

(No Model.)

A. C. McCORD.
CAR COUPLING.

No. 482,500.

Patented Sept. 13, 1892.

Fig. 1.

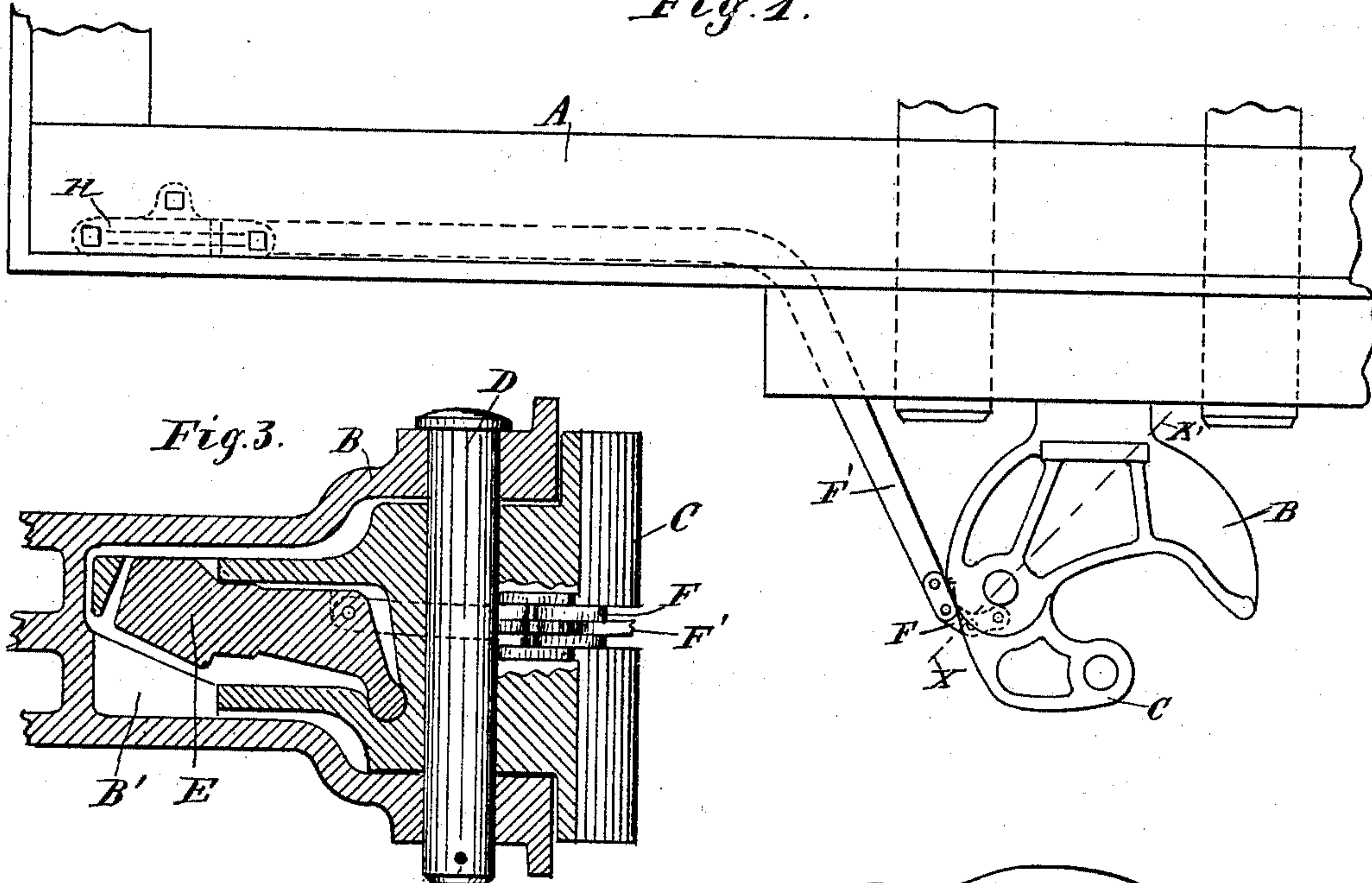


Fig. 3.

