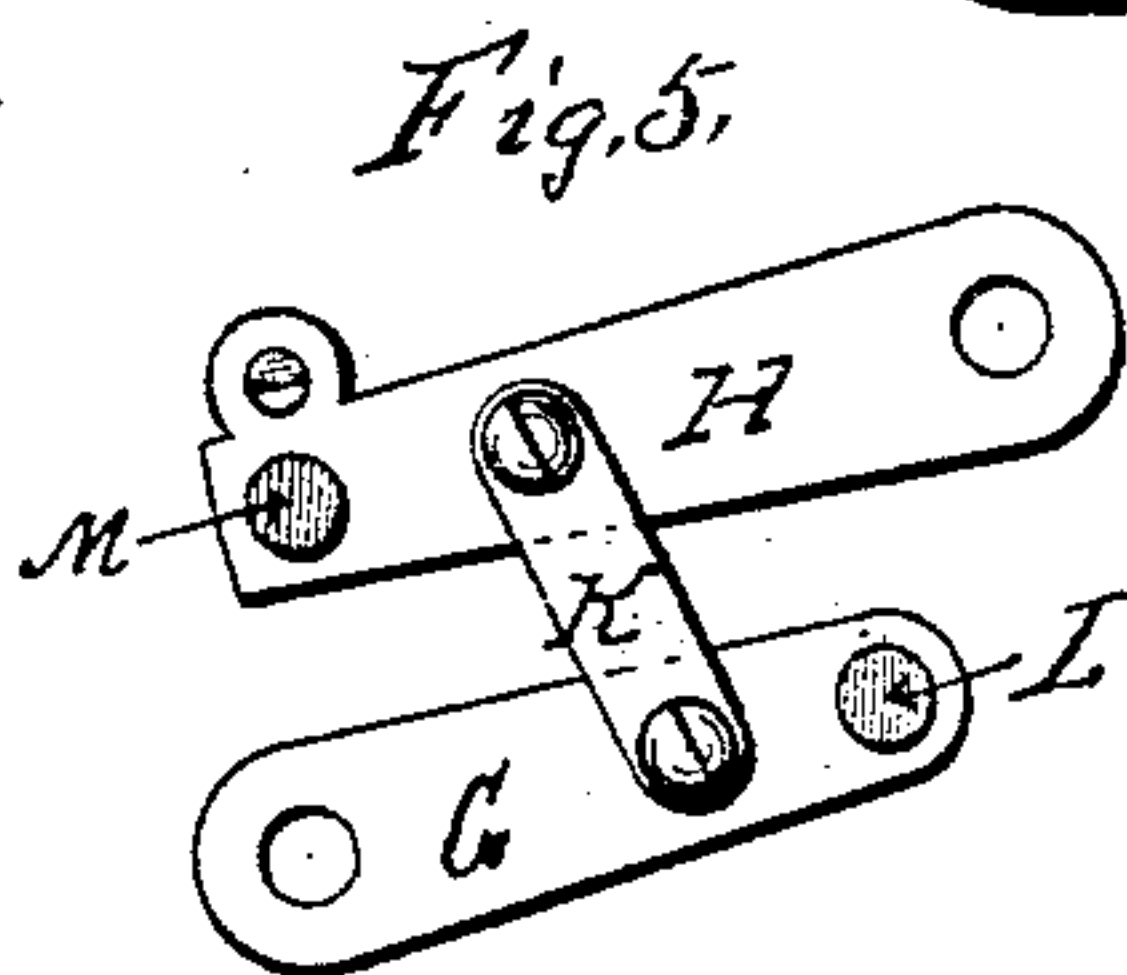
