(No Model.) 2 Sheets—Sheet 1.

J. GEARY.

MACHINE FOR MARKING ENVELOPS OR THE LIKE.

No. 568,845. Patented Oct. 6, 1896.

Fig. 1.

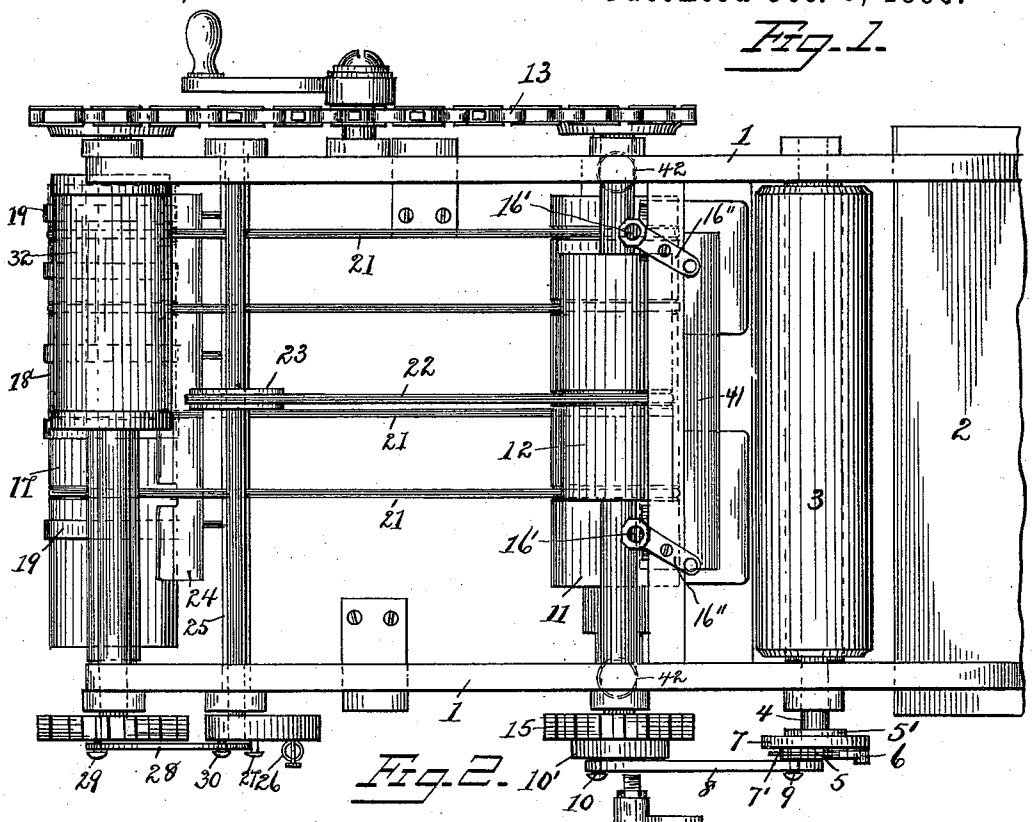
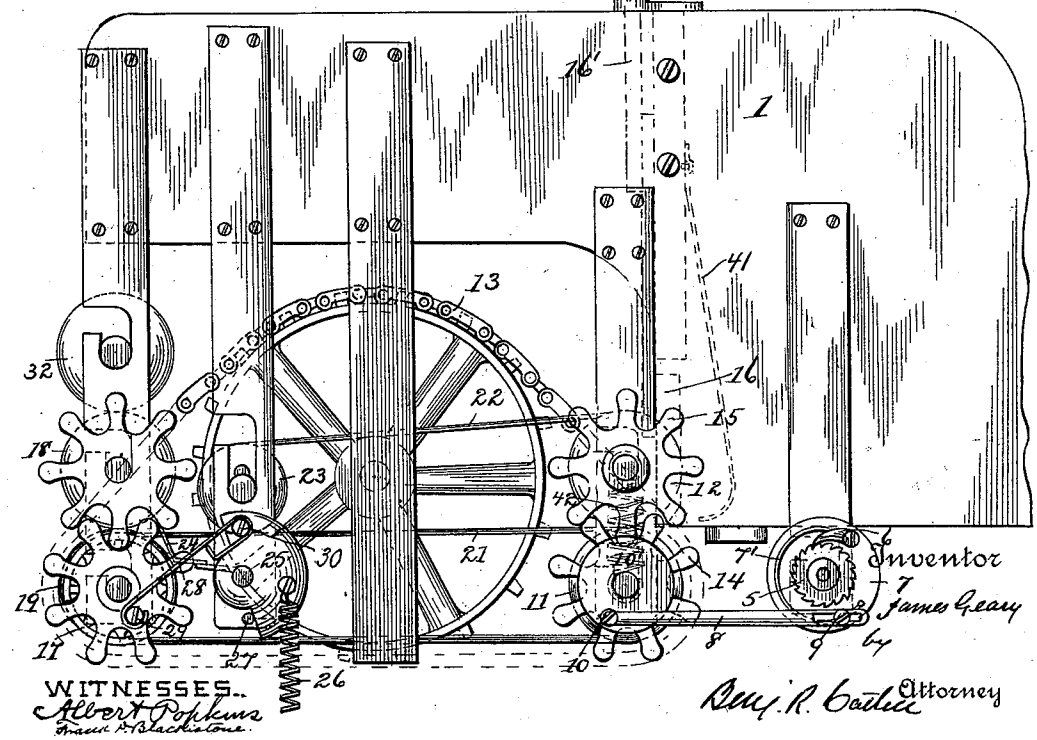


