

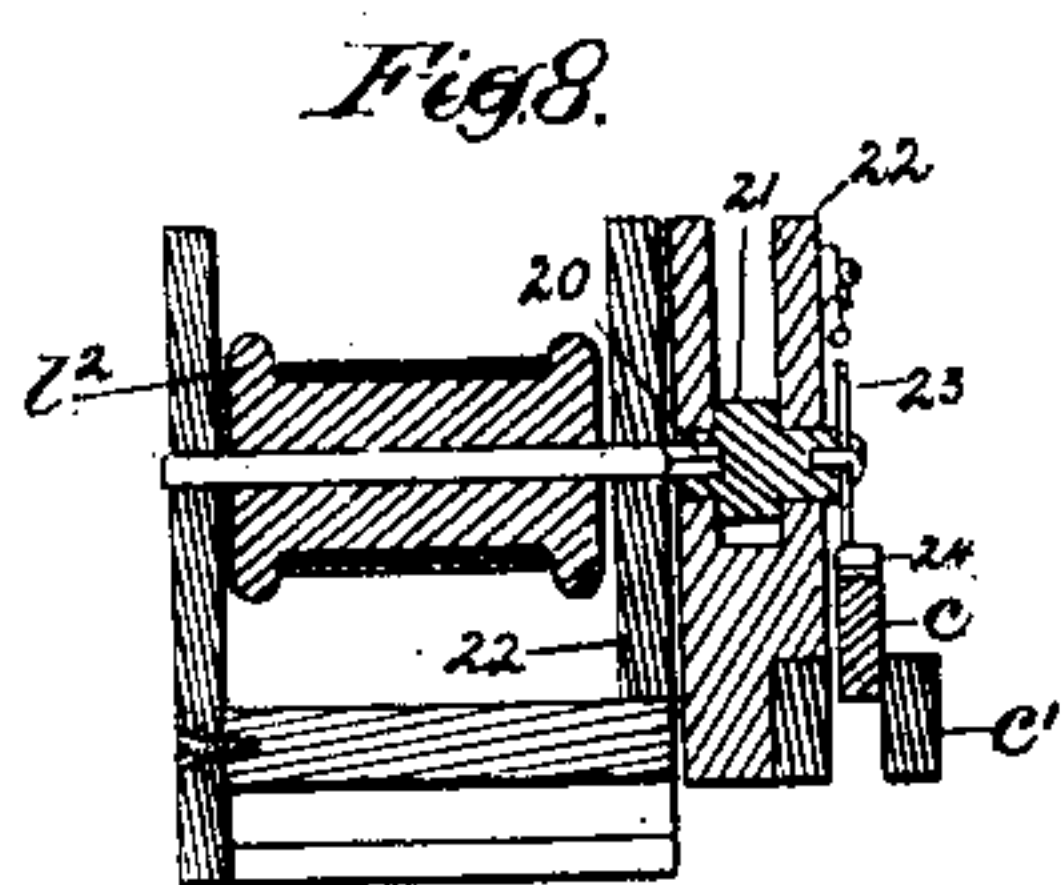
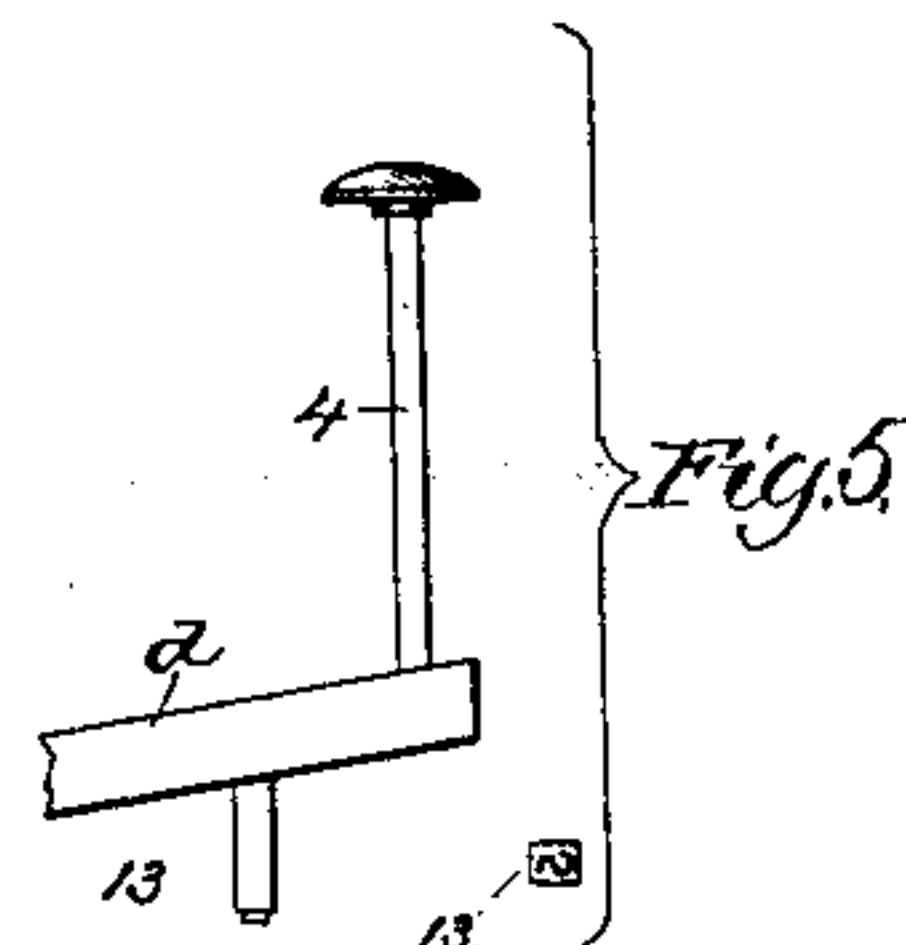
