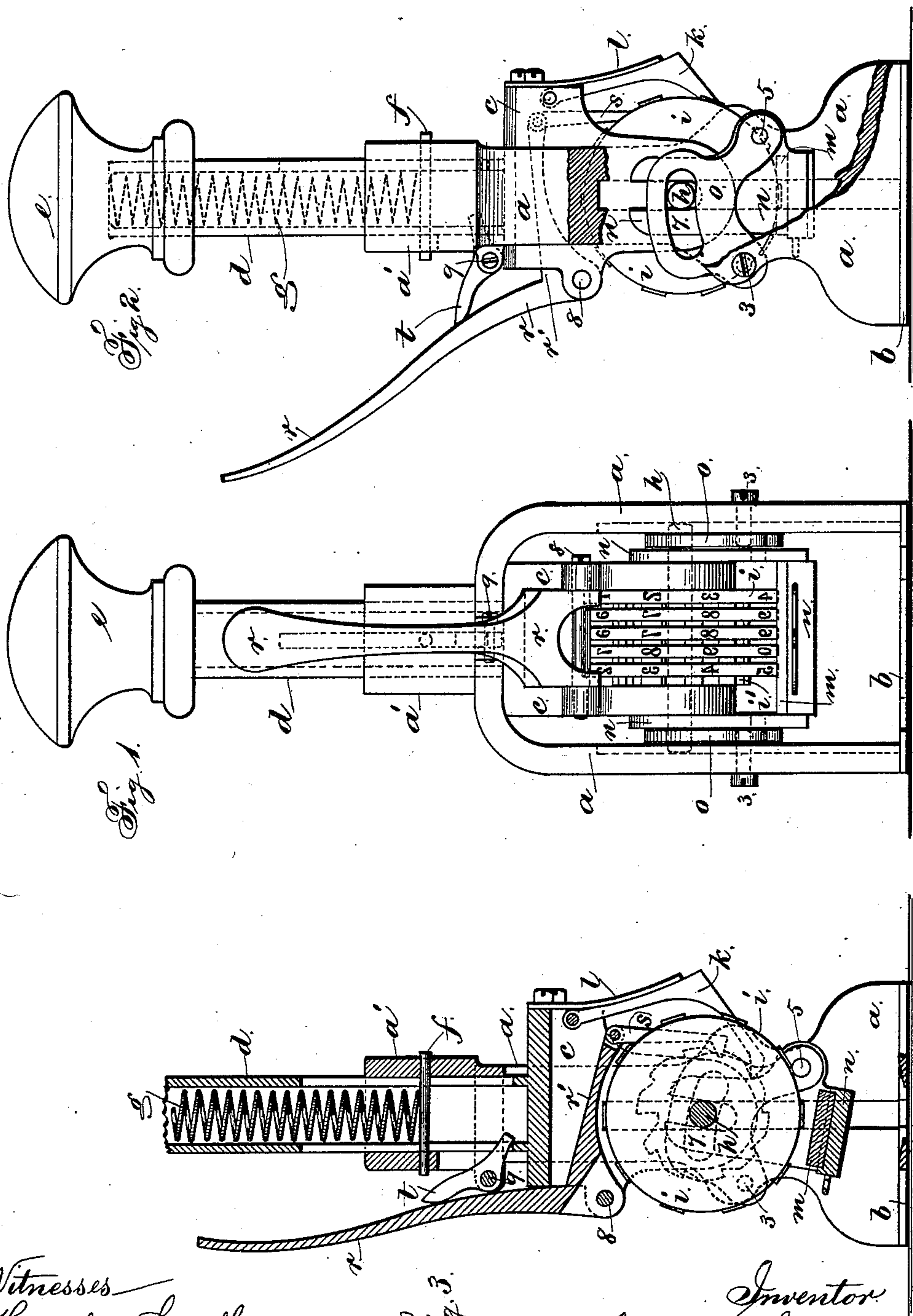


(No Model.)

C. SPIELMANN.
CONSECUTIVE NUMBERING MACHINE.

No. 436,109.

Patented Sept. 9, 1890.



Witnesses
Harold Terrell
Charles Smith

Fig. 3.

Inventor
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Lemuel W. Terrell atty

UNITED STATES PATENT OFFICE.

CHARLES SPIELMANN, OF BROOKLYN, NEW YORK, ASSIGNOR TO WILLIAM
A. FORCE, OF SAME PLACE.

CONSECUTIVE-NUMBERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 436,109, dated September 9, 1890.

Application filed January 20, 1890. Serial No. 337,429. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SPIELMANN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Consecutive-Numbering Machines, of which the following is a specification.

My invention is designed as an improvement upon consecutive-numbering machines heretofore existing, especially that shown and described in Letters Patent to William A. Force and Willard W. Sawyer, dated October 8, 1889, No. 412,489; and the object of my invention is to simplify the parts and make more positive in their action the devices for moving away the inking-pad from the face of the type while the type-disks are being rotated to alter the numbering of the machine.

My invention consists in a swinging lever and pivoted arm combined with the numbered disks and inking-pad and their operating mechanism, the swinging lever having a double function—viz., that of operating the pivoted dogs to revolve the numbered disks, and also simultaneously moving the pivoted arm to depress the disk-carrying frame and so operate the cam-arms and plates of the inking-pad to depress said pad, so that the numbering-disks can be rotated without coming in contact with the pad.

In the drawings, Figure 1 is a front elevation of my improved consecutive-numbering machine. Fig. 2 is a side elevation with the frame partially in section; and Fig. 3 is a vertical cross-section of the same, showing the parts in a depressed condition.

