

(No Model.)

J. W. BAKER & G. A. PRESCOTT.

CAR COUPLING.

No. 355,909.

Patented Jan. 11, 1887.

Fig. 1.

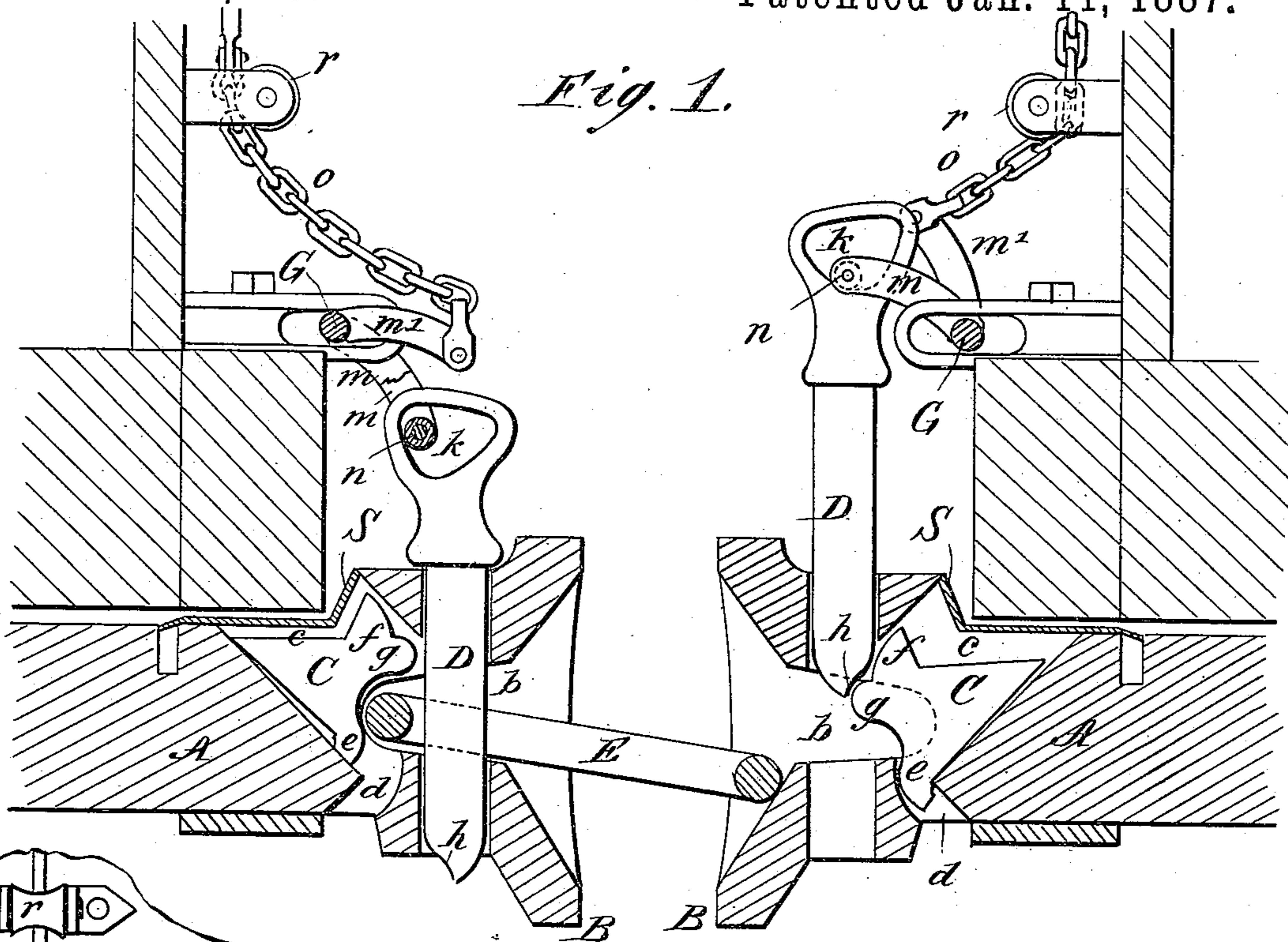
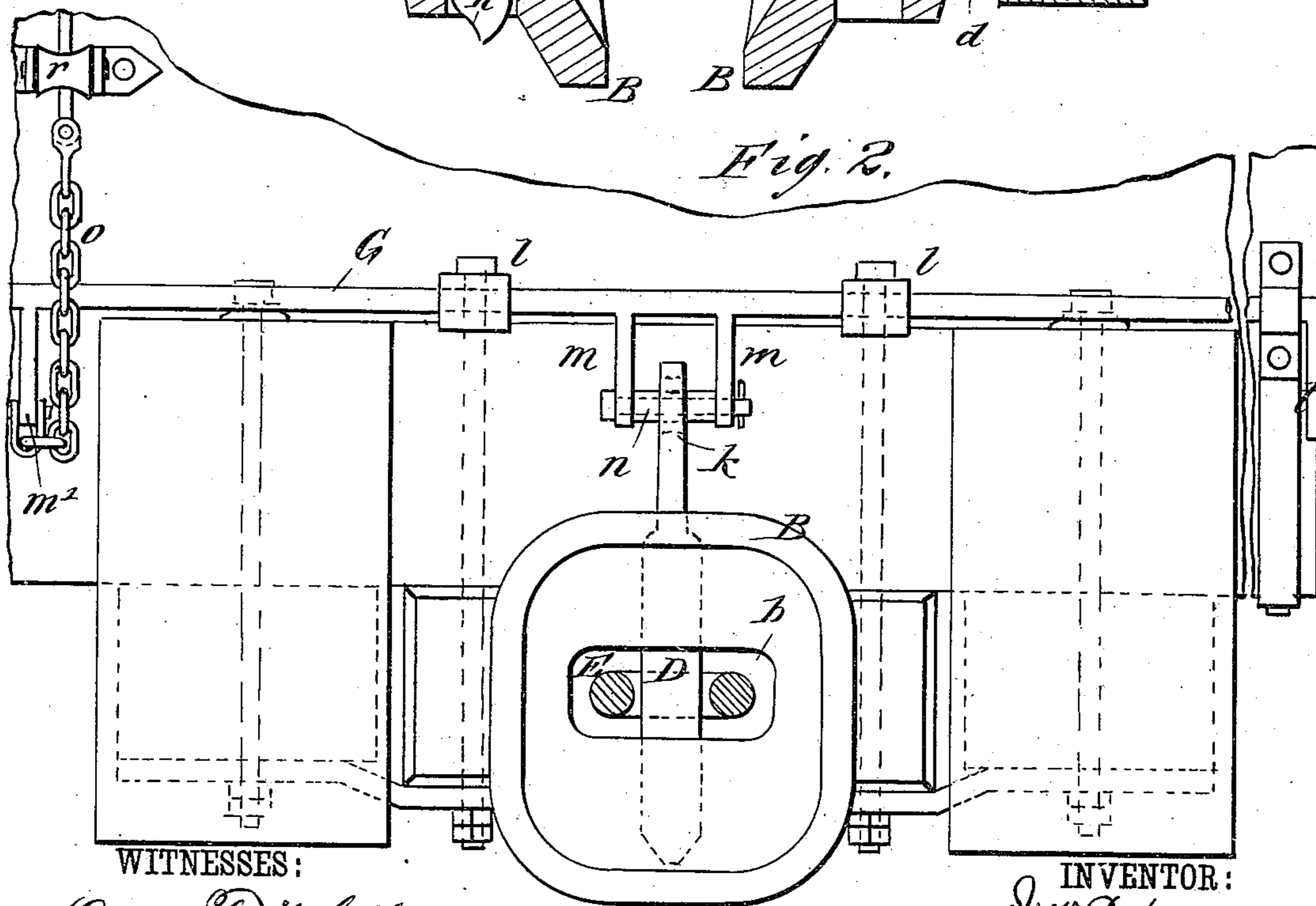


