(No Model.)

3 Sheets—Sheet 1.

W. A. FORCE.

HAND STAMP.

No. 326,418. Patented Sept. 15, 1885.

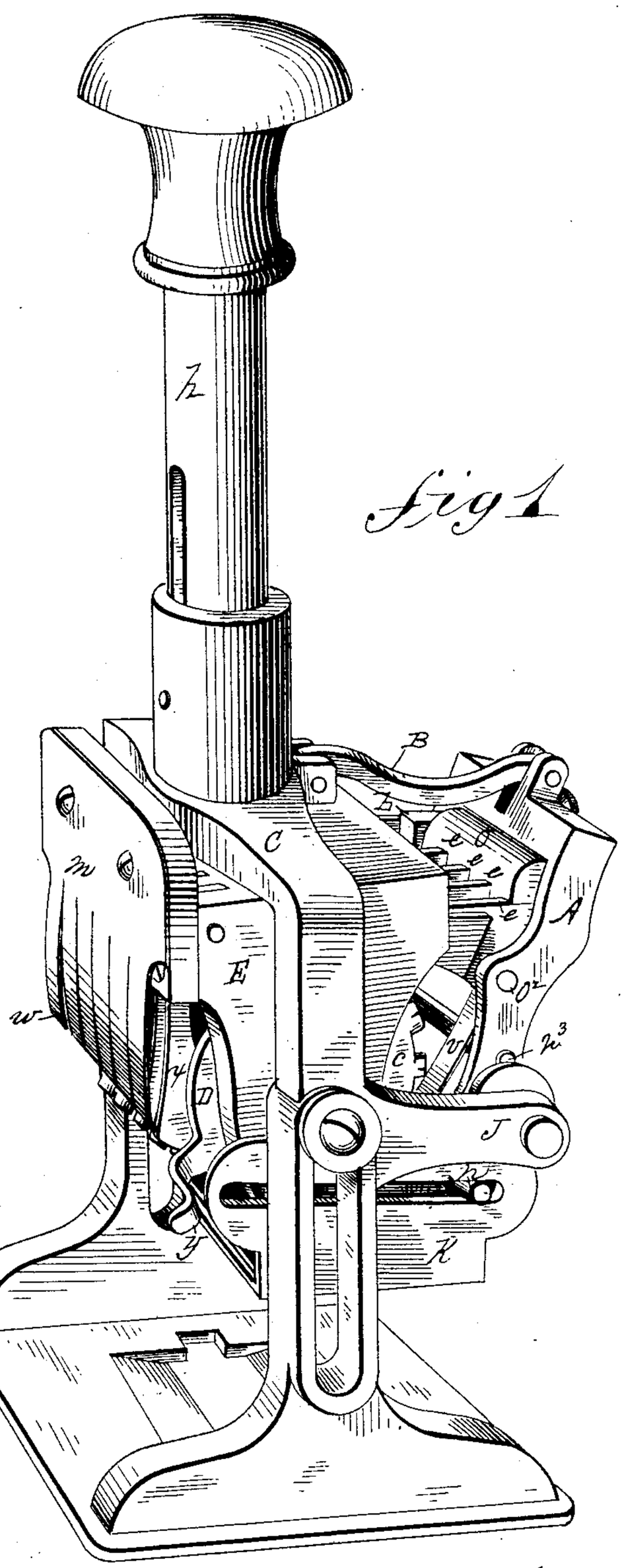

Fig 1

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Wm. H. Chapin

INVENTOR

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BY Henry A. Chapin

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(No Model.) 3 Sheets—Sheet 2.

