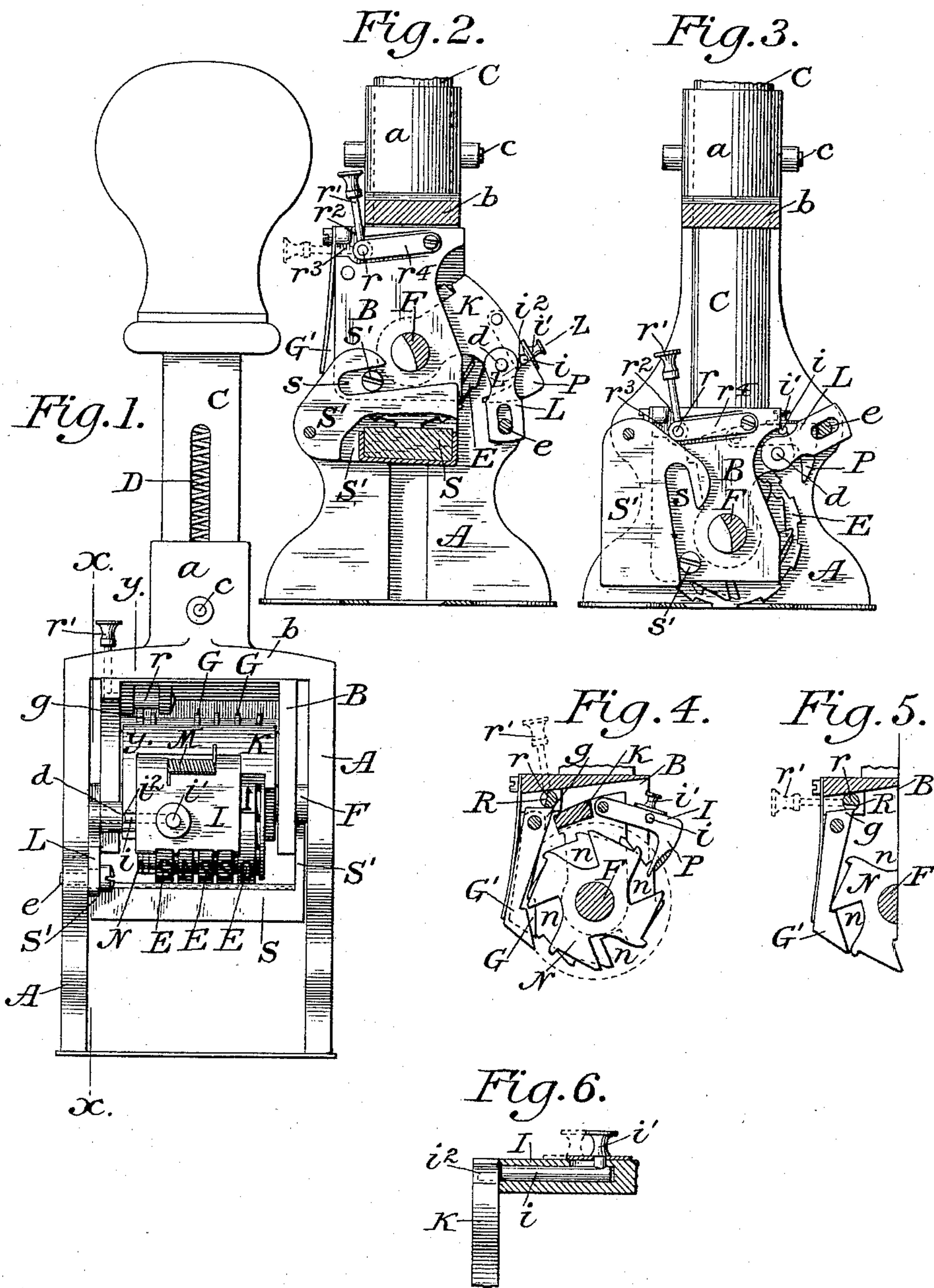


(No Model.)

O. BARTUSCH.
NUMBERING HAND STAMP.

No. 473,605.

Patented Apr. 26, 1892.



Attest:

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UNITED STATES PATENT OFFICE.

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NUMBERING HAND-STAMP.

SPECIFICATION forming part of Letters Patent No. 473,605, dated April 26, 1892.

Application filed July 8, 1891. Serial No. 398,815. (No model.)

To all whom it may concern:

Be it known that I, OSWALD BARTUSCH, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Numbering Hand-Stamps; 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.

The object of this invention is to simplify and improve the devices for actuating the pawl-carrier and for regulating its engagement with the numbering-wheels to effect the desired movement thereof and to improve the devices for actuating the inking-pad.

In the accompanying drawings, Figure 1 is a front elevation of the improved hand-stamp. Fig. 2 is a vertical section thereof on line xx of Fig. 1, with the upper part of the handle broken away. Fig. 3 is a similar section showing the stamp with the numbering-wheels forced down to produce an imprint. Fig. 4 is a detailed sectional view showing the adjustment of the pawls for printing consecutive numbers singly. Fig. 5 is a detailed sectional view showing the adjustment of one of the pawls for producing the impression of each number twice before changing. Fig. 6 is a detailed view, partly in section, of the device for adjusting the position of the pawl-plate.

A is the standard or supporting-frame of the machine; B, the number-wheel frame, mounted in the customary manner to reciprocate vertically within the outer supporting-frame; 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 in 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.

