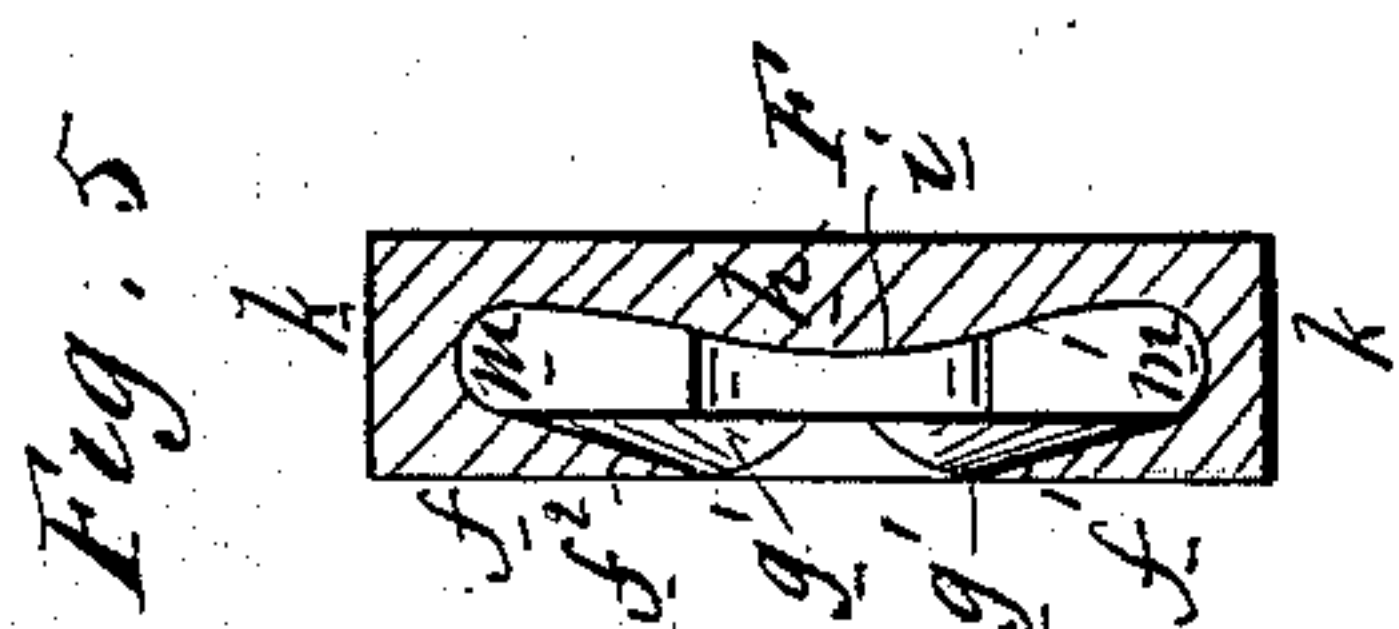