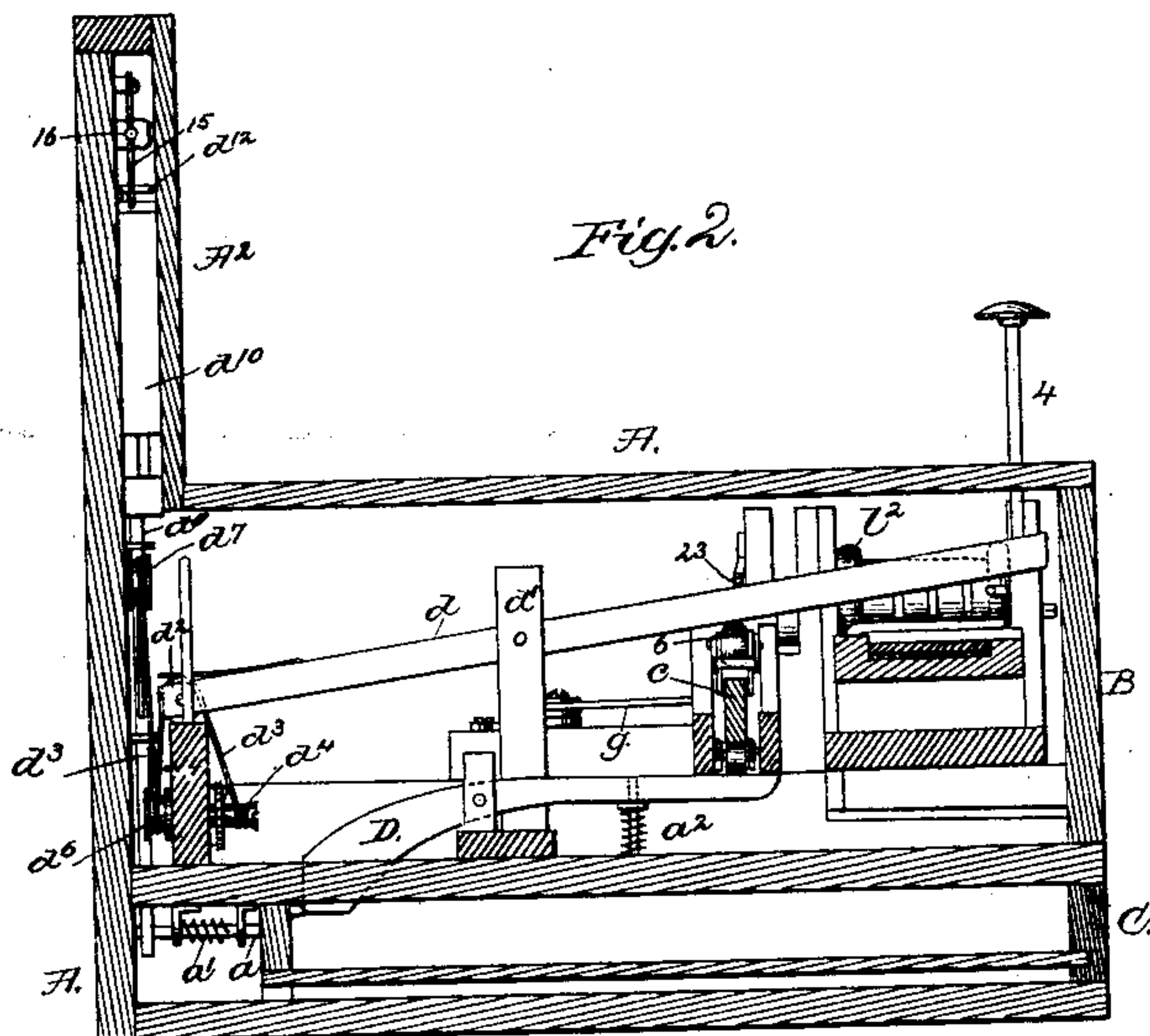
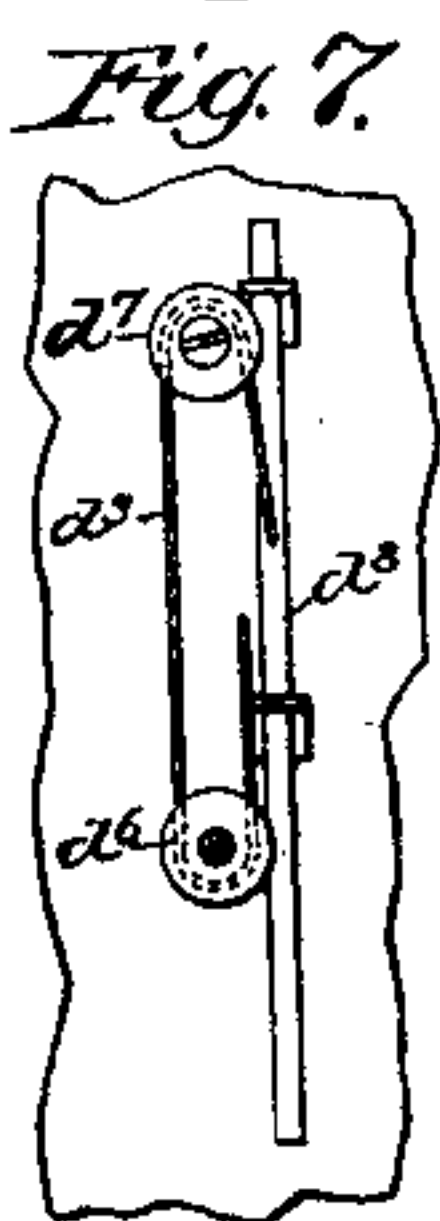
