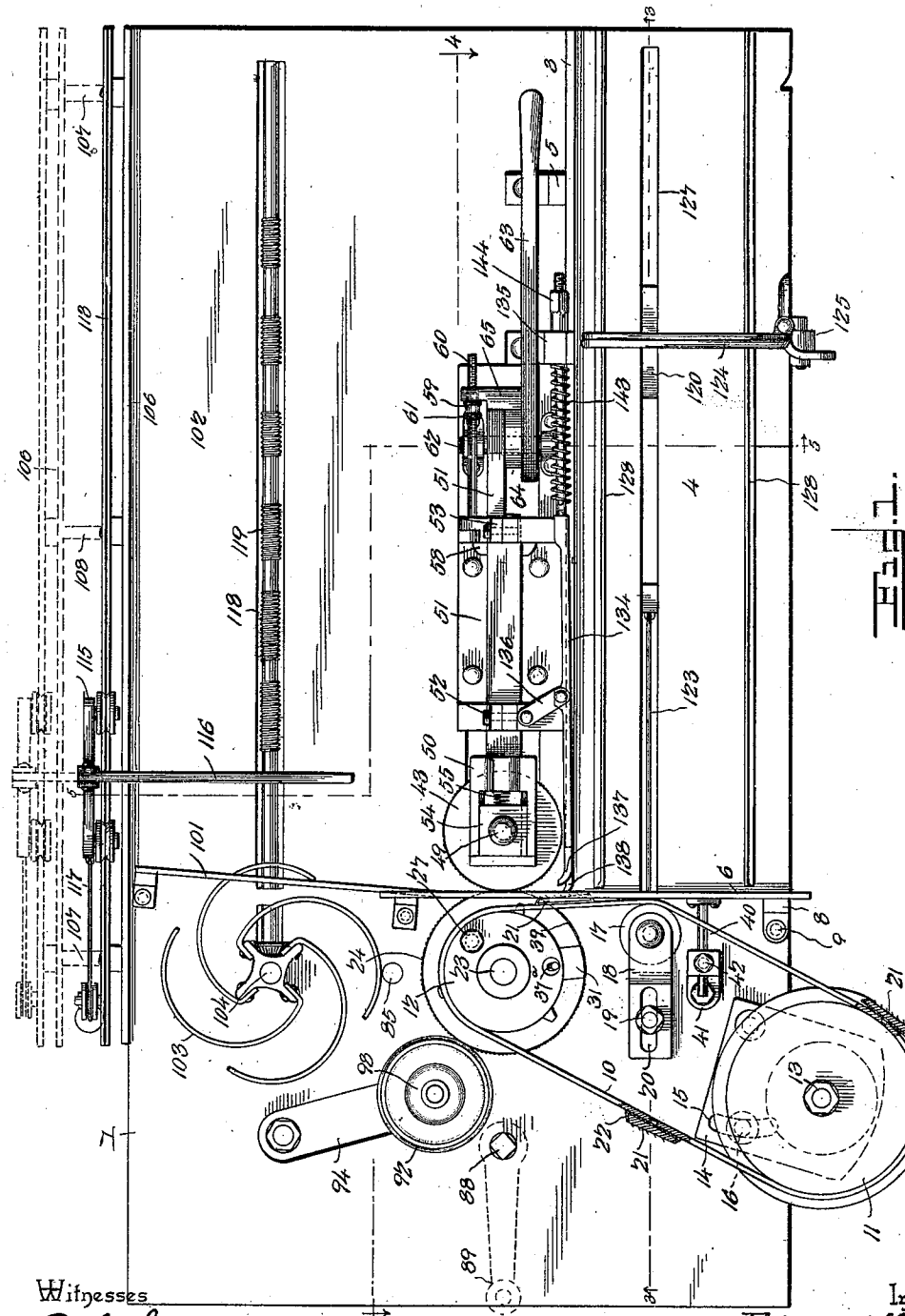
No. 652,821. Patented July 3, 1900.

E. M. VAIL & G. POTTER.

STAMP CANCELING MACHINE.

(Application filed May 8, 1899.)

(No Model.) 5 Sheets—Sheet 1.



Witnesses
E. F. Stewart.
C. E. Hoyt

By their Attorneys,
C. A. Snow & Co.

Inventors
Edward M. Vail
Gideon Potter

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 652,821. Patented July 3, 1900.

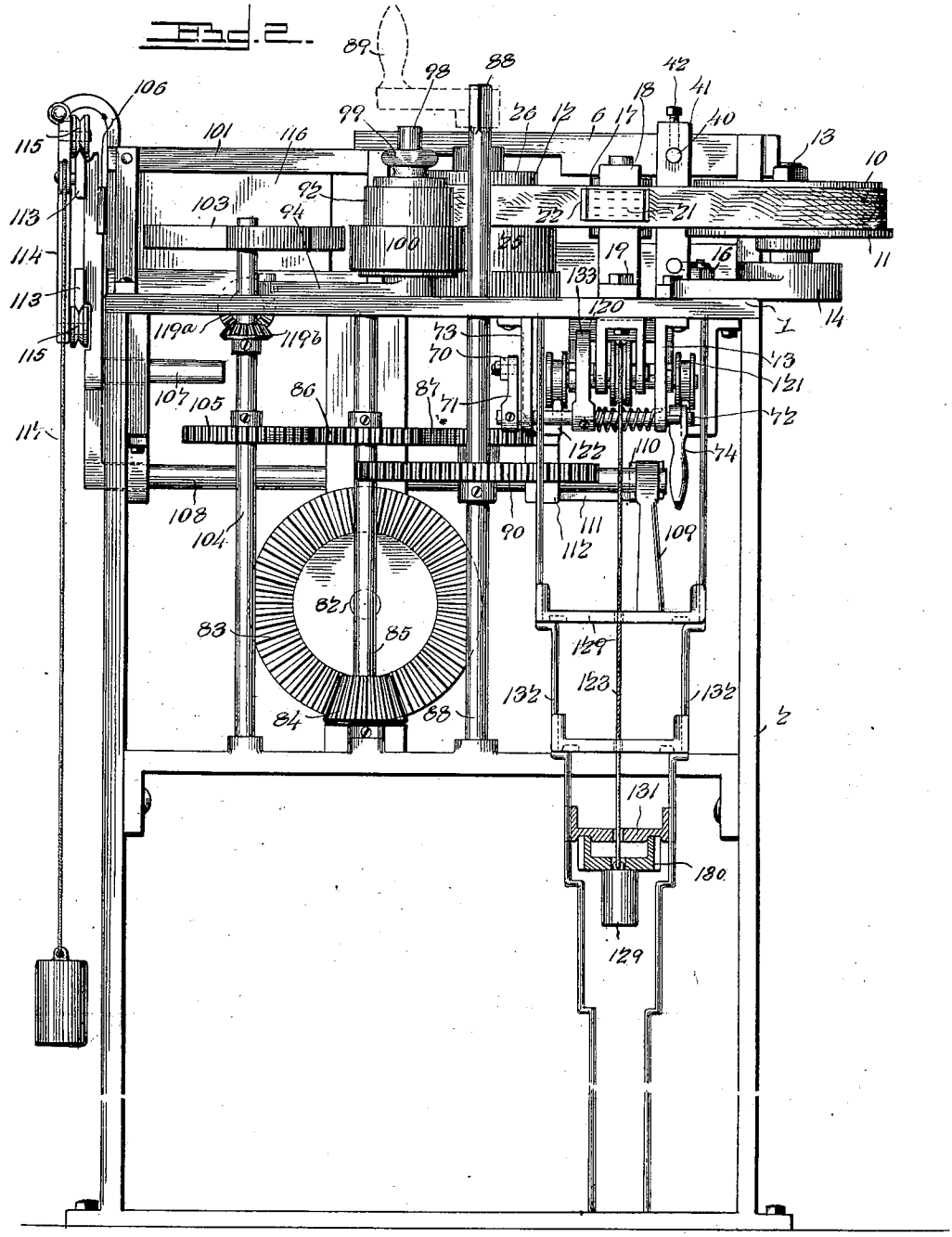
E. M. VAIL & G. POTTER.

STAMP CANCELING MACHINE.

(Application filed May 8, 1899.)

(No Model.) 6 Sheets—Sheet 2.

Fig. 2.



Witnesses

E. F. Stewart

O. E. Hoyle

By their Attorneys.

Edward M. Vail Inventors
Gideon Potter

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 652,821. Patented July 3, 1900.

E. M. VAIL & G. POTTER.

STAMP CANCELING MACHINE.

(Application filed May 8, 1899.)

(No Model.) 6 Sheets—Sheet 3.

