

(No Model.)

J. MUNTON & A. FRAZIER.
CAR COUPLING.

No. 500,815.

Patented July 4, 1893.

Fig. 1

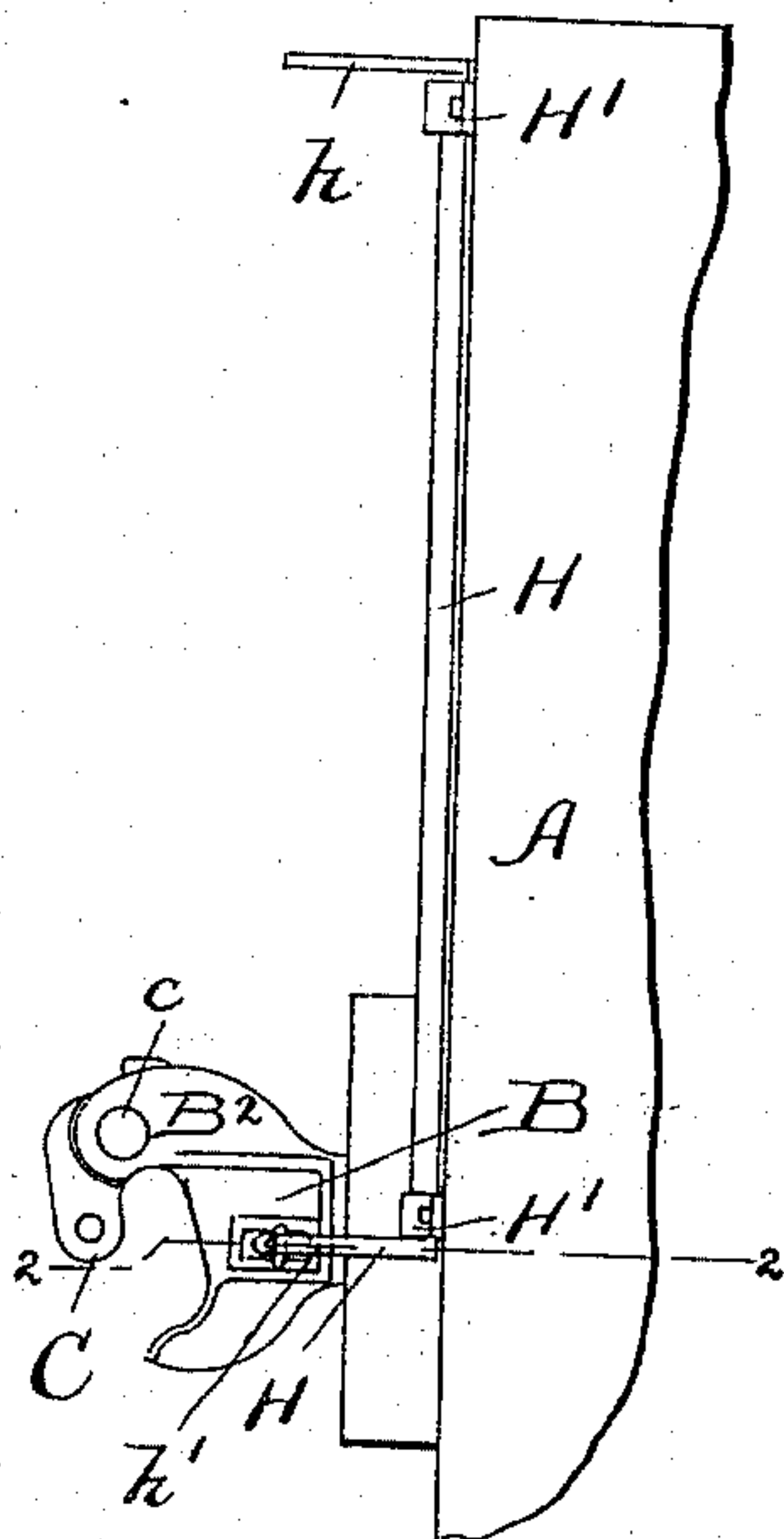


Fig. 2.

