

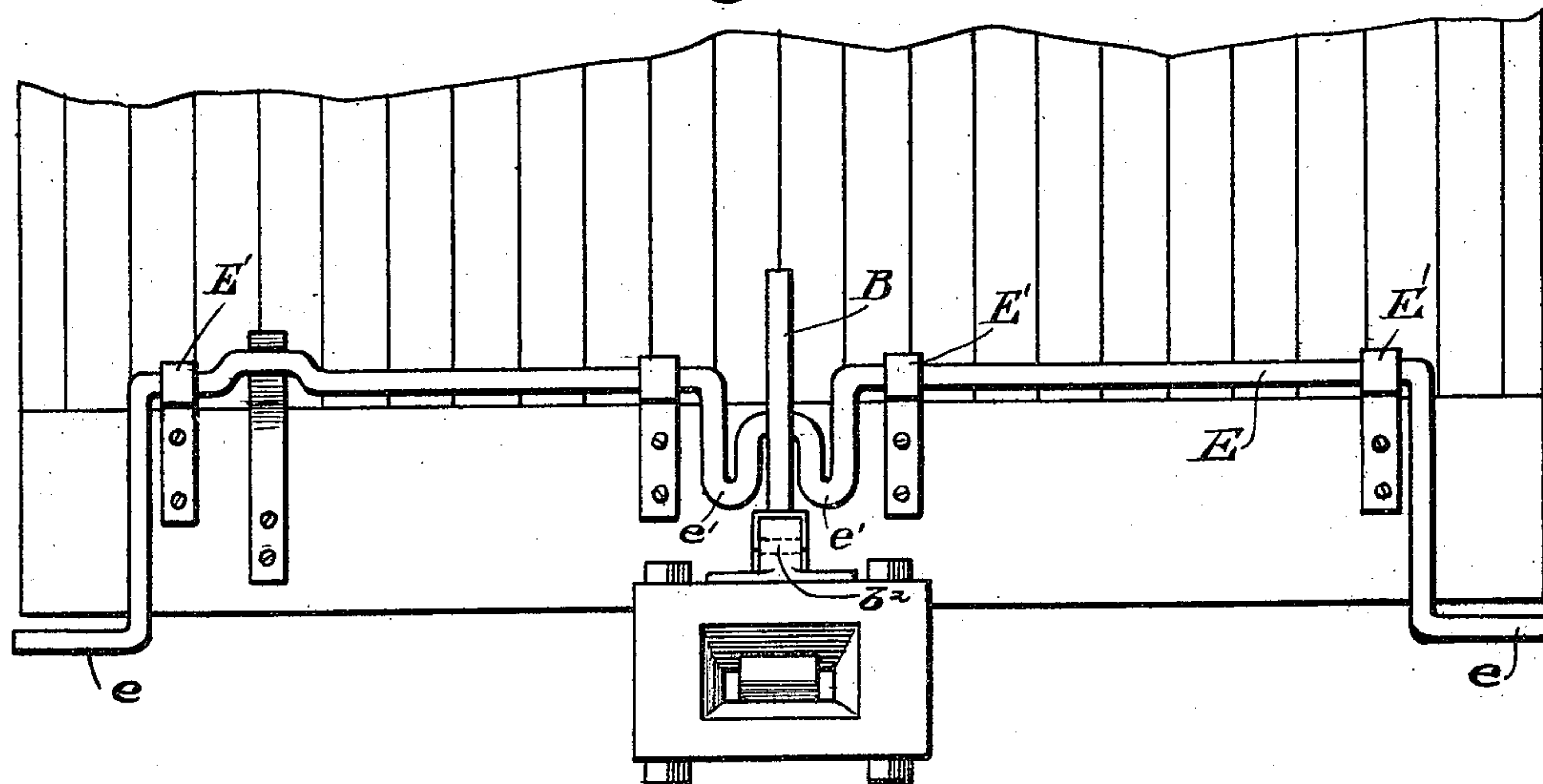
(No Model.)