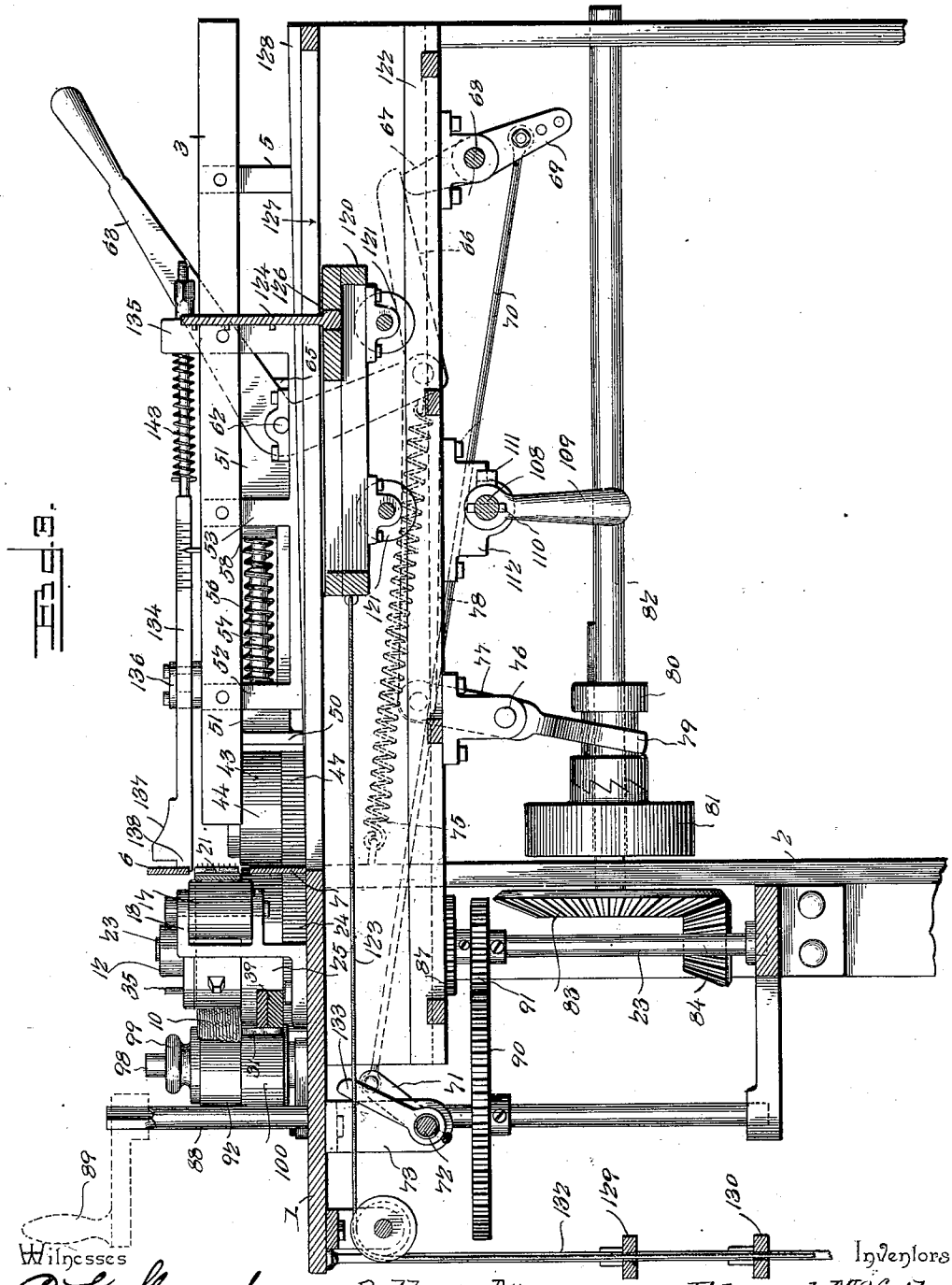


Fig. 3.

Witnesses

E. L. Stewart

[illegible]

Inventors

By their Attorneys,

Edward M. Vail

Gideon Potter

Cashow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

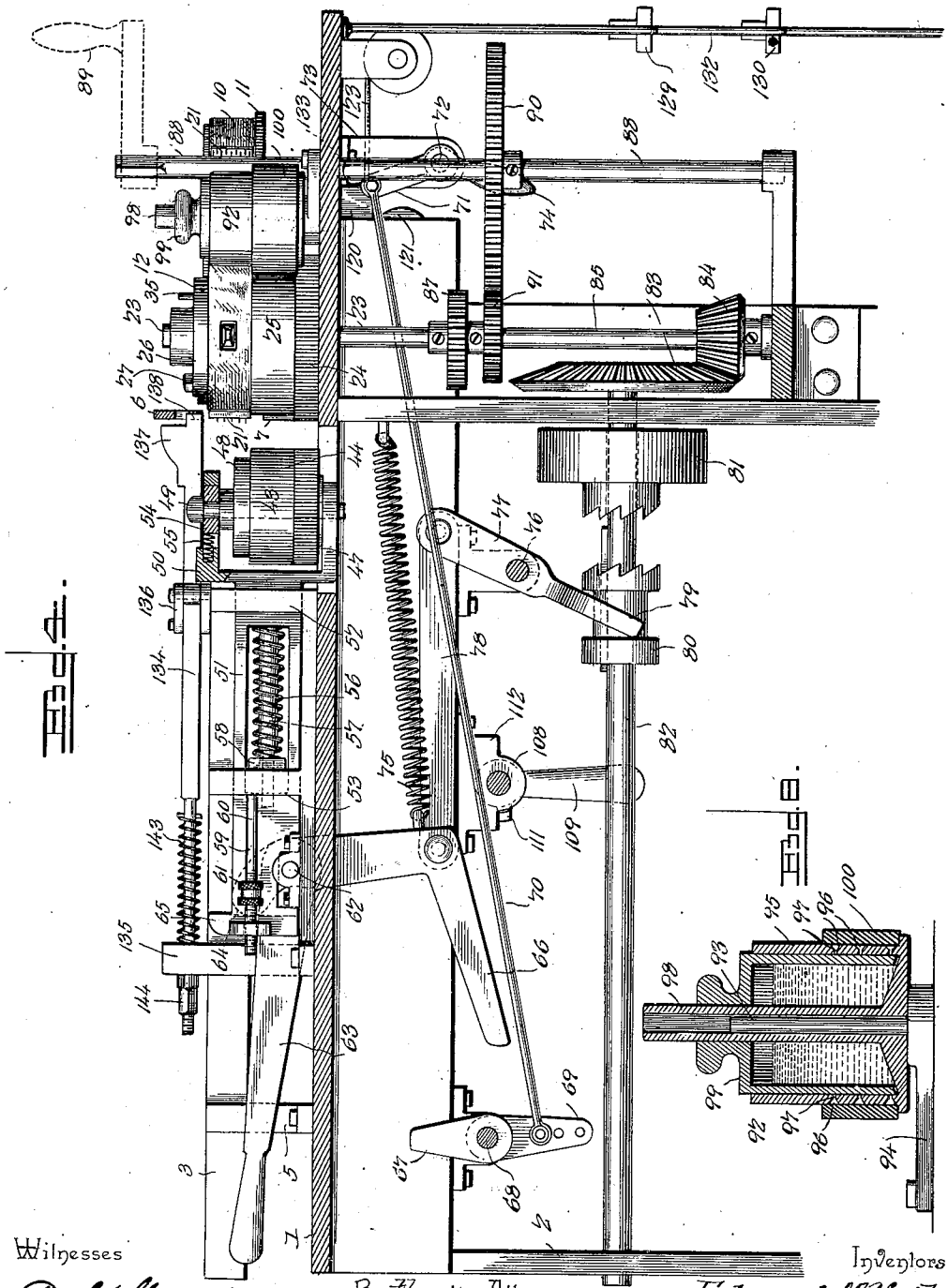
No. 652,821. Patented July 3, 1900.

E. M. VAIL & G. POTTER.

STAMP CANCELING MACHINE.

(Application filed May 8, 1899.)

(No Model.) 6 Sheets—Sheet 4.



Witnesses

E. F. Stewart,

C. E. Hoyt

Inventors

Edward M. Vail

Gideon Potter

By their Attorneys,

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 652,821. Patented July 3, 1900.

E. M. VAIL & G. POTTER.

STAMP CANCELING MACHINE.

(No Model.) (Application filed May 8, 1899.)

6 Sheets—Sheet 5.

Fig. 5.

