

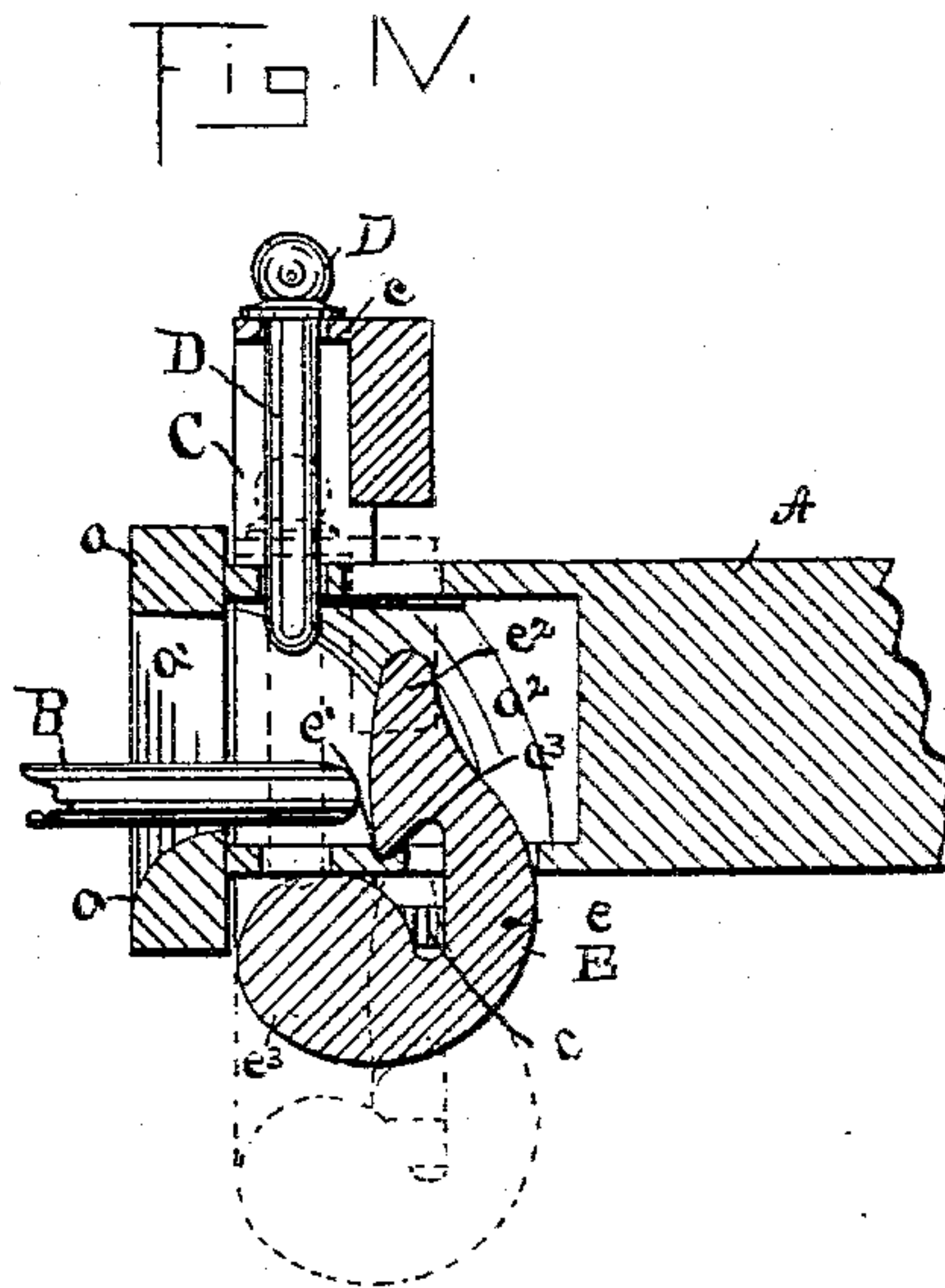
