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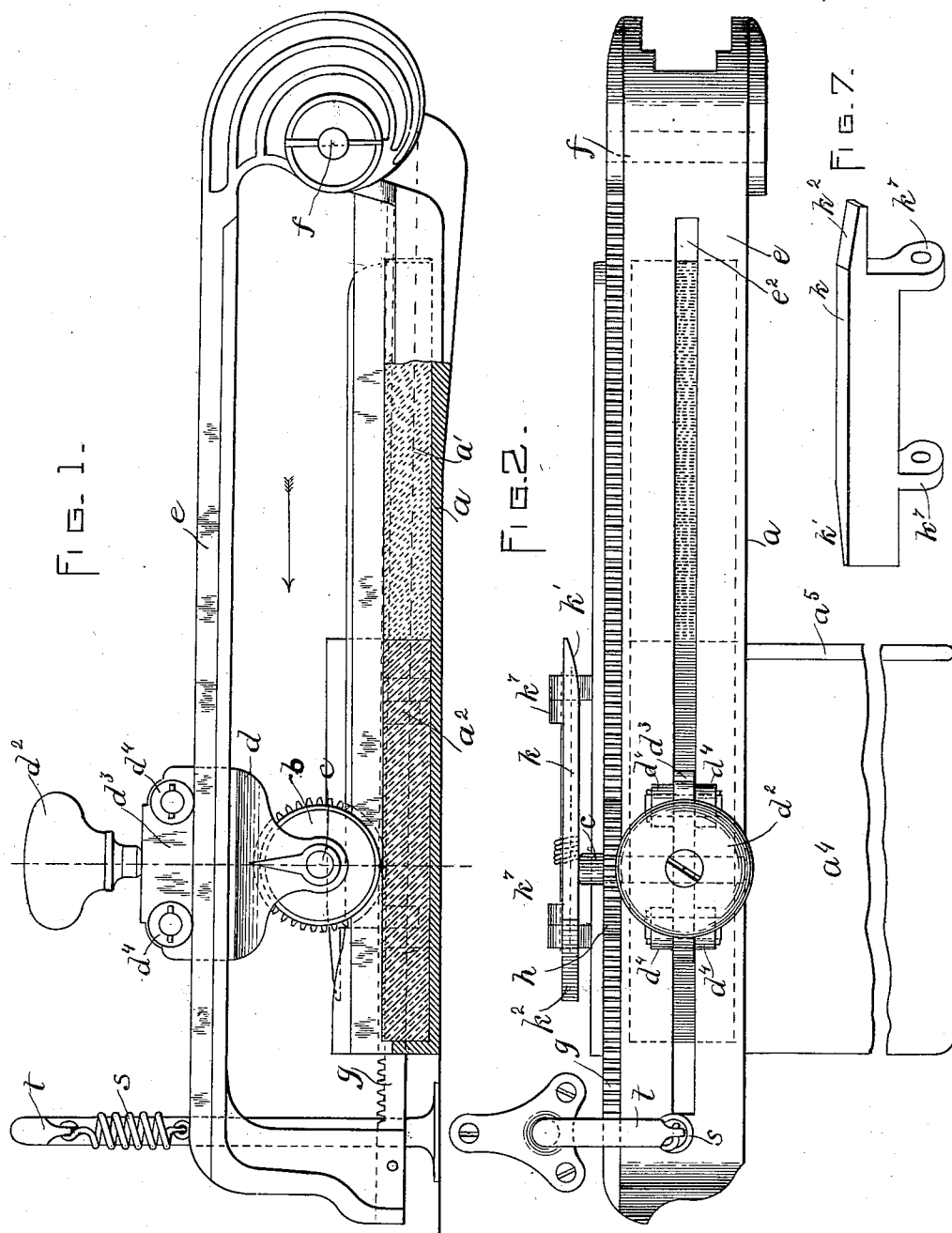
3 Sheets—Sheet 1.

M. V. B. ETHRIDGE & H. E. WAITE.

ROTARY MARKING STAMP.

No. 469,632.

Patented Feb. 23, 1892.



WITNESSES:

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(No Model.)

