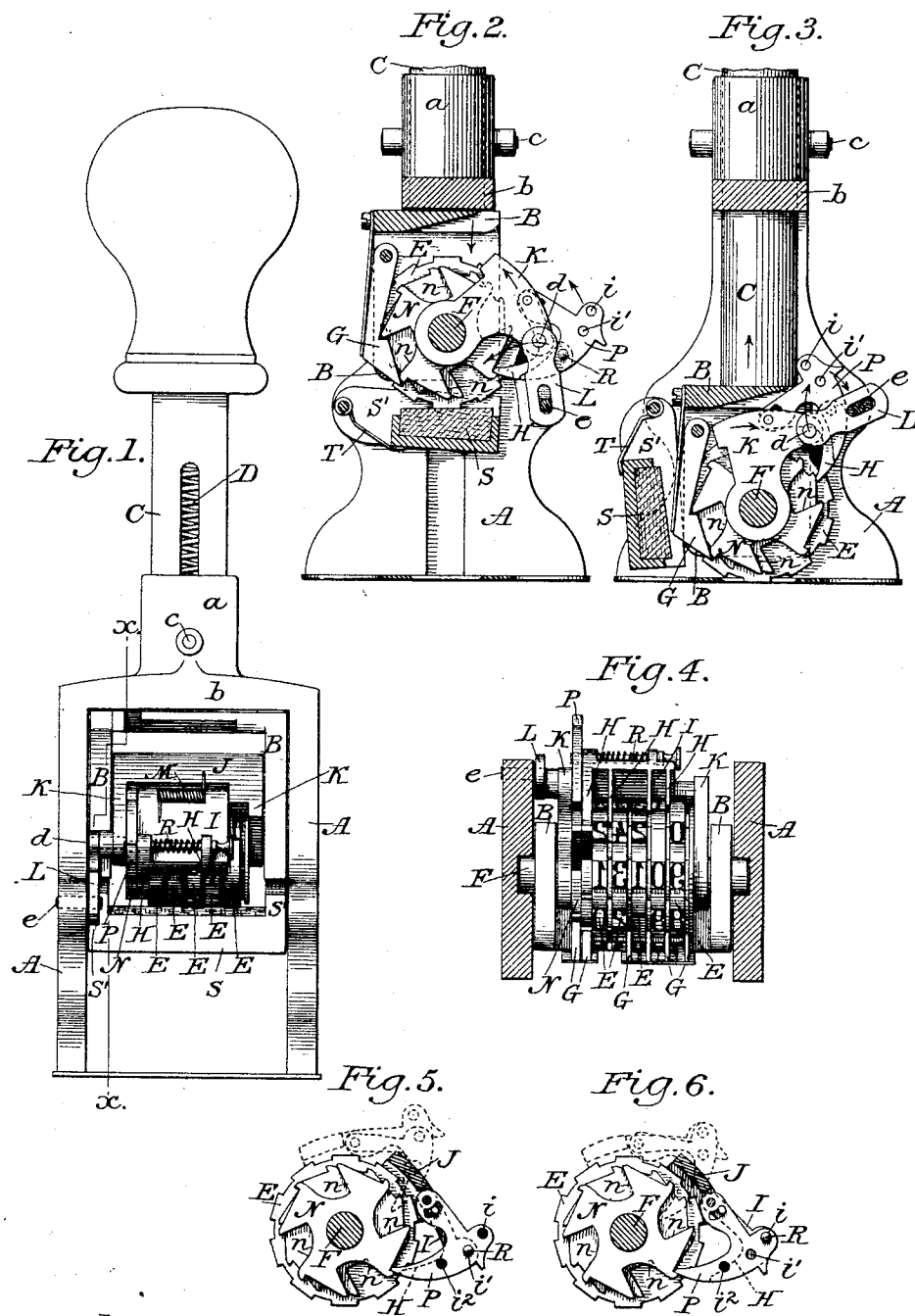


(No Model.)

R. HAMMER.
CONSECUTIVE NUMBERING MACHINE.

No. 461,196.