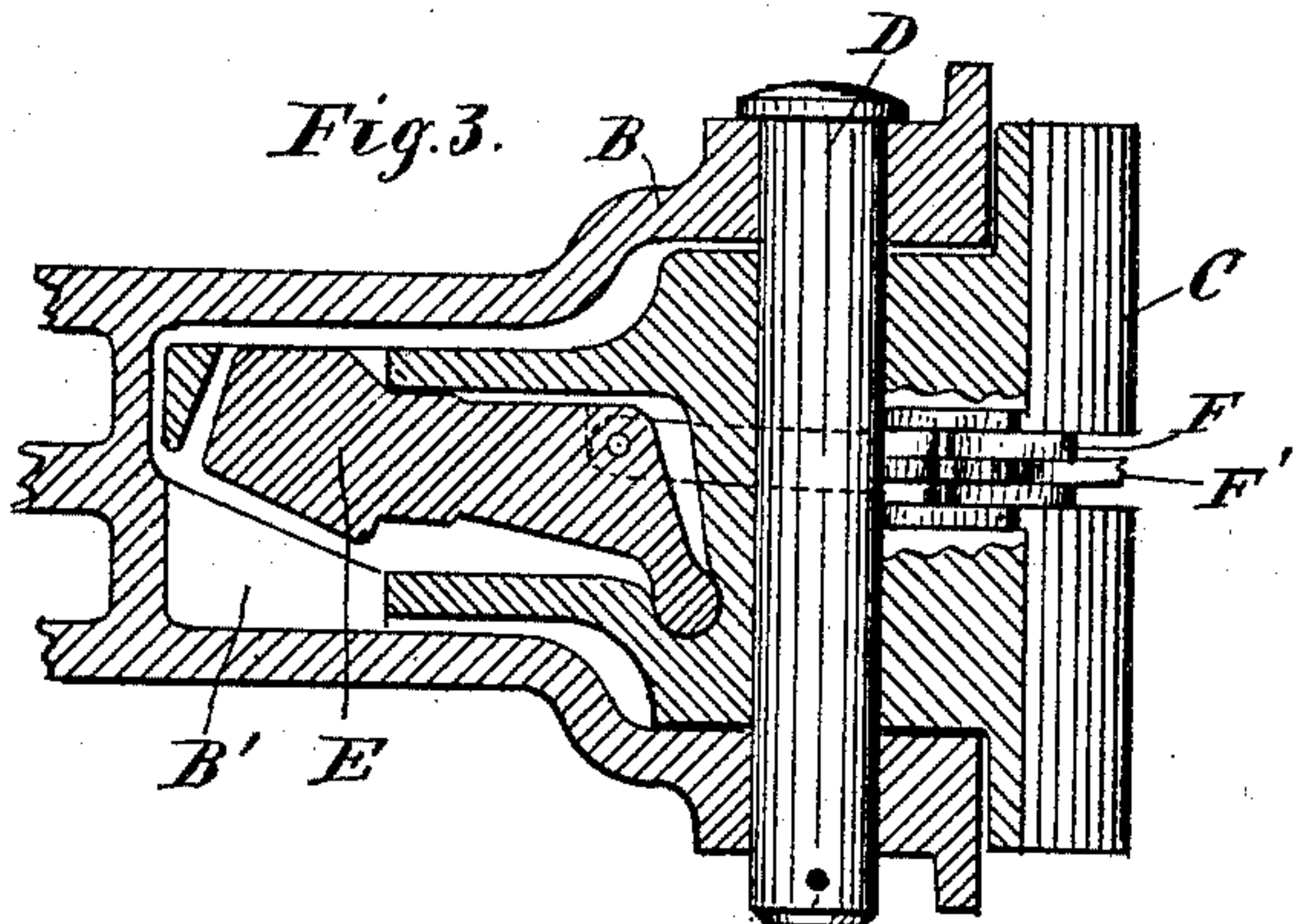


Fig. 2.