R. L. BRETH.  
CAR COUPLING.

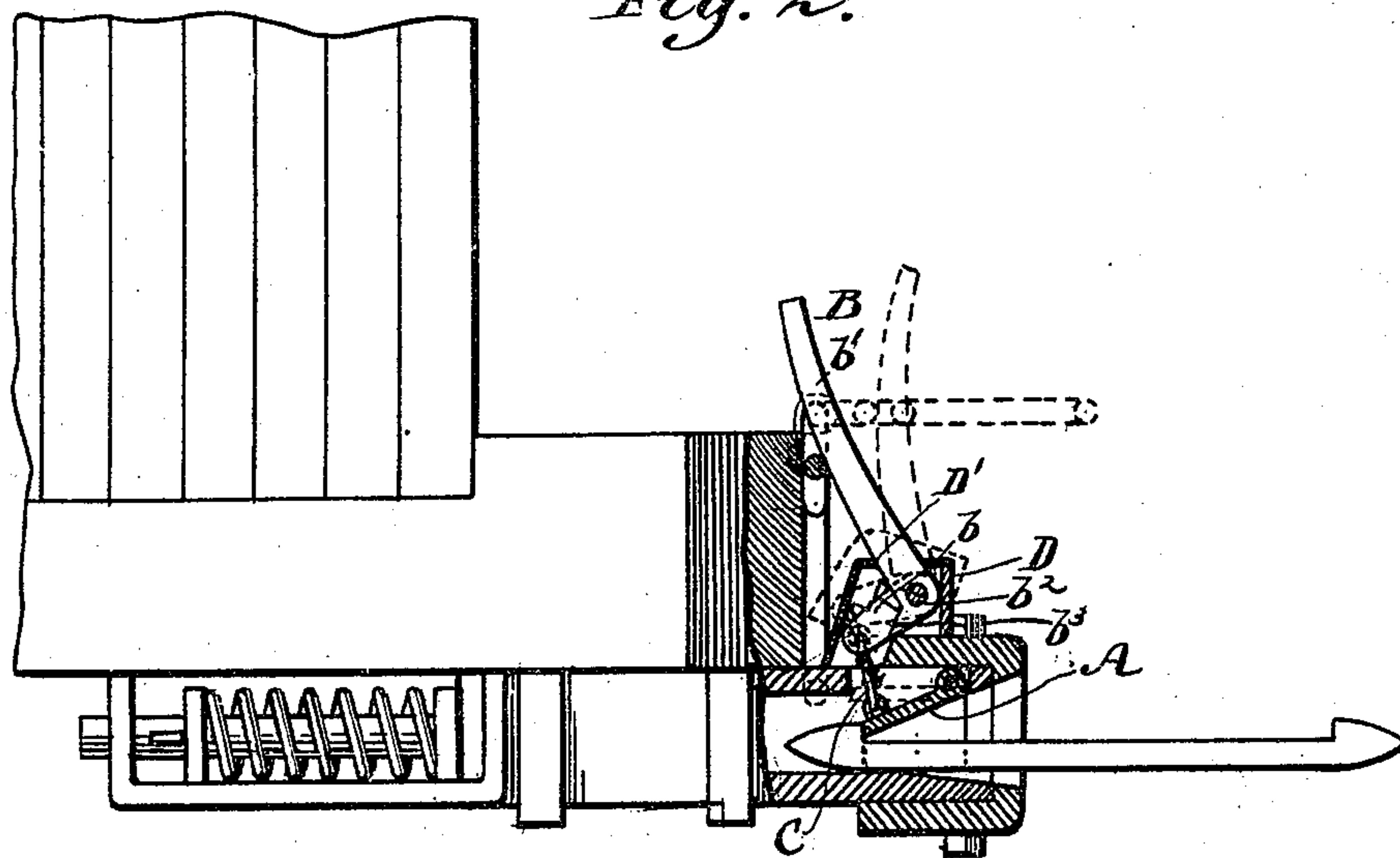
No. 434,315.

Patented Aug. 12, 1890.

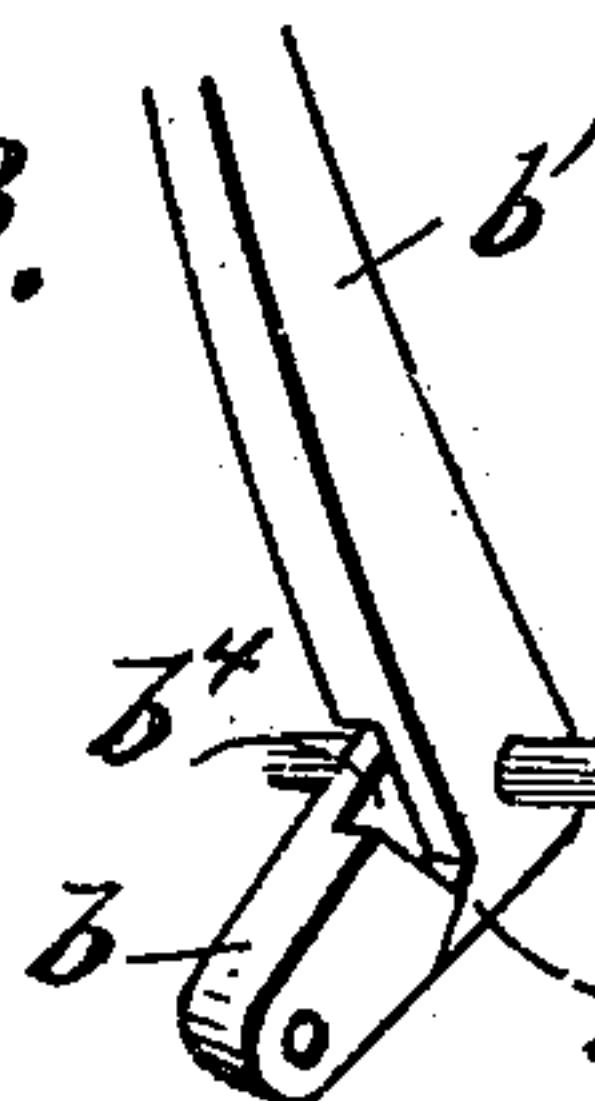
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:  
*John H. Deemer*  
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# UNITED STATES PATENT OFFICE.