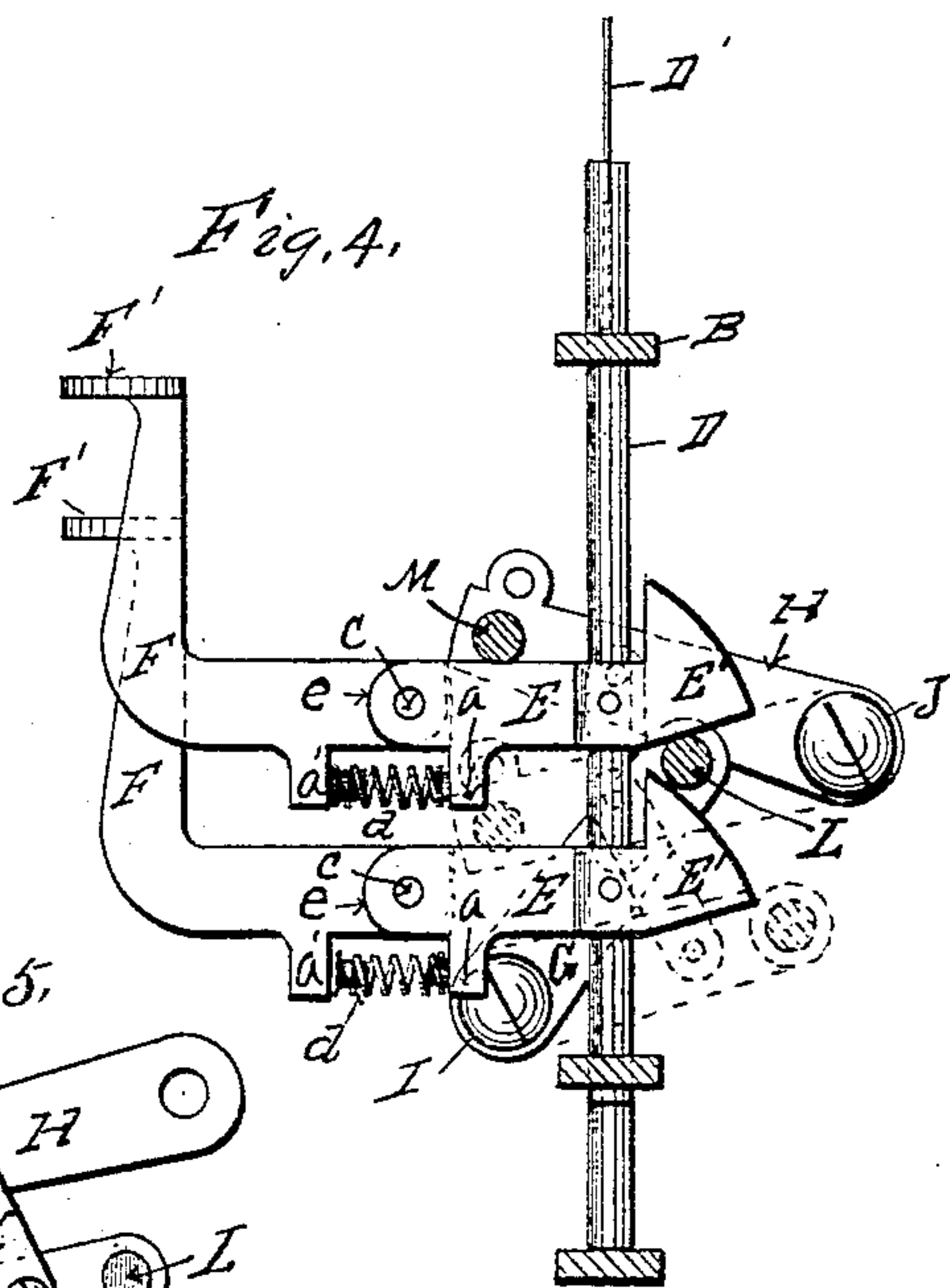
