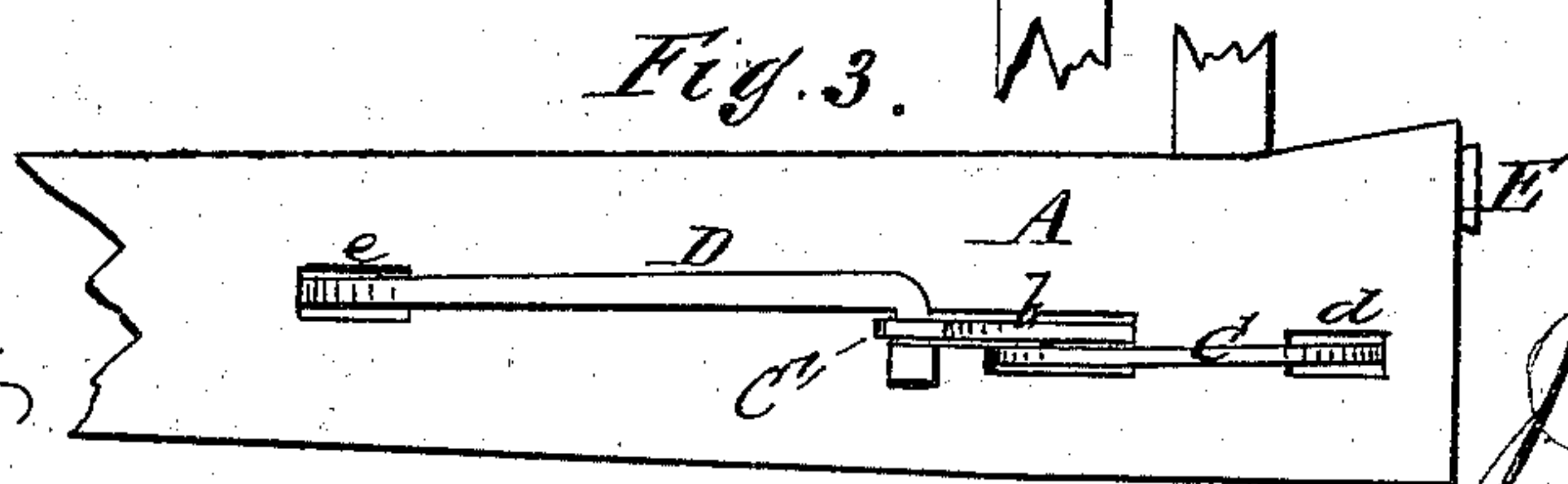
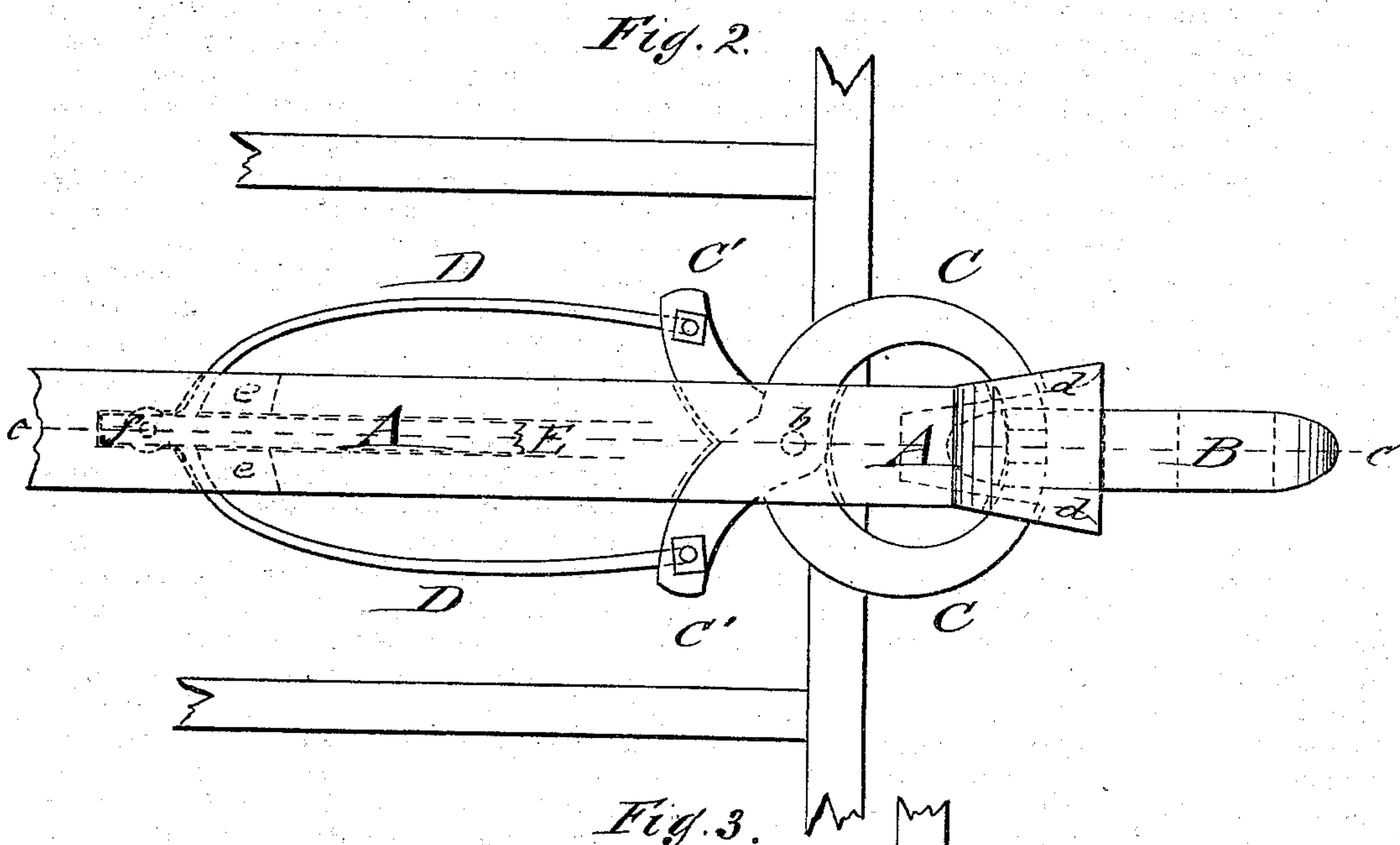