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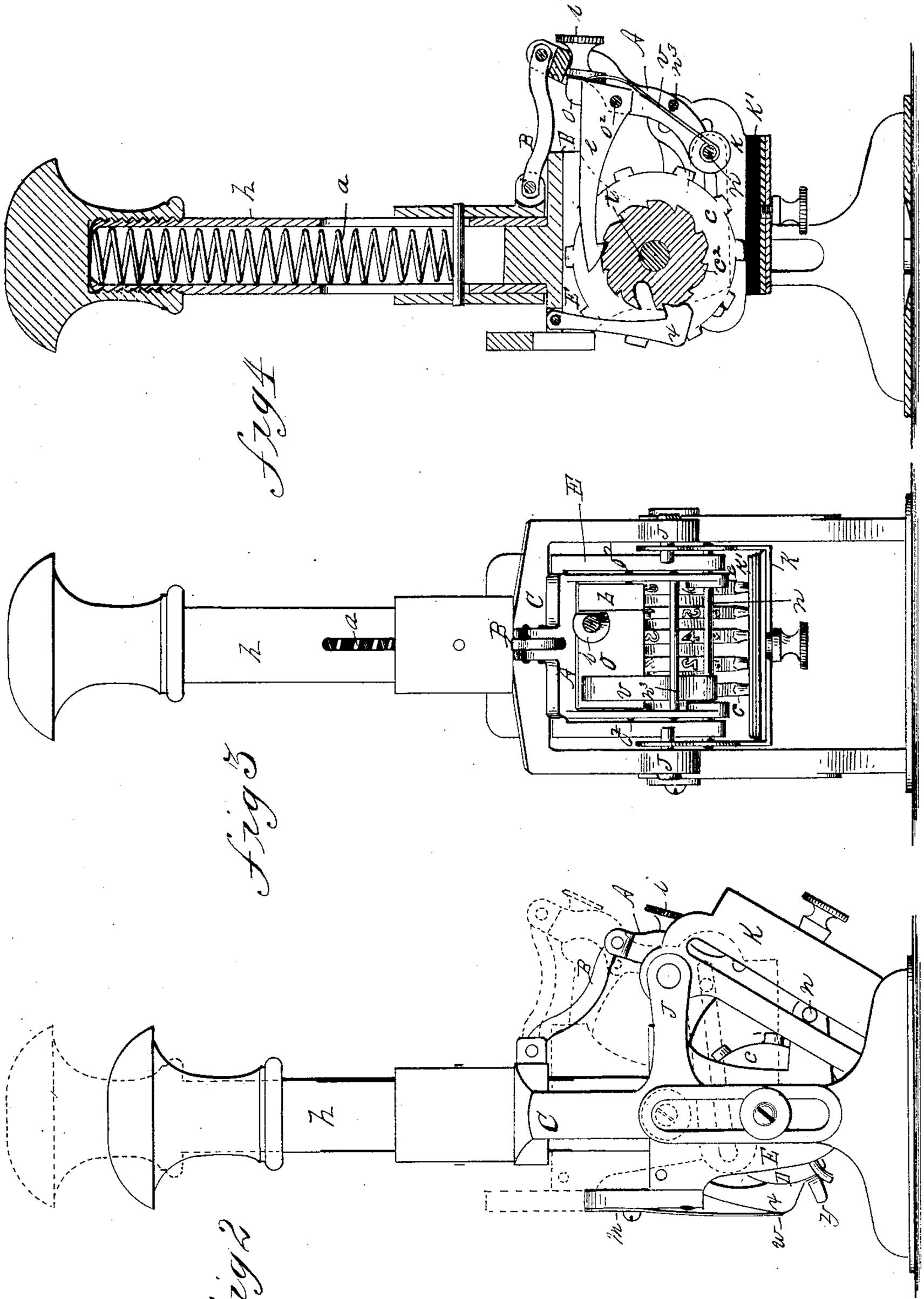

Fig 4

Fig 3

Fig 2

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(No Model.) 3 Sheets—Sheet 3.

W. A. FORCE.

HAND STAMP.

No. 326,418. Patented Sept. 15, 1885.