3 Sheets—Sheet 2.

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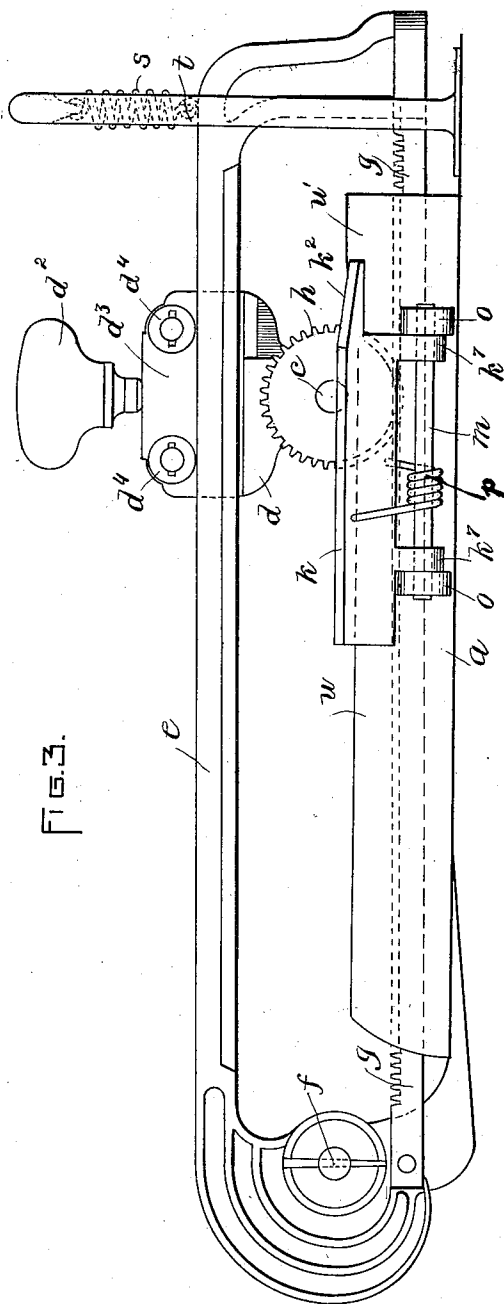
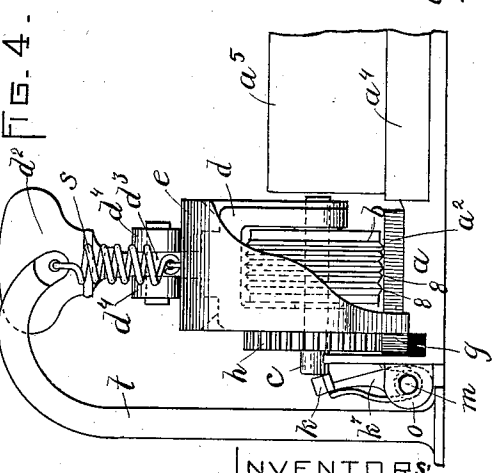
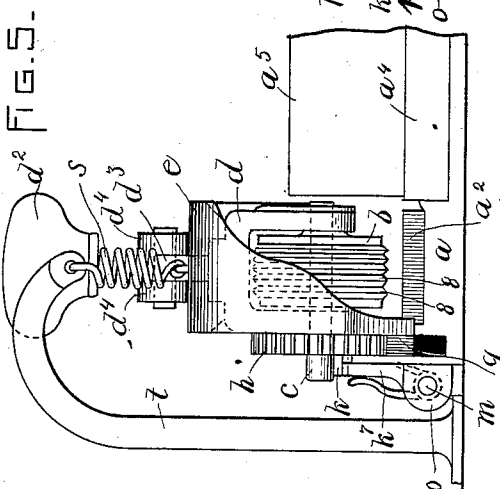
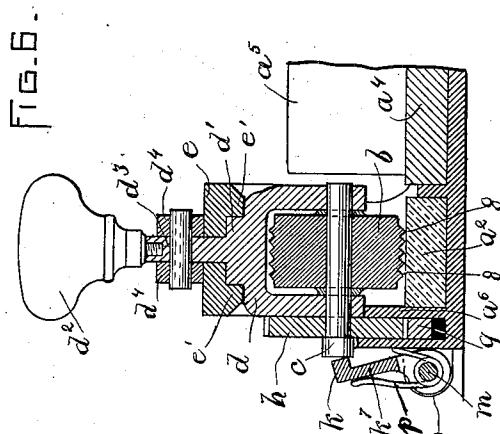


FIG. 3.



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(No Model.)

