No. 668,353. Patented Feb. 19, 1901.

W. R. LANDFEAR.

MAIL CANCELING AND POSTMARKING MACHINE.

(Application filed Jan. 8, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

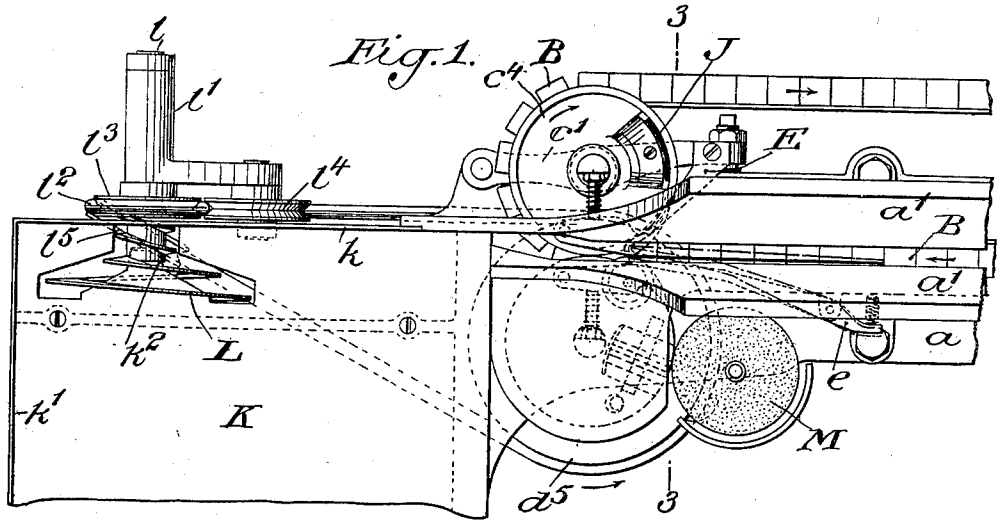


Fig. 2.

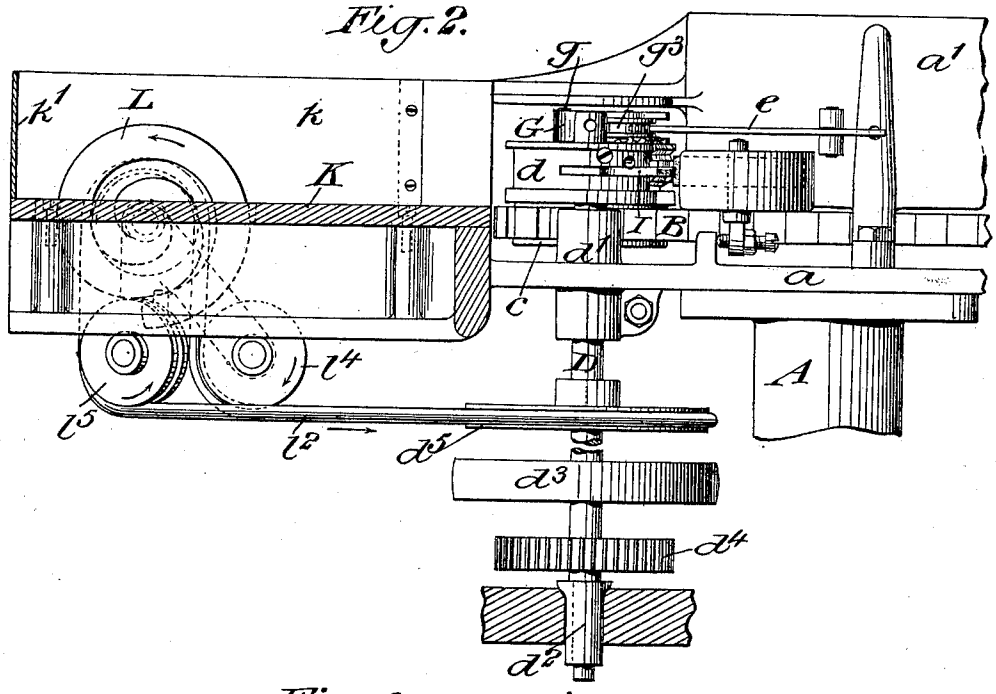


Fig. 6.

