

No. 688,214.

Patented Dec. 3, 1901.

H. E. WAITE.
MAIL MARKING MACHINE.

(Application filed Feb. 19, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

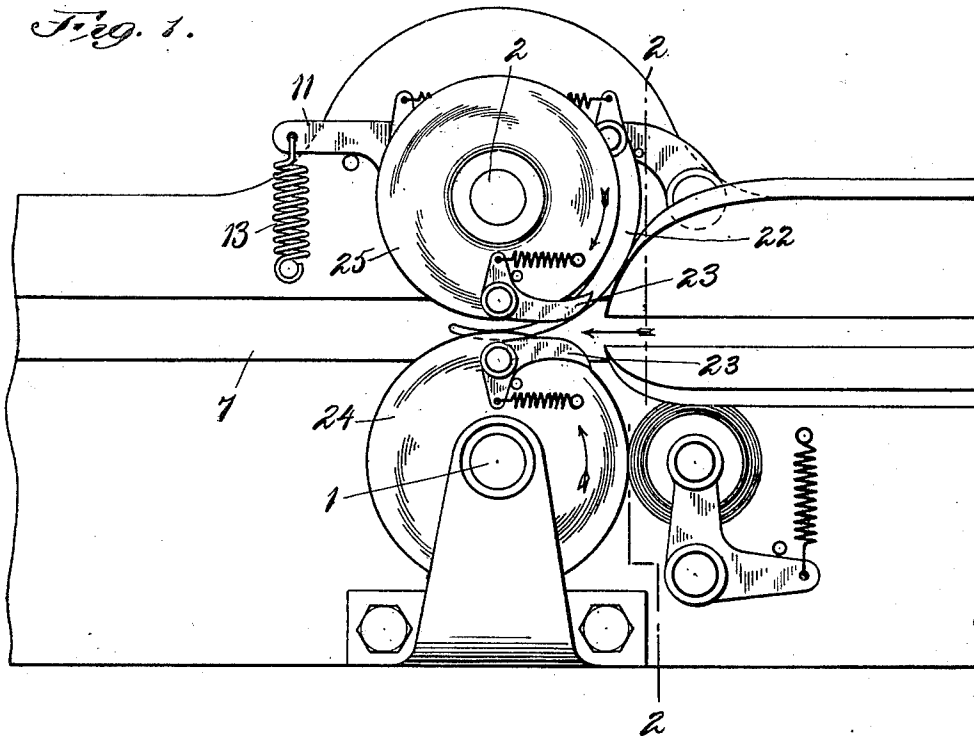


Fig. 2.

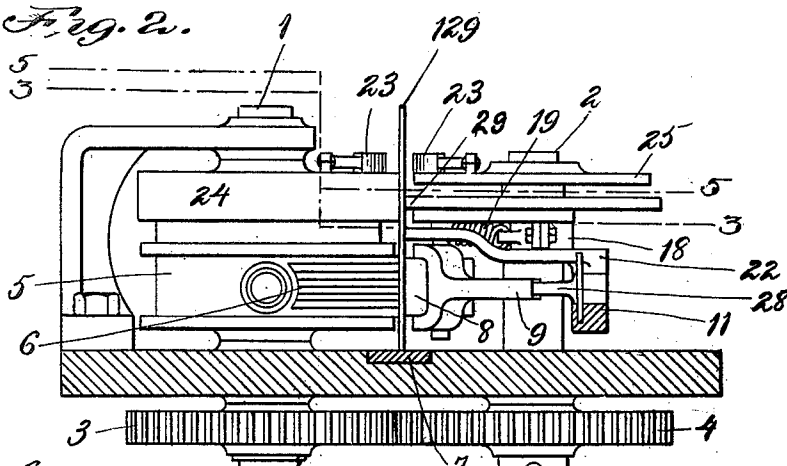
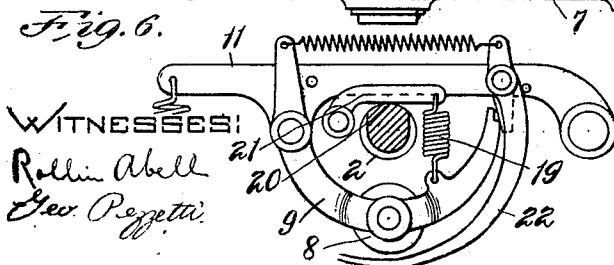


Fig. 6.