3 Sheets—Sheet 3.

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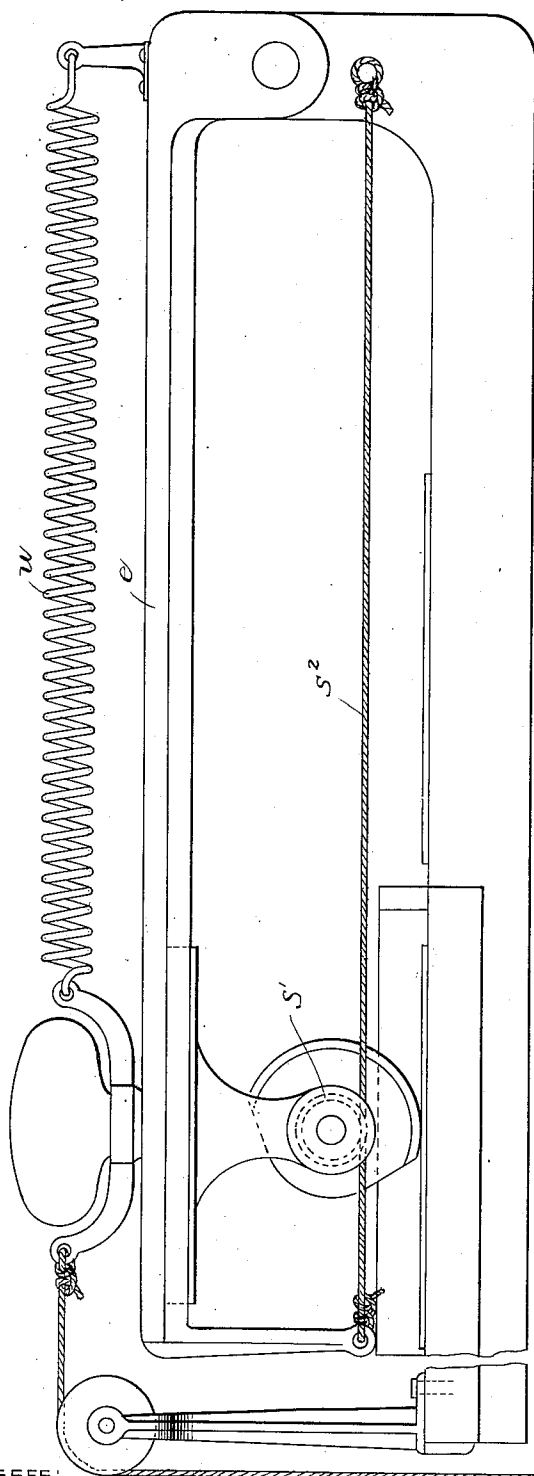


Fig. 8.

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UNITED STATES PATENT OFFICE.

MARTIN V. B. ETHRIDGE, OF EVERETT, AND HENRY E. WAITE, OF NEWTON,
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ROTARY MARKING-STAMP.

SPECIFICATION forming part of Letters Patent No. 469,632, dated February 23, 1892.

Application filed January 4, 1892. Serial No. 417,003. (No model.)

To all whom it may concern:

Be it known that we, MARTIN V. B. ETHRIDGE, of Everett, and HENRY E. WAITE, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Rotary Marking-Stamps, of which the following is a specification.

This invention has for its object to provide a simple hand-operated machine for accurately postmarking and canceling the stamps of letters and other pieces of mail-matter in fourth-class post-offices, where the business of the office does not warrant the employment of the more expensive rapidly-operating and complicated machines such as are now in use in some of the larger offices.

The invention consists in the several improvements which we will now proceed to describe and claim.

Of the accompanying drawings, forming part of this specification, Figure 1 represents a side elevation of a machine embodying our improvements, a portion of the machine being shown in section. Fig. 2 represents a top plan view. Fig. 3 represents an elevation from the side opposite to that shown in Fig. 1. Figs. 4 and 5 represent end elevations showing the canceling and marking wheel in different positions. Fig. 6 represents a section on line 6 6 of Fig. 1. Fig. 7 represents a perspective view of one of the parts of the machine. Fig. 8 represents a side view of a modification.

The same letters and figures of reference indicate the same parts in all the figures.

In the drawings, *a* represents a support or table, which is provided with a pad *a'*, adapted to absorb and hold ink or other coloring-matter, and with an impression-bed *a²*, which co-operates with the rotary printing and canceling wheel *b*, hereinafter referred to, in marking letters and other pieces of mail-matter, the bed supporting the piece to be marked, while the wheel *b* rotates over the bed and marks the upper surface of the piece.