Patented Oct. 13, 1891.



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CONSECUTIVE-NUMBERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 461,196, dated October 13, 1891.

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To all whom it may concern:

Be it known that I, REINHOLD HAMMER, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Consecutive-Numbering Machines; and I do hereby declare that the following is a full, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to improvements in the construction of consecutive-numbering hand-stamps, and has for its object to facilitate the movements of the pawl-carrier.

It consists in the novel construction, combination, and arrangement of the pawl-carrying devices with the supporting and wheel-carrying frames of the stamp, substantially as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved hand-stamp; Fig. 2, a vertical section thereof in line *xx* of Fig. 1 with the upper part of the handle broken away; Fig. 3, a similar section illustrating the stamp when in action with the numbering-wheels forced down to produce an imprint; Fig. 4, a bottom view of the stamping mechanism with the supporting-frame in section; Fig. 5, a detailed sectional view illustrating the adjustment of the pawls for repeating the impression of each number twice before changing; and Fig. 6, a similar detached sectional view illustrating the adjustment of the pawls, whereby the stamp is made to repeat the same number indefinitely.

Similar letters indicate like parts in all of the figures.

A is the standard or supporting-frame for the machine; B, the number-wheel frame, mounted in the customary manner to reciprocate vertically within the outer supporting-frame A; C, a tubular handle projecting from the wheel-frame B through a cylindrical collar *a* on the cross-bar *b* of the supporting-frame A; D, a spiral spring interposed within the handle C between its upper end, and a pin *c* passing transversely through the collar *a* and the slots in the handle C.

E E E are the numbering-wheels, hung as usual upon a shaft F, fixed upon the frame

B, each having the customary ratchet-wheel fixed thereto.

G G are the spring-actuated detent-pawls, fitted to the rear side of the wheel-frame to engage the ratchets of the numbering-wheels and prevent a reverse movement thereof.

The construction of the machine in the foregoing particulars is not essentially different from that of the approved forms of hand-stamps well-known to the art.

In my invention the actuating-pawls H H for the numbering-wheels are carried in the usual manner upon a plate I, (see Fig. 1,) which is pivoted to the front edge of the transverse bar J of a pawl-frame K, consisting of side plates connected by said bar and severally pivoted to swing at each end of the series of numbering-wheels upon the shaft F, upon which they revolve. The oscillation of this pawl-frame K required to bring its pawls into effective action is produced by the reciprocation of the wheel-frame B through the intervention of a link L, (see Figs. 2 and 3,) pivoted at *d* to the outer face of one of the side plates of the pawl-frame K at a point about on a level with the axis of the latter and at *e* to the adjacent standard of the supporting-frame A at a point below said axis, so that the two pivoted points of the link shall form with the axis substantially a right-angle triangle having sides of unequal length, and whose hypotenuse extends from the lower end of the link to said axis. The pivot pin at *e* is made to project from the inner side of the standard through an enlarged opening or longitudinal slot in the link, as shown in Figs. 2 and 3, and by dotted lines in Figs. 1 and 4, so as to permit of a slight motion in the link.

By the use of a short link to connect the pawl-frame with the standard in the machine, as described, decided economy of construction and efficiency of result is obtained.

The link L, as it turns on its pivot-pins at *d* and *e* while the wheel-frame descends, causes the front end of the pawl-frame K to be swung upward and backward upon the shaft F as its axis, thereby carrying the pawls H H backward over the ratchets into position to make a new engagement with the teeth thereof. When the wheel-frame B moves upward again, the return of the pawl-frame to its first posi-

tion will so actuate the ratchets engaged thereby as to turn the numbering-wheels one step forward. The continued movement of the wheel-frame to complete its stroke after the link has operated to swing back the pawl-frame is permitted by the slot in the link through which the pin at *e* projects. A spring M, (see Fig. 1,) bearing upon the pawl-plate I, operates to keep the several pawls in automatic engagement with the ratchets.

