

(No Model.)

J. E. McMURTREY, I. WILLIAMS & F. E. OKIE.

CAR COUPLING.

No. 287,455.

Patented Oct. 30, 1883.

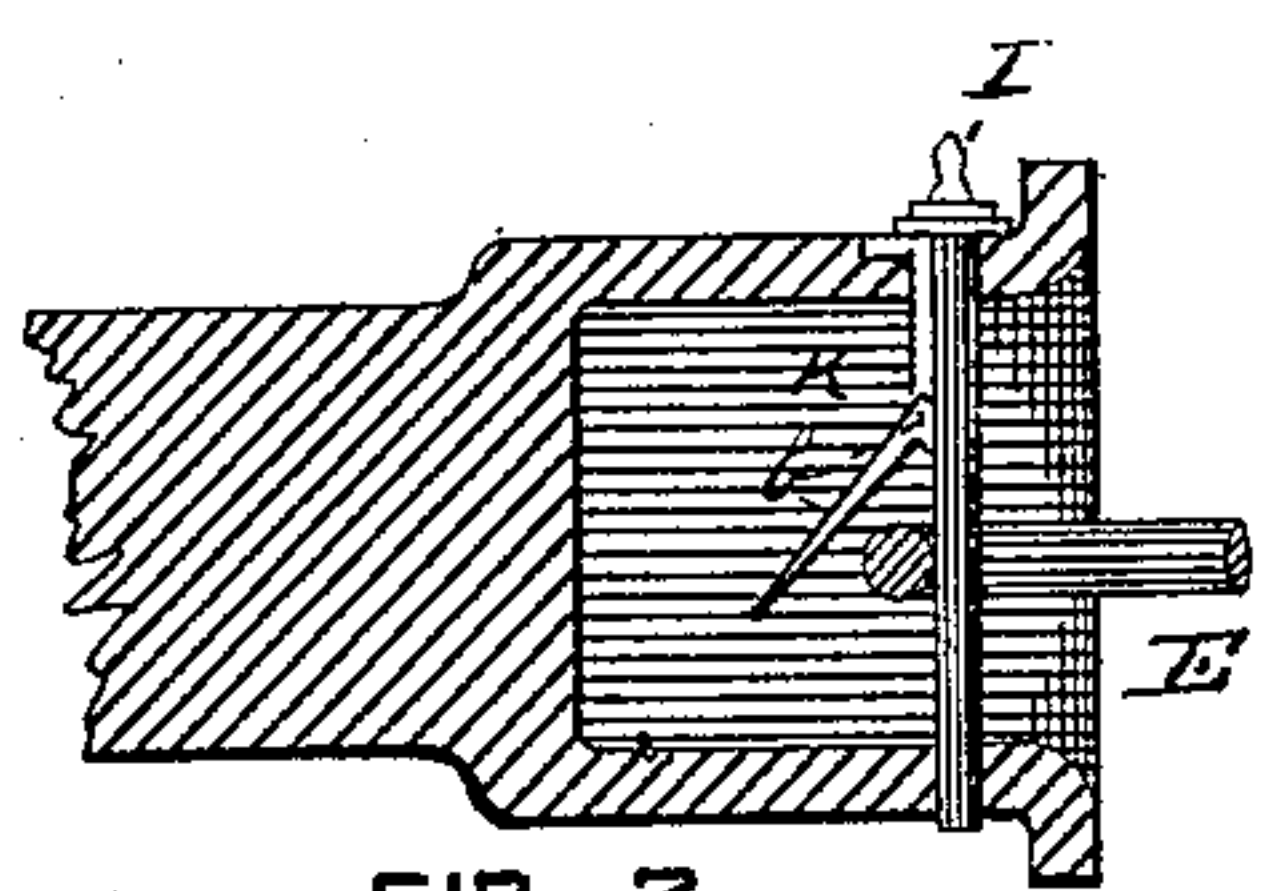
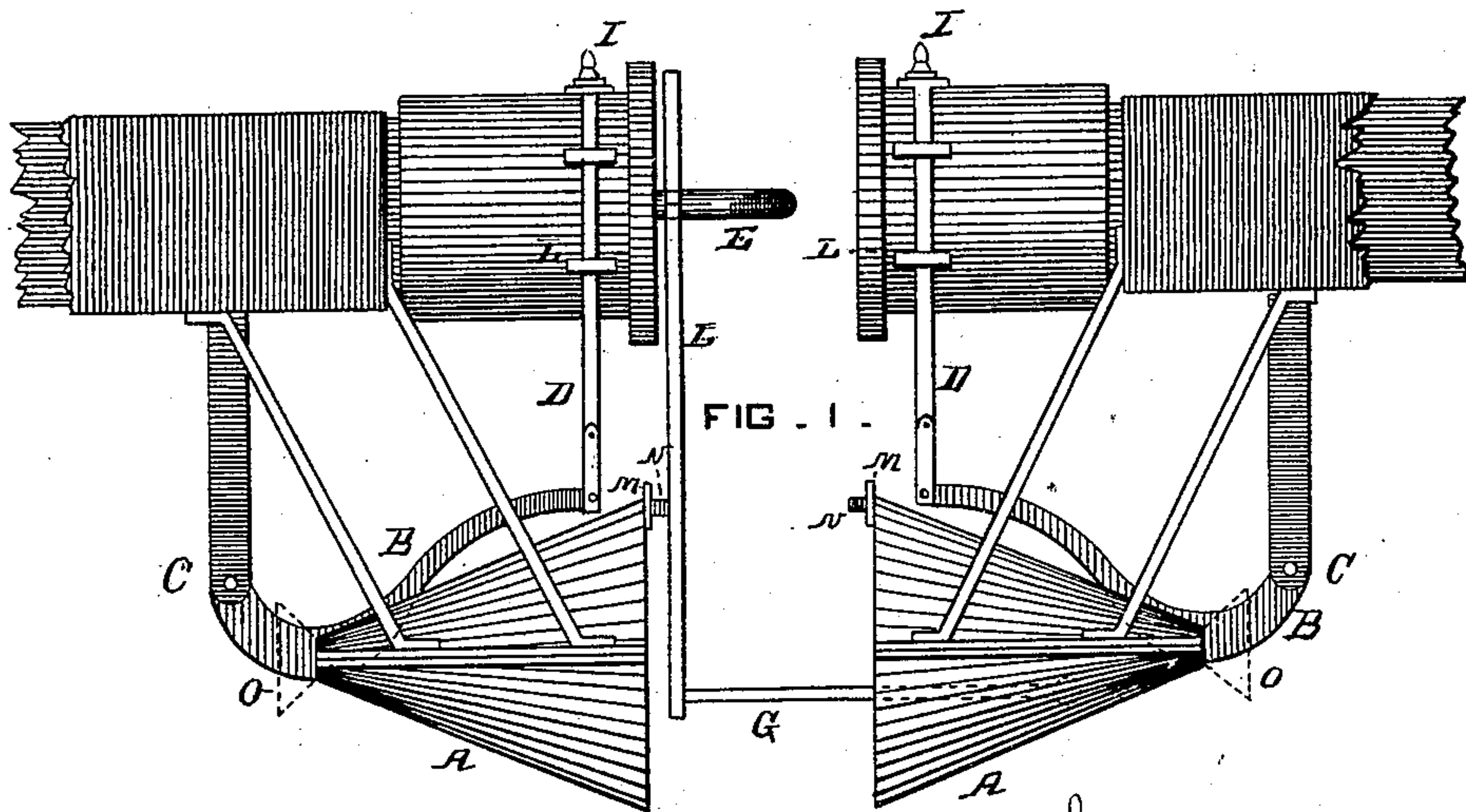