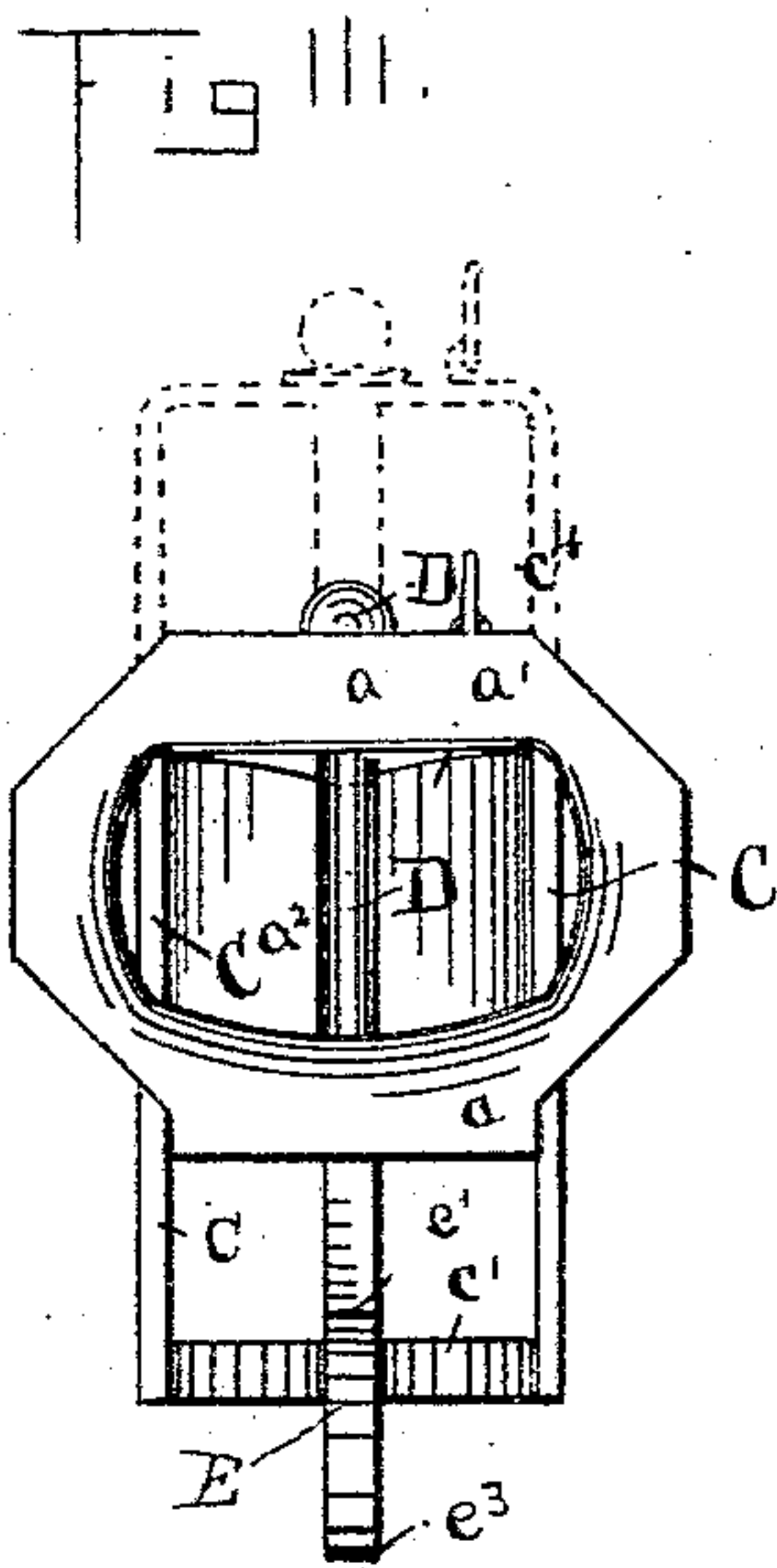