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

J. GEARY.

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Fig. 3.

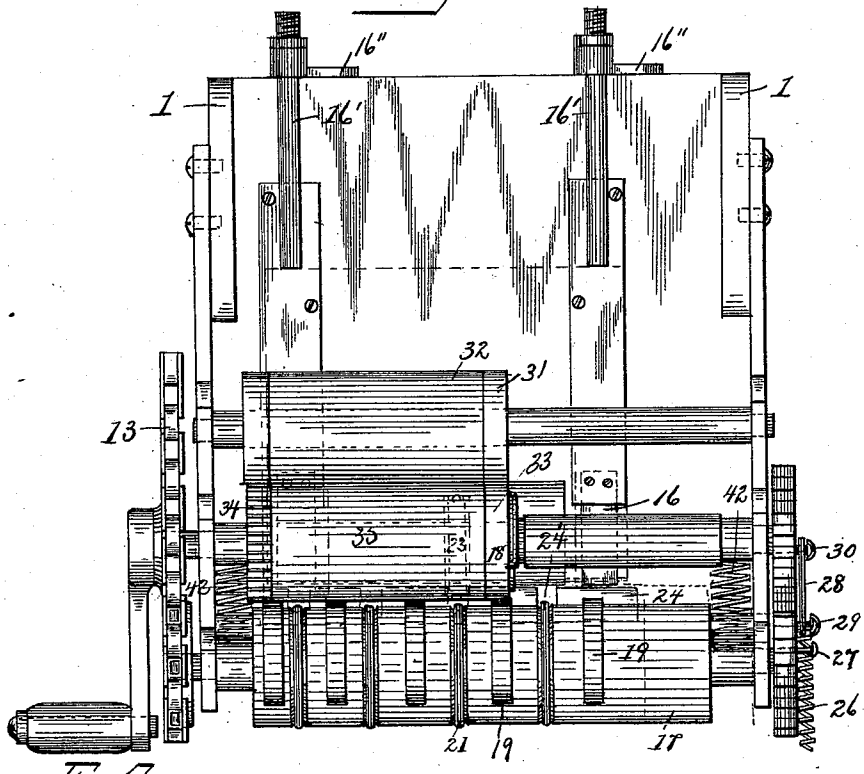


Fig. 4.