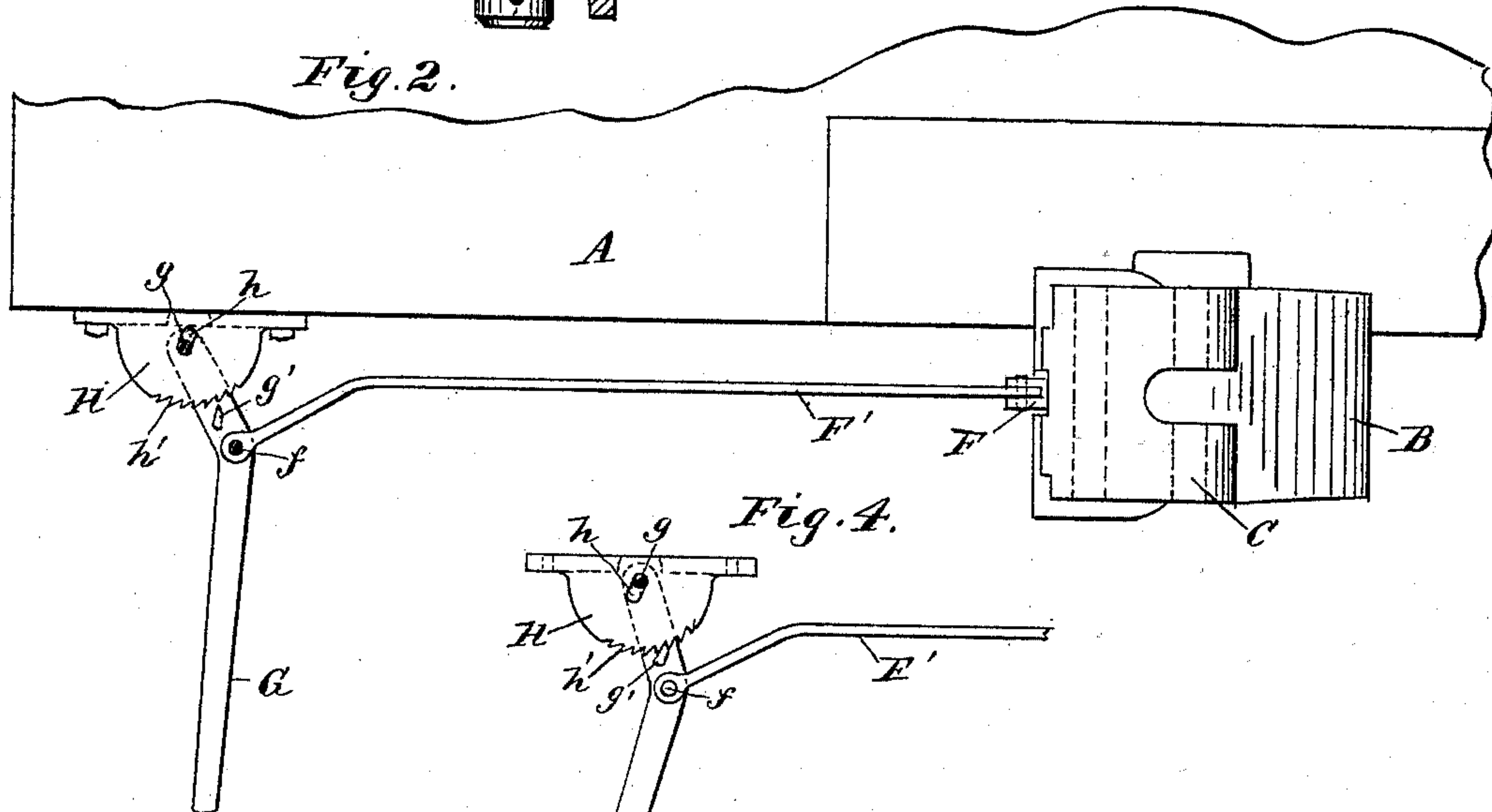
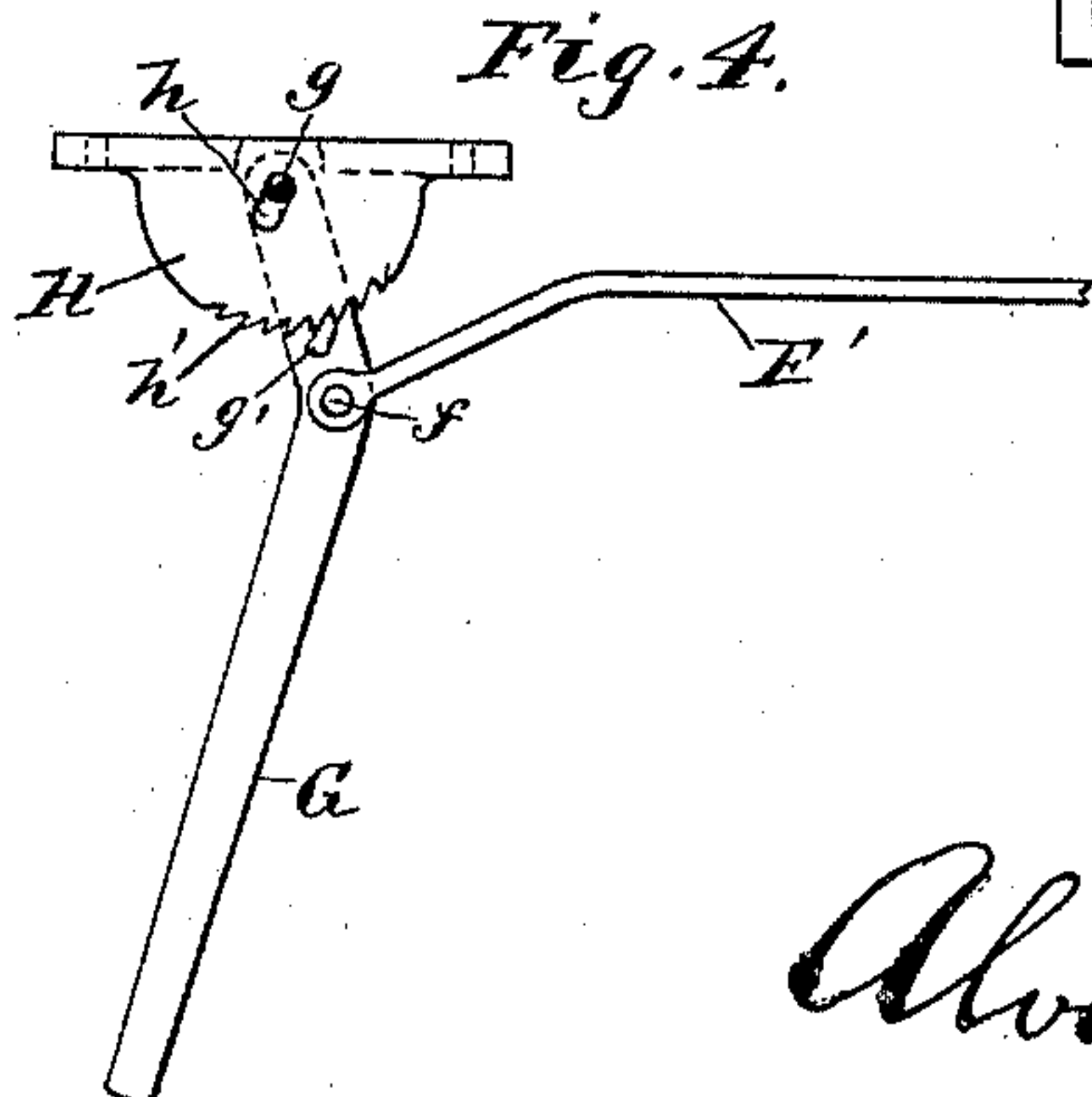