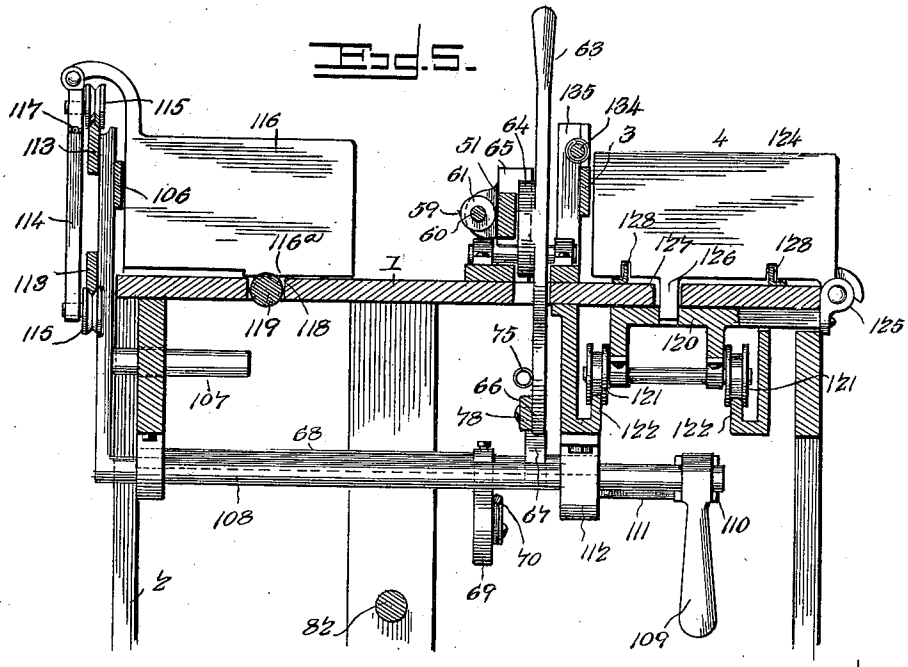


Fig. 6.

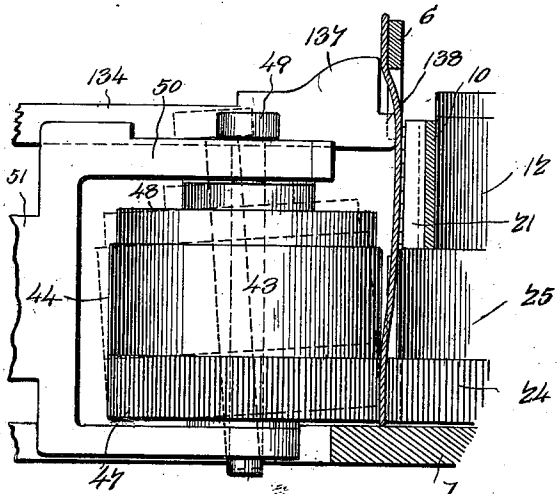
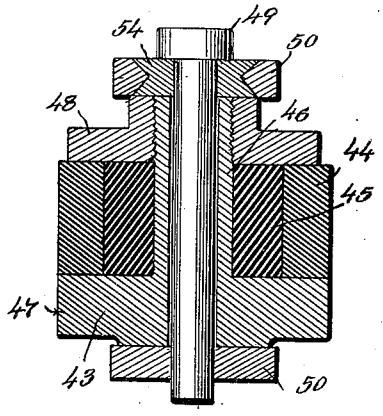


Fig. 7.



Witnesses,
E. L. Stewart.
D. E. Hoyle

By Their Attorneys,
Edward M. Vail Inventors
Gideon Potter
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

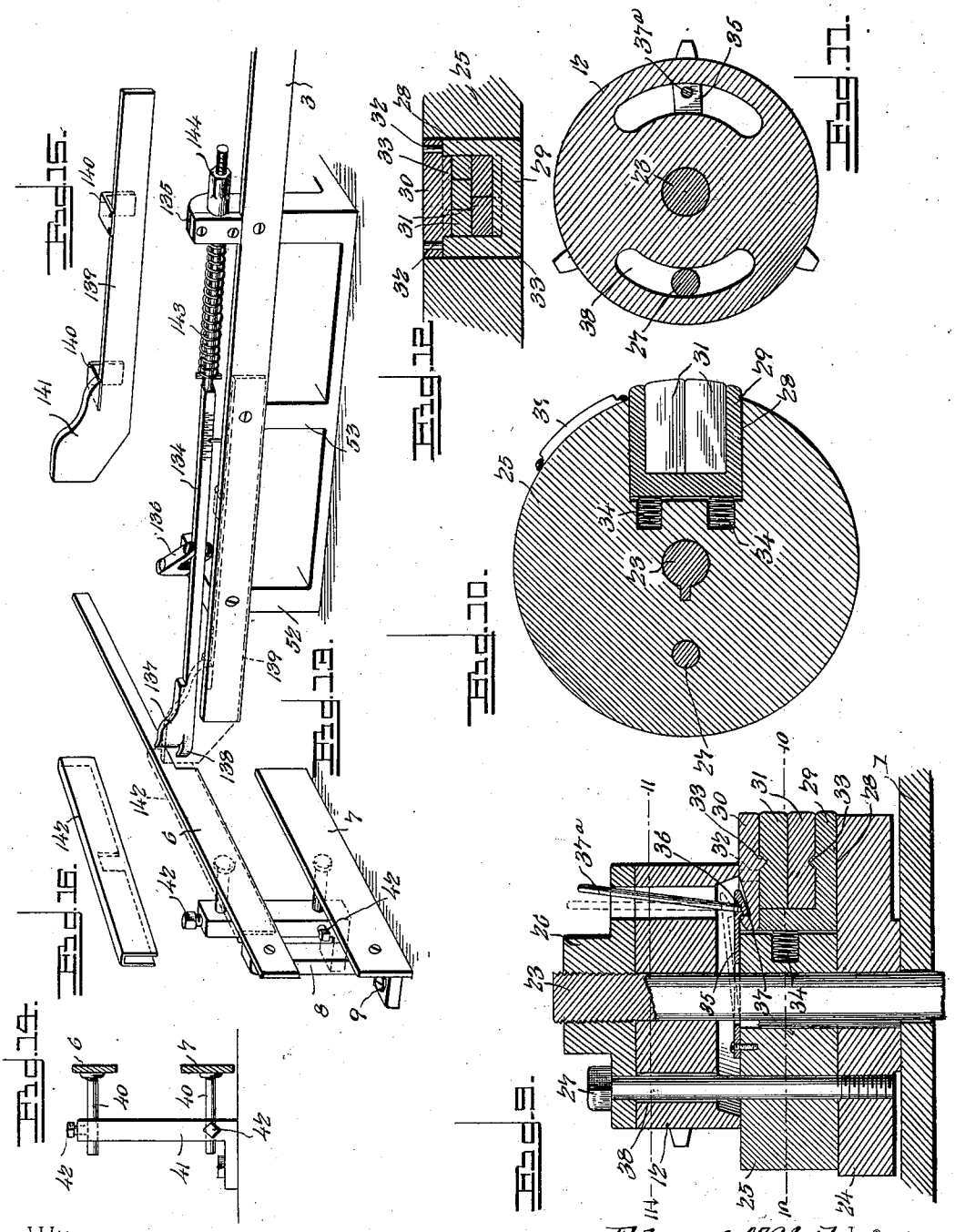
No. 652,821. Patented July 3, 1900.

E. M. VAIL & G. POTTER.

STAMP CANCELING MACHINE.

(Application filed May 8, 1899.)

(No Model.) 6 Sheets—Sheet 6.



Witnesses
E. F. Stewart.
C. E. Foy

Edward M. Vail Inventors
Gideon Potter
By their Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD M. VAIL AND GIDEON POTTER, OF KEWANEE, ILLINOIS.

STAMP-CANCELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,821, dated July 3, 1900.

Application filed May 8, 1899. Serial No. 715,973. (No model.)

To all whom it may concern:

Be it known that we, EDWARD M. VAIL and GIDEON POTTER, citizens of the United States, residing at Kewanee, in the county of Henry and State of Illinois, have invented a new and useful Stamp-Canceling Machine, of which the following is a specification.

Our invention relates to a postmarking and stamp-canceling machine for use in connection with letters and other mail-matter requiring the cancellation of stamps and the designation of the post-office; and the invention consists in an improvement upon the construction shown and described in a former patent, No. 625,861, granted to us on the 30th day of May, 1899.

An object of the present invention is to improve the construction of the letter-feeding mechanism and the means whereby the letter or other object is grasped and positively advanced during the impression thereof to mark the post-office and cancel the stamp, and particularly in this connection to provide means whereby the letter may be grasped when its body portion is of a different thickness from its edge portion.

A further object of the invention is to provide such means for feeding the letters or other objects as to enable the relation between the letter-engaging devices and the printing-faces to be varied, to insure the application of the impression to the desired portion of the envelop, and also to adapt the mechanism for operating upon envelops of different sizes.

A further object of the invention is to provide simple and improved means for varying the point at which the feeding devices will engage the letters or other objects to convey them transversely from the letter-way to the printing mechanism, and in this connection to provide means whereby the extent of projection of the letter-engaging spurs into the transverse path traversed by the letters may be varied to insure an efficient engagement of the letter.

A further object of the invention is to simplify and improve the construction of the selecting or restraining device, and particularly to provide such a construction of restraining device as to adapt it to yield when encountered by a package of unusual thickness without losing its restraining effect upon other packages or objects.