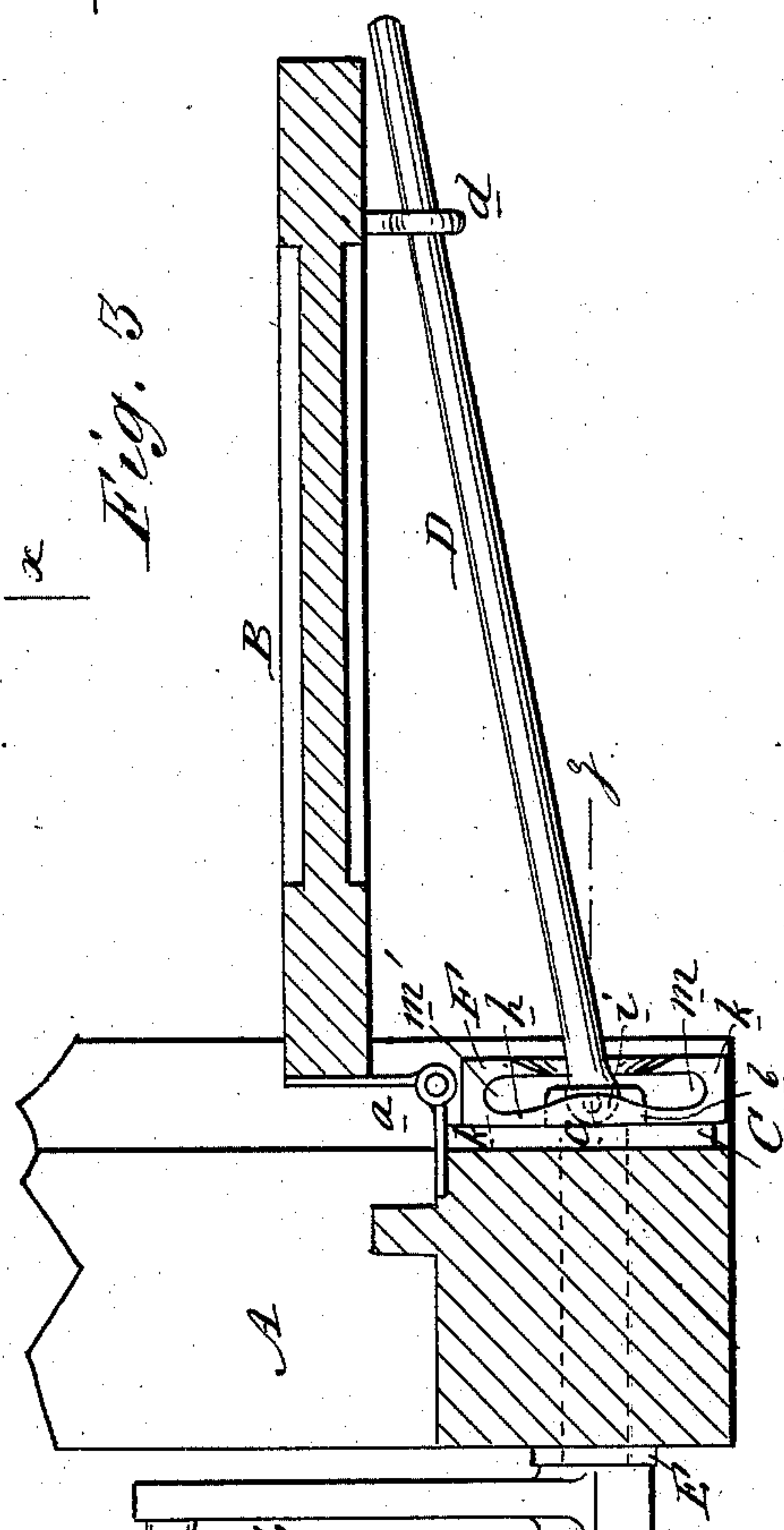