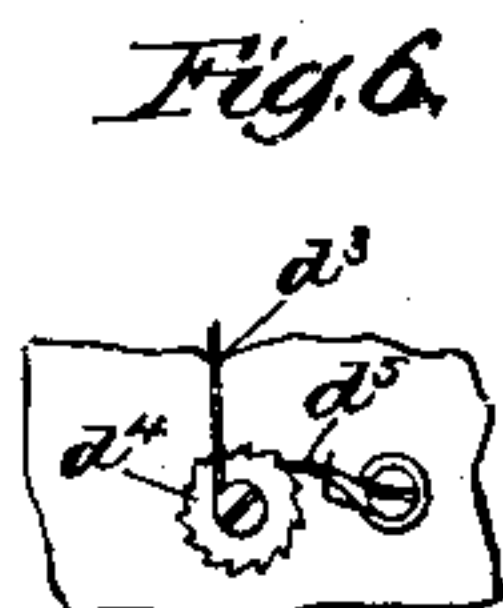
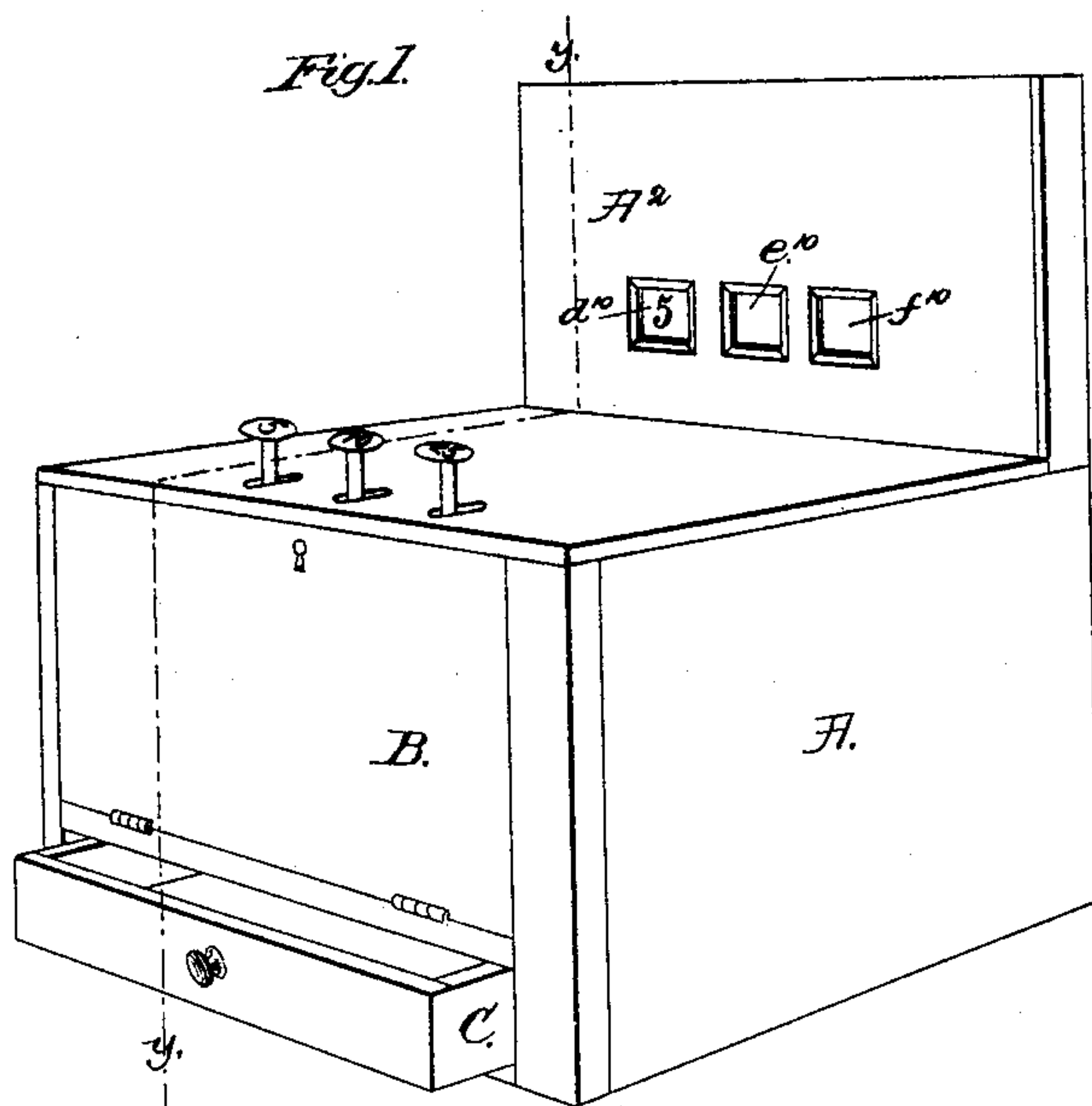
(No Model.)