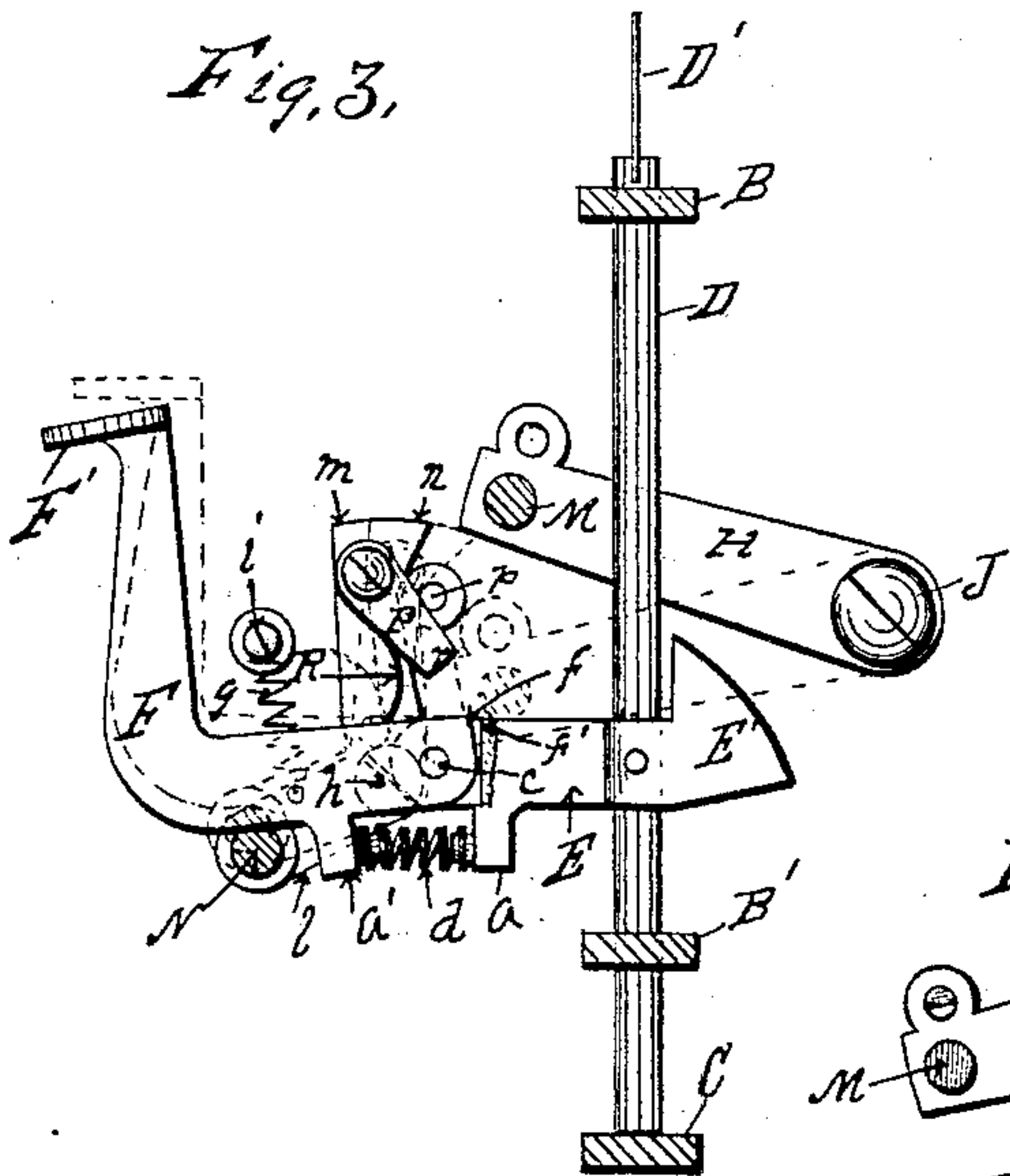