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2 Sheets—Sheet 2.

Fig. 3.

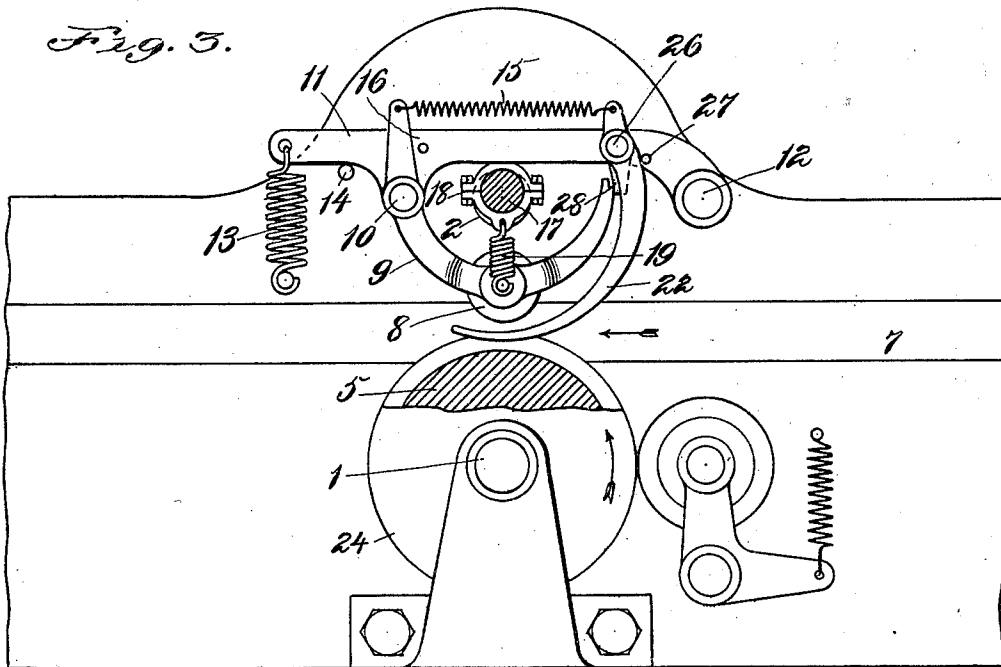


Fig. 5.

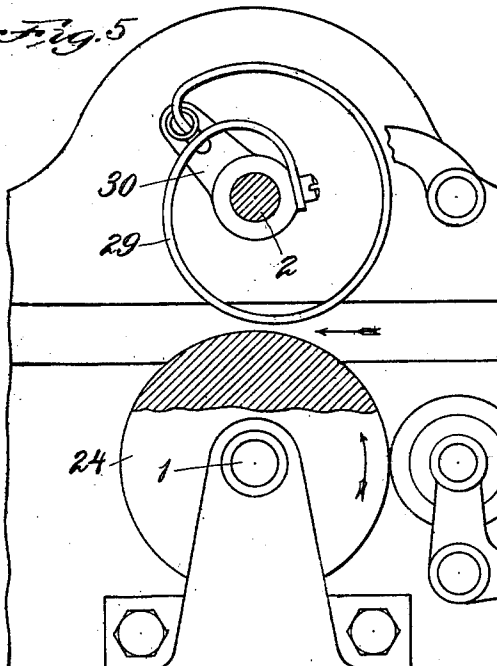
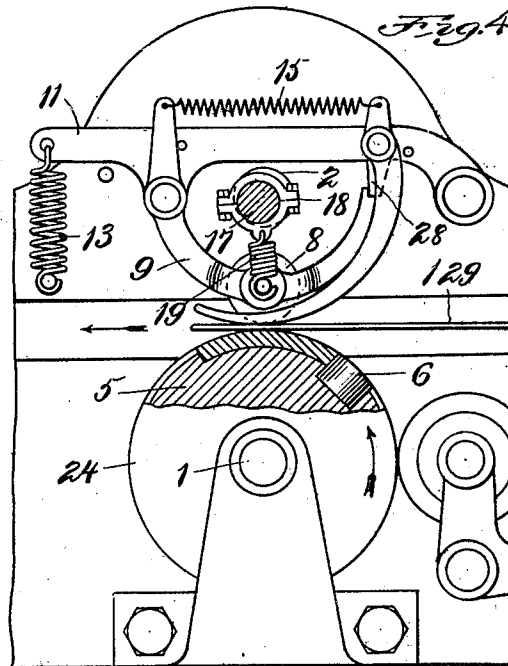


