

(No Model.)

S. J. FREEMAN.  
CAR COUPLING.

No. 424,192.

Patented Mar. 25, 1890.

Fig. 1.

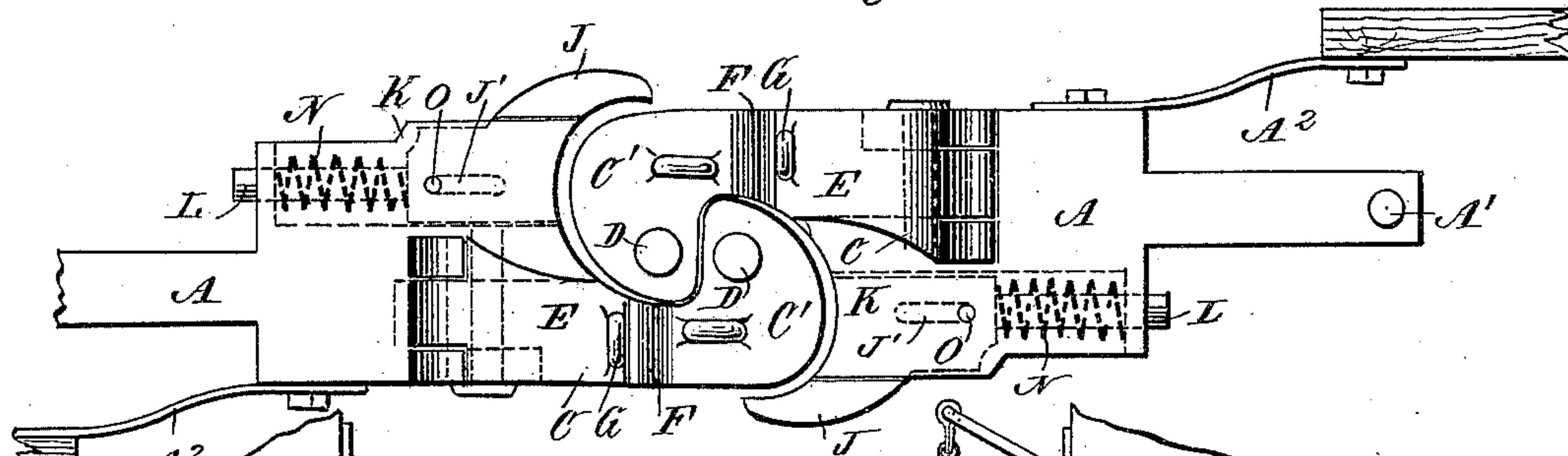


Fig. 2.