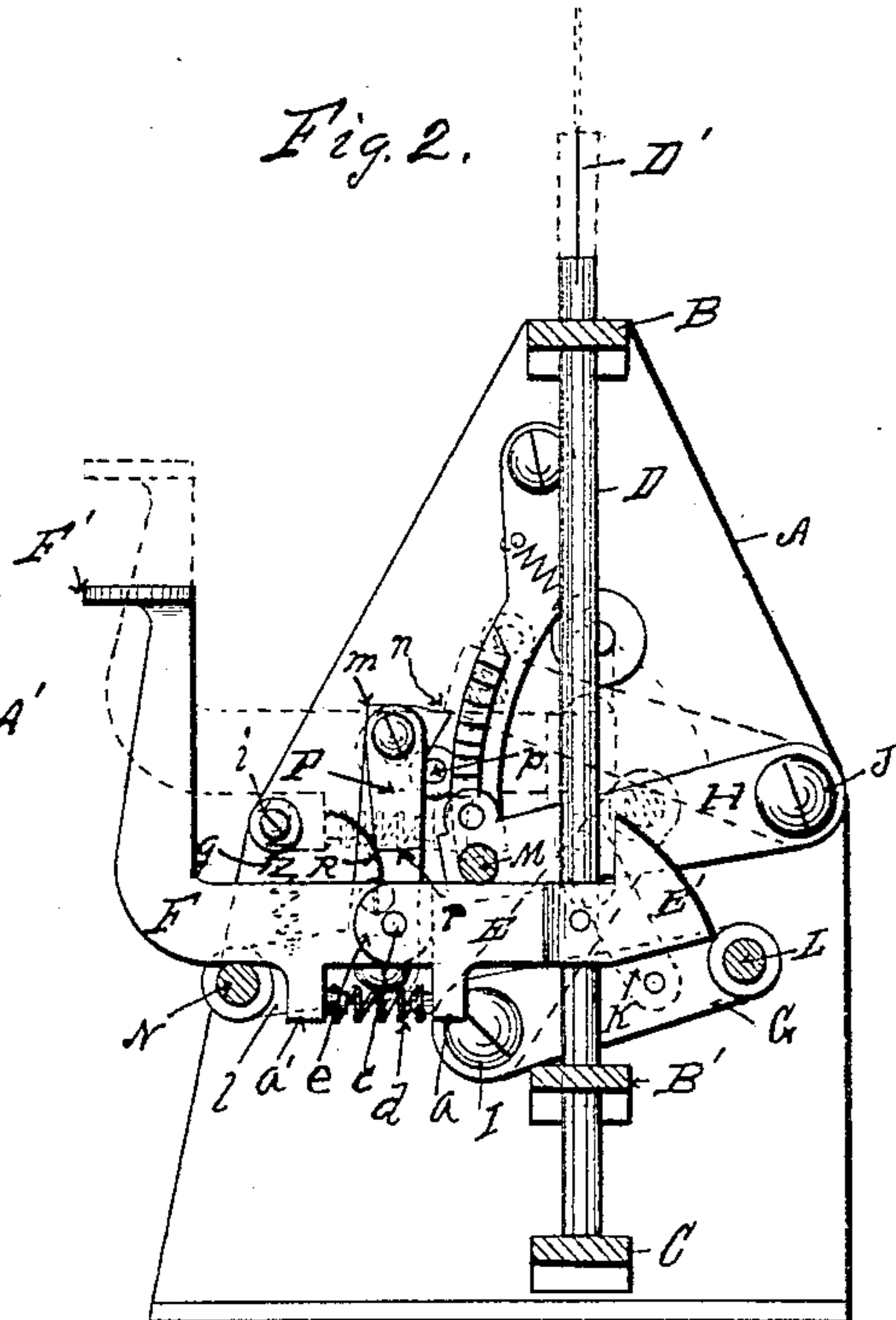