FIG. 2.

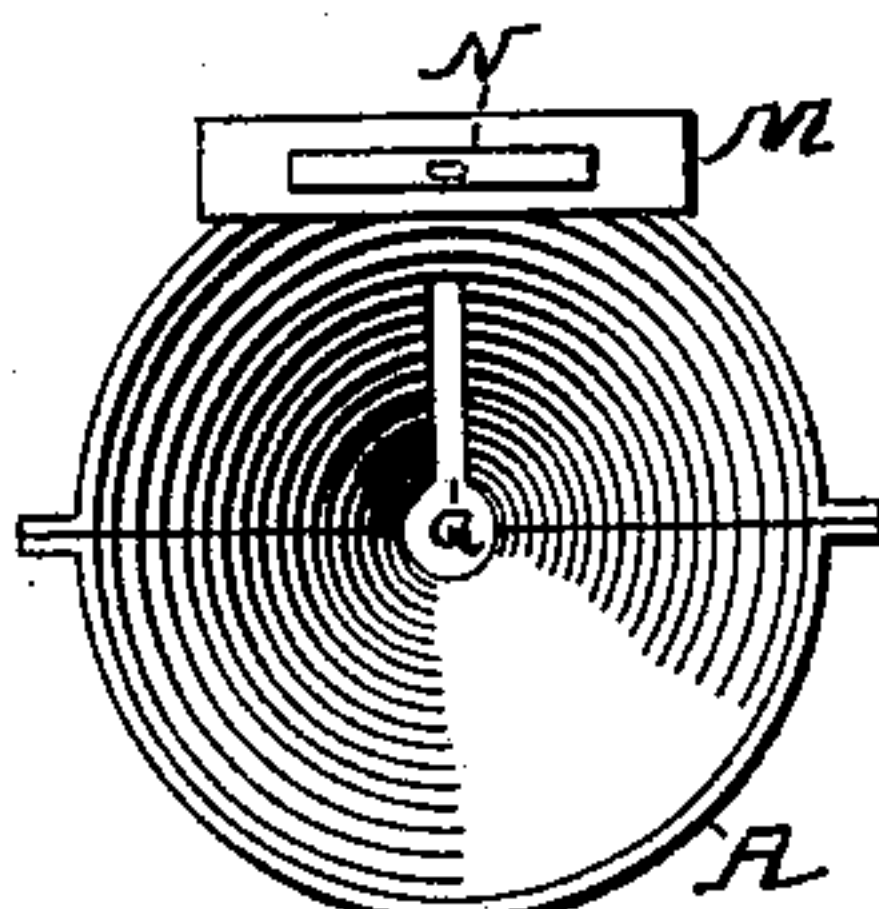


FIG. 4.

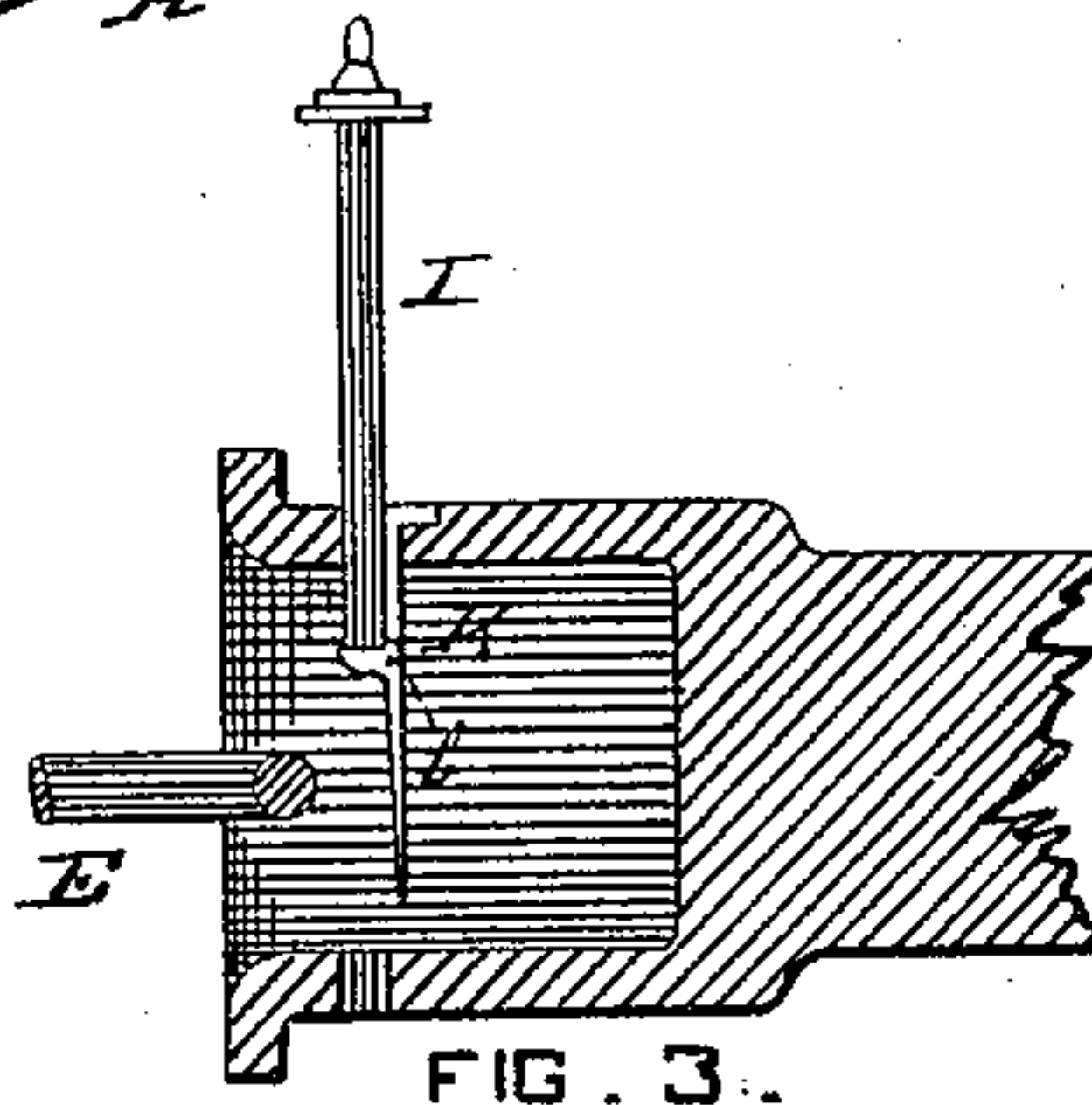


FIG. 3.

