

(No Model.)

W. H. LUCAN.

CAR COUPLING.

No. 279,654.

Patented June 19, 1883.

Fig. 1.

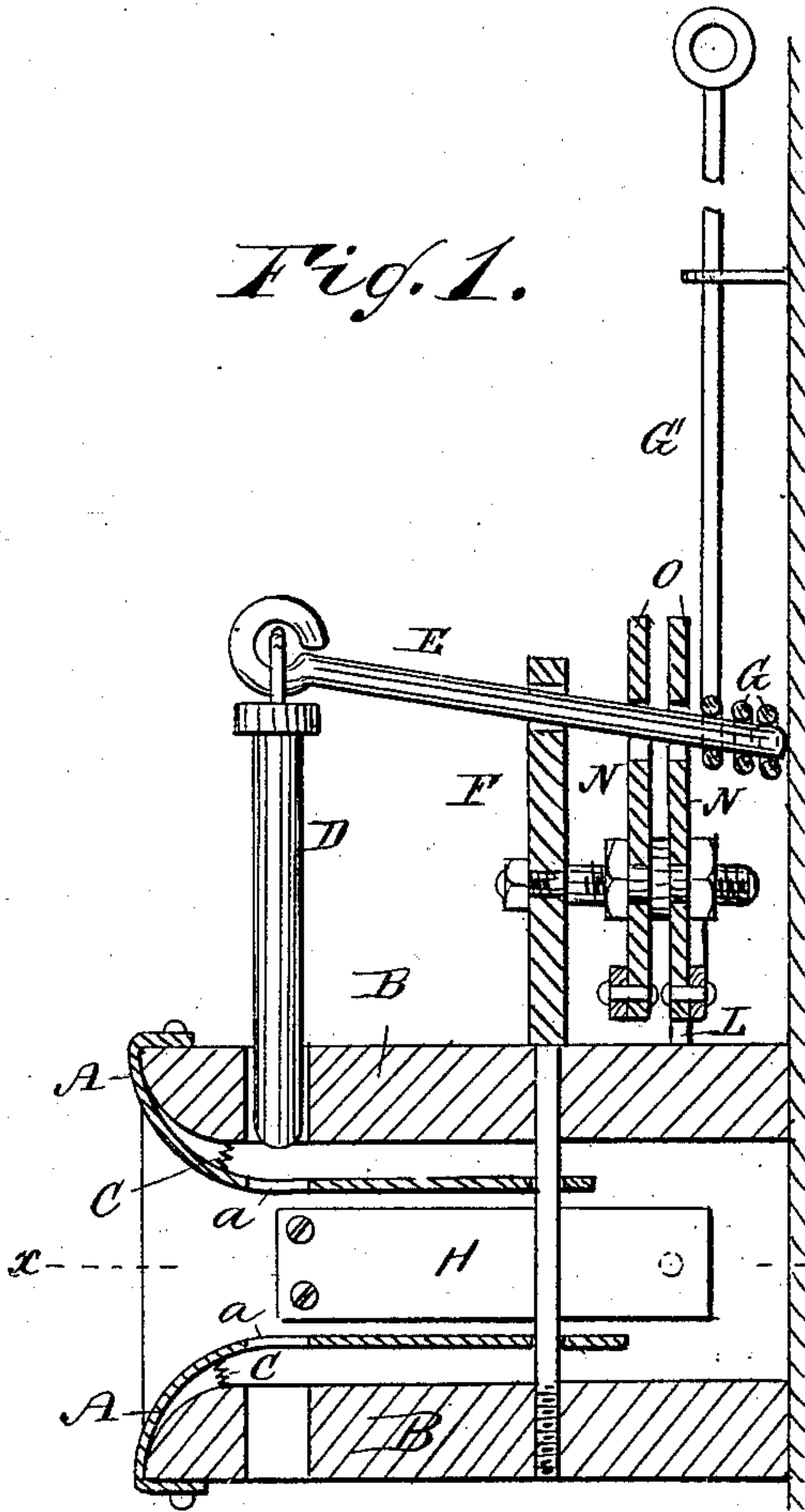


Fig. 2.