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALVIN CARR McCORD, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 482,500, dated September 13, 1892.

Application filed May 11, 1891. Serial No. 392,361. (No model.)

To all whom it may concern:

Be it known that I, ALVIN CARR McCORD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Car - Couplers; and I do hereby 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.

My invention relates to automatic car-couplers of the twin - coupler type, and is in the nature of an addition to the coupler described in my United States patent, No. 454,406, dated June 16, 1891. As in the construction shown in the said application I employ a recessed coupler-head, a pivoted coupling-hook, a gravity locking-dog adapted to engage with a locking-lug on the coupler-head, and a manual releasing device so arranged with reference to the gravity-dog and the coupling-hook that a continued pull on the releasing device will first disengage the dog and then open the hook. The releasing device in both cases is connected with a hand-lever located on the car so as to be within reach of the brakeman without entering between the cars.

To the construction so far described as common to both cases I have added and claim in the present case a novel feature of construction whereby the dog may be set in its disengaged position when the couplers are closed, so as to permit the same to open when the cars are set in motion, while at the same time the construction is such that upon the opening of the coupling-hook the parts of the releasing device will immediately resume their normal position, so that the hooks may couple when again coming together. Without this additional feature it was necessary, in order to cut out a car, for the brakeman to hold the dog by the hand-lever in its disengaged position until the cars were separated. This was a great inconvenience, often requiring the attention and time of the brakeman when elsewhere needed and delaying the movement of the train. With my improved construction the releasing device may be set either when the cars are in motion or standing still to cut out any car or desired number

of cars without requiring any further attention or delay of the brakeman after the releasing device is set.