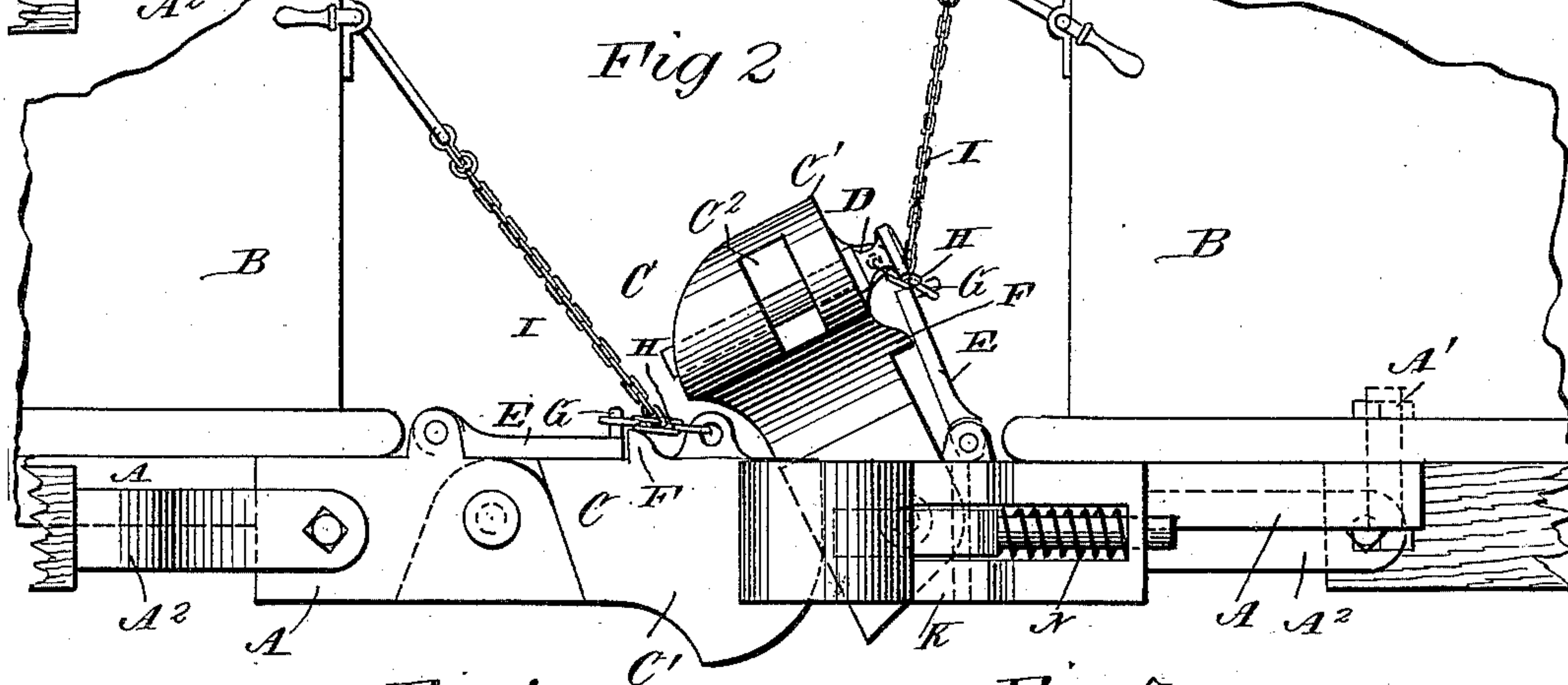


Fig. 4.

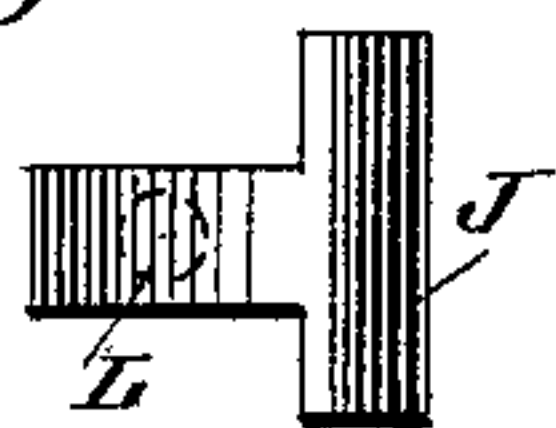


Fig. 5.