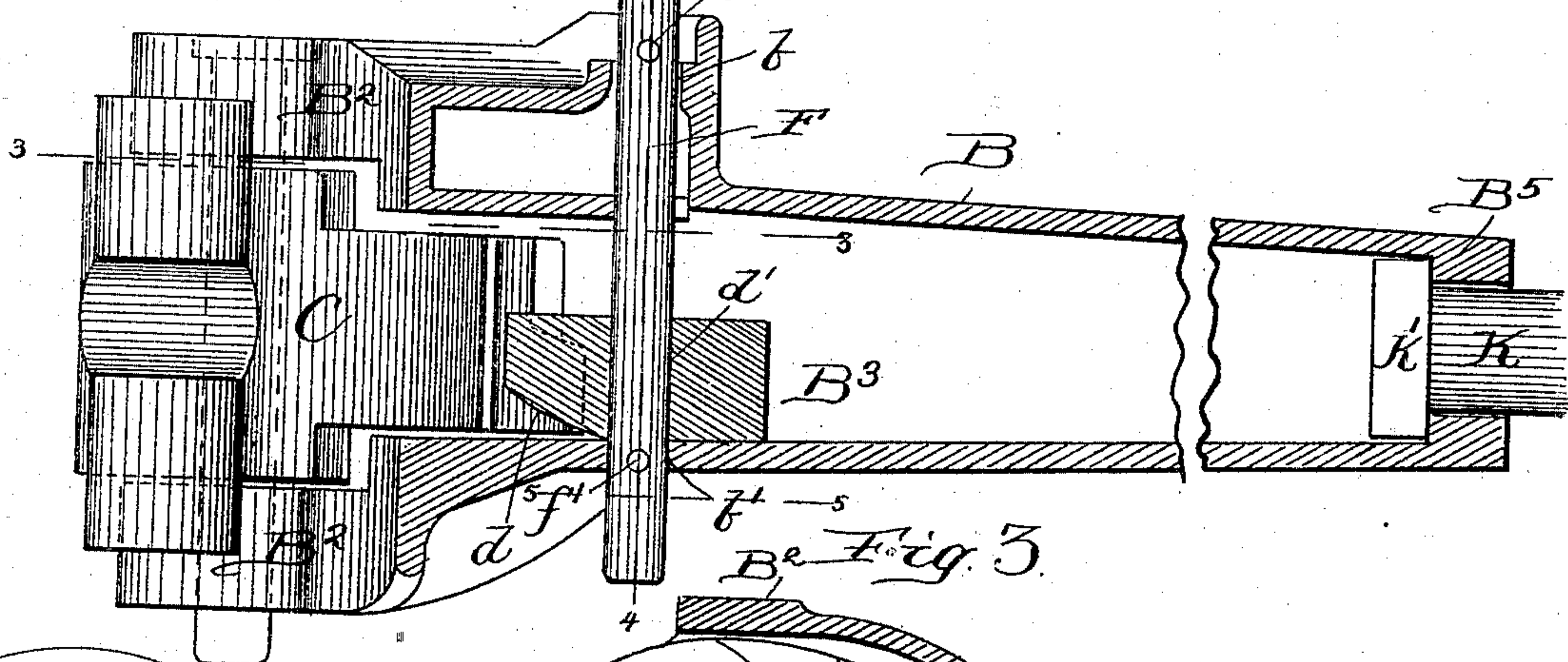
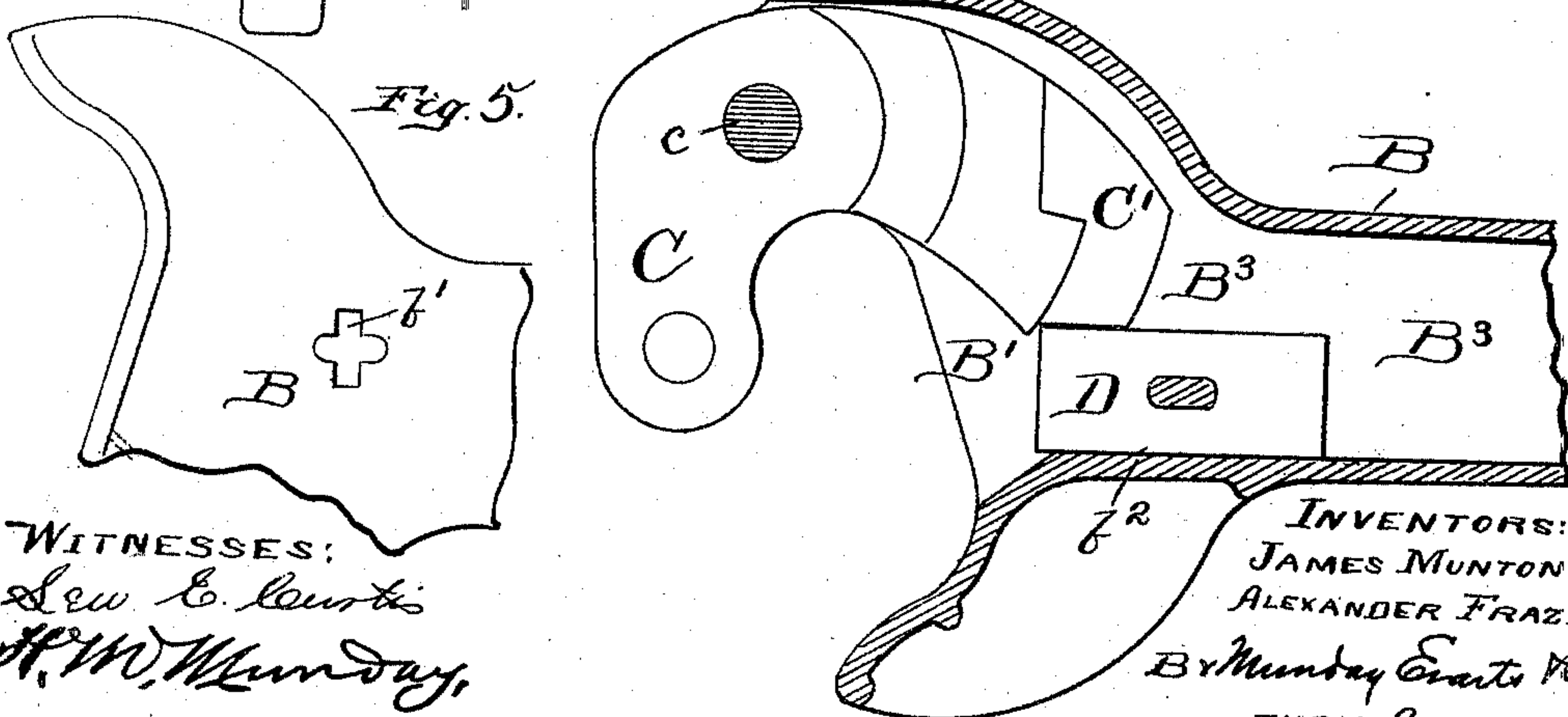