3 Sheets—Sheet 1.

M. CAMPBELL,
CASH REGISTERING APPARATUS.

No. 253,506.

Patented Feb. 14, 1882.



Witnesses.
John F. C. Prentiss
L. F. Connor

Inventor.
Michael Campbell,
by Crosby Gregory Atty

(No Model.)

3 Sheets—Sheet 2.

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Fig. 3.

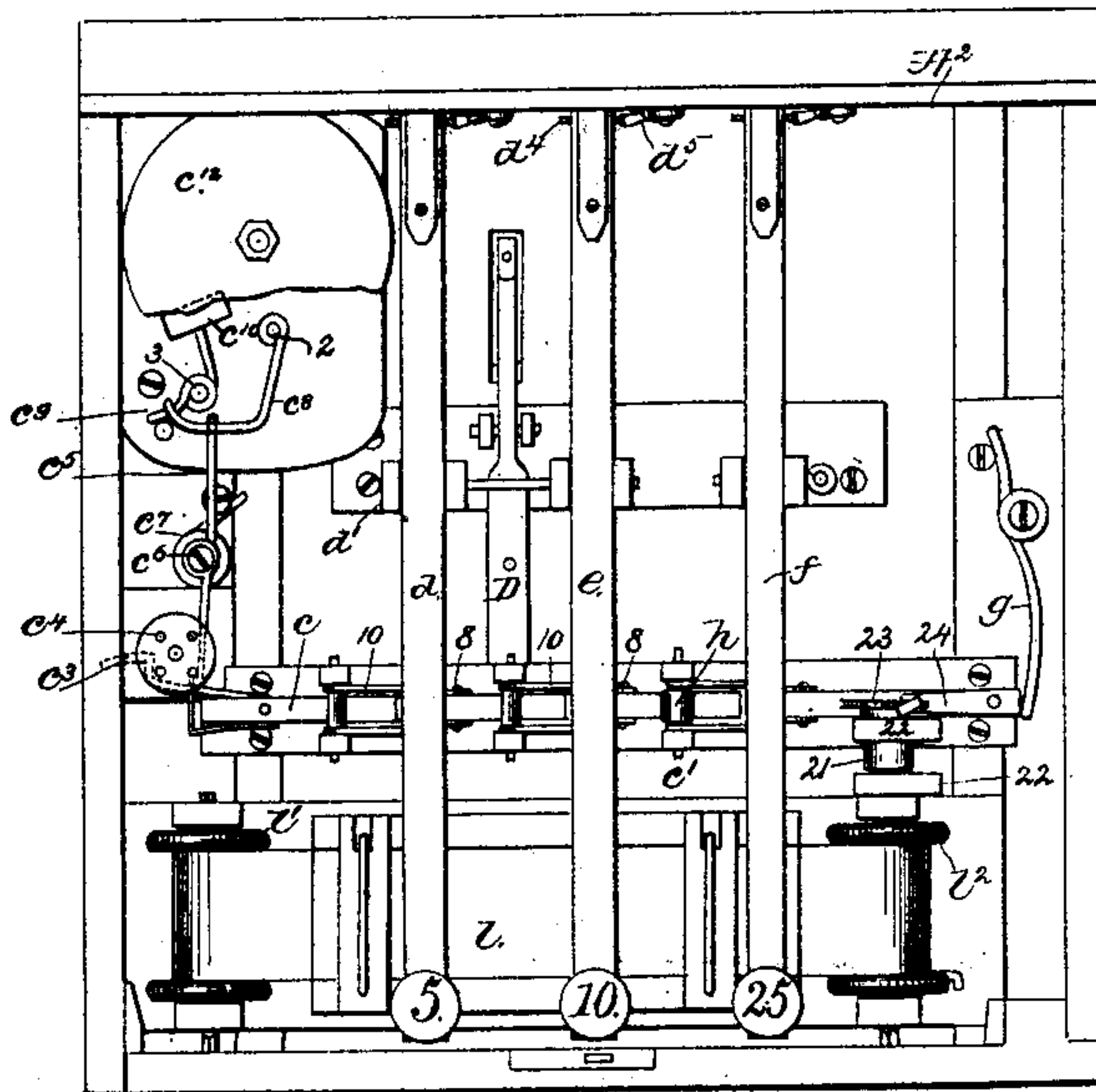
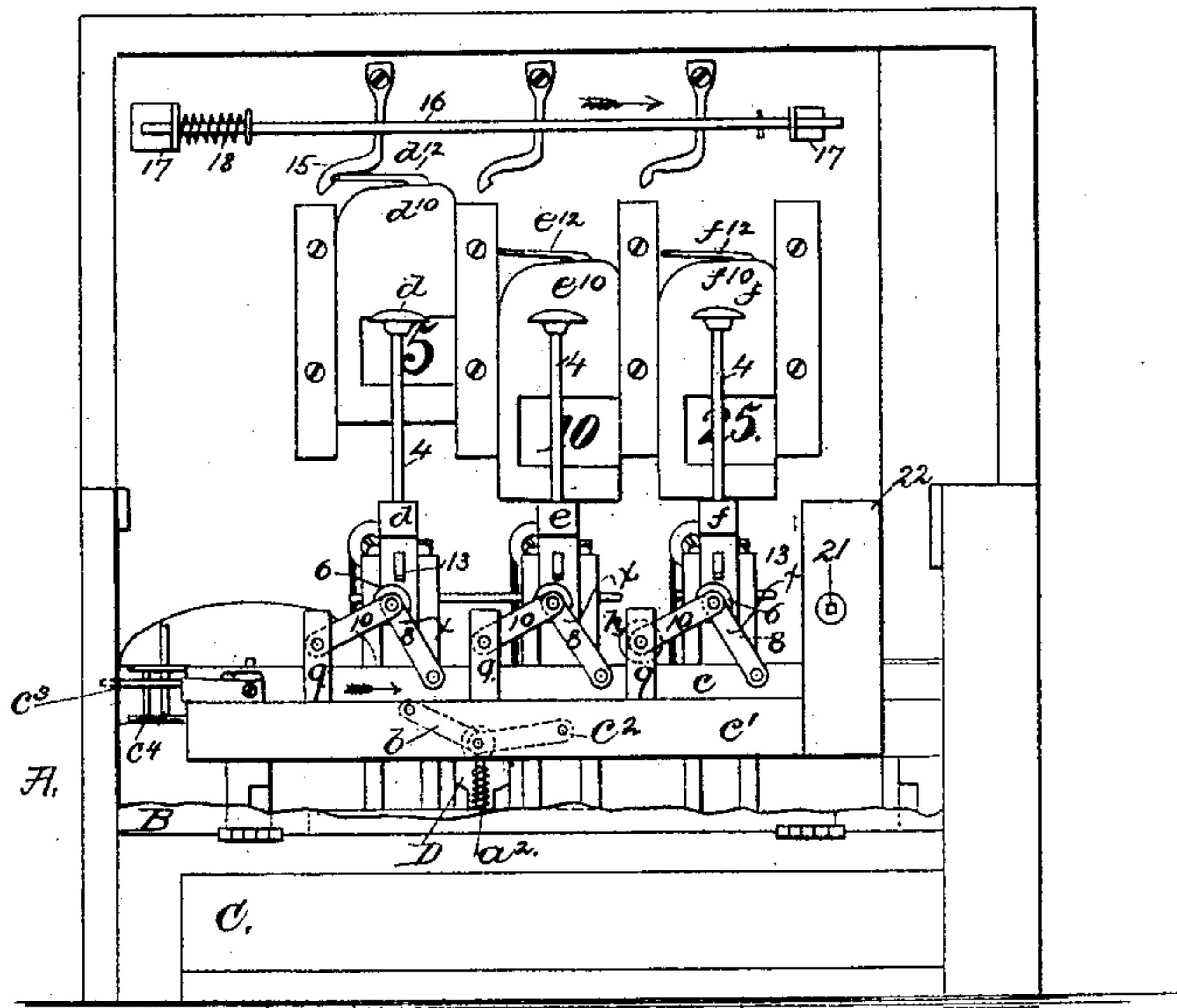


Fig. 4.



Witnesses.
John F. C. Brinkert
L. F. Connor.

Inventor
Michael Campbell.
by Crosby & Gregory,
Attys

(No Model.)