ROBERT L. BRETH, OF HOMER CITY, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 434,315, dated August 12, 1890.

Application filed March 17, 1890. Serial No. 344,075. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT L. BRETH, of Homer City, in the county of Indiana and State of Pennsylvania, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The present invention relates to improvements on the car-coupling for which Letters Patent were granted to me on May 21, 1889, No. 403,640, the object being to increase the efficiency of the coupling in the particulars hereinafter specified.

The invention consists in the novel construction and combination of parts, as hereinafter described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of a portion of a freight-car, showing my invention applied thereto; and Fig. 2 is a side view thereof, the coupling being partly in section. Fig. 3 is a detail view of the elbow-lever.

Besides a draw-head of any approved construction, the coupling, briefly described, comprises a coupling-gate A, pivoted within the draw-head to swing in the vertical plane, and an operating elbow-lever B for uncoupling the car, the said lever being united to the coupling-gate through the medium of a link C, all of which parts are described in detail in my above-named patent.

With a view of relieving the main member of the lever of the jar caused by the coupling of the cars I construct the said lever of two hinged members  $b$   $b'$ , that are pivoted together and to a suitable support on the top of the draw-head, as at  $b^2$ , the opposite end of the short member  $b$  of the lever being connected with the link C. At their jointed ends the members  $b$   $b'$  are formed, respectively, with a recess  $b^4$  and a projection or toe  $b^3$ , the recess having an angular end wall, as shown clearly in Fig. 3. By this construction, the main member  $b'$  will be unaffected when the short member  $b$  is raised by the rising of the coupling-gate in the act of coupling, the said short member being allowed a certain free movement on its pivot without affecting the member  $b'$ . When the member  $b'$ , however, is thrown outward, its toe  $b^3$  engages the member  $b$  at the lower inclined portion of the wall of its recess  $b^4$ , lifting said short member, and

with it the coupling-gate A. The tendency of the gate is normally to remain in the lower position, it being a gravitating gate.

To protect the parts of the coupling from dust and dirt, a housing D is provided, through an aperture D' in which the arm  $b'$  of the lever extends. The housing is movable with the lever B, and forms a cover for the vertical slots formed in the draw-head for the movements of the link C and lever B.

In order to provide for operating the coupling from the sides of the car, I provide a shaft E, which is secured to the car-platform by straps E', the said straps forming bearings for the shaft. On each end the shaft is formed with a handle  $e$  for turning it, and is formed with a double-cranked portion, as at  $e'$ , which acts to throw the lever B and lift the coupling-gate. The cranked portion of the shaft is without a positive connection with the lever B; hence the latter is free to be moved independently of the shaft E, when desired, by a person standing on the car-platform.

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

1. In a car-coupling, the combination, with a draw-head, of a coupling-gate pivoted thereto, and an elbow-lever formed of two hinged members connected with said draw-head, substantially as described.

2. In a car-coupling, the combination, with a draw-head, of a coupling-gate pivoted thereto, and an elbow-lever formed of two hinged sections, and a link connecting said lever with the coupling-gate, substantially as described.

3. In a car-coupling, the combination, with the draw-head, of a gate, a lever connected with said gate through the medium of a link that works in a vertical slot in the draw-head, and a housing covering said slot and having an aperture through which one arm of said lever passes, substantially as described.

4. The combination, in a car-coupling, with a draw-head, of a coupling-gate, an elbow-lever connected with said gate, and a shaft having a cranked portion that acts to throw said lever when the shaft is turned, substantially as described.

ROBERT L. BRETH.

Witnesses:

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JOHN R. HENRY.