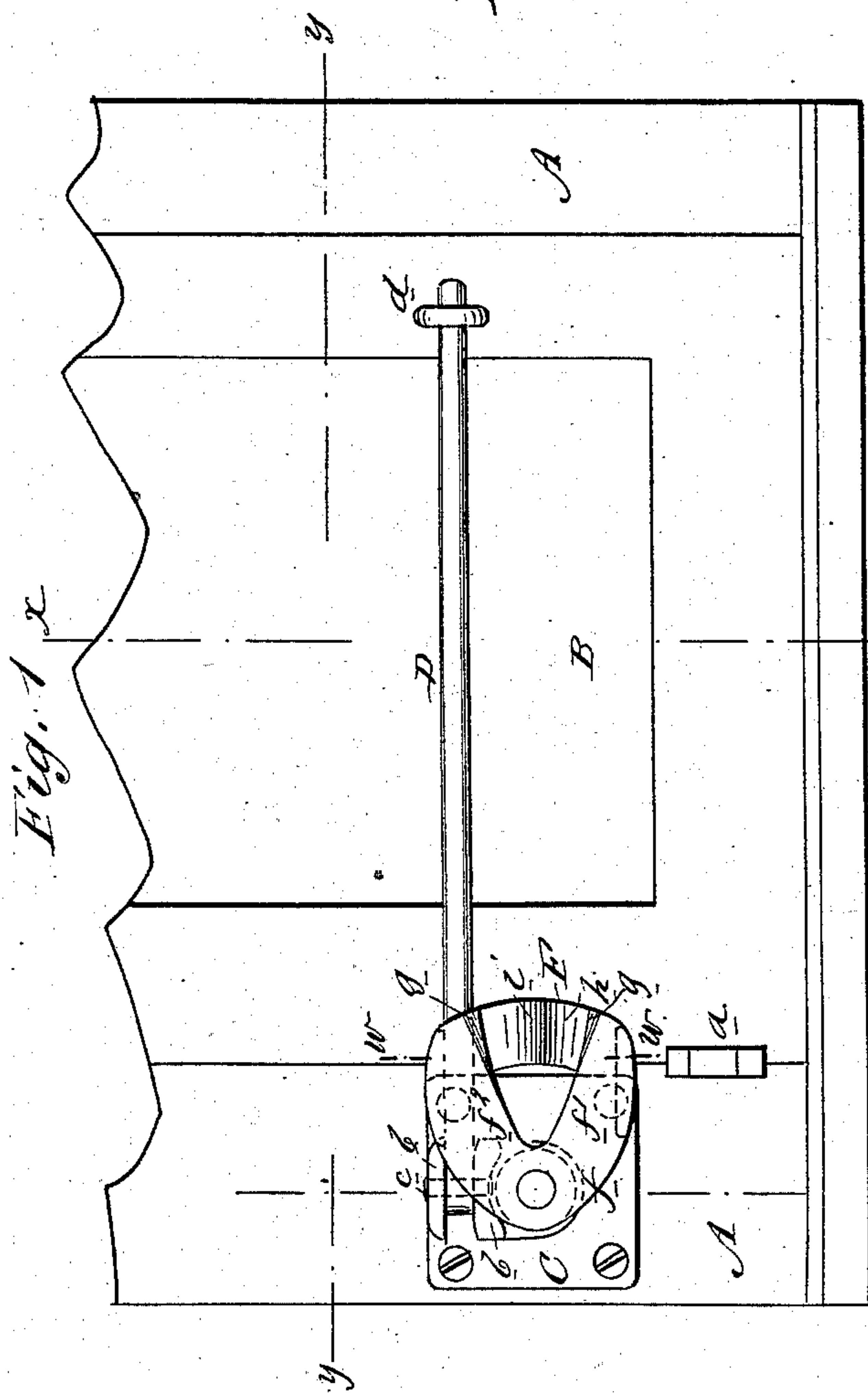