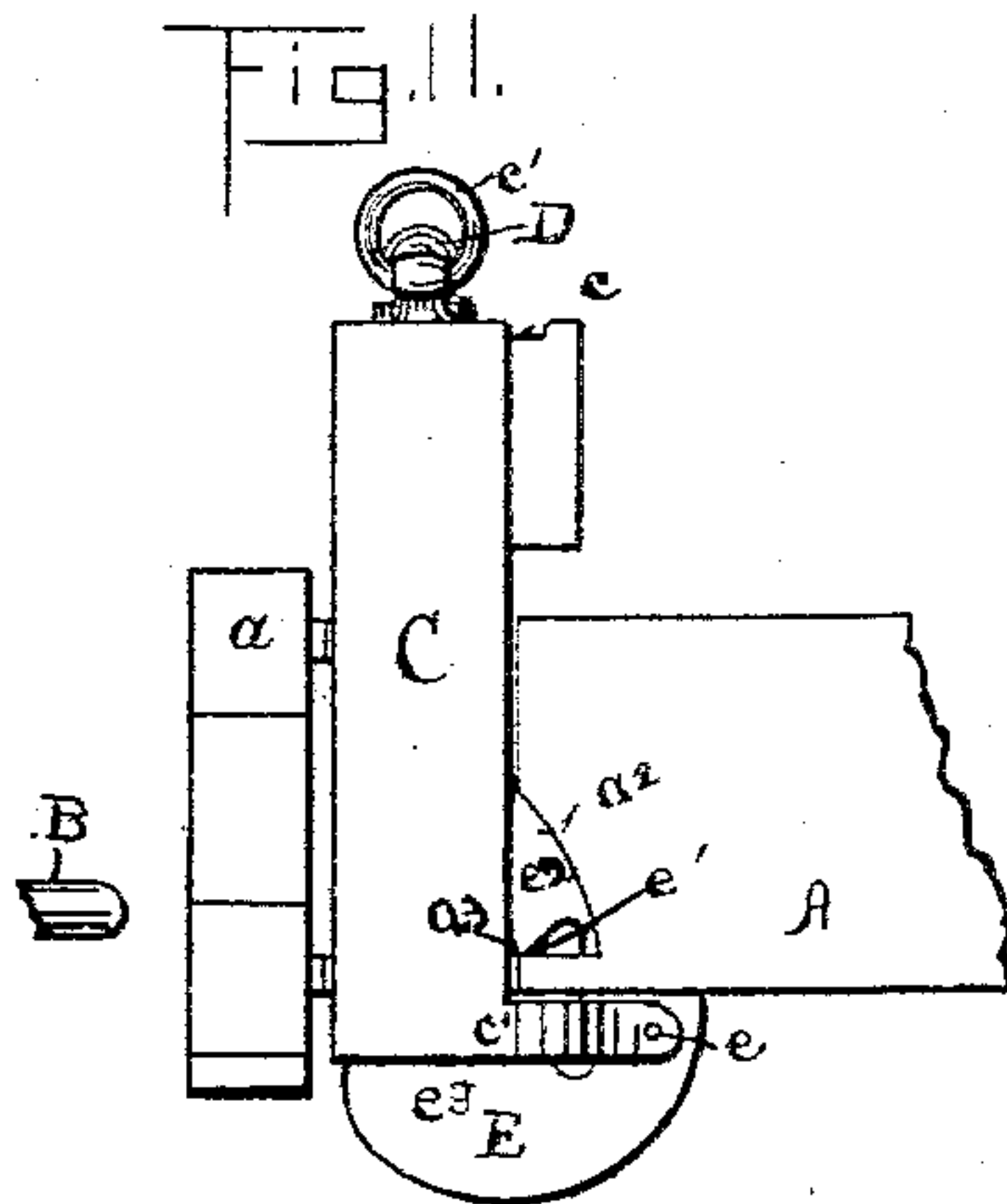