3 Sheets—Sheet 3.

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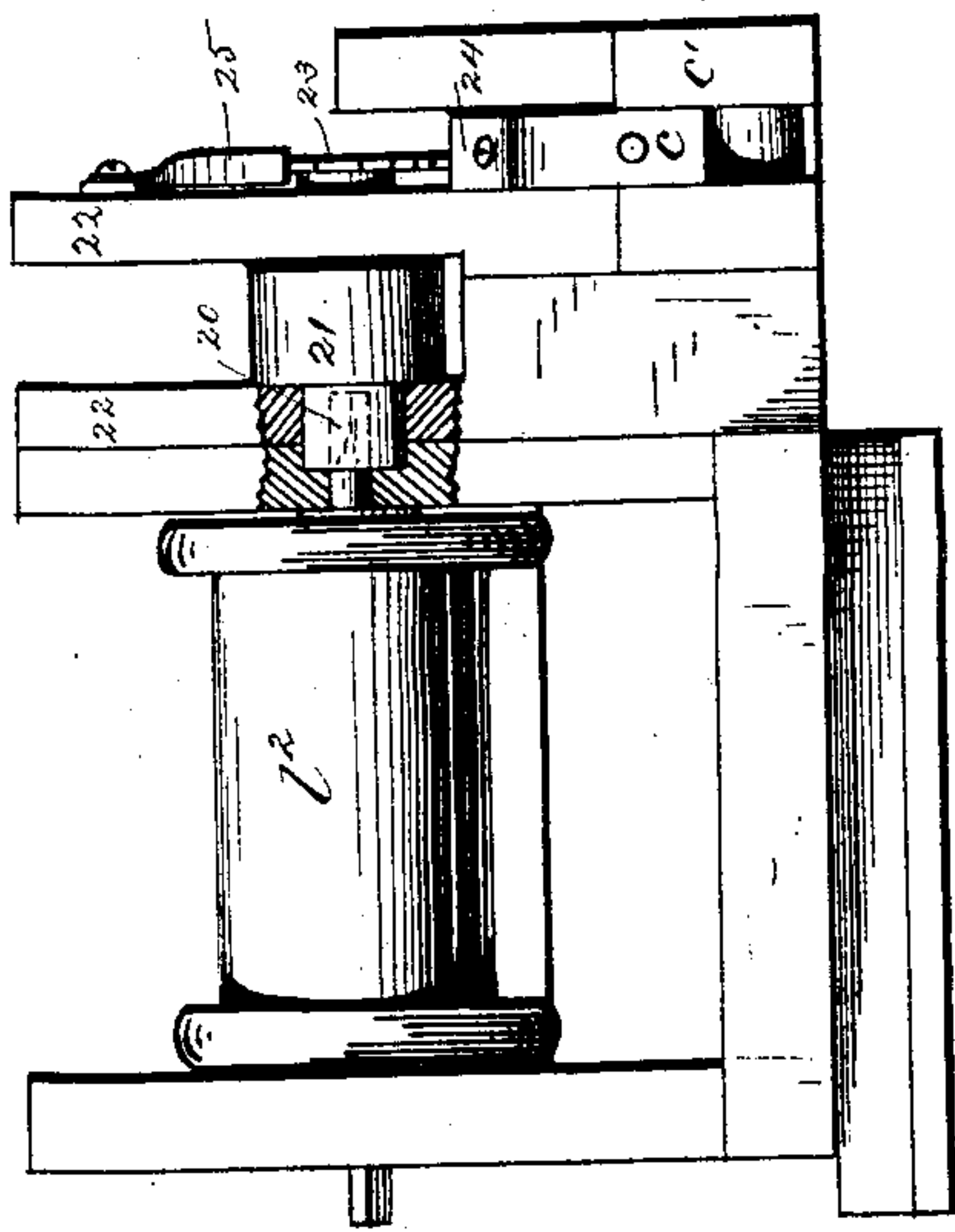


Fig. 10.

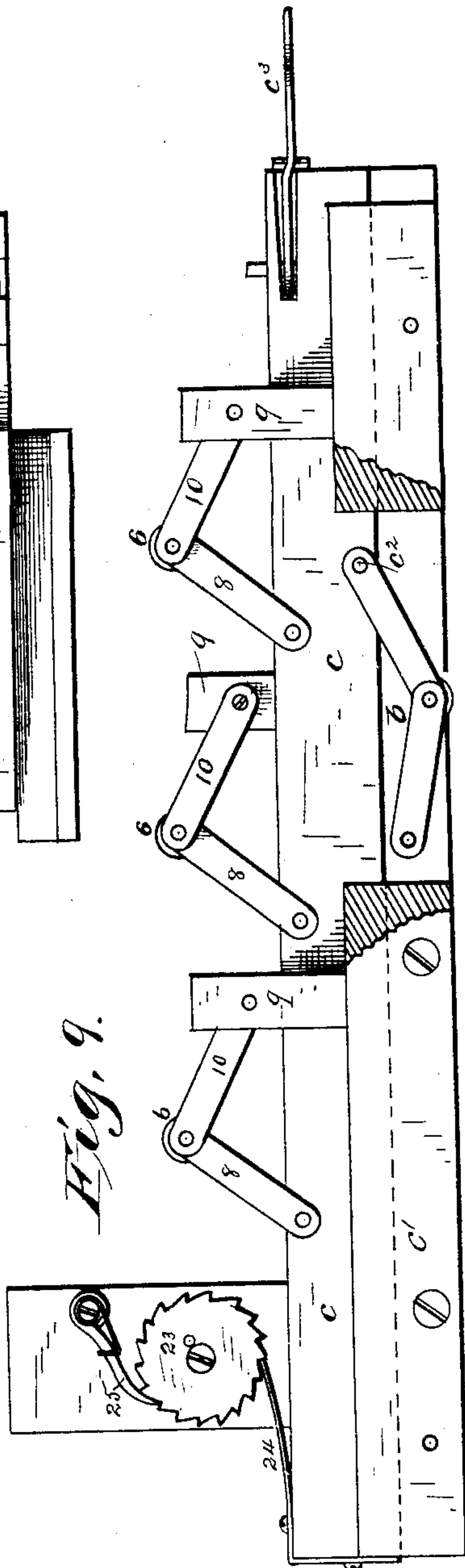


Fig. 9.