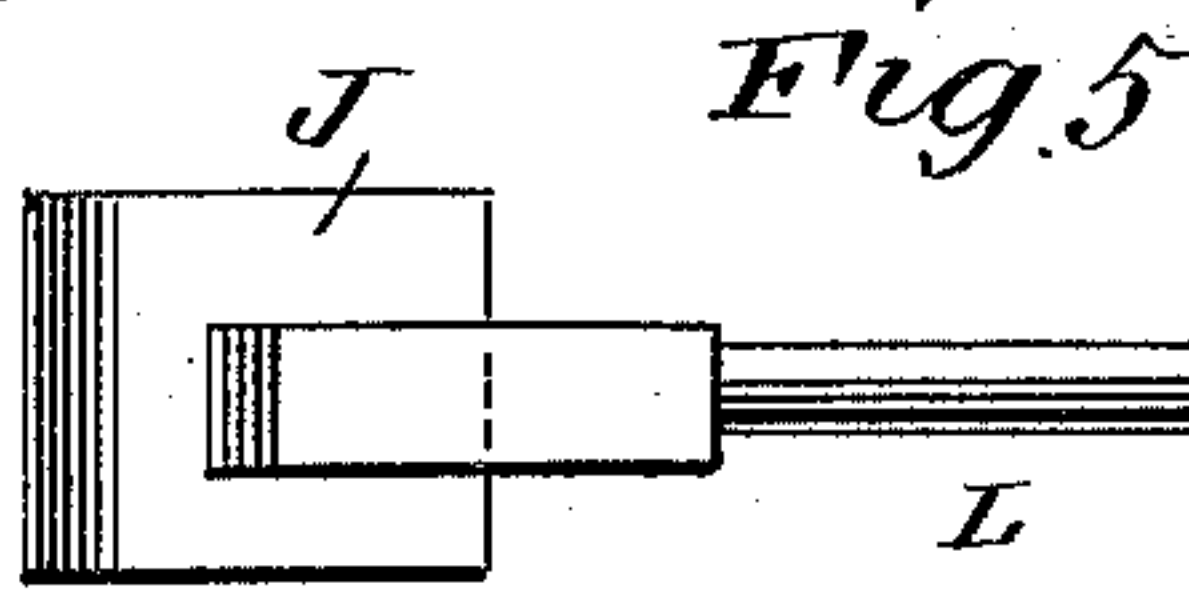
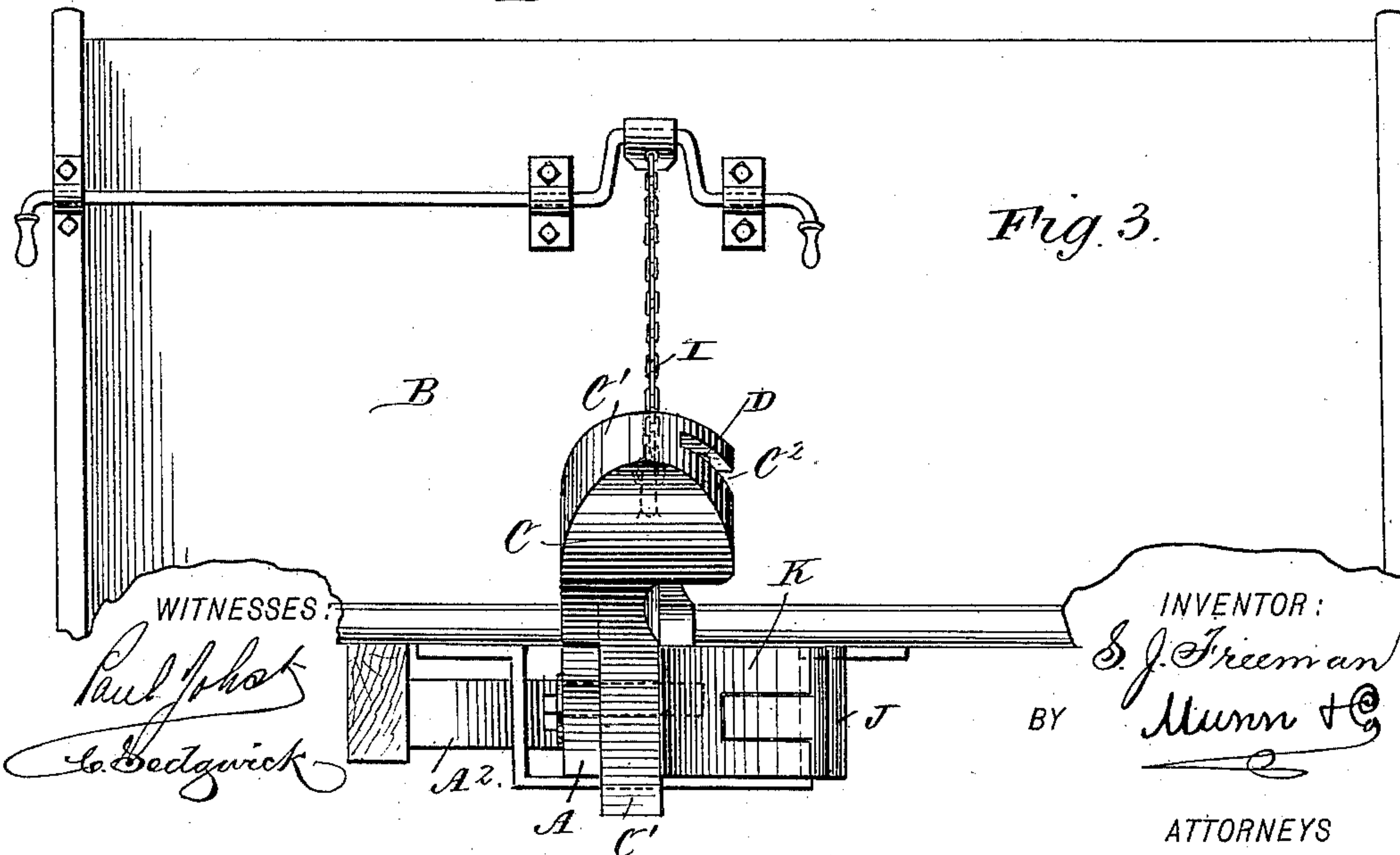


Fig. 3.



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# UNITED STATES PATENT OFFICE.

SIMON J. FREEMAN, OF BRADFORD, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 424,192, dated March 25, 1890.

Application filed January 29, 1890. Serial No. 338,478. (No model.)

*To all whom it may concern:*

Be it known that I, SIMON J. FREEMAN, of Bradford, in the county of McKean and State of Pennsylvania, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The invention relates to car-couplings such as shown and described in Letters Patent of the United States No. 412,492, granted to me under date of October 8, 1889.

The object of the present invention is to provide a new and improved car-coupling, which can be readily coupled to the ordinary link-and-pin coupling, and in which the hook is locked in place to prevent its displacement when the cars are coupled, so as to prevent accidental uncoupling of the cars.