The actuating-pawls 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 of the 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. 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, so as to permit of a slight lost 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 are 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 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 position 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, hav-

ing 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 a pawl P , carried, like the actuating-pawls, upon the plate I . The pawl P is so proportioned in length relatively to the actuating-pawls as that when the plate is in normal position and when the detent-pawl G' acts upon the wheel N , as shown in Fig. 5, the said pawl P will operate to hold up the pawl-plate and prevent an engagement of the actuating-pawls with their respective ratchet-wheels when it rests upon the periphery of the wheel N and will permit such engagement when it drops into one of the deep notches n . Consequently the numbering-wheels will be moved only at every second stroke of the stamp and each successive number will be printed twice before a change is made. The wheel N is normally held from retrograde movement by the detent-pawl G' , and when so held it moves forward one step with each upward movement of the wheel-frame, producing the result above described. If the detent-pawl be held out of engagement with the wheel N , as shown in Fig. 4, the said wheel will be moved backward by the contact of the rear side of pawl P with the rear wall of deep notch n . Consequently pawl P will not rise out of the deep notch and the actuating-pawls will always be in position to engage with their respective ratchets. The numbering-wheels will then be moved with each reciprocation of the wheel-frame and consecutive numbers will be printed.

The means employed for holding the pawl G' out of engagement with wheel N consists of a cam R , adapted to act upon a shoulder of the pawl. Said cam is carried upon a rotatable bolt r , held to rotate and to slide in bearings in the wheel-frame. The bolt also carries near its extremity a pin r' , which is fixed to the bolt at right angles therewith and serves as a handle by which to rotate the bolt and to hold it in one position or the other by its engagement with shallow notches r^2 and r^3 , the pin being pressed into said notches by a spring r^4 , which acts upon the end of the bolt.

It will be seen from the foregoing that when the pawl-plate is in normal position and the pin and cam are in the position indicated in Fig. 5 the stamp will duplicate the successive numbers and that when the pawl-plate is in normal position and the pin and cam are in the position shown in Fig. 4, whereby the pawl G' is disengaged from the wheel N , the stamp will print consecutive numbers singly. The pawl-plate, however, is provided with a sliding bolt i , which may be moved by a knob i' to engage with a shoulder i^2 , formed on one of the side plates of the pawl-frame K and thereby hold said plate so that the pawls will not reach the ratchets, as shown in Fig. 3. The reciprocation of the wheel-frame will not then move said wheels and the number thereon which may be at the line of print will be repeated at each stroke of the stamp. In this

case the position of the cam R and pawl G' is immaterial.

It will be observed that all of the devices above referred to are carried by the wheel-frame, by which arrangement it has been possible to attain great simplicity in construction and operation and to reduce materially the size and weight of the stamp.

The inking-pad S is suspended upon the swinging arms $S' S'$, pivoted to the supporting-frame in position to be swung up against the numbering-wheels when they are in their elevated position.

In place of the springs and other complicated and cumbersome devices heretofore employed the arms $S' S'$ are formed with slots s , which are engaged by pins $s' s'$, projecting from the sides of the wheel-frame. When the wheel-frame is in its lowest position, the parts will assume the positions shown in Fig. 3. As the frame moves up and nears its highest position the pins $s' s'$ will engage at first the closed ends of the slots and then the upper walls of said slots, bringing the parts into the position shown in Fig. 2, with the pad resting squarely against the face of the type. As the wheel-frame descends to make an impression the pad is swung outward by the bearing of the pins against the lower walls of the slots. When the parts are in the position shown in Fig. 3 with the pins $s' s'$ at or near the limit of their movement, the pad may be swung outward and upward by reason of the fact that the pin at the lower limit of its motion is free of the slot until it is exposed in a position convenient for cleaning, inking, or replacing. By these means the usual springs, rods, and levers are dispensed with, the pad is moved positively by a direct connection with the wheel-frame, and the necessity of providing for lost motion, in order to secure proper action of the pad without interference with the movement of the wheel-frame, is dispensed with.

I claim as my invention—

1. The combination, in a hand-stamp, with its outer supporting-frame, its reciprocating wheel-frame, a shaft carried by said wheel-frame, numbering-wheels revolving on said shaft and provided with ratchet-wheels, a pawl-frame swinging freely upon said shaft, a pawl-plate pivoted to said frame, and pawls carried by said plate to engage the ratchet-wheels, of a bolt carried by said plate and adapted to engage a shoulder on the pawl-frame to hold the pawls out of engagement with the ratchets, substantially as shown and described.

2. The combination, in a hand-stamp, with its outer supporting-frame, its reciprocating wheel-frame, a shaft carried by said wheel-frame, numbering-wheels revolving on said shaft and provided with ratchet-wheels, a pawl-frame swinging freely upon said shaft, a pawl-plate pivoted to said frame, pawls carried by said plate to engage the ratchet-wheels, a loose ratchet-wheel on said shaft

having both deep and peripheral notches, and a retaining-pawl for said wheel, of a cam to act upon said pawl and hold it out of engagement with said wheel and an actuating-pawl on said plate and adapted to enter the deep notches or rest upon the shallow notches of said wheel and permit or prevent engagement of the other actuating-pawls with their ratchets, substantially as shown and described.

3. The combination, with a supporting-frame and a reciprocating printing-head, of an inking-pad, swinging arms carrying said pad and pivoted to the supporting-frame and

having slots formed therein and open at the end, and pins projecting from the side of the wheel-frame and entering said slots, said pins at their lower limit of motion being free of said slots, substantially as shown and described.

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

OSWALD BARTUSCH.

Witnesses:

A. N. JESBERA,
W. B. GREELEY.