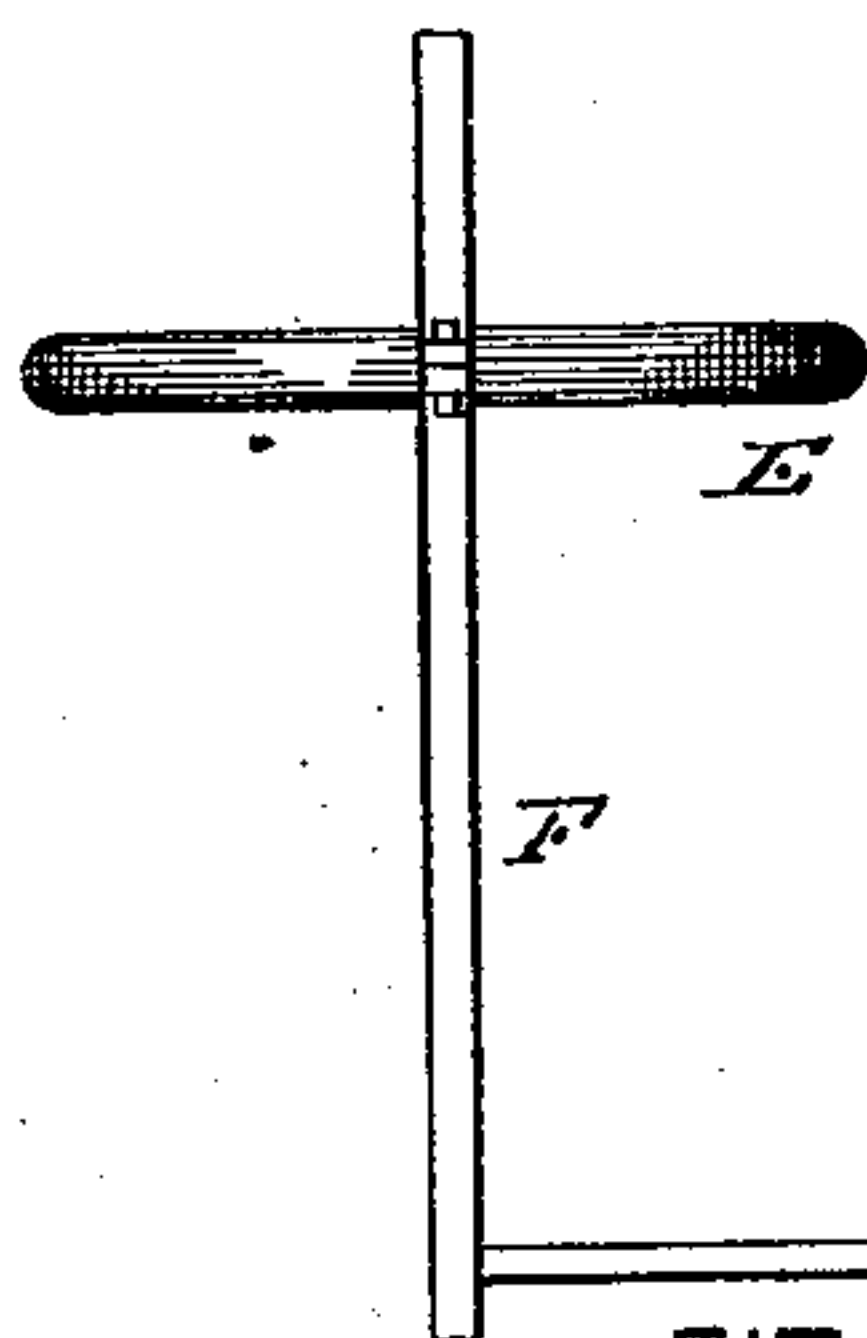


FIG. 5.

