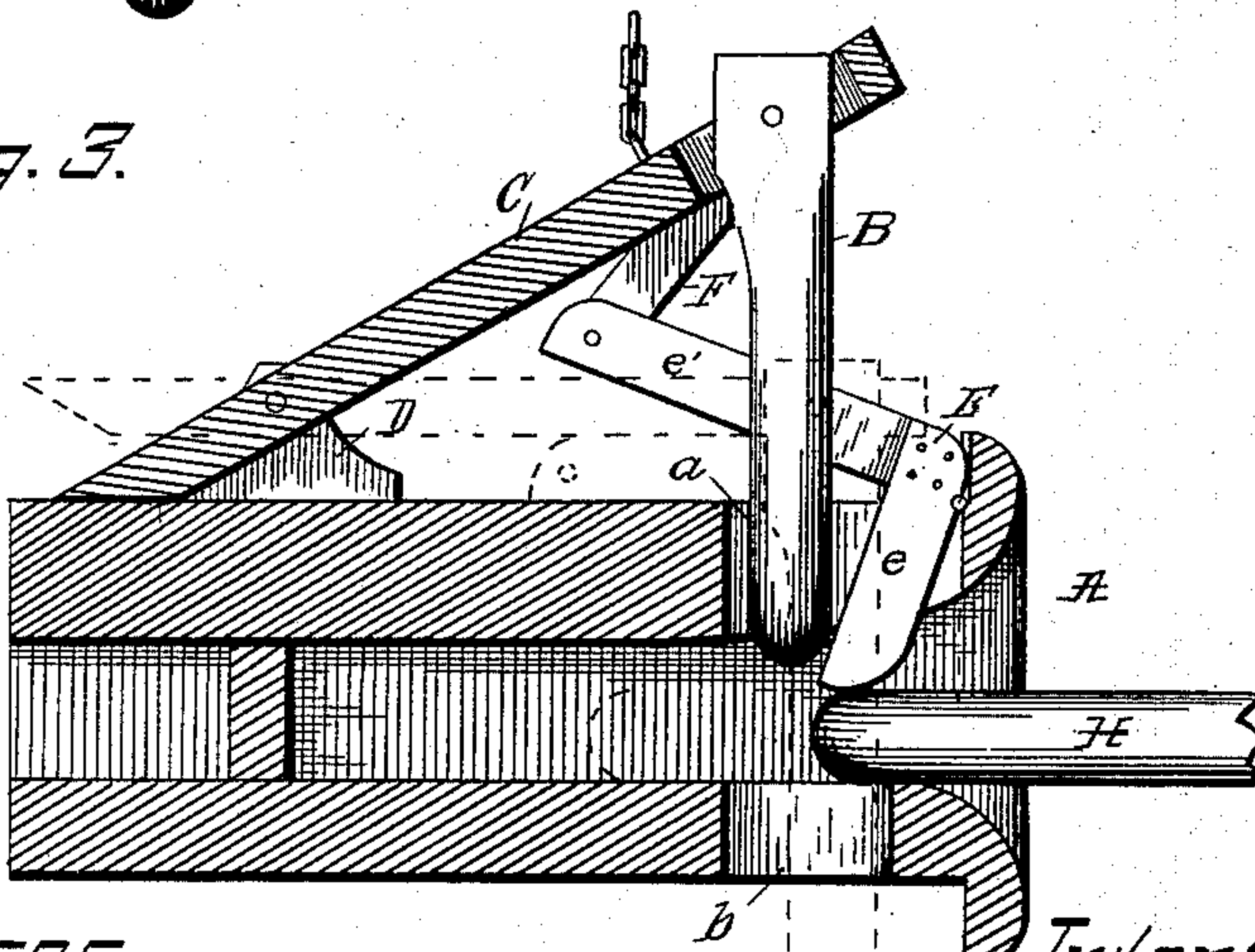
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.

W. A. Barnes.  
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# UNITED STATES PATENT OFFICE.

JOHN G. E. ARMEAH, OF PLAINVILLE, ASSIGNOR OF ONE-HALF TO JOHN W. FULLER, OF KILBOURN CITY, WISCONSIN.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 384,671, dated June 19, 1888.

Application filed October 31, 1887. Serial No. 253,882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN G. E. ARMEAH, a citizen of the United States, residing at Plainville, in the county of Adams and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to car-couplings, and in common with such devices aims to improve and simplify the mechanism for automatically coupling the cars when run together without the necessity of the brakeman going between them, and by which the cars can be readily uncoupled from the side, platform, or top.