Fig 5

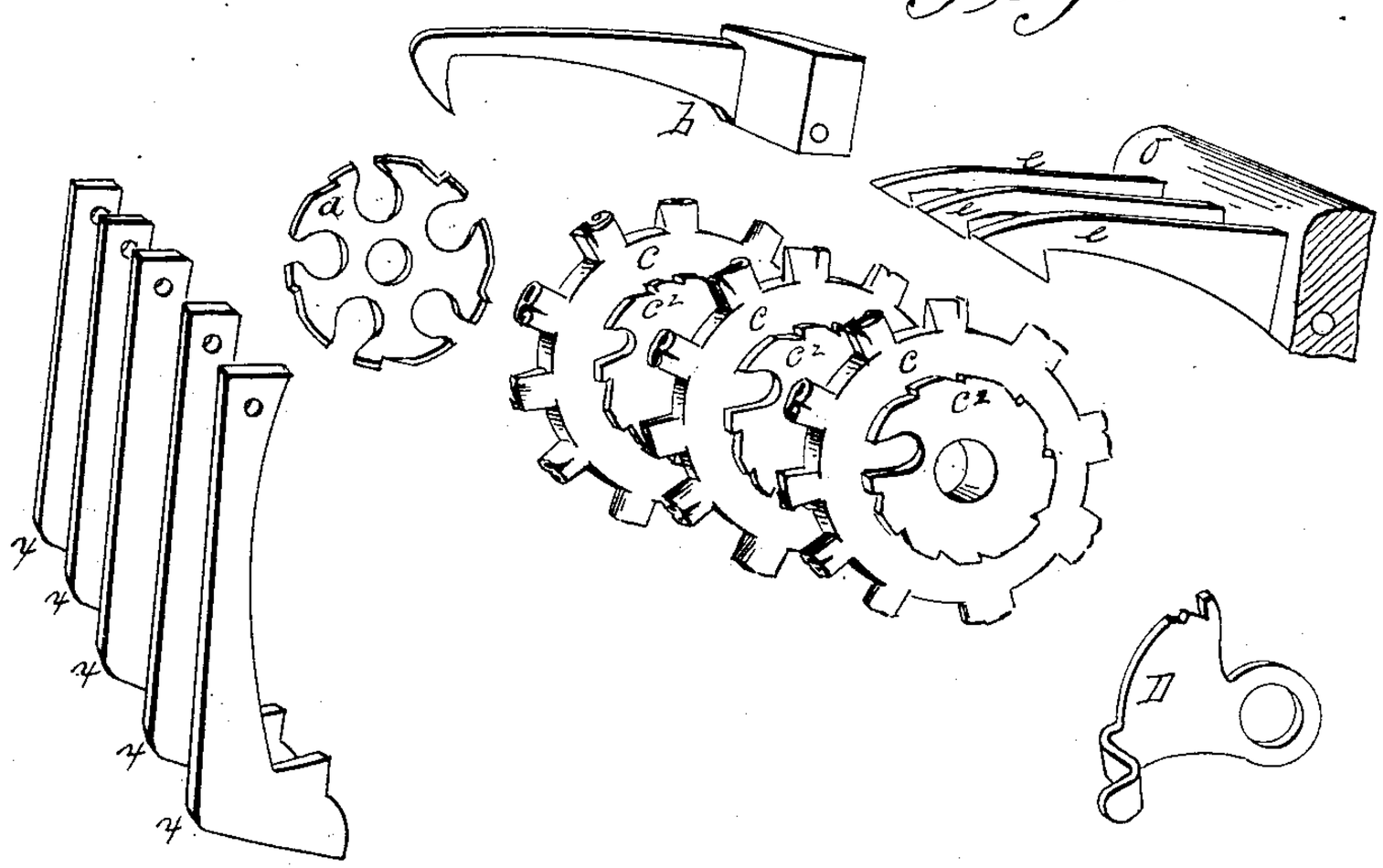
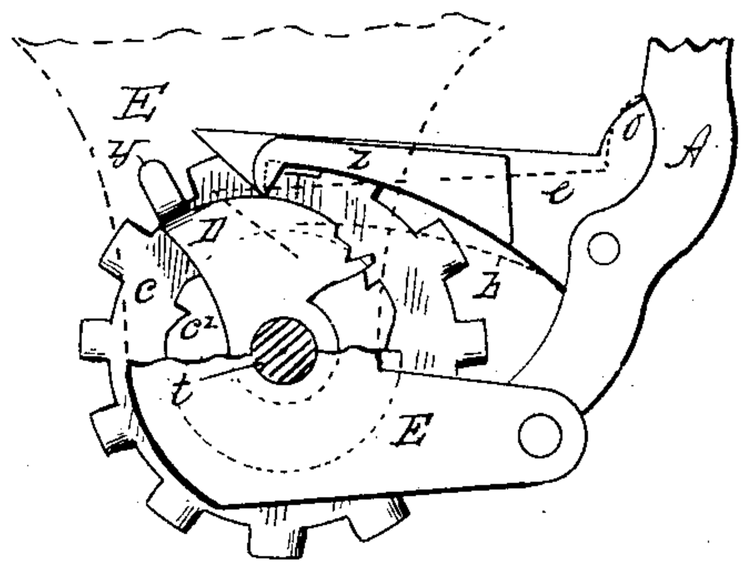