The support *a* is preferably a casting horizontally arranged and having recesses or pockets in its upper surface to receive the pad *a'* and impression-bed *a²*, as clearly shown

in Fig. 1, the pad being preferably of felt, while the impression-bed is preferably of a suitable elastic material, such as vulcanized rubber. The pad *a'* and bed *a²* are arranged in line with each other, so that the wheel *b* in moving lengthwise of the table *a* in the direction indicated by the arrow in Fig. 1 will pass first over the pad *a'* and receive ink therefrom and will then pass over or upon a piece of mail-matter resting upon the bed *a²*.

The marking-wheel *b* is affixed to a shaft *c*, which is journaled in bearings in ears formed on a carrier *d*, which is adapted to be moved over the support *a* lengthwise of the latter. Said wheel has on its periphery a series of marking-ribs *8 8*, adapted to form parallel cancellation-marks on the upper face of a letter and the postage-stamp thereon. The periphery of the wheel is provided at or near one end of the series of ribs with a die having the types or printing characters which print the name, date, &c., at one end of the parallel cancellation-marks, the wheel or marking device being preferably constructed to make the impression now stamped on mail-matter by machinery.

The carrier *d* is fitted to slide in a guide or way formed in a swinging arm or guide-bar *e*, which is pivoted at *f* to ears formed on one end of the support *a*. The carrier is preferably engaged with the bar *e* by means of a rib *d'*, formed on the carrier, and guides *e'*, formed on the guide *e*. (See Fig. 6.) The carrier has a web or shank *d³*, which passes through a longitudinal slot *e²*, formed in the guide *e*, said slot being of such length as to permit the carrier to move nearly the entire length of the guide *e*, as shown in Fig. 2. A handle *d²* is attached to said shank for the convenience of the operator, and the shank is preferably provided with anti-friction rollers *d⁴*, which run on the upper surface of the guide.

g represents a rack affixed to one side of the guide *e*. To the shaft *c* of the marking-wheel is affixed a gear *h*, which meshes with the rack *g*. It will be seen that when the carrier *d* is moved along the guide *e* the rack *g* and gear *h* will cause the marking-wheel to rotate in a direction corresponding to the di-

rection of movement of the carrier, so that the marking-wheel is positively rotated and is always kept in operative relation to the inking-pad a' and impression-bed a^2 .

5 The guide-bar e , as previously stated, is free to swing vertically on its pivot f . Hence the marking-wheel can rise and fall.

We have provided the support a with a device whereby the marking-wheel is raised 10 when it is being returned to its starting position after it has marked a letter on the bed a^2 , so that the marking-wheel will not touch the letter on its return movement. Said device is here shown as a bar k , which is provided with ears $k^1 k^2$, which are pivotally 15 connected by a bolt m with fixed ears $o o$ on the support a . The inner edge of the bar k is provided with a beveled face k' , Fig. 2, at the end of the bar which is nearest the pivot 20 f of the guide e . The top surface of the bar k is provided at the end opposite the beveled face k' with an incline k^3 , which is adapted to raise the marking-wheel during its backward movement, as hereinafter described.

25 The bar k is normally held in the position shown in Fig. 5 by means of a spring p . When the carrier d is at the extreme of its inward or backward movement, it is entirely separated from the bar k . When the carrier is moved outwardly from the position shown in dotted lines in the direction indicated by the arrow in Fig. 1, one end of the marking-wheel shaft c strikes the beveled 35 face k' and forces the bar k outwardly from its normal position, as shown in Fig. 4, until the carrier and marking-wheel have passed beyond the outer end of said bar, whereupon the spring p returns the bar to the position shown in Fig. 5, the bar being thus located in such 40 position that when the carrier moves backwardly the marking-wheel shaft c strikes the lower portion of the incline k^3 and is raised by the latter to the upper surface of the bar k , as shown in Fig. 5, the shaft c rolling along said 45 upper surface until it reaches the inner end of the bar k . When the shaft c drops from the bar k , the marking-wheel falls upon the inking-pad a' , and is prevented from striking an injurious blow on said pad by a spring s , 50 connecting the outer end of the guide e with a fixed arm t . Hence the marking characters of the wheel cannot be injured or worn by the dropping of the wheel or marking device.

u represents an inclined flange affixed to 55 the support a , said flange having a raised inclined portion u' , arranged to raise the shaft c when the latter in moving forward is passing the incline k^3 , said flange raising the shaft in time to permit the bar k to move inwardly 60 under the shaft and support the latter during its backward movement.

a^4 represents a table affixed to the support a and extending in a substantially horizontal direction at right angles with the direction of 65 movement of the marking-wheel and its carrier, the upper surface of said table being

flush with the upper surface of the impression-bed a^2 . The table a^4 is of suitable length to contain an accumulation of letters or other 70 pieces of mail-matter and is provided at one edge with a vertical guide or flange a^5 , which guides the letters moved along said table to the proper position over the impression-bed, the letters being arrested when they have 75 been moved far enough onto the impression-bed by a shoulder a^6 , Figs. 4 and 5, formed on the support a .