A further object of the invention is to improve the construction of the roller bed or platen, whereby it is adapted for adjustment to secure an even impression of the type upon the surface of the letter-envelop when the envelop varies in thickness from one edge toward the other.

A further object of the invention is to provide, in connection with the printing mechanism, means for facilitating the change of the type for indicating the year, month, day, and hour.

A further object of the invention is to provide an improved construction of operating devices and trip mechanism for releasing the same when the last letter has left the letter-way.

Furthermore, it is an object of the invention to provide a postal-card attachment, and in addition thereto to construct the rear or receiving letter-way to adapt it for the reception of letters of different lengths.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a plan view of a stamp-canceling machine constructed in accordance with our invention. Fig. 2 is an end elevation of the same. Fig. 3 is a longitudinal section on the plane indicated by the line 3 3 of Fig. 1. Fig. 4 is a longitudinal section on the plane indicated by the line 4 4 of Fig. 1. Fig. 5 is a transverse section on the plane indicated by the line 5 5 of Fig. 1. Fig. 6 is a detail elevation of the bed-roller and adjacent portions, including the face of the printing-roller, to show the position of an envelop during the printing operation. Fig. 7 is a detail sectional view of the bed-roller. Fig. 8 is a similar view of the inking-fountain. Fig. 9 is a similar view of the printing-roller. Fig. 10 is a horizontal section of the printing-roller on the plane indicated by the line 10 10 of Fig. 9. Fig. 11 is a similar view taken upon the plane indicated by the line 11 11 of Fig. 9. Fig. 12 is a detail vertical section of the type-holder. Fig. 13 is a detail view in perspective of the envelop-feeding devices and the

transverse outlet at the inner end of the letter-way. Fig. 14 is a detail sectional view to show the means for securing the transverse letter-guide in its adjusted positions. Figs. 15 and 16 are detail views in perspective, respectively, of the postal-card attachments for the longitudinal and transverse guides of the letter-way.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

A table or bed 1 is supported by a stand 2, of any suitable construction, and arranged longitudinally of the bed at an intermediate point of its width is a wall or guide 3, forming a front letter-way 4, adapted to receive the stack of letters to be canceled and postmarked. In the construction illustrated the guide or wall 3 consists of a strip or strips supported by brackets 5, rising from the table or bed, said guide terminating short of the plane of a transverse wall forming one end of the letter-way 4 and comprising transverse strips 6 and 7 and a bracket 8, of which the latter is secured to the table or bed by means of a bolt 9, which serves to allow a slight turning or pivotal movement of the bracket or standard to vary the positions of the strips 6 and 7 with relation to the extremity of the guide 3.

Mounted adjacent to the transverse letter-guide is the letter-feeding mechanism consisting in the construction illustrated of an endless belt or carrier 10, traversing carrier-rolls 11 and 12, of which the former is mounted upon a spindle 13, rising from the table. Preferably said spindle 13 is carried by a swinging bracket 14, pivoted upon the table and slotted, as at 15, for engagement by a set-screw 16 to secure the bracket at the desired adjustment and correspondingly secure the sprocket-wheel or peripherally-toothed drum 11 in the desired position with relation to the coöperating carrier roll or drum 12. At an intermediate point this belt or carrier traverses a pressure-roll 17, mounted in an adjustable bracket 18, held in place by a set-screw 19, engaging a slot 20, whereby said bracket 18 is capable of both pivotal and longitudinal adjustment to vary the position of the pressure-roll with relation to the plane of the transverse letter-guide.

The belt or carrier is provided at intervals with spurred or toothed letter-engaging plates 21, which may be of any preferred construction, but which, as illustrated in the drawings, are detachably secured to the belt or carrier to provide for their replacement when worn. In the construction illustrated the spurred plates are beveled at their opposite edges to fit in seats 22, attached to the belt.

The carrier-drum 12, which is peripherally toothed, forms one member of a printing-roller which is carried by a vertical shaft 23, mounted in suitable bearings in the frame and adapted to receive motion from operating mechanism, of which the construction is hereinafter fully explained. Said printing-roller comprises a peripherally-milled disk 24, arranged near the front of the bed or table-top, a printing-drum 25, superposed upon said disk 24, the above-described carrier-drum 12, in turn arranged upon said printing-drum, and a cap 26, threaded upon the upper end of the shaft 23 to hold the said parts 24, 25, and 12 in place thereon. Also extending through the cap and said parts 25 and 12 and threaded into the disk 24 is a locking-pin 27, adapted to hold the parts of the printing-roller against independent rotation, and thus allow the shaft 23 to turn the printing-drum and advance the letter-feed belt regularly and proportionately to said printing-drum. At a suitable point in its periphery the printing-drum is provided with a recess or seat 28 for the reception of the post-marking type-roller, which consists of a box 29, fitted with a removable cap-plate 30, the exposed portions of the box and cap-plate being adapted to form type-faces for indicating the place of the post-office, and within this holder are arranged type 31, having a suitable interlocking connection with the holder to prevent accidental displacement. In the construction illustrated the cap-plate is held in place by means of studs or pins 32, projecting upward from the walls of the box, and the cap-plate and the bottom of the box are provided with transverse ribs 33 for engagement with transverse notches in the type. This type-holder is fitted for radial movement in the cavity or recess formed in the printing-drum, and seated in the inner wall of said recess or cavity are displacing-springs 34, bearing against the inner end of the type-holder and adapted to project the same from the seat when released. Also mounted upon the printing-drum is a retaining-catch 35, consisting of a spring having a shoulder 36 for engagement with a shoulder or notch 37 in the cap-plate of the holder. When the holder is placed in the cavity or recess of the printing-drum and is pressed inward against the tension of the displacing-springs 34, the catch will engage the holder and maintain it in its operative position. On the other hand, by disengaging the catch from the holder the latter will be projected to enable the operator to readily grasp the same when it is necessary to change the type. In the construction illustrated an operating-rod 37^a extends upward from the catch through suitably-alined openings in the toothed drum 12 and the cap-plate 26.

It will be understood that to insure the proper operation of the mechanism it is necessary for the engagement of the letters by the toothed plates or members of the feeding-belt at a certain definite time previous to the contact of the printing element with the same envelop, and in order that the relation between these parts may be accurately adjusted we preferably provide the drum 12 with a segmental slot 38, through which the locking-pin 27 extends. This allows angular adjustment of the belt-traversed drum with relation

to the printing-drum to insure the desired cooperation of the parts. Also attached to the periphery of the printing-drum is the canceling element 39.

For holding the transverse letter-guide at the desired adjustment with relation to the letter-feed belt, (which is arranged in a horizontal plane between the upper and lower strips 6 and 7 of said guide,) we employ studs 40, extending inward from the strips and fitted in guide-openings in a standard 41, said standard also having set-screws 42, adapted to engage the studs or pins 40, and the variation of the letter-guide with relation to the plane of the belt is such as to cause the projection of the spurs on the feed-plates to a greater or less extent beyond the plane of the outer surface of said letter-guide. Also by varying the adjustment of the bracket which supports the pressure-roll the tension of the feed-belt may be varied, and the point at which the spurred feed-plates are brought into operative relation with the letters in the letter-way may be varied. The adjustment of the bracket which supports the idle belt-carrying drum 11 also serves to take up looseness of the feed-belt and insures an operative relation between the elements of the feed mechanism.

Arranged adjacent to the outer side of the transverse letter-guide and in coöperative relation with the printing-roller is a bed-roller 43, having a function analogous to that of the corresponding member of the machine shown and described in our above-mentioned former patent. Said bed-roller is provided at an intermediate point with a circumferentially-cushioned bearing-surface of annular construction arranged in the horizontal plane of the printing-drum and consisting of a ring 44, of hard rubber or equivalent material, within which is arranged a concentric cushion-ring 45, of soft rubber, fitted around a sleeve 46, which extends upward from and may be formed integral with a peripherally-milled letter-engaging disk 47, said letter-engaging disk being arranged in the plane of and adapted to coöperate with the milled disk 24 of the printing-roller, whereby the lower edge of a letter is engaged to insure the positive advance of the letter during the contact with the surface thereof of the printing elements. The described members of the bed-roller are held in place by a cap-plate 48, threaded upon the upper end of the sleeve 46, and the sleeve, which forms the hub of the bed-roller, is fitted for revoluble movement upon a pin 49, connecting the upper and lower arms of a yoke 50, consisting of the forked inner end of a plunger 51, mounted in a guide-frame having spaced guide-standards 52 and 53. Preferably the lower end of the pin which forms an axis of the bed-roller is fitted in a bearing in the lower arm of said yoke, while the upper end thereof is fitted in a bearing in a yielding bearing-block 54, fitted for longitudinal sliding movement in a guide formed in the upper arm of said yoke, and yieldingly held at the limit of its inward movement by a cushion-spring 55. The lower end of the pivot-pin 49 fits with sufficient looseness in the opening or bearing in the lower arm of the yoke to allow the inward and outer movement of the upper end of said pin, due to a corresponding movement of the bearing-block 54, when pressure sufficient to repress the spring 55 is applied to the bed-roller. The bearing-ring of the bed-roller is adapted to yield to insure a sharp impression of the type-faces upon a letter interposed between the printing-drum and said bed-roller; but should the letter vary in thickness between its body portion and that edge which is engaged by the milled disks 24 and 47 the bearing-block 54 is adapted to yield to cause the efficient contact of the printing elements with the object. Also to accommodate varying thicknesses of packages, such as letters or other objects, in their passage between the printing-roller and the bed-roller the plunger, which is capable of longitudinal movement in the guides 52 and 53, is yieldingly held in its inwardly-advanced position by a spring 56, coiled upon a longitudinal pin 57, arranged in a longitudinal slot in the shaft of the plunger, one end of said spring bearing against the wall, closing one end of the slot, and the other end of said spring bearing against a washer-plate 58, arranged in contact with the guide-standard 53. Also the inward movement of the plunger under the tension of its actuating-spring 56 is limited by an adjustable stop 59, consisting in the construction illustrated of a nut threaded upon a longitudinal pin 60, extending outward from the guide-bracket 53 and securely held at the desired adjustment by means of a lock-nut 61. It is obvious that the adjustment of this stop may be varied to suit the average thicknesses of the articles of mail-matter which are to pass through the machine.