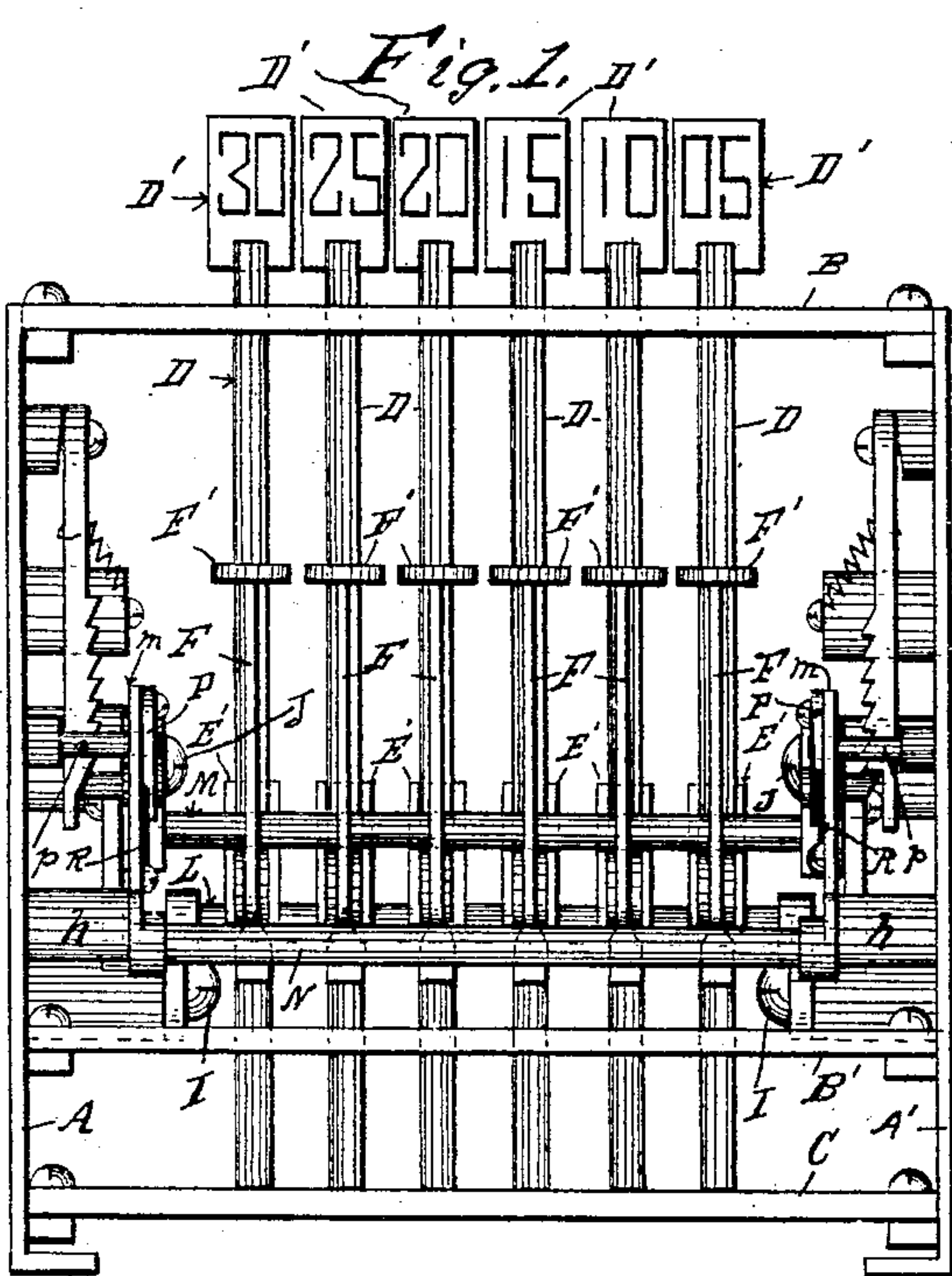