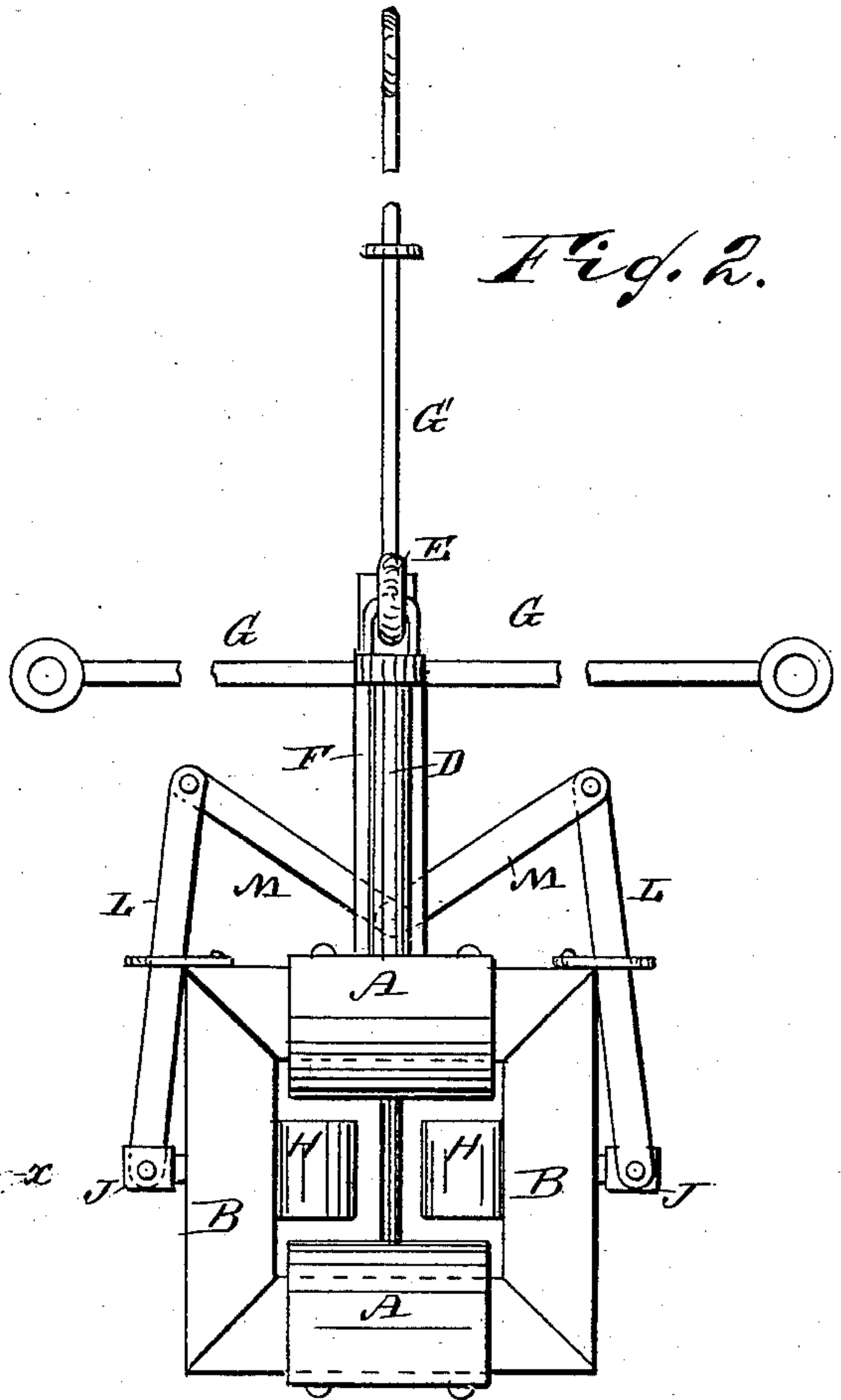


Fig. 3.