The operation of the machine is as follows: The operator, grasping the handle d^2 with one 80 hand, moves it back and forth along the guide e , thus causing the positive rotation of the marking-wheel in the manner already described. When the wheel is at the inner end of its movement, the operator moves a letter to position on the impression-bed, said position 85 being determined by the guide a^5 and shoulder a^6 . The operator then moves the marking-wheel and its carrier outwardly, the marking-surfaces of the wheel being first inked by their rolling contact with the inking-pad and then brought to bear upon the 90 letter, to which they transfer the ink sufficiently to make the desired impression in the proper relative position on the letter; the marking-wheel being timed so that it will always commence its marking action at a given 95 point on the letter. The bar k is displaced by the marking-wheel shaft during the outward movement of the marking-wheel, as already stated. When the marking-wheel has 100 performed its function and its shaft has passed outwardly far enough to release the bar k , the letter is forced inwardly by its spring, the marking-wheel being raised at the same time by the flange u' , so that when the 105 marking-wheel is returned to its starting position it is raised out of contact with the letter. Hence there is no possibility of defacement of the letter by the marking-wheel during its return movement. 110

We do not limit ourselves to the devices and details of construction here shown, nor to the conjoint use of all the described features of the machine or their equivalents. For example, the devices for automatically raising the 115 marking device during its backward movement may be variously modified or may be omitted, leaving the operator to raise the marking device by raising the guide e while moving the marking device backward. 120

Instead of rotating the marking device by the rack and gears, the same result may be accomplished by means of a flexible cord 3^2 , attached at its ends to supports on the guide 125 e and passed around the periphery of a pulley s' , affixed to the shaft of the marking-wheel, as shown in Fig. 8. In fact, the marking device may be rotated by frictional contact with the surfaces on which it bears; but I do not recommend this, as the positive control 130 over the marking device, which is very desirable, would in such case be wanting.

The carrier may be moved in one direction by a treadle *t'* and in the opposite direction by a spring *n*, as shown in Fig. 8.

We claim—

5 1. A table or support having an inking-pad and an impression-bed, combined with a guide pivoted at one end to a fixed support and adapted to swing vertically, and a carrier having a rotary marking device movable on said
10 guide, the carrier being adapted to move the marking device successively over the inking-pad and the impression-bed and to raise and lower said device, as set forth.

15 2. A support or table having an inking-pad and an impression-bed, combined with a guide pivoted at one end to a fixed support and adapted to swing vertically, a carrier having a rotary marking device movable on said
20 guide, and means for rotating said marking device when it is being moved along the guide, as set forth.

25 3. A support or table having an inking-pad and an impression-bed, combined with a guide, a carrier having a rotary marking device movable on said guide, a rack affixed to said guide, and a gear on the shaft of the marking device engaged with said rack, whereby rotary
30 motion is imparted to the marking device, as set forth.

30 4. A support or table having an inking-pad and an impression-bed, combined with a vertically-movable guide, and a carrier movable lengthwise of the guide and adapted by the

movability of the guide to approach and recede from the pad and bed, and a marking
35 device supported by said carrier, as set forth.

5. A support or table having an inking-pad and an impression-bed, combined with a pivoted guide adapted to swing vertically, a carrier movable both horizontally and vertically,
40 a rotary marking device on said carrier, and means for automatically raising said carrier and marking device during their backward movement, substantially as and for the purpose specified.

45 6. A support or table having an inking-pad and an impression-bed, combined with a guide, a carrier having a rotary marking device movable on said guide, means for rotating the printing device, and a laterally-yielding bar
50 having at one end a beveled side face and at its opposite end an incline, said bar being arranged to be displaced by the marking device during the forward movement of the latter and to raise the marking device during its
55 backward movement, as set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 30th day of December, A. D. 1891.

MARTIN V. B. ETHRIDGE.
HENRY E. WAITE.

Witnesses:

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A. D. HARRISON.