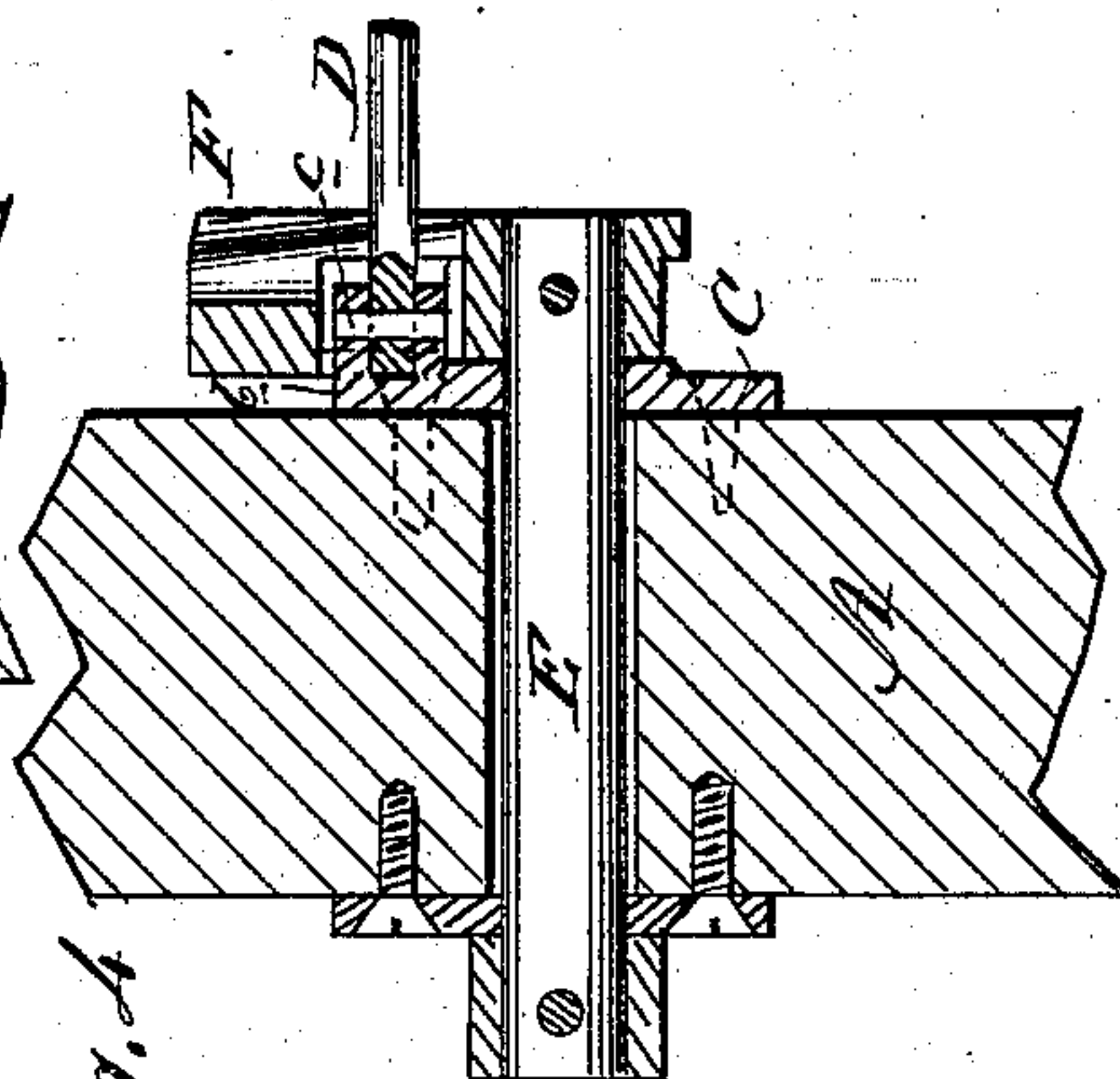