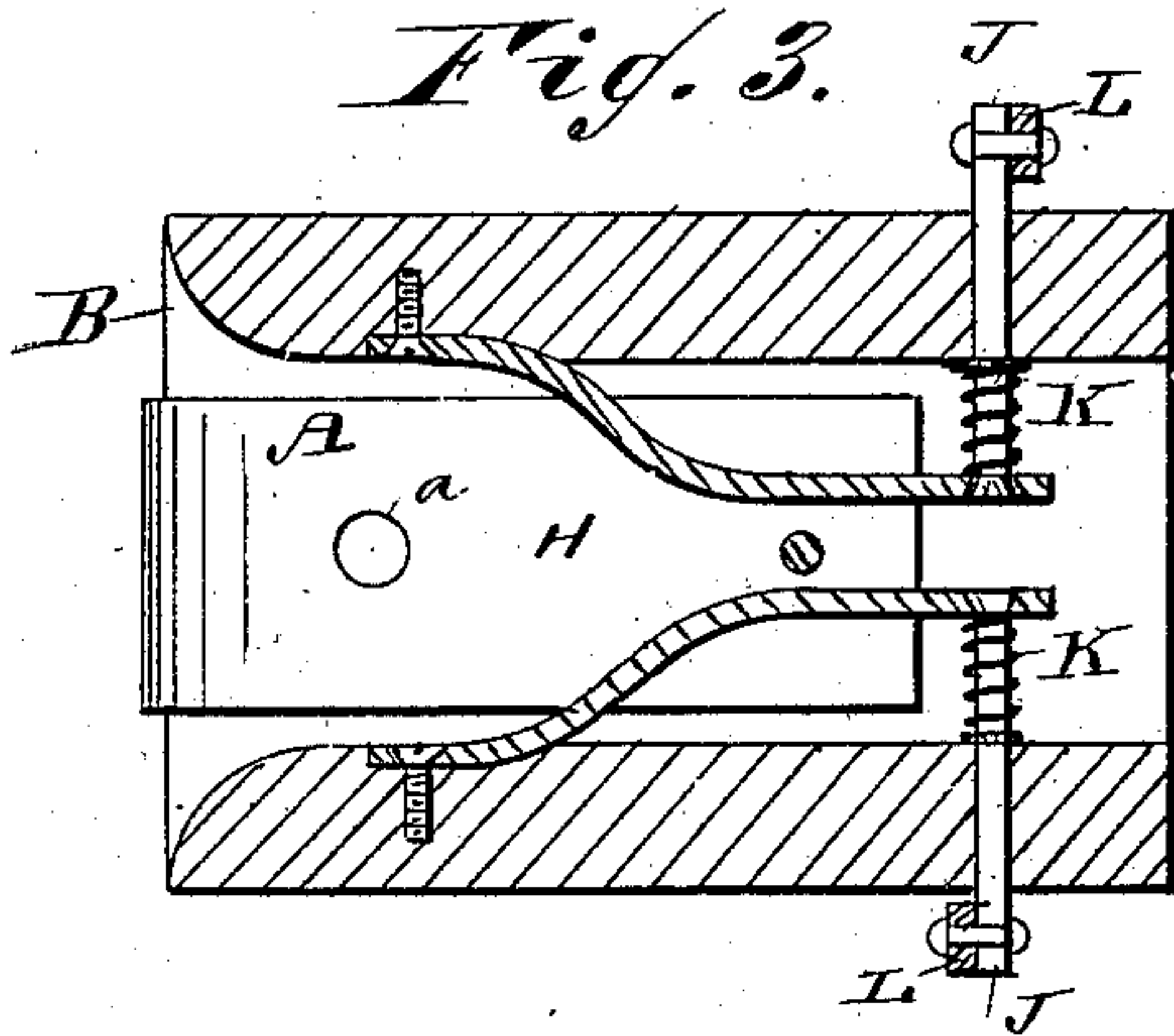