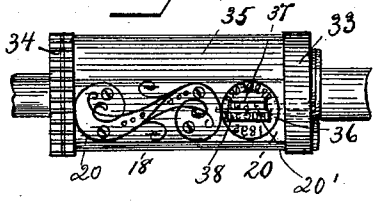


Fig. 5.

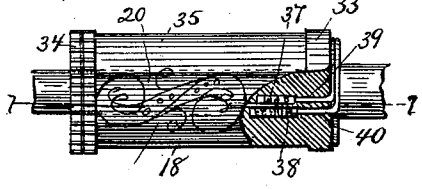


Fig. 6.

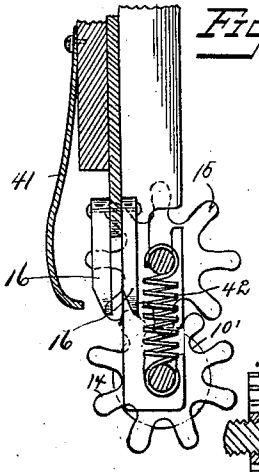
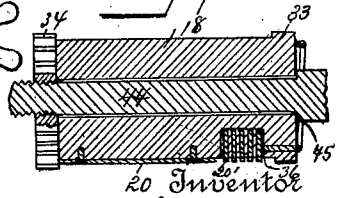


Fig. 7.



Witnesses
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Frank D. Blackstone.

Inventor
James Geary
by
Benj. R. Catlin Attorney

UNITED STATES PATENT OFFICE.

JAMES GEARY, OF BRADFORD, PENNSYLVANIA, ASSIGNOR OF PART OF HIS RIGHT TO JOSEPH C. GREENEWALD AND MARY E. GEARY, OF SAME PLACE.

MACHINE FOR MARKING ENVELOPS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 568,845, dated October 6, 1896.

Application filed September 23, 1895. Serial No. 563,427. (No model.)

To all whom it may concern:

Be it known that I, JAMES GEARY, a resident of Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Marking Letter-Envelops and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to machines for marking mail-matter and the like, and has for its object to simplify the construction of such machines and at the same time secure accuracy and increased range and facility of operation; and the invention consists in the construction hereinafter described and particularly pointed out.

In the accompanying drawings, Figure 1 is a plan. Fig. 2 is a side elevation. Fig. 3 is an end elevation. Fig. 4 is an elevation of a type-cylinder. Fig. 5 is an elevation of a type-cylinder, partly broken away. Fig. 6 is a sectional detail, and Fig. 7 is a longitudinal section of a type-roller.

Numeral 1 denotes a frame of any suitable kind to support the operating mechanism.

2 indicates a feeding-table, and 3 is a feeding-roller situated in an opening in the table and adapted to move letters or papers placed therein. This roller, which is provided with any suitable frictional surface, is loosely supported upon the shaft 4, to which is fixed a ratchet-wheel 5. This ratchet-wheel and the shaft are intermittently moved by a driving-pawl 6, pivotally connected to a sleeve or ring 7, loosely supported on an extension or hub 5′ of the ratchet-wheel.

7′ is a spring to insure the engagement at suitable times of the driving-pawl with the teeth of the ratchet-wheel.

The sleeve or ring 7 is partially rotated in reciprocal manner by the connecting-rod 8, loosely pivoted at 9 and 10 to eccentric pins fixed, respectively, to the sleeve 7 and a roller 11.

Rollers 11 and 12 have, preferably, elastic surfaces and are adapted to grip and move a letter pushed between them by the feeding-roller 3. These rollers may be loosely held in contact by springs 42, as represented. Roller 11 is driven by the gearing indicated at 13 or in any convenient manner, and it mediately drives roller 12 by the gear-wheels 14 and 15.

16 denotes retarding devices or fingers, made of rubber or other elastic material, which have their free ends situated in the path of a letter fed forward by the roller 3 against and under said fingers, which are adapted to yield sufficiently to permit a letter or the like to be pushed under them and fed forward to the gripping feed-rollers 11 and 12.