Witnesses:

F. L. Oerand

Alex. Scott

Inventor:

Michael Campbell,
Crosby & Gregory, Attys.,
by associate atty.,
Wm. N. Finckel.

UNITED STATES PATENT OFFICE.

MICHAEL CAMPBELL, OF BOSTON, MASSACHUSETTS.

CASH-REGISTERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 253,506, dated February 14, 1882.

Application filed August 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL CAMPBELL, of Boston, county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Cash-Registering Apparatus, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to a cash-registering apparatus to be employed in connection with a cash-drawer, and is shown as embodied in a form suited for bar-room use, or where the amounts received at successive sales are usually fractional parts of a dollar, which are represented by a coin.

The object of my invention is to indicate visually, and also, if desired, upon a strip of paper, the amount of each sale.

I have arranged the keys or levers which are instrumental in moving the visual numbers, and embossing or marking the numbers on the strip of paper, so that they release the cash-drawer when a number is indicated, permitting a spring to open it; and as soon as the cash-drawer is shut it is again locked until another number is to be shown or marked, or both, a bell also sounding as the drawer is released and opened. These keys or levers will be arranged in series, and each key of each series will be adapted to operate a reel carrying a paper strip, and the simultaneous operation of several keys to indicate several numbers will only operate the said strip the same distance. Each key operates its own slide, having a visual number, and the slides and numbers made visual at one operation preparatory to opening the cash-drawer are simultaneously released and dropped out of sight as the numbered slides indicating the sale just made are being moved into position to be seen, to thus indicate the next amount of cash to be placed in the cash-drawer.

Figure 1 represents in perspective a cash-receiving apparatus embodying a sufficient portion of my invention to illustrate its operation, the cash-drawer being shown thrown open, as it will be automatically as the keys indicating the amount of cash to be put in the drawer are depressed. Fig. 2 is a vertical section on the dotted line *y y*, Fig. 1. Fig. 3 is a top view of the apparatus, the top casing being

removed. Fig. 4 is a front end view, with the door B partially broken away and the carriage carrying the strip of paper removed, the plate which partially conceals the visual numbers being also removed from Fig. 2; Fig. 5, a detail of the front end of one of the keys and its type; Fig. 6, a detail showing the ratchet-drum with which the end of the cord to be referred to is fixed; Fig. 7, a detail of the slide-rod operated by the key, and connecting-cord between them and the sheaves over which the said cord runs. Fig. 8 is a longitudinal sectional detail taken through the reel which receives the numbered strip of paper, and through the parts which rotate the said reel. Fig. 9 is a rear elevation, partly sectional, of the pawl-carrier on a larger scale, also showing the connections for operating the paper-reel. Fig. 10 is an end elevation, same scale, of the pawl-carrier and reel connected, the framing being partly broken away.

The case A, which receives the working parts of the apparatus to be described, has a locked door, B, and a drawer, C, acted upon by a drawer-opener, (shown in Fig. 2,) as a rod, *a*, surrounded by a spiral spring, *a'*, the spring being compressed when the drawer is closed, as in said figure, where it is held closed by the drawer-holder, (shown as a lever, D,) the inner end of which acts upon the interior of the inner end of the drawer, the outer end of the said lever being held up by a spring, *a''*, against a toggle-lever, *b*, (shown in dotted lines, Fig. 4,) one limb of which is connected with the pawl-carrier *c*, common to all the levers of the series of levers *d e f*, while its other limb is joined with a fixed bar, *c'*, of the apparatus at *c''*, this latter bar serving as a support and guide for the pawl-carrier. The toggle-lever *b* is bent or thrown down where its two limbs are joined together whenever the pawl-carrier *c* is moved in the direction of the arrow on it, Fig. 4, thus depressing the outer end of the drawer-holder D, lifting its inner end from the drawer and permitting the spring *a'* to throw the drawer open, as in Fig. 1, ready to receive a deposit of cash, and at the same time a pawl, *c''*, carried by the pawl-carrier *c*, engages one of the bars of the lantern-wheel *c''*, causing another bar of the said lantern-wheel to move the lever *c''*, pivoted at *c''*, and held against the lantern-

wheel by the spring c^7 , the said lever c^5 being connected at its rear end with an arm, c^8 , pivoted at 2, which arm c^8 is in turn loosely connected with the end of the striker-lever c^9 , pivoted at 3, the striker c^{10} on the said lever striking the gong c^{12} each time the drawer is opened.