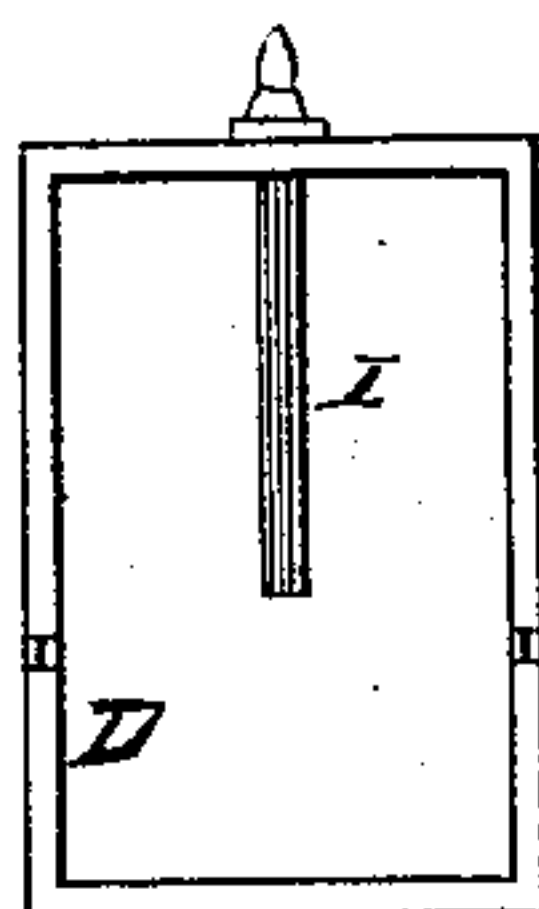


FIG. 8.

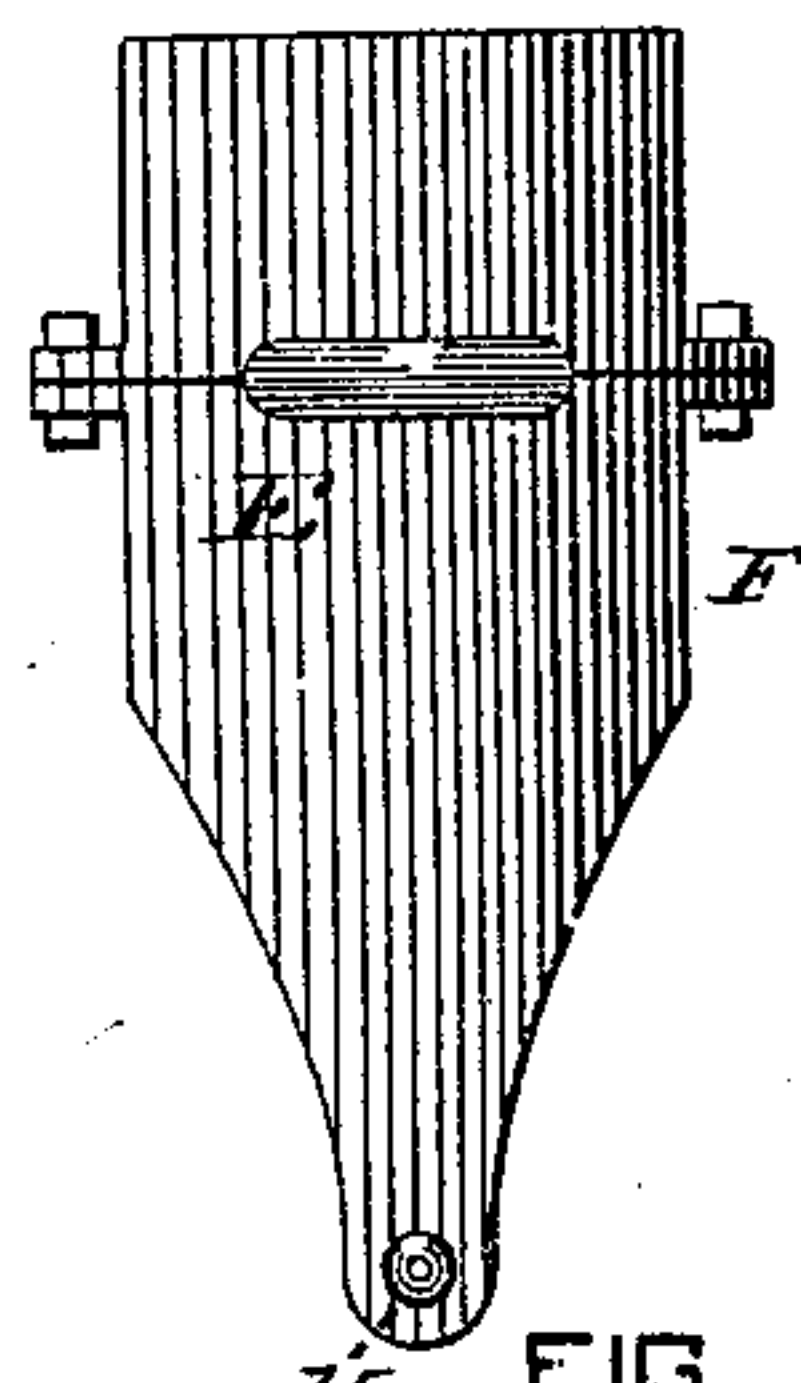


FIG. 6.