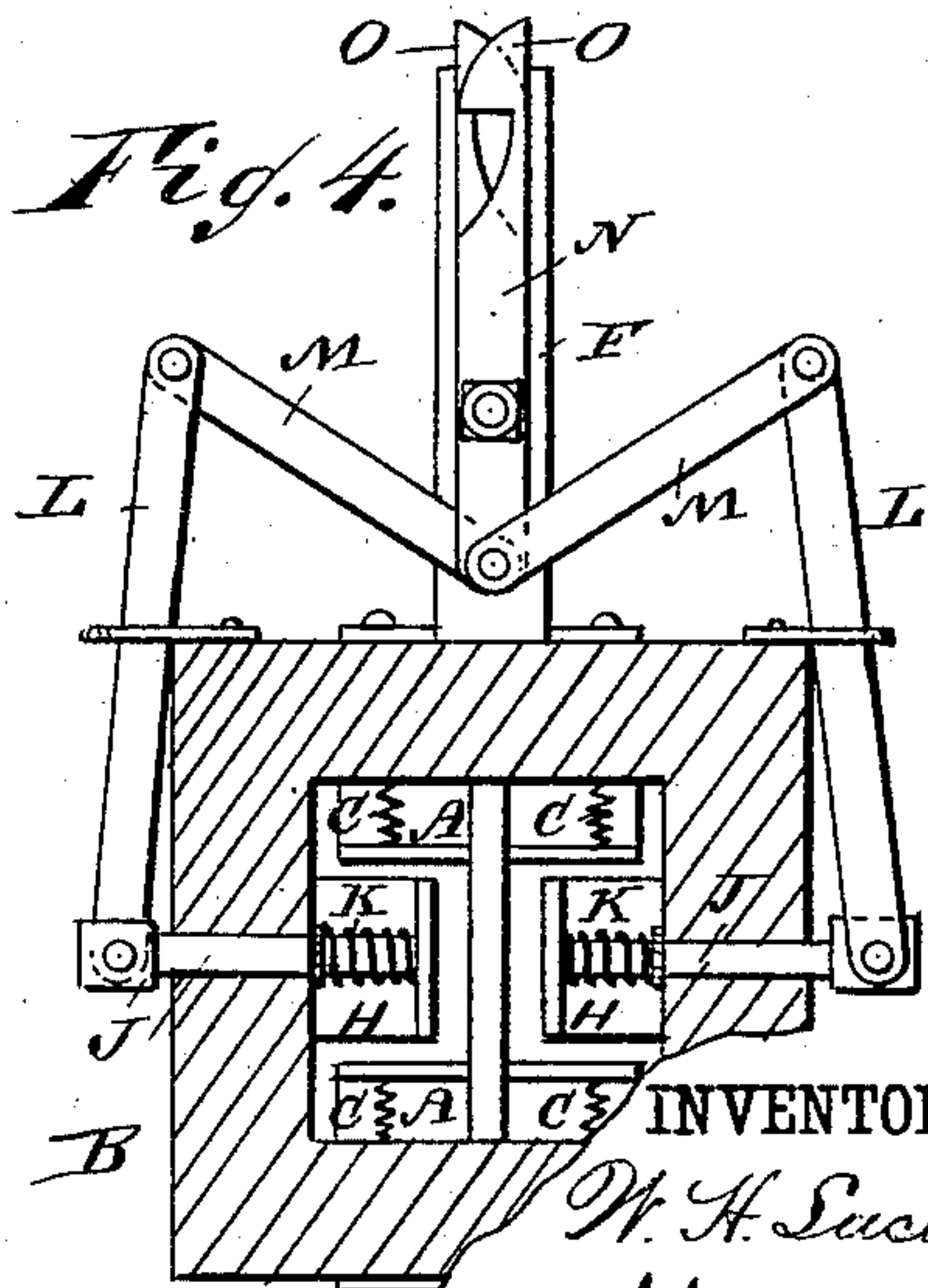