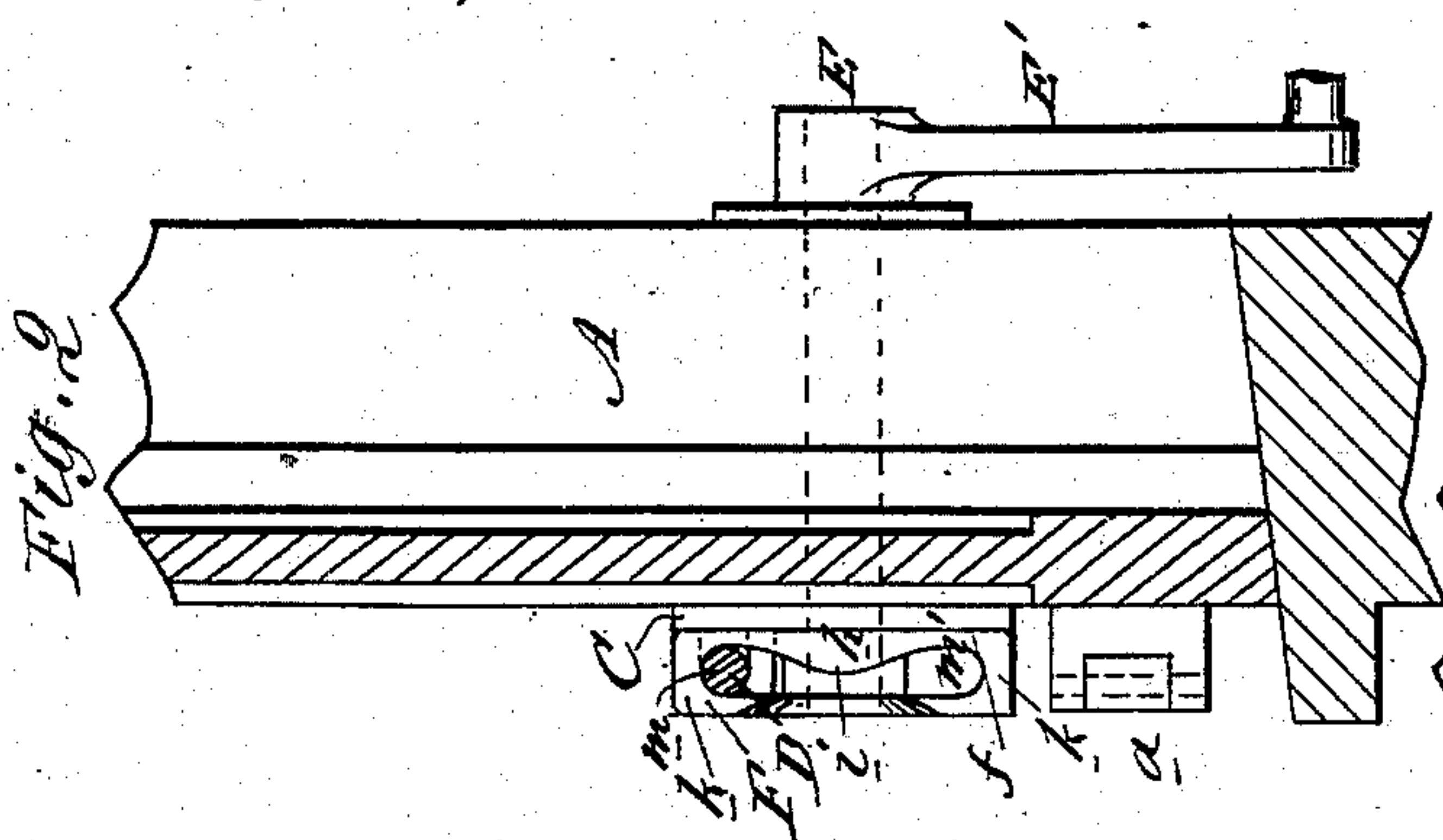