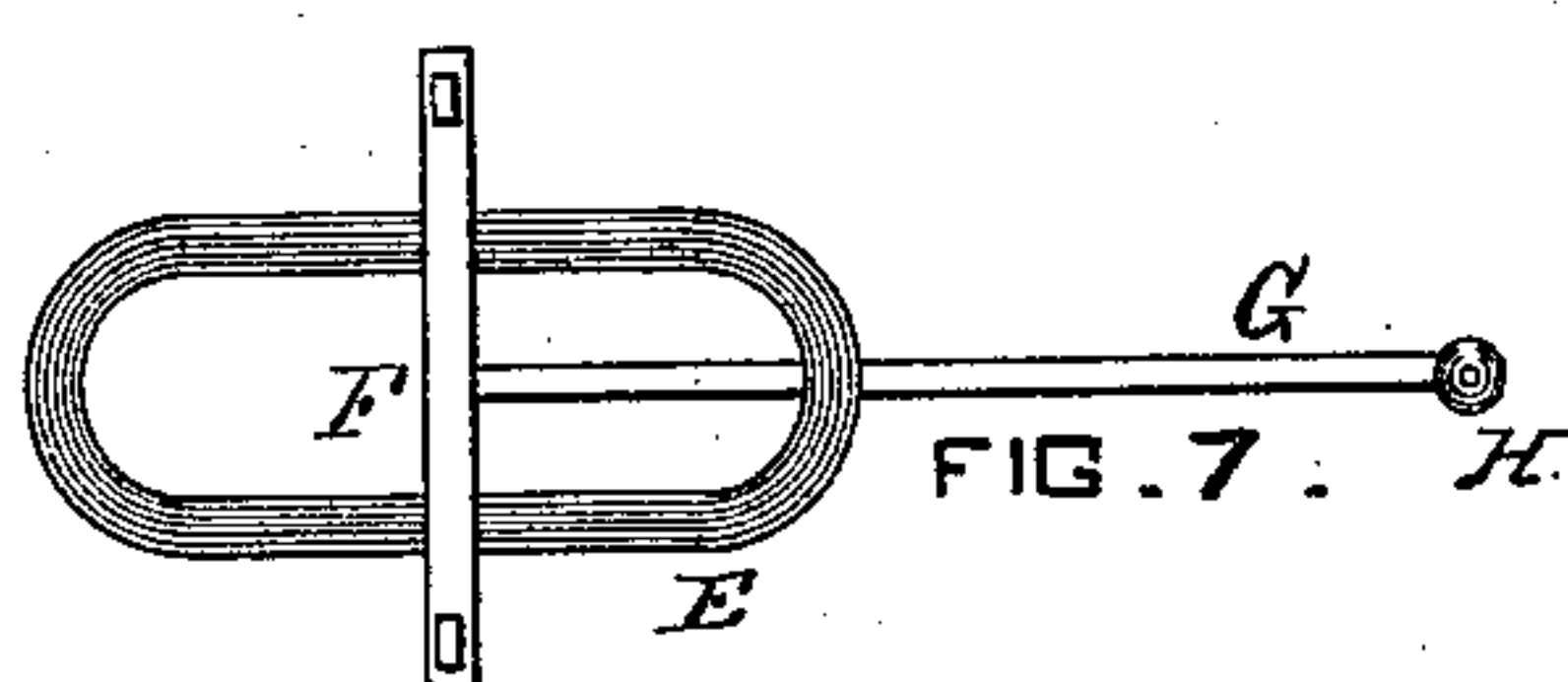


FIG. 7.