The drum 12 is located at a distance in advance of the letter-guide, so that the feed-belt travels away from the guide as it carries the letter toward the printing mechanism, which will cause the pressure upon the letter to decrease and the points 21 to pass out of contact with the letter by the time it has reached the printing mechanism. The drum is of a smaller diameter than the milled disk 24, so that as soon as the letter is engaged by the disks it is moved forward at a greater velocity than it was moved by the belt, whereby it is taken out of the way of the succeeding letter.

Mounted by means of a transverse fulcrum-pin 62 upon the bed or table of the machine is a shifting lever 63, provided with a projection 64 for engagement with a shoulder 65 on the outer end of the shank of the plunger 51, the relation between the parts being such that when the free end of said shifting lever is depressed the projection 64 will bear against the shoulder 65 and withdraw the bed-roller

from operative relation with the printing-roller. The shifting lever extends downward through a slot in the bed of the machine and is provided at its lower end with a latch-arm 66, which when the shifting lever is elevated at its free end to the position indicated in full lines in Fig. 3 is adapted to engage a spring-actuated catch 67, supported by a transverse spindle 68, mounted in suitable bearings below the plane of the bed. Connected with the spindle of the catch 67 is a trip-arm 69, from which extends a connecting-rod 70 to a point near the inner end of the frame, where it is attached to an arm 71 of a rocker 72. This rocker is mounted in bearings in a bracket 73, depending from the bed, and is provided at its front end with a trip-handle 74, adapted to be grasped by the operator to withdraw the catch 67 from engagement with the latch to release the shifting lever. Obviously the weight of the latch-arm 66, supplemented by that of the shifting lever, will tend to swing said parts to the position indicated in full lines in Fig. 4; but in order that the operation of the shifting lever (when released) may be positive and at the same time in order that the depression of the free end of the shifting lever shall be with sufficient force to displace the bed-roller from operative relation with the printing-roller we preferably connect with the shifting lever a return-spring 75.

Mounted upon a transverse spindle 76, also arranged beneath the bed, is a clutch-shifter 77, connected by a link 78 with the shifting lever and provided with a fork 79, which engages the circumferential groove in a shifting sleeve 80, forming the one element of a driving-clutch, by which a driving pulley or gear 81 may be connected with the drive-shaft 82 to communicate motion to the operating mechanism of the machine. It will be understood that this clutch-pulley and connections may be of any preferred construction, forming no part of our present invention, but that the axially-movable member thereof, which is represented in the drawings by the sleeve 80, is feathered upon the drive-shaft 82 and is adapted when the shifting lever is raised to the position indicated in full lines in Fig. 3 to arrange the clutch members in operative relation to adapt the pulley to communicate rotary motion to the drive-shaft. The drive-shaft is connected by intermeshing bevel-gears 83 and 84 to a vertical counter-shaft 85, which in turn is connected by intermeshing gears 86 and 87 with the printing-roller shaft 23; also, to adapt the mechanism to be driven manually (instead of mechanically, as by a belt traversing the clutch-pulley) we employ a crank-shaft 88, fitted at its upper end with a crank-arm 89 and carrying a gear 90, which meshes with a pinion 91 on the shaft 23.

Mounted for coöperation with the printing-roller is an inker 92, mounted upon a spindle 93, which is carried by a swinging bracket 94 to provide for adjusting the inker with relation to the printing-roller or for moving the same out of contact therewith when not in use. The inker consists of a cup 95, having a series of annular grooves 96 in its lower end portion, with which communicate openings 97, extending through the side of the cup and communicating with the interior thereof. A stem 98 rises centrally from the bottom of the cup and receives a cup-shaped cut-off 99, which is slidably mounted thereon and which fits snugly within the cup 95. The lower edge of the cut-off 99 is beveled to provide a scraping edge to remove ink from the sides of the cup 95; also, a strip or band of felt 100 encircles the lower portion of the cup and is supplied with ink from the cup to bring it into contact with the printing-surfaces or printing elements when the machine is in operation. Obviously the supply of ink is regulated by the cut-off 99, which can be adjusted to expose any desired number of openings in the cup 95.

Arranged approximately in transverse alinement with the letter-guide 67 is a guide 101, which closes the inner end of the rear letter-way 102, said guide 101 being deflected outward slightly from the plane of the letter-guide 67, whereby as the letters successively leave the printing apparatus they pass between the previously-stamped letters and the guide 101. In coöperation with the guide 101 is arranged a revoluble packer 103, having yieldable arms and adapted to serve as a means for moving the letters and for packing the same within the rear letter-way 102, the shaft of which revoluble packer is connected by a gear 105 with the gear 86 on the counter-shaft 85, the function of said revoluble packer being to insure the proper stacking of the letters after passing the printing apparatus and cause them to lie in alinement in the receiving letter-way 102.

At the rear side of the rear or receiving letter-way is a longitudinal letter-guide 106, which in the construction illustrated is mounted for transverse adjustment to suit varying lengths of letters or other packages. Said guide is provided with transverse supporting rods or pins 107, mounted in suitable guides below the plane of the bed, and is also provided with a central pin 108, which extends to a point near the front side of the bed, and is fitted with a gravity-latch 109. This latch is constructed to form a grip or handle and is mounted for revoluble movement upon the pin 108, between spaced pins 110; also, said latch is provided with an ear or projection 111, which is terminally arranged in operative relation with a bearing-box 112, in which the pin 108 is fitted. When the letter-guide is adjusted forward to adapt it for guiding letters or packages of the ordinary length, the gravity-latch is arranged with its ear or projection 111 in engagement with the stop formed by the bearing-box 112, and when it is desired to adapt the rear letter-way for let-

ters of greater length it is necessary simply to grasp the gravity-latch, swing the same sufficiently to disengage the ear or projection 111 thereof from the stop, and move the letter-guide rearwardly, as shown by the dotted lines in Fig. 1.

The rear letter-guide is provided with upper and lower tracks 113 114, upon which is mounted a carriage 115, provided with grooved rolls 115 to traverse said tracks, and mounted upon the carriage in a position to span the letter-way 102 is a follower 116, similar in construction to that shown and described in our former patent above mentioned. As in said former construction, the follower is pivotally mounted upon the carriage, to be displaced rearwardly when not in use or to facilitate the removal of letters from the way 102. The carriage is yieldingly held, with its follower, in position to exert inward pressure upon the letters which are interposed between the same and the guide 101 by a weighted cord or connection 117. The letter-way 102 is longitudinally slotted, as shown at 118, to receive a mutilated feed-screw 119, corresponding in construction to a similar element in our former machine above mentioned and adapted to engage the lower edges of the letters to communicate motion therethrough to the follower 116, and thus move the latter outward as the letters are advanced from the printing mechanism into the letter-way 102. Said feed-screw is provided with alternately-arranged threaded portions and plane or cylindrical portions, whereby the letters are adapted in the intervals between the threaded portions to lie in contact should the threaded portions by reason of the thinness of the letters tend to advance them more rapidly than is necessary. This feed-screw is connected for operation with the spindle of the revoluble packer by means of intermeshing bevel-gears 119^a 119^b. Furthermore, the follower 116 may have a depending lip 116^a, adapted to have its edge engage with the threads of the mutilated feed-screw 119, as shown by Fig. 5 of the drawings, to cause a positive advance of said follower to avoid crowding the letters in the receiving-way 102.