Fig 6



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM A. FORCE, OF BROOKLYN, NEW YORK.

HAND-STAMP.

SPECIFICATION forming part of Letters Patent No. 326,418, dated September 15, 1885.

Application filed March 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. FORCE, a citizen of the United States, residing at Brooklyn, in the county of Queens and State of New York, have invented new and useful Improvements in Hand-Stamps, of which the following is a specification.

This invention relates to improvements in hand-stamps having a series of rotating numbering-wheels therein, and means for causing said wheels to be turned when the stamp is operated, the object being to provide improved means for intermittently rotating the number-wheels, for causing the stamp to repeat a number as many times as may be desired, and for so setting the stamp-operating devices that any number shall be printed in duplicate.

In the drawings forming part of this specification, Figure 1 is an enlarged view of a hand-stamp embodying my improvements. Fig. 2 is a side elevation showing the printing devices in an intermediate position between their upper and lower one. Fig. 3 is a rear elevation. Fig. 4 is a side elevation, partly in section. Figs. 5 and 6 illustrate detail parts.

In the drawings, C is the frame of the stamp, having thereon the usual open base-plate. E is the number-wheel frame, having thereon the tubular handle *h*, within which is the coil-spring *a*. The handle as usual passes through a cylindrical collar on frame C, through which a pin passes under said spring *a*. The sides of frame C are slotted, and screws passing therethrough into the wheel-frame E serve, together with the handle *h*, to guide said frame properly when moving up and down.

Two arms, J, extend rearwardly from frame C, on which is hung the inking-pad case K, between the inner sides of which is the lower part of frame E, the latter having rearward extensions through which, transversely, is a pivot-pin, *n*, whose ends engage in slots in the sides of the case K, as shown in Figs. 1 and 2.

A pawl-yoke, A, is pivoted between said extensions of frame E on the pin *n*, and the upper end of said yoke is pivotally connected with the frame C by the connecting-bar B.

The number-wheels *c* are hung on the shaft *t* in frame E, and on the side of each is the usual ratchet-wheel, c^2, thereto fixed. A noted idler-wheel, *d*, is also hung on the shaft *t*, next to the outside of the first numbering-wheel. Wheel *d* is fully shown in Fig. 5. The "first numbering-wheel," above mentioned, is the one at the left, looking at the front of the stamp, or the side on which is the spring-finger plate *m*, Fig. 1.

A series of pawls, *e*, is rigidly secured by one end to a block, *o*, the latter being pivoted in the yoke A, and the hooked ends of the pawls extend over the edges of the ratchet-wheels c^2 on the wheels *c*, and are adapted to engage with said ratchet-wheels and turn-wheels *c*. A spring, *v*, is secured by one end to the pin *n* and passes up back of a bar, n^3, whereby its free end is made to bear against the upper edge of the block *o*, thereby forcing downward the ends of the pawls *e* against wheels c^2.

The hooked lever *b* is secured to a block, as shown in Fig. 5, through which the shaft o^2, on which the block *o* is hung, passes, and lever *b* swings freely on shaft o^2, and when not interfered with its hooked end rests on the idler-wheel *d*.