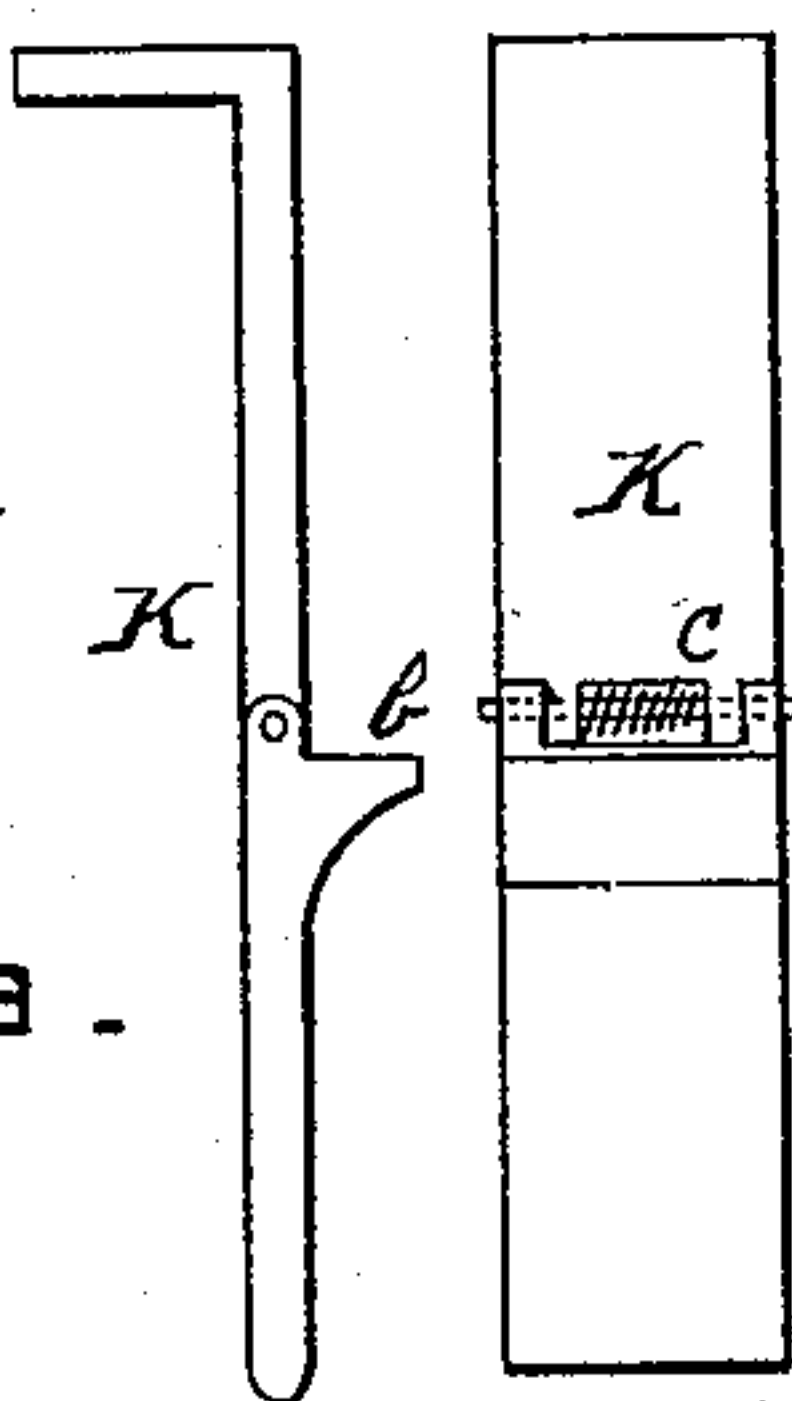


FIG. 9.

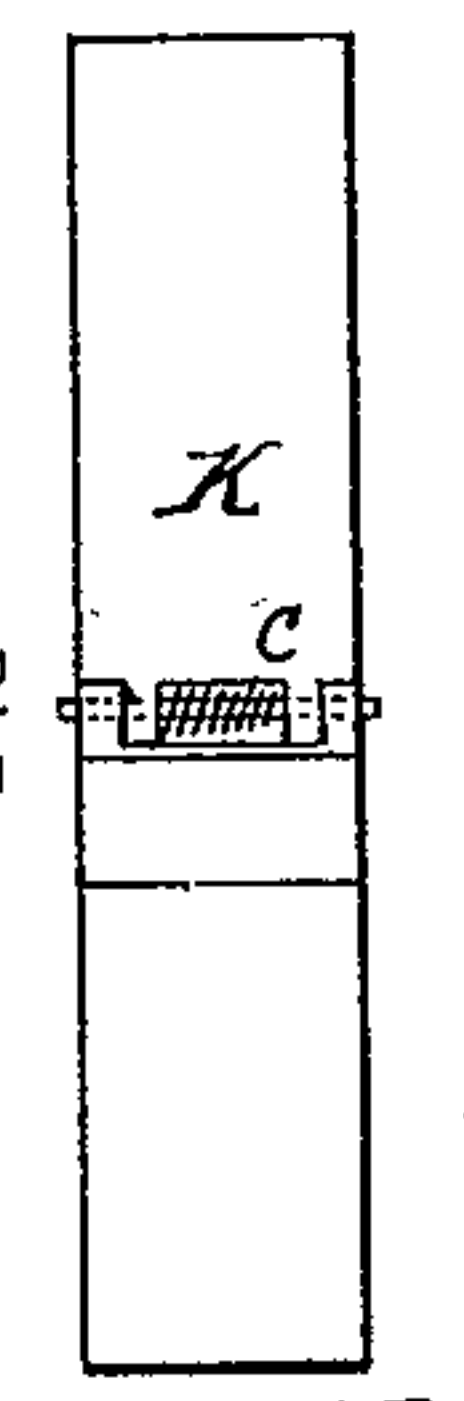


FIG. 10.