(No Model.)

W. H. CLARK.
CASH REGISTER MECHANISM.

No. 496,339.

Patented Apr. 25, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. CLARK, OF ERIE, PENNSYLVANIA, ASSIGNOR TO THE ERIE CASH REGISTER COMPANY, OF SAME PLACE.

CASH-REGISTER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 496,339, dated April 25, 1893.

Application filed August 8, 1892. Serial No. 442,534. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CLARK, a citizen of the United States, residing in the city of Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Cash-Register Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, forming part of this specification.

My invention consists in the improvements in cash-register mechanism hereinafter set forth and explained, and illustrated in the accompanying drawings in which:

Figure 1. is a front elevation of a portion of a cash-register embodying my invention. Fig. 2. is a transverse vertical section of the same. Figs. 3—4 and 5. are detail views of portions of the mechanism embodying my invention.

This invention is designed as an improvement on my prior invention in cash-registers, for which I filed an application for patent June 25, 1892, Serial No. 438,061: hence only such portions of the cash-register as especially pertain to this invention are shown and particularly described in this application.

The principal object of this invention is to connect the key levers to the arms on the tablet-rods by means of a knuckle joint, so that they operate the tablet releasing mechanism, as well as the registering, indicating, key locking and drawer opening mechanism.

Other features of my invention appear hereinafter in the specification and claims.

In the construction of my improved cash-register mechanism shown in the drawings, A, A' are the sides, and B, B', C the longitudinal portions of the frame of the machine. Mounted and operating in holes in the parts B and B' of the frame, are vertically movable tablet-rods D, supporting indicating tablets D', the register mechanism (not shown) when in place being also supported by the parts B, B' of the frame. To the tablet-rods D are se-

cured transverse horizontal arms E, having on their rear ends cams E', as and for the purpose hereinafter set forth, and on their front ends *e* adapted to receive the ends of key-levers F pivoted thereto, which key-levers have operating knobs F' thereon. The ends of the key-levers F pivoted between the ears *e* on the arms E, are provided with a square corner *f* at the upper side thereof, adapted to engage with the upper part of the shoulder *f'* between the ears *e*, so as to operate as a knuckle joint and be rigid when the lever F is raised, but when the lever F is depressed it turns freely on the pin *c* passing through the ears *e*, (as illustrated in Fig. 3.)

For retaining the levers F in their normal position, (as illustrated in Fig. 4.) I provide a spring mechanism, preferably consisting of a spiral spring *d* placed between a downwardly projecting lug *a* on the arm E and a like lug *a'* on the lever F, which spring permits the lever F to be depressed, as and for the purpose hereinafter set forth.

To the sides A and A' of the frame are pivoted levers G and H the levers G being pivoted at their front ends upon studs I and the levers H at the rear ends upon studs J on the sides A and A' of the frame: the levers G and H being also coupled together near the centers thereof by means of a link K as is clearly illustrated in Fig. 5, the free ends of the lever G at each side of the machine, are connected by means of a horizontal rod L and the free ends of the levers H at each side of the machine, are also connected by means of a horizontal rod M which rests upon all of the arms D when they are down, and none of the indicator tablets D' raised.

On stud pins *h* on the sides A and A' of the frame are bell-crank levers *l m*, the arms *l* of said bell-crank levers being connected together by means of a horizontal rod N, which rod N is immediately under and contacts with the undersides of all of the key-levers F when they are in their normal positions, so that the depressing of any one of the key-levers F operates to depress the rod N and the arms *l* of the bell-crank levers *l m* secured to the ends

thereof; retracting springs *g*, extending from the arms *l* of said bell-crank levers to stud pins *i* on the sides A A' of the frame, operating to return the levers and their connecting rod to their normal position.

The arms *m* of the bell-crank levers *lm* extend upward, and are provided with projections, against which the ends of the levers H engage and force the arms *m* back as the levers H are being raised until the ends of the levers pass above the upper ends of the arms *m* when the arms *m* are moved back by the action of the springs *g*, and the projections *n* thereon pass under the ends of the levers H, (as illustrated in dotted lines in Figs. 2 and 3,) and retain them in a raised position, when the levers H are in this position the rod L connecting the rear ends of the levers G is also retained in a raised position by means of the link K connecting the levers G and H, so as to retain the tablet-rod then being operated also in a raised position, while at the same time it operates to lock all of the remaining tablet-rods down in their normal position, when however, any one of the unoperated key-levers F are depressed the arms *m* of the bell-crank levers are moved back, so as to withdraw the projections *n* thereon out from under the ends of the levers H, permitting them and the levers G connected thereto, and the raised tablet rod supported by the rod L to return to their normal positions.