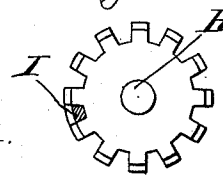
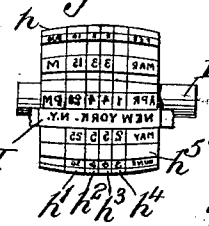


Fig. 7.



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No. 668,353. Patented Feb. 19, 1901.

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MAIL CANCELING AND POSTMARKING MACHINE.

(Application filed Jan. 8, 1900.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

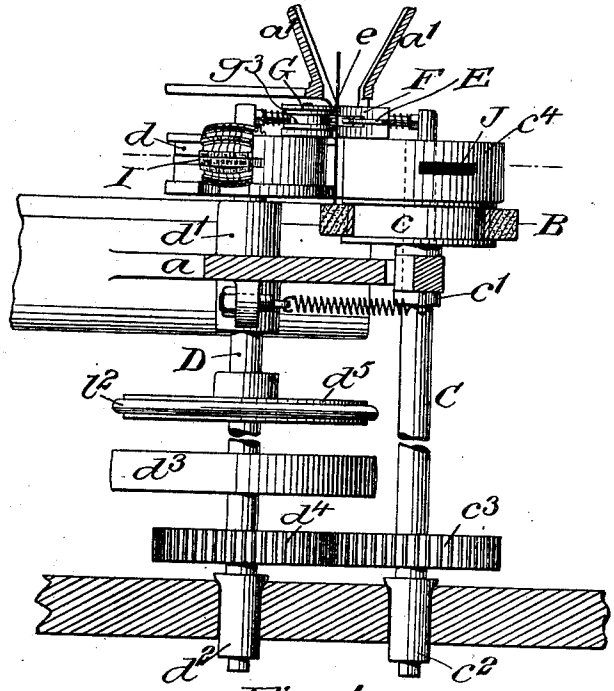


Fig. 4.

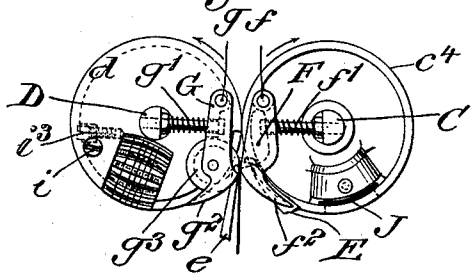
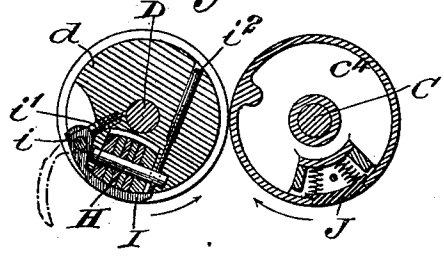


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM R. LANDFEAR, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE HAMPDEN CANCELLING MACHINE COMPANY, OF HOLYOKE, MASSACHUSETTS.

MAIL CANCELING AND POSTMARKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 668,353, dated February 19, 1901.

Application filed January 8, 1900. Serial No. 693. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. LANDFEAR, a citizen of the United States, and a resident of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Improvement in Mail Canceling and Postmarking Machines, of which the following is a specification.

My invention relates to an improvement in mail canceling and postmarking machines, with the object in view of simplifying and improving the mechanism for printing the postmark upon the letters to be canceled.

My present invention is more particularly directed to improving the postmarking device proper, the means for engaging and drawing the letters between the postmarking-drum and impression-roll, and the stacking mechanism.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a top plan view of a portion of a mail canceling and postmarking machine embodying my improvements. Fig. 2 is a side view of the same partially in section. Fig. 3 is a transverse vertical section taken in the plane of the line 3 3 of Fig. 1. Fig. 4 is a detail view, in top plan, of the canceling-drum and impression-roll. Fig. 5 is a transverse horizontal section through the same. Fig. 6 is a side view of the type-bearing disks, and Fig. 7 is an edge view of the same.

I have only represented herein so much of a mail canceling and postmarking machine as will enable a complete understanding of the operation of my improvements relating thereto.