A coupler embodying my improvement is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout—

Figures 1 and 2 are respectively a plan view and front elevation of the parts in working position. Fig. 3 is a vertical section of the coupler on the line X X' of Fig. 1, looking backward from the front; and Fig. 4 is a detail in front elevation showing the improved feature of construction.

A is the sill of the car.

B is the coupler-head, B' the locking-lug, C the coupling-hook, D the pivot-bolt, E the locking-dog, and F F' the releasing device, all identical with the construction shown in the former application.

G is the hand-lever for controlling the releasing device. I obtain my improvement in result by the way in which I mount this hand-lever.

To the under side of the car-sill A is secured a segment-plate H, having an elongated slot *h* in the vertical plane and ratchet-like teeth *h'* on its outer edge or periphery. The hand-lever G is pivotally connected to the draw-rod F' by pin *f*, as in the former case, but has its fulcrum-pin *g* working in the slot *h* and is provided with a pawl-stud *g'*, in position to engage with the teeth *h'* when the fulcrum-pin is at the upper limit of the slot. The slot is of such length that when the fulcrum-pin is at the lower limit of the slot, where it is normally held by the gravity of the parts, the stud will be clear of the teeth. In its normal position the parts of the coupler are operative in all respects like the construction shown in the former application; but it is evident that, in virtue of the sliding fulcrum, if the coupling-hooks be closed and under pressure—as they would be, for example, when the cars were standing still—the initial movement of the hand-lever G would be to slide its fulcrum-pin *g* to the limit of the slot and permit the pawl *g'* to be engaged with some one or other of the teeth *h'*. This initial movement would lift the locking-dog out of engagement with the locking-lug and the hand-lever would hold up the

same until the cars were separated. When the cars separate, the opening movement of the hooks will give to the hand-lever a further movement through the connections F F, 5 permitting the same to drop into its normal position out of engagement with the teeth of the segment-plate.

Other constructions might, of course, be used for this purpose. The construction de- 10 scribed, however, is very simple, adding practically nothing to the cost of the coupler, and has been found by actual usage to be efficient and reliable. The principle involved is, in a broad point of view, a releasing device capable 15 of being set in advance to permit the coupling-hooks to open and adapted to be restored thereby to its normal position. Any construction involving this principle would be within the scope of my invention.

20 What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a twin-jaw automatic car-coupler, the combination, with the coupling-hook, of an automatic locking device for the coupling- 25 hook, a releasing device for the locking device, and a retaining device for the releasing device, adapted to be set to hold the locking device in its unlocked position and to be tripped on the opening movement of its coupling parts, substantially as and for the pur- 30 pose set forth.

2. In an automatic coupler, the combination, with the coupling parts and an automatic locking device, of a releasing device, 35 a hand-lever for controlling the same, and a retaining device for the lever, adapted to hold the locking device in its unlocked position and be tripped by the opening movement of the coupling parts.

40 3. In an automatic twin coupler, the com-

bination, with a coupling-hook, of a locking-dog carried by the heel-piece of the coupling-hook, a releasing-rod connected both to the locking-dog and the coupling-hook at some point in advance of its pivot, a hand-lever 45 for operating the rod, and a retaining device for the lever, adapted to hold the dog in its unlocked position when the coupling-hook is closed and be tripped by the rod when the coupling-hook is opened, substantially as de- 50 scribed.

4. In an automatic twin coupler, the combination, with a coupling-hook, of a locking-dog carried by the hook, a releasing-rod connected to said dog and also to the hook in ad- 55 vance of its pivot, the slotted and toothed segment-plate, and the hand-lever pivotally connected to the rod, having its fulcrum-pin working in the slot of said plate and having a fixed pawl for engaging said teeth, substan- 60 tially as and for the purpose set forth.

5. The combination, with the coupler-head B, having locking-lug B', of the recessed coupling-hook C, the pivot-bolt D, the locking-dog E, the sectional jointed releasing device F F', 65 connected to the dog and passing to the exterior of the coupling-hook in advance of its pivot, the segment-plate H, having the slot *h* and teeth *h'*, and the hand-lever G, pivotally connected to the section F' of the releasing- 70 rod and having its fulcrum-pin *g* working in the slot *h*, and a fixed pawl *g'* for engaging with the teeth *h'*, substantially as described.

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

ALVIN CARR McCORD.

Witnesses:

M. J. TALLETT,
CHAS. H. KING.