On the arms *m* of the bell-crank levers *lm*, are pivoted swinging dogs P, and in the sides of the frame are stud pins *p*, and secured to the arms *m* of the bell-crank levers are also springs R which engage with the dogs P and operate to force the dogs P against the stud pins *p*, when however, the arms *l* of the bell-crank levers are depressed by the action of the key levers F on their connecting rod N, the springs R operate on the dogs P to force the lower ends *r* thereof back until they engage with the upper portions of the ends of the levers H, (as illustrated in dotted lines in Fig. 3,) and prevents the raising of said levers H by the operation of another key-lever, until the arm depressed is released, thus preventing the raising of any of the indicating tablets, and again lowering it, without locking it up in a raised position, and then releasing it in the usual manner.

Having thus fully described my invention, so as to enable others to construct and use the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a cash-register, of tablet-rods, key-levers hinged to arms on, and adapted to operate said tablet-rods, with levers pivoted at the sides of the machine adapted to engage tablet-rod locking mechanism, and a rod connecting said levers adapted to be engaged by any key-lever when depressed and

operate said levers at the sides of the machine, substantially as and for the purpose set forth.

2. The combination in a cash-register, of tablet-rods, key-levers hinged to arms on, and adapted to raise said tablet-rods, bell-crank levers pivoted at the sides of the machine, and a rod connecting said bell-crank levers, adapted to be engaged by any of the key-levers when depressed, and operate said bell-crank levers, with tablet-rod locking lever mechanism adapted to be engaged by said bell-crank levers, substantially as and for the purpose set forth.

3. The combination in a cash-register, of key-levers hinged to arms on, and adapted to operate the tablet-rods of such machine, with bell-crank levers pivoted at the sides of the machine, adapted to engage locking levers for retaining the tablet-rods in a raised position, and dogs on said bell-crank levers adapted to lock the tablet rods down, substantially as and for the purpose set forth.

4. The combination in a cash-register mechanism, of arms secured to the tablet-rods, key-levers hinged to said arms by means of joints on which key-levers turn when depressed, but which are rigid when the key-levers are raised to their normal positions, with a rod extending under said key-levers, adapted to actuate mechanism for releasing the tablet-rods when they are raised, and be engaged and operated by said key-levers when they are depressed, substantially as and for the purpose set forth.

5. In a cash-register mechanism, key-levers hinged to arms on the tablet-rods, and adapted to be lifted up to raise the tablet rods, and to be depressed when in their normal position to release tablet-rods when raised, and bell-crank levers adapted to automatically engage tablet-rod locking levers when raised, and be released therefrom by depressing any of the key-levers, substantially as and for the purpose set forth.

6. The combination in a cash-register, of tablet-rods as D arms as E secured thereto, with key-levers as F pivoted thereto by means of a knuckle joint, and springs as *d* for retaining said key-levers F in their normal positions, substantially as and for the purpose set forth.

7. The combination in a cash-register, of bell-crank levers as *lm*, pivoted at the sides of the machine, and a rod as N, connecting the arms *l* of said levers, and springs as *g*, for retaining said bell-crank levers in their normal positions, with spring actuated dogs as P on the arms *m* of said bell-crank levers, and stud pins as *p* at the sides of the machine, substantially as and for the purpose set forth.

8. The combination in a cash-register of tablet-rods as D, arms as E secured to said rods, cams as E' on the rear ends thereof, levers as G and H pivoted at the sides of the machine, and connected by links as K, rods as L connecting the free ends of the levers G, and rods as M connecting the free ends of the

levers H and resting normally on the top of
the arms E, with bell-crank levers as *lm*, piv-
oted at the sides of the case, the arms *m* of
which are adapted to engage the ends of the
5 levers H, when they are in a raised position,
a rod as N connecting the arms *l* of said bell-
crank levers, and key-levers as F hinged to
the arms E on tablet-rods, by means of a
knuckle joint, and adapted to engage the rod

N when depressed and operate the bell-crank¹⁰
levers *lm*, substantially as and for the pur-
pose set forth.

In testimony whereof I affix my signature in
presence of two witnesses.

WILLIAM H. CLARK.

Witnesses:

F. EINFELDT,
WM. P. HAYES.