A designates a supporting-upright of the machine, upon which is mounted the top frame a thereof. Above the frame a I provide a chute or trough a', along which the letters are fed one by one edgewise by means of an endless belt B into engagement with the canceling and postmarking device. This belt B passes around a pulley c, fixed to a vertical shaft C, mounted in suitable upper and lower bearings c' c^2.

The canceling and postmarking drum is denoted by d, and it is fixed to rotate with a vertical shaft D, mounted in upper and lower bearings d' d^2 in the frame. This vertical shaft D is provided with a drive-pulley d^3, by means of which the shaft may be rotated from a source of power not shown.

The shafts D and C are geared together so as to rotate in opposite directions by a pair of spur-gears d^4 c^3. An impression-roll c^4 is mounted to rotate with the shaft C and is located in position to engage the face of the canceling and postmarking drum d.

The usual stationary stop E and yielding stop e are carried by the top frame a in position to engage the advance edge of an envelop and temporarily stop it until it is engaged by the grippers carried by the drum d and roll c^4.

The improved device which I employ for gripping the envelop and positively drawing it between the drum and roll is constructed as follows: A spring-actuated gripping-arm F is hinged at f upon the top of the roll c^4 near its periphery, the said arm being adapted to project beyond the periphery of the said roll. This arm F is fitted to yield inwardly against the tension of a coil-spring f'. The arm F is further provided with a curved-face finger or extension f^2, fitted to travel along one face of the envelop as it is drawn between the roll and drum.

A spring-actuated swinging arm G is hinged at g upon the top of the drum d near its periphery, the free end of the said arm being fitted to normally project beyond the periphery of the said drum. This arm G is adapted to be forced inwardly against the tension of a coil-spring g'. This arm G is provided with a curved-face projection or finger g^2, opposite the curved-face finger f^2. The curved-face fingers are arranged to engage each other as the drum and roll are rotated and serve to permit the two gripping-arms to engage and separate from each other with a minimum amount of noise. The arm G is further provided with a yielding-roller g^3, arranged in position to engage the inner end of the curved-face finger f^2 as the drum and roll are ro-

tated, thus further reducing the noise of the machine and also saving the parts from injury when running at high speed.

The means which I employ for postmarking and canceling the letters in such a manner as to bring the printed matter into a compact space is as follows: A plurality of type-bearing disks are mounted so that they may be rotated independently of one another upon an axle-pin H, secured in the drum *d*. In the present instance I have shown six of these disks, (denoted, respectively, by *h*, *h'*, h^2, h^3, h^4, and h^5,) which disks are mounted to be rotated in a plane transverse to the plane in which the canceling-drum is rotated. Each of these disks is provided with an annular series of teeth, upon the outer faces of which are formed figures or characters. In this manner the disks may be manipulated in such a way as to bring any desired month, day, hour, and minute into position to be printed upon the envelop passing between the drum and the roll. For instance, in the combination of the numbers and characters upon the several disks represented in Fig. 7 there would be printed upon the envelop the date "Apr. 14—4:20 P. M."

Instead of having the name of the place upon the drum as an extension of the date I provide an arm I, hinged on an eccentric pintle *i* in a depression in the periphery of the drum, the said arm having the place-bearing type upon its outer curved face. This arm is fitted to swing into the recesses between each adjacent pair of teeth upon the disks, thus bringing the name of the place directly beneath the date. The arm I also serves to hold the disks in their rotary adjustments relatively to each other. To release the disks to permit one or more of them to be shifted, the arm is swung outwardly away from the drum. The arm is held either in its open or closed position by means of a spring-actuated follower *i'*, mounted in the drum in position to bear against the arm at a point near its eccentric hinge-pintle *i*.

To accurately adjust the hinged end of the arm outwardly and inwardly, the pintle *i* may be partially rotated in one or the other direction and locked in such position by a set-screw i^3. The free end of the arm is adjusted by means of a screw i^2, passing through from the opposite side of the drum into engagement with the inner side of the said arm.