(Model.)

J. C. LANDES.
Shutter Worker.

No. 237,551.

Patented Feb. 8, 1881.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB C. LANDES, OF SOUDERTON, PENNSYLVANIA.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 237,551, dated February 8, 1881.

Application filed December 15, 1880. (Model.)

To all whom it may concern:

Be it known that I, JACOB C. LANDES, of Souderton, in the county of Montgomery and State of Pennsylvania, have invented a new and Improved Blind Opener and Lock, of which the following is a specification.

This invention relates to that class of devices that are designed for opening, closing, and locking blinds or shutters from the inside of an apartment without opening the window.

The invention consists of a novel combination of a U-shaped double cam fixed on the outer end of a crank-rod passing through the side of a window-frame, with a rod hinged on the outside of the window-frame at right angles to the crank-rod and embraced by the cam, and extending horizontally along the outer face of the blind or shutter, so that the open blind or shutter may be unlocked, closed, and locked, or the closed blind or shutter be unlocked, opened, and locked by turning said cam in the one or other direction, as may be desired.

Figure 1 is a vertical elevation from the outside, showing the application of the device to a shutter. Fig. 2 is a sectional end elevation of the same on line *x x*, Fig. 1. Fig. 3 is a cross-section on line *y y*, Fig. 1. Fig. 4 is a cross-section on line *z z*, Fig. 3. Fig. 5 is a vertical sectional elevation on line *w w*, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a window-frame with shutter B hinged thereto, as shown at *a*, in the usual manner.

C represents a metallic plate, secured on the outer face of the window-frame A, and provided with lugs *b*, between which is pivoted, on a vertical pin, *c*, a horizontal rod, D, that extends along the front of the shutter B, and has its other end engaged in a staple or screw-eye, *d*, which is fastened in the said shutter B, near the front edge thereof.

E represents a rod passed through the window-frame A, from the inside thereof, and through the plate C, below the lugs *b b*. On the inner end of this rod E is a crank-handle, E', and on its outer end is firmly secured the U-shaped double cam F. Said cam F consists of an outer U-shaped plate, *f*, having its legs

f' f' beveled on both faces of their inner edges, as shown at *g g'*, respectively, and of a cross-bar, *h*, centrally and transversely ribbed with a rib of V-shaped cross-section, as shown at *i*, that is connected at its ends with the sides of the plate *f* by ears *k*, so that the front curved edges of said bar *h* and the plate *f* are in the same plane, whereby recesses *m m'* are formed at the opposite sides of the cam F.

The rod D, near its pivoting-point, passes through this cam F, between the plate *f* and bar *h*, and when the blind or shutter B is closed, as shown in Fig. 1, the forward part of said cam F is supported by resting on said rod D, as shown, and the shutter B is prevented from opening—is locked—by the engagement of said rod D in the upper recess, *m*.

On turning the rod E by means of the crank-handle E', the cam F is turned upward, thereby unlocking the shutter B, and then, by the engagement of the V-shaped rib *i* against the rod D, the unpivoted end of the said rod D is thrown outward, thereby opening the shutter B. As the crank-handle E' is further turned, the front edge of the cam F is gradually turned upward, and the continued bearing of the upper incline or slope of the rib *i* against the rod D throws the said rod D farther outward, so that the outer face, *g*, of the inner edge of the lower leg, *f'*, of the said cam F shall turn upward against the inner side of the rod D and force it farther outward, until the said rod D projects at about a right angle from the plate C and the cam F is turned vertically upward.

The movement of the crank E' being continued, the inner face, *g'*, of the inner edge of the leg *f'* engages against the rod D, and gradually turns it backward until the cam F has made a half-revolution and the rod D is caught in the recess *m'*, and is thereby locked fast with the shutter B fully opened. By reversing the movement of the crank E' the shutter B is, by the same means, successively unlocked, closed, and locked.

This device is simple, cheap, and durable, and is applicable to shutters, blinds, and doors of any weight.

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

1. An improved blind opener and lock, con-

structed substantially as herein shown and described, consisting of the hinged horizontal rod D, crank-rod E, and double cam F, operated as set forth.

5 2. In a blind opener and lock, the combination, with the rod E, of the U-shaped double cam F, substantially as herein shown, and for the purpose described.

10 3. In a blind opener and lock, the U-shaped double cam F, consisting of U-shaped plate *f*, having legs *f'* *f''*, beveled on both faces of their inner edges, cross-bar *h*, having a cen-

tral rib, *i*, of V-shaped cross-section, and ears *k*, substantially as herein shown and described.

4. The combination, with the window-frame 15 A and shutter B, of the plate C, provided with lugs *b* and pin *c*, hinged rod D, screw-eye *d*, crank-rod E, and cam F, substantially as herein shown and described, whereby said shutter may be opened, closed, and locked, as set forth. 20

JACOB C. LANDES.

Witnesses:

B. C. BARNETT,

ELLIS H. SOUDER.