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES MUNTUN AND ALEXANDER FRAZIER, OF MAYWOOD, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 500,815, dated July 4, 1893.

Application filed December 12, 1892. Serial No. 454,829. (No model.)

To all whom it may concern:

Be it known that we, JAMES MUNTUN and ALEXANDER FRAZIER, citizens of the United States, residing at Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

Our invention relates to car couplers, and more particularly to that class of couplers commonly known as interlocking hook couplers.

The object of our improvement is to provide an interlocking hook coupler of a simple, efficient and durable construction composed of few and simple parts, that may be cheaply and easily manufactured and put together, and in which the chamber of the hollow draw bar may be free and unobstructed by projections on the inside, so that a large and strong tail pin having a head may be inserted through the hollow draw-bar without difficulty.

To this end our improvement consists in the novel devices and novel combinations of parts and devices herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a plan view of an interlocking hook coupler embodying our invention. Fig. 2 is a longitudinal vertical section on line 2—2 of Fig. 1. Fig. 3 is a horizontal section on line 3—3 of Fig. 2. Fig. 4 is a cross section on line 4—4 of Fig. 2. Fig. 5 is a detail bottom view looking from line 5—5 on Fig. 2.

In the drawings A represents a portion of a car body or frame to which the coupler is applied.

B is the hollow draw bar furnished with the usual forked head B'; and C is the knuckle pivoted at c to one of the forks B² of the draw bar head. The pivoted knuckle C is furnished with an inclined face or cam projection C' adapted to automatically slide under and lift the locking block D which is likewise furnished with an inclined or curved face or cam d. The locking block D fits loosely inside the chamber B³ of the hollow draw bar B. The locking block D is furnished with a