Letters or the like in greater or smaller numbers, as required, being placed over the roller 3, the lower one will be moved thereby and said lower letter will also move one or more of the superincumbent letters against the retarding-fingers. The friction of the feeding-roller on the letter in contact therewith will be sufficient to overcome the elasticity of the fingers 16 to an extent sufficient to permit the passage of the letter, while others resting upon it will be arrested by said fingers. In some cases to insure greater certainty and delicacy of operation a duplicate arrangement of fingers, one in advance of another, as represented, may be employed, though the invention is not limited to the particular number and arrangement of these devices.

The roller 11 is continuously moved by means of its gear connection, and the rod 8 operates at intervals in an obvious manner to positively rotate the feeding-roller 3 by the medium of the pawl and ratchet. When, however, the said rod has completed its movement to the rear, it moves forward and reverses the movement of the pawl-supporting ring and the pawl slips over the ratchet-teeth until the movement of the rod is again reversed. The feeding-roller 3 is thereby positively moved a short distance to carry a letter between the gripping feed-rollers 11 and 12, and then rests, except it be further rotated by the friction of the letter that is being moved by said rollers 11 and 12. This free rotation of the feed-roller at such times avoids sliding friction of the letter thereon.

41 denotes a spring-plate adapted to arrest the forward movement of a pile of letters while permitting two or more to be moved underneath its foot.

16 indicates elastic separating-fingers extending below the foot of the plate. The lower end of the plate is curved, so that its foot is adapted to bear on the upper surface of a letter carried under it and thus retard its progress by suitable friction, thus coöperating with the separating-fingers.

The fingers or retarding devices 16 are adjustably supported in the frame by suitable screw-threaded parts or holders 16′ and proper nuts or by any equivalent means.

17 and 18 denote, respectively, impression and type rollers driven continuously by gearing substantially as indicated. The impression-roller 17 is provided with friction-surfaces 19, of any suitable character, adapted to hold and move letters or the like. These surfaces consist, preferably, of cut-away or mutilated bands 19 to provide an impression-surface opposite the type-plate 20, carried by the roller 18.

21 indicates endless letter-moving cords or belts operated by rollers 11 and 17. An endless belt 22 extends about roller 12 and about a pulley or roller 23 and is driven by said roller 12. These rollers are grooved to receive the belts, as shown. The lower half of belt 22 is situated in or near the same horizontal plane as the upper part of a centrally-situated belt 21, whereby a letter may be firmly held and carried by the simultaneous movement of the belts after said letter has been released from the gripping feed-rollers.

24 denotes a bent stop-plate adapted at proper times to be moved into the path of a letter to momentarily arrest the movement of its most advanced corner to permit the other to be moved forward into line therewith. This plate is fixed to and rotatable with a shaft 25. Said shaft is partially rotated in manner to move the stop-plate into the path of a letter by means of a spring 26. A pin 27 or the like is provided to limit the rotation of the shaft by the spring.

At the time a letter is so far advanced that its front edge bears continuously on the stop-plate the latter is moved out of its path by the rod 28, having suitable pivoted connections with the pins 29 and 30, eccentrically fixed to the roller 17 and shaft 25, respectively. The plate is notched at 24′ to provide spaces for the belts 22 when said plate is in operative situation.

The adjustment and operation of the parts are such that the part 19 of the impression-roller 17 is brought by the continuous rotation of said roller opposite the type-plate 20, fixed to roller 18, just after the stop-plate 24 is moved out of the path of the letter to be marked, which is thereupon moved between the rollers to receive the desired impression.

The type-plate 20 is removably fixed to its roller by any suitable means. Its engraved face is raised above the periphery of the main part of the roller and so as to receive ink from an inking-roller 32. In said plate is an opening 20′, which registers with a recess 36 in the type-roller. In the present instance the plate is engraved to print the year inclosed in a circle and also to print a scroll.