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY E. WAITE, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO J. GEORGE COOPER, OF BOSTON, MASSACHUSETTS.

MAIL-MARKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 688,214, dated December 3, 1901.

Application filed February 19, 1901. Serial No. 47,912. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WAITE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new
5 and useful Improvements in Mail-Marking Machines, of which the following is a specification.

This invention relates to machines for post-marking and canceling mail or matter of a
10 similar nature; and its objects are to attain simplicity of construction and avoid noise in running.

My invention relates to that class of mail-marking machines in which the marking and
15 impression members are intermittently separated when no letter is present by means of mechanism which is rendered inoperative by the presence of a letter; and it consists in
20 improvements in connection with the marking and impression members, as hereinafter described and claimed.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents
25 a plan view of a mail-marking machine embodying my improvements. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents a section on the line 3 3 of Fig. 2. Fig. 4 represents a similar view showing the
30 parts in a different position. Fig. 5 represents a section on the line 5 5 of Fig. 2. Fig. 6 represents a detail horizontal section showing a modified form of mechanism for retracting the impression-roll.

The same reference characters indicate the
35 same parts in all of the figures.

Referring to the drawings, 1 2 are fixed shafts connected by gears 3 4 and adapted to be continuously rotated by suitable power at
40 equal speeds.

5 is a marking-roll mounted on the shaft 1 and having a die or stamp 6 for postmarking and stamp-canceling letters. In the drawings the shafts 1 2 are mounted in a vertical position, and the machine is provided
45 with a carrying-belt 7 below the path of the letters, the direction in which the letters are fed being indicated by arrows in the several figures.

8 is an impression-roll adapted to coact
50 with the die 6 in marking the letters, said roll being journaled in a rocker-arm 9, piv-

oted at 10 to a second rocker-arm 11, which is pivoted at 12 to the bed of the machine. The free end of the rocker-arm 11 is normally moved in the direction of the shaft 1 by a
55 heavy spring 13, which yields only for the thickness of the letter, the movement of said arm being limited by a stop-pin 14. To the heel of the arm 9 is attached a light spring 15, of sufficient strength to rotate the said arm
60 on its pivot and throw the impression-roll 8 into printing position, the movement of said arm being limited by stop-pin 16. The shaft 2 is formed with an eccentric cylindrical portion 17, surrounded by a collar or strap 18, which
65 is connected by a spring 19 with the arm 9. The strap 18 is reciprocated or vibrated continuously by the rotation of the shaft 2, and spring 19 is made of greater strength than
70 spring 15, so that when no letter is present it acts as a rigid connection or link by means of which the impression-roll 8 is retracted in each revolution of the parts during the time
75 when the marking-die 6 is opposite the impression-roll, thereby avoiding a deposit of ink on the impression-roll, which might soil the back of the next-succeeding letter. Any other suitable mechanism might be substituted for the eccentric 17, such as the cam
80 20, (shown in Fig. 6,) acting on a pivoted arm 21, which is connected by spring 19 with the arm 9, carrying the impression-roll. It will be noted that during this intermittent retraction of the impression-roll when no letter is
85 present only the force of the light spring 15 has to be overcome, and not that of the heavy spring 13, which gives the printing pressure. There is thereby avoided the excessive noise and racking strains to which machines of this
90 character have been formerly subjected.