slot d' through the same in which loosely fits the lifting pin F. The lifting pin F projects through guide slots or openings b b' in the upper and lower faces of the hollow draw bar, and is provided with two projections, pins or shoulders f and f'. The pin, projection or shoulder f is located near the upper end of the lifting pin or above the draw bar, and serves to limit the downward movement of the sliding lifting pin. The pin, projection or shoulder f' is located near the lower end of the lifting pin, or normally below the draw bar, and is adapted to pass through the guide, slot or opening b' in the lower wall of the hollow draw bar, and to thus engage the slotted locking block D and thereby cause the loose locking block to be lifted or raised to permit the uncoupling of the cars when the pin F is lifted. The sliding lifting pin F is held in position by the slots or guides b b' in the hollow draw bar. It thereby serves as a guide for the locking block D. The lifting pin F thus serves the double function of raising the locking block to uncouple the cars, and as a guide to keep the loose slotted locking block in position during its up and down movement in the act of coupling the cars. The lifting pin F is preferably made flat with rounded corners or edges so as to more effectually guide the locking block. And though it may be made of cast metal with one of the pins or projections f f' cast thereon, we prefer to make this lifting pin from a flat rolled steel bar and drill or punch holes therein for the pins or projections f f' which are riveted or swaged fast therein. The eye or hole f² at the extreme upper end of the pin is to receive the chain, clevis or coupling G by which the lifting pin is connected with the operating lever H. The operating lever H is connected by suitable bearings H' to the car body or frame and has two arms h and h', the latter being connected by a link h² to the lifting pin F or its clevis G. The operating lever H and its connection with the lifting pin may be of any suitable, ordinary or customary construction known to those skilled in the art.

K is the tail pin by which the draw bar is or may be connected with the car body, or to attachments or parts secured thereto. The tail pin K has a head K' that fits against the

shouldered end B^5 of the draw bar. As the hollow draw bar B has a free and smooth interior chamber B^3 without any internal projections cast thereon, the tail pin K and its head K' may be made as large and strong as desired, and still be inserted without difficulty through the hollow draw bar as required, this of course being done before the pivoted knuckle C, loose locking block D and lifting pin F are put in place. As the locking block D consists simply of a loose slotted block of metal adapted to slide freely up and down upon the combined guide and lifting pin F and fits loosely in the chamber of the hollow draw bar; and as there is no necessity for any special mechanism or devices for connecting the locking block with or to the draw bar, all the parts are and may be made of a very simple and cheap and also very efficient and durable construction, and no special fitting is required to put the parts together. When the cars are coupled the strain of the knuckle C does not come upon the lifting pin but upon the wall b^2 of the draw bar against which the locking block D fits or abuts. This is due to the fact that the lifting pin F fits loosely in the slot d' of the locking block. The operating lever H is preferably located above the draw bar and connected to the upper end of the lifting pin F, but if desired the operating lever may be located below and connected to the lower end of the lifting pin.

We claim—

1. In an interlocking hook car coupler, the combination with a hollow draw bar having a forked head, of a knuckle pivoted to one of the forks of the draw bar, and provided with a cam projection or face, a loose locking block having a cam projection or face and fitting in the chamber of the hollow draw-bar, and a vertically sliding lifting pin extending loosely through the draw bar and locking block and furnished with upper and lower projections or pins, one to engage the draw-bar and the other to engage the locking block, said lifting pin serving both as a guide for the loose locking block and to lift the same, substantially as specified.

2. In a car coupler, the combination of draw bar B, with pivoted knuckle C, loose slotted locking block D, and sliding lifting pin F, extending loosely through said locking block and sliding in suitable guides or slots in the draw bar, substantially as specified.

3. In a car coupler, the combination of draw bar B, with pivoted knuckle C, loose slotted locking block D, and sliding lifting pin F extending loosely through said locking block and sliding in suitable guides or slots in the draw bar, and an operating lever H and means for connecting the same with said lifting pin, substantially as specified.

4. The combination in a car coupler, of a draw bar B having forked head B' with knuckle C pivoted to one of the forks of said draw bar and provided with cam projection C' loose locking block D having cam face d fitting in the chamber of said hollow draw bar and provided with a guide slot or opening d' , sliding lifting pin F extending loosely through said slotted locking block D and through upper and lower guides or slots $b b'$ with which the draw bar is provided, said lifting pin being provided with upper and lower projections or pins f and f' , substantially as specified.

5. The combination in a car coupler, of a draw bar B having forked head B' with knuckle C pivoted to one of the forks of said draw bar and provided with cam projection C' loose locking block D having cam face d fitting in the chamber of said hollow draw bar and provided with a guide slot or opening d' , sliding lifting pin F extending loosely through said slotted locking block D and through upper and lower guides or slots $b b'$ with which the draw bar is provided, said lifting pin being provided with upper and lower projections or pins f and f' , and a tail pin K having head K' adapted to be inserted through said hollow draw bar, substantially as specified.

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Witnesses:

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