The invention relates most particularly to that class of car-couplings which have a trip-lever located near the mouth of the draw-bar to be struck by the link for lifting the coupling-pin, which drops and engages with the link the moment the link is disengaged from the said trip-lever. The coupling-pin is carried by a lever, and intermediate connections connect the trip-lever and the pin-carrying lever.

My improvement chiefly relates to the relative arrangement and disposition of the trip-lever, the pin-carrying lever, and the intermediate connections, whereby a movement of the trip-lever through a small degree of space will effect a large movement of the pin-carrying lever with a minimum expenditure of force. The end of the pin-carrying lever extends beyond its pivotal point to form a stop and prevent the link being wholly withdrawn from the draw-head. The coupling-pin is loosely connected with the pin-carrying lever, and is free to have a limited movement inward at its lower end, so as to yield in case it is struck by the link.

The improvement further consists in the peculiar construction and combination of the parts, which will be more fully hereinafter set forth and claimed, and shown in the annexed drawings, in which—

Figure 1 is the front view of the end of a

car, showing my improved coupler in position; Fig. 2, a side view, parts being broken away, of my coupler on an enlarged scale; Fig. 3, a longitudinal sectional view about on the line X X of Fig. 1, on an enlarged scale, showing the operation of the coupler by dotted lines.

The draw-bar A of ordinary construction has the usual openings, *a* and *b*, in its top and bottom for the passage of the coupling-pin B, which is carried on the outer end of the pin-carrying lever C, mounted between the brackets D. The rear end of the pin-carrying lever projects beyond its pivotal support sufficiently far to strike against the top of the draw-bar and limit the tilting movement of the lever and the vertical movement of the coupling-pin, so that the latter will not wholly withdraw from the draw-head. The trip-lever E is elbow-shaped, or what is commonly known as a bell-crank lever, having its elbow hinged or pivotally connected with the draw-bar, so that its vertical branch *e* will extend across the mouth of the head-bar, and its horizontal branch *e'* will extend rearwardly and bear against the under side of the pin-carrying lever C. The link F connects the rear end of the branch *e'* with the front end of the pin-carrying lever C.

The coupling-pin B is loosely connected at its upper end with the lever C, and is free to swing inward at its lower end to yield in the event of its being struck by the link. The vertical branch *e* of the trip-lever E is sufficiently wide to give a bearing for the pin when the latter is down, and its lower corner is beveled to permit the link riding past it readily when entering the draw-bar.

The link H on entering the draw-bar impinges against the end *e* of the trip-lever and forces it in and effects a corresponding upward movement of the outer end, *e'*, which lifts the pin-carrying lever C a short distance by direct contact therewith, the lifting force being transmitted the balance of the distance to the lever C through the link F. When the link passes the end of the trip-lever, the pin B drops and, engaging with the link, couples the cars. To uncouple the cars, two levers, I and J, pivoted to the front of the car and ex-



tending in opposite directions, have their inner ends connected by the chain *m* with the pin-carrying lever C. By pressing down on either of these levers I and J the lever C and pin B will be lifted and the cars can be uncoupled.

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

10 1. The combination, with the draw-bar, the pin and the pin-carrying lever extending lengthwise of and pivotally supported on the draw-bar, of the bell crank trip-lever having its horizontal branch extending beneath and  
15 adapted to bear against the pin carrying lever, and the link connecting the inner end of said branch of the trip-lever with the outer end of the pin-carrying lever, substantially as described.

20 2. The combination, with the draw-bar, the coupling-pin, the pin-carrying lever pivotally

supported between brackets and having its rear end extended beyond its pivotal support, and adapted to bear on the draw-bar for limiting the vertical movement of the pin, 25 the trip-lever, and the link connecting the trip-lever with the pin-carrying lever, substantially as described.

3. The combination, with the draw-bar, the coupling-pin, the pin-carrying lever, the trip- 30 lever having its vertical branch forming a bed for the pin, and its horizontal branch adapted to bear against the under side of the pin-carrying lever, and the link connecting the inner end of the horizontal branch of the trip-lever 35 with the outer end of the pin-carrying lever, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN G. E. ARMEAH.

J. R. REILY,

F. W. LUECKENBACH.