The type-holding roller 18 is rotatably held on the shaft 44, provided with an enlargement or shoulder 45. A milled nut 34 has a screw-threaded connection with said shaft, and is used to jam the roller against the shoulder 45 to hold said roller under any desired circumferential adjustment. The type-roller is made thus adjustable to permit marking at various distances from the edge of the letter or sheet.

33 is a fixed band or enlargement near the end of the type-roller and is situated contiguous a mutilated band 19 on roller 17 and also contiguous a band 31 on roller 32. The engraved plate is thus provided with an opening registering with recess 36 in the roller to receive removable type 37 and 38, adapted to indicate time and place or other facts. Said type are removably held in their recess or recesses by the ends of springs 39 and 40, bearing on them through openings in the ring 33.

It is preferred that the type-holding springs should bear on the sides of type, so as to press them in the direction of a line of type, and to effect this openings are provided in the end of the roller, and the springs have each one end fixed to the end of the roller, the other end passing freely through longitudinal openings therein. To give to wire springs or the like a suitable length and insure a proper degree of strength and elasticity they are extended from their point of fixed attachment on the roller around the shaft and have their free ends bent to pass through said openings.

The particular means of transmitting power and of moving the letters and marking them and the mechanical details illustrated and described are not deemed essential except as particularly hereinafter pointed out, and known equivalents can be substituted for the various devices claimed, provided the same mechanical and operative principles are maintained.

Having thus described my invention, what I claim is—

1. In a machine for marking letters and the like, the combination of the feeding-table, the feeding-roller situated in and below the upper surface of the table, devices for intermittently moving the roller to feed a letter, means for moving the letter beyond the feeding-roller, the fixed separating-plate 41, and the adjustable fingers having free ends contiguous the table and held below the lower edge of the said plate and in a different vertical plane, said ends being composed of elastic friction material, substantially as described.

2. In a machine for marking letters and the like, the combination of the feeding-table, the feeding-roller situated in and below the

upper surface of the table, devices for intermittently moving the roller to feed a letter, the gripping feeding-rollers 11 and 12, the impression-roller, the type-roller, said feeding-rollers and impression-roller being circumferentially grooved and the cords or belts situated in said grooves and adapted to convey a letter between and from the feeding-rollers to and between the impression and type rollers, substantially as described.

3. In a machine for marking letters and the like, the combination of the feeding-table, the feeding-roller situated in and below the upper surface of the table, devices for intermittently moving the roller to feed a letter, the gripping feeding-rollers 11 and 12, the impression-roller, the type-roller, said feeding and impression rollers being circumferentially grooved and the cords or belts 22 and 21, situated in said grooves and adapted to convey a letter between and from the said feeding-rollers to and between the impression and type rollers, a cord 22 and a cord 21 having contiguous parts to hold a letter between them while being moved thereby, substantially as described.

4. In a machine for marking letters and the like, the combination of the feeding-table, the feeding-roller situated in and below the upper surface of the table, devices for intermittently moving the roller to feed a letter, the impression-roller, a type-roller, devices comprising endless bands or the like for moving a letter to and between said rollers, a stop-plate provided with notches to receive said bands, mechanism to momentarily move the said plate into the path of a letter until its forward edge is in continuous contact therewith, and devices adapted to subsequently move the plate out of said path, substantially as described.

5. In a machine for marking letters and the like, the combination of the feeding-table, the feeding-roller situated in and below the upper surface of the table, devices for intermittently moving the roller to feed a letter, the impression-roller, a type-roller, devices for moving a letter or the like to and between said rollers, a stop-plate, a shaft to which the plate is fixed, a spring to move the plate into the path of a letter, and a rod pivoted to an arm on said shaft and to the impression-roller to suitably move the plate and put the spring under tension, substantially as described.

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

JAMES GEARY.

Witnesses:
FRANK D. BLACKISTONE,
BENJ. R. CATLIN.