When a letter is fed to the machine, it is carried along by the belt 7 and arrested by a trip-arm 22 or other suitable stop until the marking-die 6 has come into the proper position to mark the letter. The letter is then
95 engaged and started in between the rolls by a pair of yielding grippers 23 23, mounted on disks 24 25 on the respective shafts 1 2. The trip 22 is pivoted at 26 to the rocker-arm 11, and its heel is connected to one end of the
100 spring 15, which normally throws it out across the path of the letter, its outward movement

being limited by the stop 27. Rigid with the trip is a locking-dog 28, which is located just out of the path of the free end of arm 9 when the trip is in normal position, as shown in Fig. 3. The advancing edge of the letter 129 oscillates the trip 22 and moves the locking-dog 28 into the path of the arm 9 just before the eccentric 17 starts to retract said arm. The locking-dog then acts as a rigid connection or support between the arm 9 and the rocker-arm 11, and the impression-roll 8 is therefore held out in printing position by the full force of the spring 13. As the letter advances it is marked by the coaction of the impression-roll with the printing-die, as shown in Fig. 4, and during the marking of the letter the spring 19, whose strength is considerably less than that of the spring 13, stretches to permit the retraction of the eccentric-strap 18. A proper shape imparted to the ends of the arm 9 and locking-dog 28 will cause them to be retained in engagement as long as the printing pressure is exerted against the arm 9. After the die has marked the letter the letter must continue to be positively advanced until it has wholly passed from between the rolls. For this purpose I provide a novel and simple carrier. (Illustrated in Figs. 2 and 5.) The carrier as here shown comprises a metallic spiral, volute, or scroll spring 29, whose inner end is secured to the shaft 2 and whose outer end is secured to an arm or member 30, rigid with said shaft, the connection being such as to permit said outer end to be displaced inwardly toward the shaft. The carrying member 29 coacts with a cylindrical carrying-surface forming the periphery of disk 24 on the shaft 1 of the printing-roll to engage the letter and advance it after the die 6 has passed from contact with the latter. The outer segmental acting portion of the member 29 exerts throughout its length a substantially equal pressure upon the letter.

I claim—

1. In a mail-marking machine, a normally stationary support adapted to yield for thick

letters, a normally-yielding member of a printing-couple, mechanism to intermittently retract said member when no letter is present, and letter-controlled means to rigidly connect said member and said support.

2. In a mail-marking machine, a stationary pivotal support adapted to yield for thick letters, a normally-yielding arm pivoted thereto, a member of a printing-couple carried by said arm, mechanism to intermittently retract said arm when no letter is present, a letter-actuated trip pivoted to said support, and a locking member movable by said trip into position to support the free end of said arm.

3. In a mail-marking machine, coacting marking and impression members one of which is movable toward and away from the other, a continuously-vibrated device adapted to intermittently retract the movable member when no letter is present, a spring normally acting as a rigid connection between said device and the movable member, and letter-controlled means to hold the movable member in printing position.

4. In a mail-marking machine, a stationary support adapted to yield for thick letters, a normally-yielding member of a printing-couple, a continuously-vibrated device adapted to intermittently retract said member when no letter is present, a spring normally acting as a rigid connection between said device and member, and letter-controlled means to rigidly connect said member and said support.

5. In a mail-marking machine, printing and impression members, a rotary volute composed of a resilient strip of rigid material, and an opposed rotary carrying member, said volute and opposed carrying member acting to supplement the carrying effect of the printing and impression members.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY E. WAITE.

Witnesses:

H. L. ROBBINS,
C. F. BROWN.