Fig. 2.



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JACOB W. BAKER AND GEORGE A. PRESCOTT, OF DOVER, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 355,909, dated January 11, 1887.

Application filed November 20, 1886. Serial No. 219,479. (No model.)

To all whom it may concern:

Be it known that we, JACOB W. BAKER and GEORGE A. PRESCOTT, both of Dover, in the county of Morris and State of New Jersey, have
5 invented a new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description.

This invention relates to the coupling-pin and its lifting or operating devices in a draw-
10 bar and its connections, the whole, when provided with the usual or any suitable coupling-link, constituting a car-coupling.

The invention consists in a coupling-pin provided with a head of peculiar construction, and
15 in means of a special description for lifting or operating said pin, substantially as hereinafter described, and whereby jamming of the pin is avoided, and a straight lift or movement obtained for it under all circumstances.

20 The invention is more particularly intended to be applied in connection with certain peculiar constructions and combination of parts relating to the draw-bar and its connections, described in another application for Letters Patent
25 by us, Serial No. 213,000, filed September 8, 1886, and in which a peculiar-constructed sliding block, arranged within a peculiar-shaped recess in the draw-bar, was used, and we here show our invention as applied to such
30 a construction and combination of parts.

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

Figure 1 represents a central vertical longitudinal section of a draw-bar and its connections having our invention applied, the parts upon the left being shown in the position they
40 assume when the coupling-pin is in place within the coupling-link, while upon the right the parts are represented as in the position they assume when the coupling-pin has been raised. Fig. 2 is a face view of the draw-bar
45 and its connections, with the parts in position shown at the left in Fig. 1.

A A are the draw-bars of two adjacent cars. Each of these draw-bars is formed, as usual, with a draw-head, B, having the usual link-recess, b. Behind this recess b there is another recess, c,
50 formed in the draw-bar, and having its upper and lower walls or faces inclining downward to-

ward the front of the draw-head, while below the recess c there is a smaller recess, d.

C is a sliding block mounted within the recess c, said block being constructed with a lug
55 or projection, e, and with a shoulder, f. A sliding cover, S, serves to prevent said block from becoming accidentally misplaced.

D is the coupling-pin, and E the coupling-
60 link.

When the coupling pin is drawn upward and partially out of the draw-head, which releases the coupling-link, the sliding block C is free to move downward to the position in which it
65 is shown at the right in Fig. 1—that is, to a position so that the curved upper face, g, of the block will fit in the curved recess h of the coupling-pin, the shoulder f striking against the peripheral face of the pin, while the lug or
70 projection e will rest within the recess d of the draw-bar. The lug e then prevents the weight of the coupling-pin from canting the block C.

In coupling with the link of an approaching car, said link, upon entering the recess b, will strike the forward curved face of the block C
75 and force the block at first straight but subsequently diagonally upward, thereby permitting the pin to drop within the coupling-link, as shown at the left hand of Fig. 1.

So far as above described this invention is
80 the same as that described in our previous application for patent, hereinbefore referred to, and no claim is here made to the same, separately considered. It is very important, however, that the coupling-pin D should not be
85 liable to jam; but should have a free straight up and-down movement when being engaged with and disengaged from the coupling-link, and so that when two cars come together the tendency of the shock produced to throw the
90 upper end of the pin forward will be counteracted. To these ends we construct the head or top of the pin D with a cam-shaped slot, k, and provide the end of the car above the draw-bar with a cross-shaft, G, capable of vibration
95 within suitable bearings, ll, and having an arm or arms, m, made to carry a roller-pin, n, which passes through the slot k in the head of the coupling-pin. Said shaft G is also provided with an arm, m', to which is attached a
100 chain or loose connection, o, that may pass up back of a pulley, r, and which serves, when

pulled upon, to turn the shaft G and cause the pin or roller carried by the arms *m* to lift the coupling-pin in the draw-head, as shown to the right of Fig. 1. The slot *k* is of such a shape, length, and depth that when the shaft G is turned by pulling on the chain *o* to lift the coupling-pin the roller-pin *n* will work forward and backward under and along the upper wall of the slot in a free and easy manner, and after the coupling-pin has been raised and the lift released from the chain the shaft is free to turn back to its normal position, so that the roller-pin *n* will drop to its lowest position in the slot *k* over the center of the coupling-pin, which is held raised by the block C. So soon, however, as the block C is slid upward and backward by the entry of the coupling-link the coupling-pin is free to drop unrestrained by its lifting device, and any tendency of the coupling-pin to pitch forward or to be jammed either backward or forward will be counteracted by the roller-pin *n* running up the inclined side walls of the slot *k*, the weight of the arms *m* assisting. The shaft G may also have a crank, *t*, on its end or ends to control the movement of the shaft and, if necessary, to make the roller-pin *n* act downward on the pin, should it by any possibility jam.

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

1. A coupling-pin provided with a cam-slot, as *k*, in its upper end, substantially as specified.

2. The combination, with a draw-head and a coupling-pin provided with a triangular cam-slot in its upper end, of a shaft journaled on the end of the car and provided with an arm carrying a pin entering said slot, substantially as specified.

3. The combination, with a draw-bar and its head, of the coupling-pin D, having a triangular cam-shaped slot, *k*, in its upper end, the shaft G, with its attached loose operating connection *o*, and the roller-pin *n*, connected with said shaft and arranged to work within the slot *k*, substantially as specified.

4. The combination of the coupling-pin D, having a cam-shaped slot, *k*, in its upper part, shaft G, with its attached loose operating connection *o* and roller-pin *n*, carried by an arm or arms connected with said shaft, the draw-bar A and draw-head B, having a link-recess, *b*, and a rear recess, *e*, provided with upper and lower inclined walls, and the sliding block C, constructed for operation in connection with the coupling-pin, essentially as herein shown and described.

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