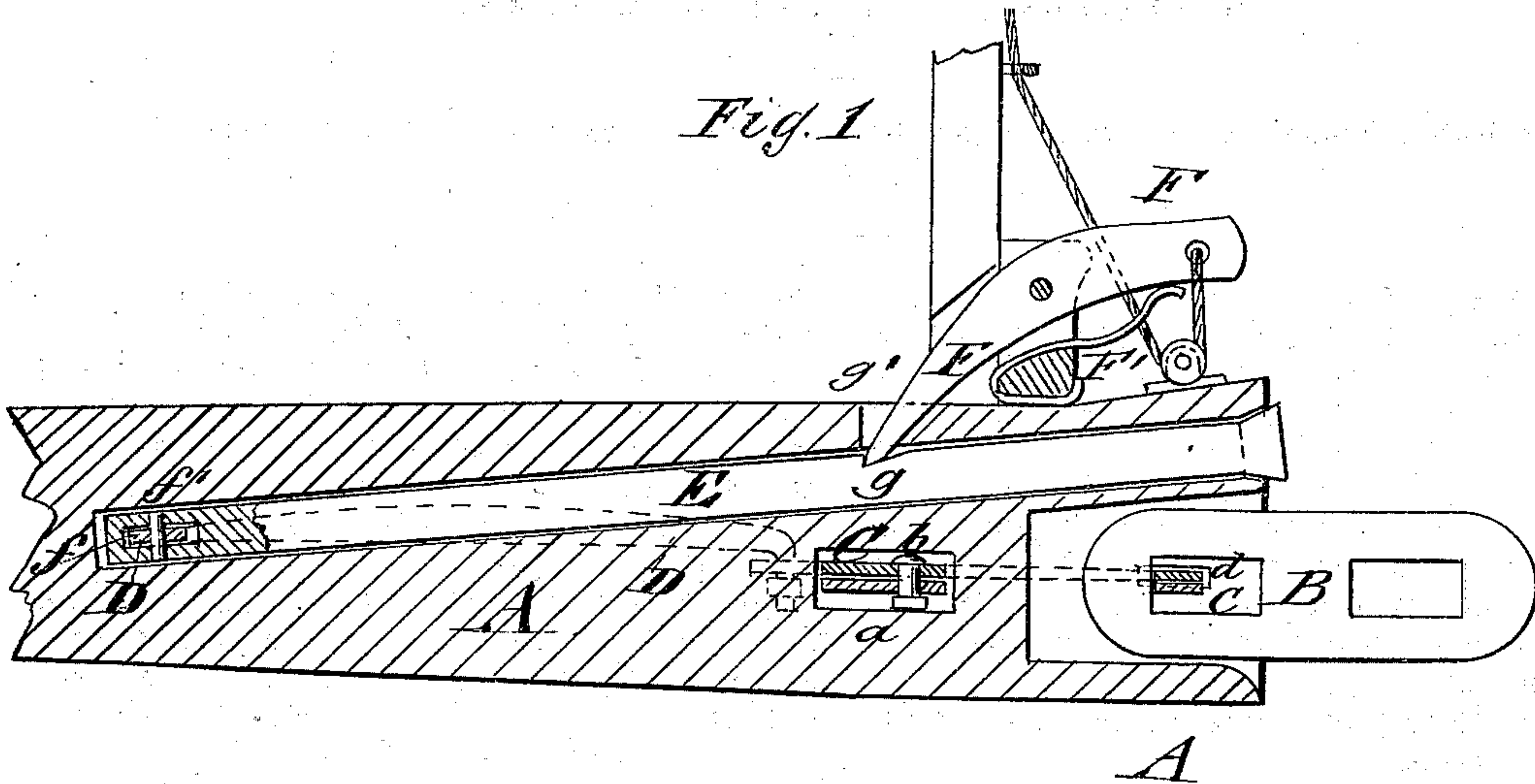