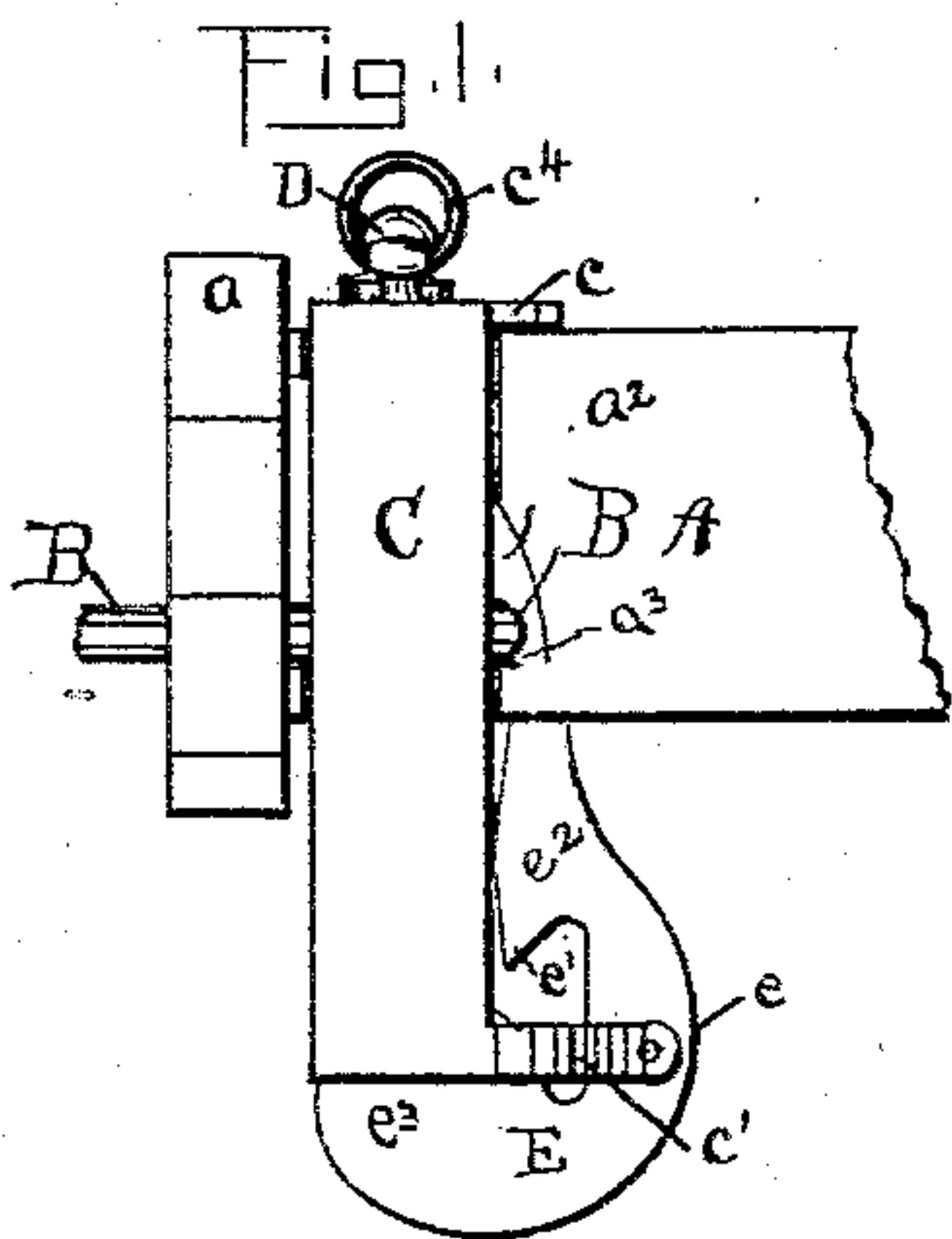
(No Model.)