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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 287,455, dated October 20, 1883.

Application filed April 11, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES E. McMURTREY, IRVIN WILLIAMS, and FREDERICK E. OKIE, citizens of the United States, and residents of Burksville, in the county of Cumberland and State of Kentucky, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

The objects of our invention are to furnish a car-coupler by means of which two cars may be coupled automatically, and so prevent the numerous accidents which arise from the old method of coupling, which requires the presence of a person between the cars to guide the link into place in the draw-head and to drop the coupling-pin.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate like parts throughout the several views, Figure 1 represents a side view of two draw-heads embodying our invention; Figs. 2 and 3 sectional elevations of draw-heads, showing the positions of trigger when the coupling-pin is down and up; Fig. 4, a front view of funnel; Figs. 5, 6, and 7, a side, front, and top view of coupling-link, plate, and arm; Fig. 8, a front view of stirrup; Fig. 9, an enlarged side view of trigger, and Fig. 10 a front view of the same.

Beneath the draw-head, and secured to some convenient part of the car-frame, we have a funnel, A, which may be constructed of any suitable material. This funnel is furnished with a slot, a, to allow the bottom of a lever, B, to rest in its rear end, and may, if necessary, have a flaring end, as shown by the dotted lines O. The lever B has one end secured to some fixed point C and the other to a stirrup, D, which spans the draw-head and carries the coupling-pin I, and the stirrup D is held in place and is guided by staples L, which are preferably placed on the sides of the draw-head.

The operation of the device is as follows: The link being secured in one draw-head, as shown in Fig. 1, the car to which this draw-head is attached is backed up to the one which is to be coupled to it, and the arm G enters the funnel A, and is guided up to the far end of said funnel, where the ball H strikes against

and throws up the lever B, and passes through this end of the funnel and falls down, allowing the lever B to return at the proper time to or near its original position. When the lever B is raised, it raises the stirrup D and pin I, and when this pin is at its highest point it is caught and held by the lower part, b, of a trigger, K, which is held in the draw-head, as shown in Figs. 2 and 3. The position of this trigger when the pin is up is shown in Fig. 3. When the link E enters the draw-head, it strikes against the trigger and releases the pin, which falls and secures the link in the draw-head. The position of the trigger when the pin is down is shown in Fig. 2, and an enlarged side and front view of this trigger are shown in Figs. 9 and 10, from which it will be observed that the upper and lower parts are pivoted together, and a spring, c, always tends to throw the lower part into the position shown in Fig. 9. When the arm G, which is attached to plate F on link E, enters and moves up along the sides of A, said link, which will always be parallel to said arm, will be guided in a proper manner into the draw-head, and the distance that the funnel is below the draw-head should be regulated according to the length of the plate F. Secured to the upper part of the funnel we have a plate, M, which carries a spring, N, which bears against the plate F and prevents this plate from being moved backward out of a vertical position.

If it be desired, the stirrup D may be arranged with a hook or ring, to which a rope, chain, or rod may be attached, and by means of which this stirrup may be raised from the top of the car; or, if it be found more convenient, the chain or rod may be attached to the top of coupling-pin I.

It is obvious that the pin may be raised by hand, and the funnel be only used to guide the link into place in the draw-head. In this arrangement, the lever B would be dispensed with, the stirrup D would be much shorter, the arm G would be without a ball at its end, and the funnel would be set up very close to the draw-head.

Having thus described our invention, we claim—



1. As a device for guiding a link, E, into a draw-head automatically, said link being provided with a plate, F, and arm G, a funnel, A, or its equivalent, situated beneath said draw-head, the whole being arranged and operating substantially as shown and described.
2. The combination, in a car-coupler, of a link, E, provided with a plate, F, and arm G, said arm having at its end a ball, H, or its equivalent, funnel A, lever B, and stirrup D, said stirrup carrying the coupling-pin I, all substantially as and for the purposes set forth.
3. As a device for raising the coupling-pin I automatically, the stirrup D and lever B, said stirrup carrying said pin, and said lever resting in a slot, *a*, in a funnel, A, and being operated by an arm, G, attached to the link E, substantially as set forth.

4. The herein-described device for holding and tripping the pin I, consisting of a trigger, K, formed of two pieces of metal pivoted together, said pivot being surrounded with a spiral spring, *c*, the ends of which bear against the pieces of metal forming the trigger, and always tend to keep them in line, and the lower part of the trigger being furnished with a projection, *b*, for holding said pin, the whole arranged and operating substantially as and for the purposes described.

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