An independent idle ratchet-wheel N, of the same diameter as the ratchets of the numbering-wheels and having a deep notch *n* cut therein in place of every second peripheral notch, is hung upon the shaft F at one end of the series of numbering-wheels E E, in position to be engaged by an independent pawl P, pivoted at one end of the pawl-plate I upon the same pivot-pin. This independent pawl P is locked to the pawl-plate I, so as to move in unison with the actuating-pawls H H, by means of a spring-actuated catch-pin or bolt R, (see Fig. 1,) fitted upon the plate I to engage either one of a series of three holes *i i'* *i''*, pierced in the outer end of the pawl P, as shown in Figs. 2, 3, 5, and 6. The pawl is so proportioned in length relatively to the actuating-pawls and the holes *i i'* *i''* therein so located as that when the bolt R is in engagement with the upper hole *i* in the series the pawl will, even when it enters the deeper notches in the idle ratchet-wheel N, prevent the actuating-pawls H H from reaching any of the ratchets on the numbering-wheels, so that the reciprocating movement of the wheel-frame B will not then operate to move said wheels, and the number thereon, which may be at line of print, will be repeated at each stroke of the stamp. By swinging the pawl P outward upon its pivot, so as to bring the inner hole *i''* in the series into engagement with the bolt R, the pawl P will be thereby held out of engagement with the idle ratchet-wheel N, and hence will no longer operate to prevent the actuating-pawls H H from engaging their ratchets and operating the numbering-wheels in the customary manner at each impression of the stamp to change the numbers in consecutive order.

If the pawl P be adjusted so that the bolt R will engage the central hole *i'* in the series, it will operate to prevent an engagement of the actuating-pawls H H only when it rests upon the periphery of the idle-wheel N and will permit their engagement with their ratchets whenever it drops into one of the deep notches *n n* on said idle-wheel, and these deep notches *n n* are so arranged as that they shall alternate with the peripheral notches, so that the numbering-wheels may only be moved at every second stroke of the stamp, and each successive number will in such case be repeated twice before a change is made.

By the use of an idle-wheel having every third instead of every other notch cut deeper therein it is evident that the change may be made to occur at every third stroke, instead of every second stroke of the stamp.

The inking-pad S for the stamp is suspended upon the swinging arms S' S', pivoted to the supporting-frame in position to be swung up automatically from below against the numbering-wheels when they are in their elevated position, by means of a spring T. As the wheel-frame descends to make an impression the inking-pad is swung outward to clear the wheels by the bearing of the lower end of the wheel-frame against the arms S' S', as shown in dotted lines in Fig. 3.

In the operation of the stamp it is made to number consecutively or to repeat between its changes in the customary manner by inserting the adjusting-bolt R into either the lower hole *i''* or the middle hole *i'* of the independent pawl P; but by causing the bolt R to engage the upper hole *i* in the pawl P the pawl is made to project inward so far as to prevent altogether by its bearing on the idle-wheel the engagement of the actuating-pawls with the ratchets of the numbering-wheels, and hence the one number which in such case may be at line of print will be repeated without change at each impression. The movement of the swinging pawl-frame K to actuate the several pawls attached thereto, which is produced by means of the slotted link L, pivoted to said frame on the one side and to the supporting-frame A on the other, is direct, positive, and simple, and the entire machine is strong, neat, compact, and may be produced at a low cost.

I claim as my invention—

The combination, in a hand-stamp, with its outer supporting-frame, its spring-actuated reciprocating wheel-frame moving within the supporting-frame, the shaft carried by said wheel-frame, the numbering-wheels revolving on said shaft and provided with ratchet-wheels, the pawl-frame swinging freely upon said shaft, and the pawls carried by said frame to engage the ratchet-wheels, of a link pivoted to the supporting-frame below the axis of the pawl-frame when in its upper position and to the pawl-frame at the level of said axis and which swings inward as the pawl-frame moves downward, acting tangentially upon said frame, substantially in the manner and for the purpose herein set forth.

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

REINHOLD HAMMER.

Witnesses:

A. N. JESBERA,
E. M. WATSON.