J. PENDERGAST.
Car-Couplings.

No. 152,680.

Patented June 30, 1874.



WITNESSES:

C. Wolff.
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JOHN PENDERGAST, OF SPRING GROVE, MINNESOTA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **152,680**, dated June 30, 1874; application filed May 16, 1874.

To all whom it may concern:

Be it known that I, JOHN PENDERGAST, of Spring Grove, in the county of Houston and State of Minnesota, have invented a new and useful Improvement in Car-Coupling, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved car-coupling on the line *c c*, Fig. 2; Fig. 2, a bottom view, and Fig. 3 a side view, of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to an automatic car-coupling, by which the accidents arising from the present mode of coupling may be avoided, and a strong connection of the cars, with the possibility of their instant detachment in case of danger, produced. My invention consists of a draw-head with semicircular or otherwise-curved jaws, which are fulcrumed to a slot of the draw-head back of the link-cavity, so that the overlapping ends of the jaws pass through side slots of the mouth of the draw-head into the same, and couple thereby the link. The rear arms of the jaws are attached to a strong elliptic band-spring, which is again applied at its rear part to a connecting-bar sliding in a longitudinal-guide perforation of the draw-head, and projecting beyond the front part above the mouth, so as to close the jaws when being carried back by the concussion of the draw-heads, and be locked in this position by a pivoted spring-lever catching into a notch of the sliding bar. On releasing the lever or treadle the link is instantly uncoupled by the spreading of the spring-jaws.

In the drawing, A represents a draw-head, of suitable size and material, which is hung in the usual manner to the under side of the car-frame. The draw-head A has a tapering mouth and cavity, for the entering of the coupling-link B, which is introduced in a vertical position, and preferably made with straight sides, so as to rest thereon in position for coupling. The link B may be provided with a central brace-piece, to produce thereby two eyes or openings for separating the coupling spring-jaws, if such is desired. The spring-jaws C are fulcrumed into a horizontal slot, *a*, of the draw-head, at some distance

back of the link-cavity, to a pivot-pin, *b*, and made of semicircular or similarly curved shape, with their front ends entering sidewise through side slots *d* of the mouth of the draw-head, and overlapping each other intimately and firmly when in closed position. The rear arms *C'* of jaws C are extended sidewise to suitable length, and jointed in suitable manner to a band-spring, D, which is curved into elliptical shape, connecting the jaws, and passing through a slotted recess, *e*, of the draw-head, at some distance to the rear of the jaws. The apex or rearmost point of the spring D is pivoted, by an eye, *f*, and pin *f'*, to a sliding bar, E, which presses under slight inclination in longitudinal direction through the draw-bar to the front part of the same, projecting above the mouth, and being guided in its forward and return motion by the perforation of the draw-head. A lever or treadle, F, is pivoted to suitable bearings or standards at the top of the draw-head, and acted upon by a spring, *F'*, applied to the under side of its front end, so that the downward-curved rear arm of lever F is pressed through a slot, *g'*, of the draw-head on the sliding bar, locking the same firmly in position by entering a notch, *g*, of the same. Notch or groove *g* is placed at such a point from the front end of the bar that it is locked by the lever when carried fully back into the draw-head by the concussion with the other draw-head, which has the effect of carrying the mainspring back, and produces thereby the entering of the jaws into the mouth of the draw-head, and the coupling of the link simultaneously with the entering of the same, and the forcing back of the slide-bar by the concussion. The uncoupling may be accomplished by suitable rope or chain connection from the top of the car, or from the platform, by the pressure of the foot on the treadle, or by a tap thereon from the side of the car, or in other suitable manner, provided the spring-lever is released from the notch of the sliding bar, and thereby, by the instant acting of the elliptic spring, the opening of the jaws and the releasing of the link produced.

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

1. The automatic car-coupling consisting of

draw-head A, with curved pivoted side jaws C, jointed elliptical spring D, inclined longitudinal slide-bar E, and pivoted treadle-lever F, all constructed to operate substantially as and for the purpose set forth.

2. The combination of longitudinal slide-bar E, having notch *g* and mainspring D, with pivoted treadle-lever F, for closing and locking the jaws in coupled position and uncoupling them, as specified.

3. A draw-head provided with slotted recess at rear part for elliptic spring, longitudinal-guide perforation for the slide-bar, and top slot for entering of treadle-lever, substantially as specified.

JOHN PENDERGAST.

Witnesses:

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J. C. STRONG.