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. LUCAN, OF HERMON, ILLINOIS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 279,654, dated June 19, 1883.

Application filed January 19, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. LUCAN, of Hermon, in the county of Knox and State of Illinois, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The invention consists in the combination, with a draw-head, of a coupling-pin-holding lever fulcrumed on the draw-head, the inner end of which lever can be lowered by means of suitable devices and held in the lowered position by means of hooked levers, which are connected with spring-plates within the draw-head, whereby when a link enters the draw-head it presses the spring-plates from each other and moves the hooked levers from each other, thereby releasing the inner end of the lever on the draw-head and permitting the coupling-pin to drop and to pass through the draw-head and the link in the same.

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 longitudinal sectional elevation of my improved car-coupling. Fig. 2 is a front end elevation of the same. Fig. 3 is a sectional plan view of the same on the line *x x*, Fig. 1. Fig. 4 is a cross-sectional elevation of the same.

Curved plates A are attached to the top and bottom of the draw-head B, at the outer end, and extend into the same, the inner ends of the said plates being free. The plates are pressed from the top and bottom of the opening of the draw-head by springs C, between the said plates and the draw-head. The plates A are provided each with an aperture, *a*, through which the coupling-pin D can pass, which coupling-pin is attached to the outer end of a lever, E, which passes loosely through an opening in the upper end of a standard, F, on the top of the draw-head, which standard extends vertically through the opening in the draw-head and passes loosely through apertures in the inner ends of the plates A. A lever, G, extending to the sides of the car, and a lever, G', extending to the roof of the car, are connected with the inner end of the lever E for the purpose of lowering the same; but in place of the said levers G and G' any other of

the well-known devices may be used for lowering the inner end of the said lever E. A spring-plate, H, is attached to each side of the opening in the draw-head, near the outer end of the same, the said plates projecting backward into the opening of the draw-head, and being bent in such manner that their inner ends will be nearer to each other than the outer ends. Pintles J project from the inner free ends of the spring-plates H through the sides of the draw-head, and are surrounded by spiral springs K, which press the inner ends of the spring-plates toward each other. The outer ends of the pintles J are pivoted to the lower ends of levers L, pivoted to the edges of the draw-head, at the top of the same, the upper edges of which levers L are connected by means of connecting-rods M with the lower ends of levers N, which are pivoted to the standard F by means of a suitable pintle, and are provided at the upper ends with hooks O, which project toward each other. The upper ends of the said levers M above the hooks are beveled or rounded, as shown.

The operation is as follows: If the inner end of the lever E is pressed downward, it will be forced between the upper ends of the levers N, which are thus separated until the said lever passes under the hooks O, in which it will be held, whereby the coupling-pin D will be raised and will be held in this position. When a coupling-link enters the draw-head it strikes the curved parts of the plates H and forces the inner ends of the plates H from each other, thereby forcing the ends of the levers L from the sides of the draw-head, and by means of the connecting-rods M the upper ends of the levers N will be moved from each other, and thereby the inner end of the lever E will be released, thus permitting the coupling-pin D to drop. The cars are thus coupled automatically. If the cars are to be uncoupled, the inner end of the lever E is pressed down by means of the levers G and G' or other devices. The plates A serve to hold the link in the proper position within the draw-head.

My above-described coupling can be attached to any of the draw-heads in general use at present.

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

1. The combination, with the draw-head B, of the coupling-pin D, the lever E, fulcrumed on the draw-head, the spring-plates H within the draw-head, the pivoted hooked levers N, 5 and devices for connecting the spring-plates H with the said hooked levers N, substantially as herein shown and described, and for the purpose set forth.

2. The combination, with the draw-head B, 10 of the coupling-pin D, the lever E, fulcrumed on the draw-head, the spring-plates H within the draw-head, the pintles J, the levers L, the connecting-rods M, the hooked levers N, and devices for lowering the inner end of the lever E,

substantially as herein shown and described, 15 and for the purpose set forth.

3. The combination, with the draw-head B, of the coupling-pin D, the lever E, fulcrumed on the draw-head, the spring-plates H within the draw-head, the pintles J, the springs K, 20 the levers L, the connecting-rods M, the hooked levers N, and devices for lowering the inner end of the lever E, substantially as herein shown and described, and for the purpose set forth.

WILLIAM H. LUCAN.

Witnesses:

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JESSE ROUTH.