In the drawings I have shown but three keys or levers, $d e f$, but I desire it to be understood that I may and intend in practice to use a greater number of like keys, each of which will indicate some particular amount of cash or dollars or tenths or hundredths of a dollar. As shown in the drawings, the lever d represents five, e ten, and f twenty-five cents. These levers, which I denominate "keys," have proper upright rods, 4, provided with buttons or heads, on which is designated the amount controlled by that lever or key, as represented in Fig. 1. Each key is alike in its mechanism and independent of the others in its action, so I need only describe key d and its connections. The key d has its outer end held up by resting on the roll 6 at the junction of a toggle-lever, x , composed of links 8 10, the link 10 being joined to a standard, 9, of the bar c' , while the link 8 is joined with the pawl-carrying bar c , before referred to, the normal condition of the said toggle-levers being elevated, as in Fig. 4, because of the pressure of the spring g (see Fig. 3) on the pawl-carrying bar c . Each key-lever has its fulcrum on a rod in a suitable standard, like d' . Each key $d e f$ (see part of key d , Fig. 5,) carries near its front end a type, 13, (shown in detail,) the lower end of which having on it a figure—in this instance the number 5—which is to be indicated by the key d .

The rear end of the key d has a pulley or roller, d^2 , over which is extended a cord, d^3 , one end of which is joined with the barrel of a ratchet, d^4 , acted upon by a pawl, d^5 , the said cord passed over the pulley d^2 , as in Fig. 2; then passing down under a pulley, d^6 , fixed on the cross-bar 14; thence up over a pulley, d^7 , on a pin held in the frame A, and thence down, where it is connected with the rod d^8 . The upper end of this rod d^8 , when elevated, strikes and lifts the slide d^{10} , carrying the visual number 5, (see Figs. 1 and 4,) which number then shows through the opening made in the covering-plate A². The corresponding slide for the key e has on it the number 10, while the one for key f will be marked 25.

Each slide d^{10} , e^{10} , or f^{10} has a finger, d^{12} , e^{12} , or f^{12} , which as a slide is lifted by the rod under it engages the hook 15 above it, the said hook holding the finger and keeping the slide elevated until such time as another slide at a subsequent operation of a lever is elevated, when it drops, because all the hooks 15, one for each slide, are extended through one common bar, 16, (see Fig. 4,) pressed in the direction of the arrow thereon by the spring 18. The slide d^{10} is shown lifted and caught by one of the hooks 15. As one of the other slides is lifted to strike a hook 15, the hook then holding a slide up will release such slide, and

it not being supported by a rod under it will drop.

The bar c will be moved to the right a certain fixed distance by depressing any one of the keys d , e , or f , and should two or more of the said keys be depressed the movement of the said bar c will not be altered, but each key would cause its slide to be lifted to show its proper visual number, and the type of each key would mark or impress its number on the roll or strip of paper l , which is gradually wound from the reel l' to the receiving-reel l^2 , the shank 20 of which, extended and made square or of other irregular shape, (see Figs. 8 and 10,) is fitted into a corresponding-shaped opening in the rotating sleeve 21, held in standards 22, the said sleeve having a ratchet-wheel, 23, acted upon at each movement of slide c toward the left, Fig. 3, by a pawl, 24, a suitable detent-pawl, 25, preventing retrograde movement of the said ratchet and sleeve.

The slide d^{10} , &c., may be located in another apartment from that where the case and keys are placed, or at a considerable distance from the said keys, and through a system of cords and pulleys indicate to a party at a distance or in a separate office the amount of cash taken.

One of the toggle-levers x has a roller, h , to bear on and hold down the slide c .

I claim—

1. In a cash-registering apparatus, a series of keys provided with type designating certain amounts, a strip of paper to be marked by the said type, and a series of toggle-levers, x , one for each key, combined with a pawl-carrying bar common to all the said keys, and levers to operate the said strip of paper and move it intermittently below the type of the said keys, substantially as described.

2. In a cash-registering apparatus, a series of keys to designate certain amounts, a pawl-carrying bar, c , and a series of toggle-levers, x , intermediate between each key and the said pawl-carrying bar, the toggle-lever b , actuated by the bar c , combined with the drawer-holder D and drawer C, substantially as described.

3. In a cash-registering apparatus, a series of keys to designate certain amounts, combined with the drawer, the drawer-holder D, mediate connected with said keys, and the spring to throw the drawer open when released by the drawer-holder, substantially as described.

4. In a cash-registering apparatus, a series of keys indicating certain amounts, and a series of slides indicating corresponding amounts, combined with bars connected with said keys by cords and pulleys to lift the slides when the keys are depressed, and with a series of hooks and arms to retain the said slides in elevated position until the keys are again lifted, substantially as described.

5. The series of keys to correspond with numbers thereon type carried by the said keys, a

5 pawl-carrying slide common to all the said keys, a ratchet, and strip to be numbered by the said type, combined with a series of numbered slides, and intermediate devices, substantially as described, between the said keys and slides to operate them as the said keys are actuated to impress a figure or number on the said strip.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MICHAEL CAMPBELL.

Witnesses:

G. W. GREGORY,
B. J. NOYES.