To insure the perfect printing of the type carried by the postmarking-dies and the swinging type-carrying arm, I provide the periphery of the impression-roll c^4 with a spring-actuated yielding platen J, located in position to form a backing only for the type upon the said arm as the drum and roll are rotated. This structure will cause the type upon the disks and the type upon the swinging arm to both print absolutely perfectly upon the letter passing between the drum and roll, even if the type upon the arm and the type upon the disks are not absolutely in the same curved plane.

The mechanism which I employ for stacking the letters after they have been postmarked and canceled is as follows: A stacker-table K is secured in position to receive the envelops as they are delivered from between the canceling-drum and impression-roll, the table being so situated that the letters will be received at a point adjacent to the end wall *k* of the table, the momentum imparted to the letter being sufficient to slide it along its bottom edge until its advance edge strikes the side wall *k'* of the table. In the bottom of the table, adjacent to the end and side walls *k* and *k'*, I provide an open spiral L, being of greatest diameter at its outer end and gradually decreasing in diameter to a point where it is attached to the end of a short horizontal shaft *l*, mounted in suitable bearings *l'*. This shaft is rotated by means of a belt l^2, which passes around a pulley l^3, fixed on the shaft *l*, and from thence partially around idler-pulleys l^4 l^5 to and around a pulley d^5 on the vertical shaft D. The pulley l^3 is considerably smaller than the pulley d^5, so that the shaft *l* is driven at a much higher rate of speed than the shaft D. The shaft *l* does not extend above the top of the table K, and the envelops are thus permitted to freely slide over the shaft and between the walls of the open spiral L. The table K is extended into the center of the spiral a short distance, as shown at k^2, thus leaving a substantially Y-shaped opening in the table for the passage of the walls of the spiral, and thereby obviating any tendency on the part of the envelops becoming cramped between the spiral and the bottom of the table. The spiral is rotated in a direction tending to move the envelops laterally away from the end wall *k*. A suitable traveling follower may be employed, against which the envelops may be forced as they are fed from the spiral, which follower I have not shown in the accompanying drawings.

It is to be understood that any suitable inking-roll—as, for instance, a roll M—may be mounted in the frame in position to supply ink to the type upon the canceling-drum.

It is evident that changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein shown and described; but

What I claim is—

1. The combination with a canceling-drum and impression-roll, of spring-actuated gripping-arms carried thereby and a roller mounted in one of the arms, substantially as set forth.

2. The combination with the rotary canceling-drum, a plurality of type-carrying disks mounted on an axis transverse to the axis of the canceling-drum and a curved swinging type-carrying arm hinged in posi-

tion to swing across the edges of the disks to permit the type on the arm to be brought into close proximity to the type on the disks along the periphery of the drum, substantially as set forth.

3. The combination with a rotary canceling-drum, of a plurality of freely-rotatable type-carrying disks mounted on an axis transverse to the axis of the canceling-drum and a curved type-carrying arm arranged in position to be swung into and out of engagement with the said disks for locking and releasing them, substantially as set forth.

4. The combination with a canceling-drum, a plurality of type-carrying disks mounted therein and a type-carrying arm hinged in position to be swung across the peripheries of the said disks, of an impression-roll and a yielding platen carried thereby in position to form a backing only for the type upon the said arm as the drum and roll are rotated, substantially as set forth.

5. The combination with a canceling-drum, of a plurality of type-bearing disks mounted therein, a swinging type-carrying arm mounted in position to be swung across the peripheries of the said disks and means for adjusting the free end of the said arm outwardly and inwardly, substantially as set forth.

6. The combination with a canceling-drum, of a plurality of type-bearing disks mounted therein, a swinging type-carrying arm mounted in position to be swung across the peripheries of the disks and means for adjusting the hinged end of the arm outwardly and inwardly, substantially as set forth.

7. The combination with a canceling-drum, of a plurality of type-bearing disks mounted therein, a swinging type-carrying arm mounted in position to be swung across the peripheries of the disks, means for adjusting the free end of the arm outwardly and inwardly and means for adjusting the hinged end of the arm outwardly and inwardly, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 24th day of October, 1899.

WILLIAM R. LANDFEAR.

Witnesses:
FREDK. HAYNES,
C. S. SUNDGREN.