The invention consists in certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out 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 plan view of two couplings in a coupled position. Fig. 2 is a side elevation of the same with one hook raised. Fig. 3 is a front view of one coupling with the hook raised. Fig. 4 is a front view of the sliding hook, and Fig. 5 is a side elevation of the sliding hook.

The draw-bar A is pivoted at A' to the under side of the car B, and is held in its normal position by a spring A<sup>2</sup>, connected with the car B, and is thus free to swing sidewise. On the front end of the draw-bar A is pivoted the hook C in a similar manner as the hook E described in the patent above referred to. The hook C is always held in a horizontal position unless swung upward by the operator, and it is adapted to engage with its hook end C' a corresponding hook part on the hook of the opposite car, as is plainly shown in Fig. 1. The means for raising the hook C are similar to the ones described in the patent above referred to, and a further description of the same is not deemed necessary.

In the hook end C' of the hook C is formed a slot C<sup>2</sup>, adapted to receive the ordinary

coupling-link in case the car provided with the improved coupling is to be coupled with a car having the ordinary coupling link and pin. A pin D is held to slide vertically in the hook end C', and passes through the slot C<sup>2</sup>, to engage the ordinary coupling-link.

On top of the draw-bar A is pivoted a locking-plate E, extending over and onto the top of the pivoted end of the hook C, to abut with its free end on a projection or lug F, formed on top of the hook C. An eye G is secured on the free end of the locking-plate E, and is connected by a short chain H with the chain I for raising the hook C. When the hook C is in its normal horizontal position, the plate E, by abutting against the lug F, locks the hook C in place and prevents an accidental upward swinging of the same. When the operator, however, draws the chain I upward, the short chain H pulls on the free end of the locking-plate E and swings the same upward out of contact with the lug F, to set the hook C free, and before the latter commences to swing upwardly by the further upward movement of the said chain I.

Instead of the lever L shown and described in the patent above referred to I employ a sliding hook J, arranged to one side of the hook C, and held to slide horizontally in suitable bearings K, formed on one side of the draw-bar A. On the rear end of the hook J is formed a longitudinally-extending shaft L, on which is coiled a spring N, pressing with one end against the hook J and with its other end on the bearing K, to force the said hook outward. A pin O, held vertically in the bearing K, passes through a longitudinally-extending slot J', formed in the hook J, to limit its outward and inward sliding motion. When the two hooks C are locked in a horizontal position by the respective plates E and the two cars to be coupled are moved toward each other, the rounded-off hook ends C' slide over each other against the projecting ends of the sliding hooks J, so that the latter are moved rearwardly in opposite directions, being yielding on account of the springs N, until the hook parts C' have engaged each other, as shown in Fig. 1, being pressed inward toward each other by the springs A<sup>2</sup> acting on the piv-



oted draw-heads A. As soon as the hooks C C engage each other, the sliding hooks J are pressed forward by their springs N, to surround the hook ends C', to hold the same in place and prevent their accidental disengagement. When the operator desires to uncouple the cars, he raises one of the hooks C and its locking-plate E, as previously described, into the position shown to the right in Fig. 2. The hook parts C' are then disengaged from each other.

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

15 1. A car-coupling comprising a draw-bar, a horizontal hook pivoted on the said draw-bar and adapted to swing vertically, and a locking-plate pivoted on the said draw-bar and adapted to abut against and to lock the hook in a horizontal position, substantially as shown and described.

20 2. A car-coupling comprising a draw-bar, a horizontal hook pivoted on the said draw-bar and adapted to swing vertically, a lug formed on the said hook, a locking-plate pivoted on the said draw-bar and adapted to abut against the said lug to lock the hook in a horizontal

position, and means, substantially as described, for raising the said locking-plate previous to swinging the hook upward, substantially as shown and described. 30

3. A car-coupling comprising a pivoted spring-pressed draw-bar adapted to swing sidewise, a horizontal hook pivoted on the said draw-bar and adapted to swing vertically, and a spring-pressed hook held to slide horizontally on one side of the draw-head and adapted to be engaged by the hook of the car to be coupled, substantially as shown and described. 40

4. A car-coupling comprising a draw-bar, a horizontal hook pivoted on the said draw-bar and adapted to swing vertically, a lug formed on the said hook, a locking-plate pivoted on the said draw-bar and adapted to abut against the said lug to lock the hook in a horizontal position, and a coupling-pin held in the hook part of the said hook and passing through a slot in the latter to engage a coupling-link, substantially as shown and described. 45

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Witnesses:

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