E. A. RICHARDS.

CAR COUPLING.

No. 321,532.

Patented July 7, 1885.



Witnesses

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J. A. Good

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# UNITED STATES PATENT OFFICE.

EDMUND ALDEN RICHARDS, OF FARMINGTON, MAINE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 321,532, dated July 7, 1885.

Application filed March 12, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, EDMUND ALDEN RICHARDS, a citizen of the United States, residing in Farmington, in the county of Franklin and State of Maine, have invented a new and useful Improvement in Car-Couplings; and I hereby declare the following to be a full and clear description thereof.

The object of this invention is to construct a coupling in which the ordinary open link, or a similar device, is used, so that the pin may be held up by a latch and sliding holder while the link is being inserted in the draw-head, and thereby allow two cars to come together and the link of one of the cars enter the draw-head of the other car and couple therewith, without the necessity of a person going between the cars, the mechanism providing for the coupling-pin falling down into place as soon as the link shall have fully passed home to its seat in the draw-head.

The invention will be readily understood by reference to the accompanying drawings, in which—

Figure I is a side elevation of a draw-head of a railway-car fitted with one of my improved attachments, and showing the link in place and the coupling-pin and the latching-frame down in their lowermost position. Fig. II is a similar side elevation to Fig. I, except that in this view the latching-frame and coupling-pin are raised up. Fig. III is a front end elevation of the improved coupling, showing by the full lines the latching-frame and coupling-pin in their lowermost position, and in the dotted lines the said pin and latching-frame raised up. Fig. IV is a longitudinal sectional elevation of the improved coupling, with the latching-frame and coupling-pin raised up in the full-line drawings and dropped down in the dotted lines. This figure shows the link just entering the draw-head and at the moment before the latch is tripped.

The draw-head A, in its general features and form, is much like the ordinary link draw-heads in common use, mostly, however, at the present time on freight-cars. The front end of the draw-head carries a head-plate, *a*, the front face of which, as in Fig. III, shows a mortise or aperture, *a'*, adapted to receive the link or coupling bar B. The bottom, front face, or

end of the draw-head A is recessed, as at *a''*, for the reception and seating of the end of the link B when the parts are assembled together.

The draw-head A is fitted with a vertically-sliding latch-frame, C, placed just inside of the head-plate *a*, or in a position laterally by the sides of the coupling-pin D. This sliding frame has a vertical bar at each side of the draw-head, and a cross-bar, *c*, at the top of the said vertical bars, and connecting them together above the top of the draw-head. The lower ends of the said vertical sliding bars are provided with lugs *c'*, between and to which is pivoted a latch-piece, E. The construction and arrangement of this latch-piece is best shown in Fig. IV. The upper end of it, above the pivot *e*, has a notch or latching-catch, *e'*, with an upwardly-projecting tongue, *e''*, extending a few inches above it. The lower end of the said latching-piece terminates in a longitudinally-curved arm, *e'''*, which acts as a closing-weight, which, when the aforesaid frame C with its latch is raised up, catches under the bottom of the draw-head, and thereby forms a stop which arrests and limits the upward movement of the latch-frame, and at the same time tips the upper end of the said latch forward, so that the notch *e'* will catch or engage on the bottom plate, *a'''*, of the draw-head A, or on an equivalent latching-ledge provided for the purpose on the said draw-head.

The coupling-pin D is seated in a suitable aperture in the top bar, *c*, of the frame C, and rises and falls with the said frame, suitable holes or apertures being also provided for it in the top or bottom parts or plates of the draw-head. A ring, *c'*, or other suitable hold or lifter, is provided in the top bar, *c*, of the said sliding frame C, by means of which the said sliding frame, the pin D, and the latch E may be lifted up by the brakeman or other person assigned to the duty, and when up the latch E, caught or latched on the ledge or plate *a'''*, will hold the said sliding frame and coupling-pin up until the end of the link B is pressed in against the arm or tongue *e''* of the latch and forces it back, so that the notch *e'* is released from the ledge *a'''*, when the sliding frame becomes tripped and the pin D drops, along with the said frame, and enters the open



end of the link and holds it fast in the draw-head.

The vertically-sliding bars of the frame C may be flat or round bars seated in suitable ways in the sides of the draw-head, or they may pass through vertical holes or apertures formed in the draw-head.

When the sliding frame C is lifted up by its lifter or ring  $e'$ , the pin D is raised up with it and held up by it as long as the latch E, engaged as above described, holds it up; but as soon as the link B enters the draw-head far enough to strike and trip the said latch the pin drops into its place in the link and couples with it automatically.

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

The draw-head A of a car-coupling, provided with a vertically-sliding frame, C, seated in suitable ways on the sides of the draw-head, and the top end or cross-bar of the said frame C adapted to receive and hold in place the

coupling-pin D, which slides vertically in a suitable hole provided for it in the draw-bar, and the bottom part of the said sliding frame adapted to receive the bearings of a pivoted latch-piece, E, which said latch-piece has a laterally-projecting weighted arm,  $e^3$ , which acts as a stop to limit the upward movement of the frame C at the point required for the bottom of the pin D to drop into the connecting-link B, at which point of limitation of the upward movement the weighted stop strikes the bottom side of the draw-head, and then by its gravity throws the hook  $e'$  of the latch-piece over a ledge provided on the draw-bar to receive it, substantially as shown and set forth.

In witness whereof I have hereunto set my hand this 2d day of March, 1885.

EDMUND ALDEN RICHARDS.

In presence of—

FRANK P. LADD,

PRESCOTT J. PHINNEY.