The following parts are the same as those described in the aforesaid Letters Patent, and I hereby refer to said patent for a full description of the construction and operation.

a represents the main frame of my consecutive-numbering machine, which is in the shape of a yoke or inverted **U**, and formed therewith is a sleeve or neck *a'*. The lower ends of the uprights of the frame *a* are connected by a plate *b*, having an aperture through which the types pass to give the impression upon the article to be printed.

Within the frame *a* there is a movable yoke

or inverted-**U**-shaped frame *c*, to the upper end of which is connected a tubular slotted rod *d*, capped with a handle *e*. A pin *f* passes through the sleeve *a'* and through the slot of the rod *d*, and within said tubular rod is a helical spring *g*, the ends of which bear, respectively, upon the pin *f* and the upper inner end of the rod *d*, to return and restore the frame *c*, rod *d*, and handle *e* to their elevated or normal condition.

The yoke or inverted-**U**-shaped frame *c* has passing through it a central shaft *h*, the ends of which project and enter vertical grooves on the inner faces of the uprights of the frame *a*, and are guided thereby.

Each disk *i* has upon one side a ratchet-face *i'*, that is secured to and rotates in unison with the disk. These ratchet-faces have teeth corresponding in number and location with the type upon the face of its disk.

The following description relates peculiarly to the features of my present invention.

There are dogs *k* corresponding in number with the type-disks *i* and ratchets *i'*, and these dogs are pivoted at their upper ends in the yoke frame *c*, and their toothed lower ends engage the teeth of the ratchets *i'*, and springs *l* bear against the back of the dogs to press them against the teeth of the ratchets *i'* and by said dogs a backward movement of the type-disks is prevented.

My machine is a self-inker, and for this purpose *m* is an inking-pad adapted to contact the types to ink them. This pad *m* is carried by a yoke *n*, whose arms are adapted to straddle the frame *c*, and said arms are forked or slotted for the shaft *h*, which they straddle.

There are cam-plates *o* pivoted at one end, at 3, upon the inner faces of the frame *a*, and the other ends of these cam-plates are pivoted at 5 to the uprights of the pad-yoke *n*. These cam-plates *o* have curved slots at 7 for the shaft *h*, which passes through said slots. When the yoke-frame *c* is depressed by hand-pressure upon the handle *e*, the shaft *h* descends and in its descent operates the cam-plates *o*, swinging them on their fixed pivots 3. These cam-plates in their turn simultaneously operate the inking-pad *m* and its

yoke *n* by the pivot-connections 5 and swing said pad about a quarter-revolution around the shaft *h* as a pivot from beneath the type-disks to a position at one side out of the way in printing. After printing, and as the yoke-frame *c* and other moving parts are released, the action of the helical spring *g* elevates and returns all the parts to their normal position.

I provide a lever *r* and lever-arm *r'*, connected together or in one piece and pivoted at 8 and move in unison. Between the up-rights of the yoke-frame *c* and at the extreme end of the lever-arm *r'* are pivoted dogs *s*, similar to those shown in Fig. 5 of aforesaid patent and corresponding in number, and said dogs *s* are adapted to engage the teeth of the ratchet-faces *i'* to revolve the type-disks progressively in the usual manner to form the combinations of numerals in regular succession. I also provide an arm *t*, pivoted at 9 in lugs formed upon the surface of the sleeve *a'* of the yoke-frame *a*, and said sleeve is slotted for the reception of this arm. The outer curved end of this arm *t* bears against the surface of the lever *r*, while its inner end bears against the base of one slot of the tubular rod *d*, as will be seen in Fig. 3.

The operation of this lever and arm is as follows: The lever *r* is moved by the thumb or finger toward the tubular slotted rod *d*, and with the lever-arm *r'* it is swung on the pivot 8. As the lever moves up, it engages and swings the pivotal arm *t*, which bears against it, moving its outer end up and its inner end down, and depressing the tubular slotted rod *d* and yoke-frame *c* a small distance, sufficient, however, to operate and swing the cam-plates *o* upon their pivots 3, and by the pivot-connection 5 between the cam-plates *o* and yoke *n* depress the yoke *n* and pad *m* sufficiently to move the surface of the inking-pad *m* away from the types

upon the peripheries of the disks *i*, so that said type-disks *i* are free to be turned by the dogs *s* progressively. The depression of the inking-pad *m* in this manner and the turning of the type-disks *i* by the movement of the arm *r'* and dogs *s*, as heretofore described, are simultaneous. When the lever *r* is released, the helical spring *g* expands and elevates the rod *d*, operating the arm *t* and lever *r*, its lever end *r'* and dogs *s*, together with the cam-plate *o* and yoke *n*, returning the parts to their normal position.

I claim as my invention—

1. The combination, in a consecutive-numbering machine, with the moving yoke-frame carrying the type-disks, the inking-pad, and its operating mechanism, of a lever pivoted to the moving yoke-frame and carrying dogs for operating the type-disks, and an arm pivoted in the sleeve of the main frame of the machine and adapted to be operated by the movement of the aforesaid lever to depress the moving yoke-frame and inking-pad, substantially as set forth.

2. The combination, in a consecutive-numbering machine, with the main yoke-frame and its slotted sleeve *a'* and the movable yoke-frame *c* and its tubular slotted rod *d*, the inking-pad *m*, yoke *n*, and the cam-plates *o*, of the lever *r* and lever-arm *r'*, pivoted in the moving yoke-frame, the dogs *s* upon the lever-arm *r'* and the pivotal arm *t*, moving in the slot of the sleeve *a'* and engaging at one end the lever *r* and at the other end the slotted rod *d*, substantially as and for the purposes set forth.

Signed by me this 26th day of December, A. D. 1889.

CHARLES SPIELMANN.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.