A turn-button, *i*, is placed in block *o*, near the side of the block to which the lever *b* is secured, the base of which is cut off on one side, as seen in Fig. 3. When said button is in the position there shown, block *o* may oscillate without swinging the block on which is the lever *b*, but when the button *i* is turned to bring its base on the block to which lever *b* is secured, the end of the latter will, by spring *v* acting on block *o*, be forced down onto the edge of wheel *d*.

A cam-lever, D, is hung on the wheel-shaft *t*, in frame E, at the side of the ratchet-wheel c^2, on the adjoining wheel *c*. The pawl *e*, which turns the said wheel *c*, may swing down freely, together with the other pawls which are on block *o* when lever D is in the position shown in Fig. 1—that is to say, with its finger-piece *y* downward—carrying its rim from under the thickening boss *z* on the side of the pawl, but when the finger-piece *y* is carried up, the rim of lever D strikes the boss *z* and swings the ends of all the pawls *e* up and holds them away from the ratchet-wheels c^2, so that when the pawls reciprocate by the swinging

of yoke A the numbering-wheels *c* are not turned, and the stamp repeats a number as long as the pawls are so held up.

When the handle *h* is driven down, the frame E and the parts thereto connected have the same movement, and, since the upper end of yoke A is connected by bar B to frame C, said downward movement causes the upper end of the yoke and the pawls *e* to move toward the upper part of frame E, carrying the pawls over the ratchet-wheels *c*, with which they engage in turn, as above described, and the action of spring *a*, in drawing up frame E, causes yoke A to swing outward and the wheels *c* to be turned.

The above described means for working the pawls which rotate the number-wheels in a stamp of this class contribute greatly to the steady working of the machine and obviate the usual jarring motion which causes imperfect printing.

In operating the stamp to repeat a number, it is accomplished by providing means, above described, for permitting the pawls *e* to reciprocate twice, but in so doing to act on the number-wheels but once. The features of construction which contribute to this result are the above-named wheel *d*, lever *b*, and button *i*, acting in conjunction with the block *o*. Thus when the lever *b* is left free the pawls *e* act to turn wheels *c* each time frame E goes up, but when said lever is made to swing with block *o* its end will first drop into one of the deep notches on wheel *d*, but when next lifted and let fall it will ride on the edge of the wheel and thus hold the pawls up, but at its next movement it will again drop into a deep notch as before. Thus the wheels are rotated only after two impressions of the stamp by simply turning button *i* so that its base is over the block on which lever *b* is secured. The engagement of the ends of the pin *n* in the slots in the sides of the ink-pad case K causes the latter to swing from under the wheels *c* when frame E is forced down, and the upward movement of the latter swings up case K and brings the pad K′ against the numbers on wheels *c*, thus properly inking them.

The fingers *x*, pivoted on the front of the frame E, are made by the spring-fingers *w* to press against the edges of the ratchet-wheels c^2 and hold wheels *c* from rotating out of time.

What I claim as my invention is—

1. In combination, the yoke A, the pawls *e*, pivoted in said yoke, one of said pawls provided with boss *z*, the series of numbering-wheels, and the cam-lever D, said wheels and cam-lever mounted on a single shaft, substantially as set forth.

2. In combination, the frame E, the frame C, the yoke A, movably pivoted at *n*, the pawls *e*, and the numbering-wheels, the bar B, and the inking-pad case slotted to receive pivots *n*, substantially as described.

3. In combination, yoke A, block *o*, pivoted in said yoke, a series of numbering-wheels provided with ratchets, pawls *e*, engaging said rachets, spring *v*, lever *b*, idler-wheel *d*, and the button *i*, substantially as set forth.

4. In combination in a hand-stamp, a series of number-wheels provided with ratchet-wheels, as described, a notched idler-wheel on same shaft with number-wheels, a series of pawls to engage said ratchet-wheels and a pawl to engage said idler, a button by which said pawls may be connected or disconnected, as described, and mechanism by which the pawls are reciprocated, substantially as described.

WM. A. FORCE.

Witnesses:
H. A. CHAPIN,
WM. H. CHAPIN.