The means for inwardly advancing the objects in the letter-way 4 include a carriage 120, mounted below the plane of the bed and provided with grooved rolls 121 to traverse track-rails 122, and a weighted cord or connection 123, attached to the front end of the carriage and adapted to move the same inwardly as the letters are removed from the inner end of the stack. As in the construction illustrated in our former patent above mentioned, a follower 124 is pivotally mounted upon a forward projection 125 of the carriage and overhangs the letter-way 4, with a depending projection 126 operating in a longitudinal slot 127 in said letter-way. Also preferably arranged upon the bed in the letter-way 4 are parallel letter-supporting ribs 128, which incline downward toward their inner ends to facilitate the movement of the mail-matter in traversing the same.

We have found in practice that the pressure which is applied by the letter-advancing follower of the front carriage should be diminished as the stack which is being advanced becomes diminished, a considerable pressure of the follower being necessary when the letter-way 4 is approximately full. Hence in connection with the cord 123 we employ a variable weight consisting of a series of members 129 130 131, of which the former or main weight member, as shown, may be attached to the end of the cord, while the other or auxiliary weight members are supported at intermediate points in the path of the main weight member and are adapted to be taken up successively as the carriage recedes from the transverse letter-guide. In the construction illustrated the weight members 130 and 131 are terminally fitted upon a guide 132, and the weight-cord extends through central openings in said auxiliary weight members. By this construction the inward strain which is applied to the carriage increases as the latter recedes from the transverse letter-guide 6 7 and diminishes as the carriage approaches said guide. Also arranged in the path of the carriage 120 is a trip-arm 133 on the rocker 72, and when said carriage reaches a position adjacent to the transverse guide 6 7, whereby the last letter has left the letter-way 4, the contact of the carriage with the trip-arm causes the release of the shifting lever 63 and the checking of the movement of the mechanism.

In the construction illustrated in the drawings we employ an improved selecting or restraining device for preventing a plurality of letters or other objects from being advanced to the printing mechanism simultaneously, the same being arranged upon the front letter-guide 3 and consisting of a stem or shank 134, fitted near its outer end in a guide 135 on said letter-way 3 and provided at an intermediate point with a swinging guide 136, consisting of a link, whereby as the inner end of the stem or shank is moved outward said inner end also receives a rearward movement. The inner end of the stem or shank carries a shoe 137, which is of deflective or rounded construction, and is provided below its main or body portion with a deflecting projection 138. Adjacent to this shoe the upper slat or strip 6 of the transverse letter-guide is cut away, whereby when the main or body portion of the shoe is adjacent to the plane of said slat or strip the deflecting portion of the shoe occupies a position in the cut-away portion of the slat. Thus as a letter which is in contact with the transverse letter-guide 6 7 is carried transversely by the letter-feeding belt its upper edge passes between the body portion of the shoe and the outer surface of the upper strip 6, while the intermediate portion of the letter or object is pressed inward by

said deflecting portion of the shoe to bow the letter longitudinally, as indicated in Fig. 6. This causes the restraining of any other letter or object which may be advanced by the letter-feeding mechanism simultaneously with that letter or object which is engaged by the spurs of the feeding-belt. The end of the second letter strikes against the front side of the shoe and is thus restrained, while the letter which is positively engaged by the spurs of the belt is carried forward until its lower edge is received between the milled surfaces of the letter-feeding disks carried, respectively, by the printing-roller and bed-roller. Should an unusually thick envelop come in contact with the shoe of the restraining device, the repression of the shoe or the outward movement thereof in a direction tending to separate it from the transverse letter-guide will be accompanied by a rearward swinging movement thereof, due to the guiding-link 136, and thus when the said thick object or letter passes the return forward and inward movement of the shoe will serve to effectually prevent the premature advance of a second envelop or object which may have been carried forward by that which is engaged positively by the feeding mechanism.

In connection with the mechanism above described we also employ postal-card attachments consisting of a longitudinal guide member 139, having keepers or stirrups 140, which engage one of the slats of said guide 3, and also provided at its front end with a shoe 141, which may be arranged close to the plane of the transverse letter-guide 6 7, and a transverse guide member 142, which is removably engaged with the upper slat 6 of the transverse letter-guide, while it is adapted to occupy a position at its rear end adjacent to the shoe at the inner end of the selecting or restraining device. These attachments serve to reduce the width of the throat formed between the adjacent portions of the longitudinal and transverse letter-guides, whereby said width is adapted to the thickness of postal-cards.

To yieldingly hold the selecting or restraining device in its operative position with relation to the transverse letter-guide, the shank thereof is fitted with an advancing-spring 143, bearing at its front end against a suitable shoulder on said shank and at its rear end against the guide 135, and to limit the inward advance movement of said restraining device it is fitted at its rear end with an adjustable stop 144, adapted for contact with the rear side of said guide 135. By adjusting this stop the interval between the shoe at the inner end of the restraining device and the plane of the transverse letter-guide may be varied to suit packages of different average thicknesses.

The operation of the mechanism embodying our present invention, which is analogous to that of the apparatus shown and described in our said former patent, will be readily understood from the foregoing description, and it is obvious, furthermore, that various changes in the form, proportion, size, and minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described our invention, what we claim is—

1. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to an outlet-throat at the inner end of the letter-way and disposed laterally with respect to the printing mechanism, letter-feeding devices for advancing letters successively through the throat, said transverse letter-guide being adjustable toward and from the plane of the letter-feeding devices and of the printing mechanism, and means for securing said letter-guide in its adjusted positions, substantially as specified.

2. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to an outlet-throat at the inner end of the letter-way, letter-feeding devices for advancing letters successively through the throat, said letter-guide being pivoted for movement toward and from the plane of the letter-feeding devices, and having a guide pin or pins, a guide or guides in which said pins operate, and fastening devices for securing the pin or pins in an adjusted position, substantially as specified.

3. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way and disposed laterally with respect to the printing mechanism, an endless letter-feeding belt arranged in operative relation with said transverse letter-guide and provided with spurred elements for successively engaging the letters, and means for adjusting the letter-guide toward and from the plane of the active portions of the printing mechanism and the letter-feed belt, substantially as specified.

4. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way and disposed laterally with respect to the printing mechanism, an endless letter-feeding belt or carrier arranged in operative relation with said transverse letter-guide and provided with spaced spurred plates for successively engaging the letters, and means for adjusting the letter-guide toward and from the plane of the active portions of the printing mechanism and the letter-feed belt, substantially as specified.

5. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way, an endless letter-feeding belt or carrier provided with spaced seats, spurred plates removably fitted in said seats, and means for operating the belt or carrier, substantially as specified.

6. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of said letter-way and disposed laterally with relation to the printing mechanism, an endless letter-feeding belt or carrier supported and actuated by vertically-arranged rollers for one lead of said carrier to face the transverse letter-guide, spurred elements secured at intervals to said belt or carrier for successively engaging with mail-matter to advance the same through said throat, a pressure-roller engaging with said belt or carrier between its supports and opposite to the letter-guide, and means for adjusting the pressure-roller relative to the belt or carrier and the letter-guide, whereby the position of the spurred elements on the belt or carrier may be changed relative to a given position of the letter-guide, substantially as described.

7. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way, an endless letter-feeding belt or carrier provided at intervals with spurred elements for successively engaging elements to advance them through said throat, a pressure-roll arranged in contact with said belt or carrier at an intermediate point to hold the latter in operative relation with the transverse letter-guide, an adjustable supporting-bracket for said pressure-roll, means for securing said bracket in its adjusted positions, and means for operating the belt or carrier, substantially as specified.

8. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way, an endless letter-feeding belt or carrier provided at intervals with spurred elements for successively engaging elements to advance them through said throat, a pressure-roll arranged in operative relation with the belt or carrier at an intermediate point to maintain it in operative relation with the transverse letter-guide, a slotted supporting-bracket for said pressure-roll, set-screws for securing said bracket at the desired adjustment, and means for operating the belt or carrier, substantially as specified.

9. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way, an endless letter-feeding belt or carrier provided at intervals with spurred elements for successively engaging elements to advance them through said throat, a pressure-roll arranged in contact with the belt or carrier at an intermediate point for maintaining the same in operative relation with the transverse letter-guide, a pressure-roll-supporting device mounted for angular and linear adjustment to vary the point of contact of the pressure-roll with the belt or carrier, means for securing said support at the desired adjustment, and operating devices for the belt or carrier, substantially as specified.

10. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way, an endless belt or carrier provided at intervals with spurred elements for successive engagement with letters to advance them through said throat, operating and idle belt-carriers traversed by said belt, means for actuating the operating belt-carrier, an adjustable bracket supporting the idle belt-carrier, and means for securing said bracket in its adjusted positions, substantially as specified.

11. In a mail-marking machine, the combination with a letter-way and means for advancing letters therein, and printing mechanism, of a transverse letter-guide arranged adjacent to a lateral outlet-throat at the inner end of the letter-way, an endless belt or carrier provided at intervals with spurred elements for successive engagement with letters to advance them through said throat, operating and idle belt-carriers traversed by said belt, means for actuating the operating belt-carrier, a pivotal bracket supporting the idle belt-carrier, and means for securing said bracket in its adjusted positions, substantially as specified.

12. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of a vertical printing-roller having coaxially-arranged printing and carrier drums engaging laterally one with the other, a letter-feeding belt or carrier traversing said carrier-drum and provided at intervals with spurred elements for successively engaging letters to advance them through said throat, said drums being capable of relative angular adjustment, means for laterally clamping said drums together and holding them in their adjusted relative positions, and operating mechanism for the printing-drum, substantially as specified.

13. In a mail-marking machine, the combination with a letter-way provided at its inner

end with a lateral throat for the passage of letters, of a printing-roller having coaxially-arranged printing and carrier drums, a common shaft carrying said drums, said printing-drum being fast with the shaft and the carrier-drum being loose on the shaft and angularly adjustable with relation to the printing-drum, means for laterally clamping said drums together and holding the printing-drum in its adjusted position with relation to the other, operating devices for said shaft, and an endless feed belt or carrier traversing the carrier-drum and provided at intervals with spurred elements for successively engaging letters to advance them through said throat, substantially as specified.

14. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of a printing-drum, a shaft carrying the printing-drum, a peripherally-spurred carrier-drum fitted loosely upon the shaft of the printing-drum and provided with a segmental slot for angular adjustment with relation to the latter, a clamping-bolt through said slot for securing the carrier-drum in its adjusted positions with relation to the printing-drum, operating devices for the said shaft, and an endless letter-feeding belt or carrier traversing said carrier-drum and provided at intervals with spurred elements for successively engaging letters to advance them through said throat, substantially as specified.

15. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of a printing-drum, a shaft carrying the printing-drum, a segmentally-slotted carrier-drum mounted upon said shaft coaxially with the printing-drum, a cap-plate carried by said shaft, a locking-pin connecting said cap-plate and printing-drum and extending through the slot of the carrier-drum for securing the latter at the desired adjustment, means for operating said shaft, and an endless letter-feeding belt or carrier traversing said carrier-drum and provided at intervals with spurred elements for successively engaging elements to advance them through said throat, substantially as specified.

16. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of a printing-drum, a shaft carrying the printing-drum, a segmentally-slotted carrier-drum mounted upon said shaft coaxially with the printing-drum, a cap-plate threaded upon said shaft, a locking-pin engaging registering openings in said cap-plate and printing-drum, and extending through the segmental slot of the carrier-drum to secure the latter at the desired adjustment, means for operating said shaft, and an endless letter-feeding belt or carrier traversing said carrier-drum and provided at intervals with spurred elements for successively engaging elements to advance them through said throat, substantially as specified.

17. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of a letter-marking drum and means for operating the same, letter-feeding mechanism coöperating with said drum for advancing letters through the throat, a letter-engaging disk carried by the marking-drum, and a bed-roller in opposition to the printing-drum and carrying a letter-engaging disk arranged to coöperate with the similar disk of said printing-drum, said bed-roller being yieldably mounted for deflection laterally with respect to the face of the printing-drum, and for the axis of the bed-roller to assume an inclined position relative to the axis of the printing-roller, whereby the faces of the printing-drum and the bed-roller may be separated while the letter-engaging disks remain in their operative relations, substantially as described.

18. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of a letter-marking drum and means for rotating the same, letter-feeding mechanism coöperating with said drum for advancing letters through the throat, a letter-engaging disk carried by the marking-drum, and a peripherally and axially variable bed-roller arranged in opposition to the printing-drum and carrying a letter-engaging disk for coöperation with the similar disk of said printing-drum, said bed-roller provided with a yieldable impression-surface in the plane of the marking characters on said printing-drum and the bed-roller being also yieldably mounted for deflection laterally to an inclined position relative to the printing-drum, whereby the bed-rollers may be inclined to the drum and the letter-engaging disks remain in operative relation one to the other, substantially as described.

19. In a mail-marking machine, a printing-drum provided with a peripheral seat or cavity, a type-holder having an open top and fitted in said seat or cavity, a cap-plate fitted removably on said type-holder, and a catch attached to the printing-drum and having interlocking connection with the cap-plate, said type-holder and the cap-plate each provided with means for securing interlocking connection between said elements individually with interposed type, substantially as described.

20. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, and letter-feeding mechanism for successively advancing letters through said throat, of printing mechanism having a printing-drum provided with a peripheral seat or cavity, a type-holder having an open side and the studs, a shouldered perforated cap-plate engaging with said studs on the type-holder, and a catch attached to the drum and engag-

ing with the shoulder of the cap-plate, said type-holder and cap-plate having ribs for interlocking with type in the holder and also provided on their exposed edges with printing characters, substantially as described.

21. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of letter-feeding mechanism for successively advancing letters through said throat, and printing mechanism having the coaxially-arranged printing and carrier drums, said carrier-drum engaging with the letter-feed mechanism and provided with a latch-rod slot, and said printing-drum provided with a seat or cavity, a type-holder in said seat, displacing-springs for unseating the type-holder, a catch between the carrier-drum and the printing-drum for engaging and maintaining the type-holder in opposition to said displacing-springs, and a terminally-exposed latch-operating rod extending through the latch-slot in the latch-drum, substantially as described.

22. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and a coöperating revoluble letter-engaging disk, feeding mechanism for successively advancing letters through said throat to the printing mechanism, operating mechanism for the printing-drum, and a bed-roller having a letter-engaging disk for coöperation with the similar disk of the printing-drum, said bed-roller being also provided with an elastic cushion-core and a relatively-hard friction-surface, the latter being seated on the yieldable core and arranged in coöperative relation with the type-surface on the printing-drum, substantially as described.

23. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and a coöperating revoluble letter-engaging disk, feeding mechanism for successively advancing letters through said throat to the printing mechanism, operating mechanism for the printing-drum, and a bed-roller having a letter-engaging disk for coöperation with that which is actuated by the printing-drum, and also provided with a relatively-hard pressure-ring arranged in opposition to the type characters on the printing-drum and encircling the yieldable cushion-core which is concentric with the axis of the bed-roller, said bed-roller being yieldably mounted relative to the printing-drum to assume an inclined position thereto for spreading the surfaces of the drum and the roller without disalining the letter-engaging disks, substantially as specified.

24. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and a coöperating revoluble letter-engaging disk, feeding mechanism for successively advancing letters through said throat to the printing mechanism, operating mechanism for the printing-drum, and a bed-roller having a central spindle, a letter-engaging disk having a sleeve mounted upon said spindle, a cushioned bearing-ring fitted upon said sleeve in the plane of the printing-drum, and a cap threaded upon the sleeve to maintain said bearing-ring in operative position thereon, substantially as specified.

25. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and means for communicating rotary motion thereto, feed mechanism for successively advancing letters through said throat, and a bed-roller, provided in the plane of said printing-drum with a cushioned bearing-ring for contact with the opposite side of a letter from the printing-drum, and an idle spindle on which the bed-roller is mounted, said spindle being yieldably held at one end for the bed-roller to move laterally and assume an inclined relation to the face of the printing-drum, substantially as specified.

26. In a mail-marking machine, the combination with a letter-way provided with a lateral throat, a revoluble printing-drum, and feed mechanism for advancing letters through said throat, of a yoke yieldably mounted for reciprocating play toward and from said printing-drum, and a bed-roller mounted for tiltable movement in said reciprocatory yoke, said bed-roller movable with the yoke relatively to the printing-drum and capable of a tiltable movement independent of the reciprocatory yoke, substantially as described.

27. In a mail-marking machine, the combination with a printing-drum, and feed mechanism for advancing letters thereto, of a yoke movable with respect to the printing-drum, a bed-roller having an arbor fitted loosely at one end in said yoke, a spring-actuated bearing confined in the yoke and supporting the other end of the bed-roller arbor, and means for normally holding the yoke and the bed-roller in coöperative relation to the printing-drum, said bed-roller being movable bodily with the yoke toward or from the printing-drum and also capable of a tiltable movement laterally with respect to the printing-drum and independently of its travel with the yoke, substantially as described.

28. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and means for communicating rotary motion thereto, feed mechanism for successively advancing letters through said throat, an armed yoke, a bed-roller having a cushioned bearing-surface arranged in the plane of and in opposition to the printing-drum, and bearing-boxes in the arms of said

yoke for the extremities of the spindle of the bed-roller, one of said bearing-boxes being mounted for outward yielding movement and provided with actuating or cushion springs, substantially as specified.

29. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and means for communicating rotary motion thereto, feed mechanism for successively advancing letters through said throat, a bed-roller having a cushioned bearing-surface arranged in the plane of and in opposition to the printing-drum, an idle tiltable spindle on which said roller is mounted, means for yieldably holding the idle spindle and the bed-roller normally in parallel relation to the printing-drum, and adjustable devices for changing the spindle and bed-roller to varying positions relative to the printing-drum, substantially as specified.

30. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and means for communicating rotary motion thereto, feed mechanism for successively advancing letters through said throat, a yielding plunger having a forked inner end, the arms of the fork being provided respectively with upper and lower spindle-bearings, of which the former is yieldingly mounted for movement toward and from the transverse plane of the axis of the printing-drum, and is spring-actuated to maintain it in its normal position, and a bed-roller having its spindle mounted in said bearings and provided with a cushioned bearing-surface arranged in the plane of the printing-drum, substantially as specified.

31. In a mail-marking machine, the combination with a letter-way provided at its inner end with a lateral throat for the passage of letters, of printing mechanism having a printing-drum and means for communicating rotary motion thereto, feed mechanism for successively advancing letters through said throat, a yielding spring-actuated plunger mounted for longitudinal movement toward and from the transverse plane of the axis of the printing-drum, a bed-roller mounted in said plunger for coöperation with the printing-drum, an adjustable stop mounted upon the plunger for coöperation with a fixed stop in the path thereof, a shifting lever arranged in operative relation with a shoulder on the plunger, and having a latch-arm, and a yielding catch for engagement with said latch-arm to maintain the shifting lever in its normal position, substantially as specified.

32. In a mail-marking machine, the combination with a drive-shaft, a letter-way having a transverse outlet-throat at its inner end, and feeding and printing mechanisms operatively connected with said drive-shaft, of a driving-clutch having one of its members feathered upon said drive-shaft, a bed-roller arranged in operative relation with the printing mechanism and carried by a reciprocatory plunger, a shifting lever arranged in operative relation with a shoulder on the plunger, a latch-arm carried by the shifting lever, a catch yieldingly held in the path of said latch-arm, a shifting rocker operatively connected with one member of said clutch, and having connection with said shifting lever, and means for actuating the catch to disengage the latch-arm, substantially as specified.

33. In a mail-marking machine, the combination with a letter-way having a lateral feed-throat, and letter-feed devices for advancing letters through said way and through the feed-throat, of a printing mechanism having a movable letter-pressure element coöperating therewith, means for driving the printing mechanism and the letter-feed devices, a shifting lever in operative relation to the letter-pressure element of the printing mechanism, and trip devices in the path of the letter-feed device in said letter-way and operable to automatically arrest the driving mechanism and to act through the shifting lever in repressing the letter-pressure element from operative relation to the printing mechanism, as set forth.

34. In a mail-marking machine, the combination with a letter-way, a letter-advancing carriage movable parallel with said letter-way, and printing and feed mechanism, of a variable feeding device for said carriage consisting of a weight-cord, a plurality of weight members each successively increasing in width and loosely threaded on said weight-cord, and a vertical fixed weight-guide frame having its side bars gradually widened from the bottom toward the top and forming a series of seats which are spaced at variable distances apart in different horizontal planes, said weight members slidably engaging the weight-guide frame and adapted to be successively applied to the weight-cord as the carriage recedes from one end of the letter-way and to be successively relieved from the weight-cord as the carriage approaches the other end of said letter-way, substantially as described.

35. In a mail-marking machine, the combination with a letter-way, a letter-advancing carriage movable parallel therewith, and printing and feeding mechanism, of a variable feeding device for the carriage consisting of a weight-cord, a series of main and auxiliary weight members, and a tapered and shouldered weight-guide frame provided with stops for respectively limiting the movement of the weight members as the carriage approaches the end of the letter-way, said weight members successively increasing in width and engaging slidably with the shouldered side bars of the weight-guide frame, substantially as described.

36. In a mail-marking machine, the combination of feeding and receiving letter-ways

having front and rear guides respectively parallel with said ways, the rear guide being provided with transverse pins under the bed of the machine and mounted for transverse adjustment, means for securing said rear guide in its adjusted positions, a letter-advancing follower for traversing the feed letter-way, means for actuating said follower, printing and feeding mechanisms arranged at the inner end of the feed letter-way, and a second follower arranged for operation in the receiving letter-way and having a carriage mounted upon tracks carried by said rear guide, substantially as specified.

37. In a mail-marking machine, the combination of feeding and receiving letter-ways having front and rear guides respectively parallel with said ways, the rear guide being mounted for transverse adjustment, a transverse pin extending forward from the rear guide, a rotary gravity-latch mounted upon said pin and adapted for cooperation with a stop on the machine to limit the rearward adjustment of said guide, followers for respectively traversing said letter-ways, and printing and letter-feeding mechanisms arranged adjacent to the inner end of the feed letter-way, substantially as specified.

38. In a mail-marking machine, the combination with a letter-way, a transverse letter-guide at the inner end of said letter-way, and printing and feed mechanisms adjacent to said letter-guide, of a separating or restraining shoe arranged in cooperative relation to the transverse letter-guide, said shoe movable toward or from the letter-guide and also movable laterally in a path rearwardly from said letter-guide, a sliding and swinging carrier for said shoe, means for impelling said shoe-carrier toward the letter-guide and normally holding the shoe in operative relation thereto, and means for limiting the shoe-carrier, on the repression of the shoe, to lateral movement away from the letter-guide, substantially as described.

39. In a mail-marking machine, the combination with a letter-way provided at its inner end with a transverse letter-guide, means for advancing letters in the letter-way, and printing and feed mechanisms arranged adjacent to the inner end of the letter-way, of a letter separating or restraining device having a shouldered shoe arranged adjacent to said transverse letter-guide, and provided with a stem or shank mounted for longitudinal and swinging movements, whereby said shoe is adapted for outward and rearward deflection, substantially as specified.

40. In a mail-marking machine, the combination with a letter-way provided at its inner end with a transverse letter-guide, means for advancing letters in the letter-way, and printing and feed mechanisms arranged adjacent to the inner end of the letter-way, of a letter separating or restraining device having a terminally-deflected shoe and provided with a shank or stem fitted near its outer end for longitudinal movement in a fixed guide, a swinging link connected with said stem or shank at an intermediate point, and a spring for yieldingly holding said shank or stem in its normal position, substantially as specified.

41. In a mail-marking machine, the combination with a letter-way provided at its inner end with a transverse letter-guide, means for advancing letters in the letter-way, and printing and feed mechanisms arranged adjacent to the inner end of the letter-way, of a letter separating or restraining device having a terminally-deflected shoe and provided with a shank or stem fitted near its outer end for longitudinal movement in a fixed guide, a swinging link connected with said stem or shank at an intermediate point, a spring for yieldingly holding the shank or stem in its normal position, and an adjustable stop for limiting the inward advance movement of the shank or stem, substantially as specified.

42. In a mail-marking machine, the combination of a letter-way provided at its inner end with a transverse outlet-throat, a transverse letter-guide forming one side of said throat and having an upper strip cut away adjacent to the throat, means for advancing letters in the letter-way, printing and feed mechanisms arranged adjacent to the inner end of the letter-way, and a letter separating or restraining device having a yielding shoe of which the body portion is arranged for cooperation with said upper strip, and which is provided with a projecting portion to extend into the cut-away portion of said strip to cause longitudinal bowing of an interposed letter, substantially as specified.

43. In a mail-marking machine, the combination with a letter-way having a parallel longitudinal letter-guide and a transverse letter-guide at the inner end of the letter-way, means for advancing letters in the letter-way, feeding and printing mechanisms, and postal-card attachments having members for engagement respectively with said longitudinal and transverse letter-guides for reducing the width of the throat therebetween, substantially as specified.

44. In a mail-marking machine provided with a letter-way, and printing mechanism adjacent to the outlet thereof, the combination of a letter-guide projecting across the outlet of the letter-way and arranged laterally with respect to the printing mechanism, a feeding device cooperating with said letter-guide for conveying letters along the guide from the letter-way to the printing mechanism, and means for adjusting the letter-guide laterally with respect to the feeding device, substantially as described.

45. In a mail-marking machine provided with a letter-way, and printing mechanism adjacent to the outlet thereof, the combination of an adjustable letter-guide projecting across the outlet of the letter-way and arranged laterally with respect to the printing mechanism, and an endless feeding device

arranged in coöperative relation to the letter-guide for conveying the letters along said guide from the letter-way to the printing mechanism, substantially as described.

46. In a mail-marking machine provided with a letter-way, and printing mechanism adjacent to the outlet thereof, the combination of a letter-guide projecting across the outlet of the letter-way and arranged laterally with respect to the printing mechanism, and an endless feeding device coöperating with the letter-guide and diverging laterally therefrom toward both ends, substantially as described.

47. In a mail-marking machine provided with a letter-way, and printing mechanism adjacent the outlet thereof, the combination of a letter-guide projecting across the outlet of the letter-way and arranged laterally with respect to the printing mechanism, an endless letter-feeding device in coöperative relation to the letter-guide, and means for adjusting said letter-guide and the endless feeding device laterally and independently of each other, substantially as described.

48. In a mail-marking machine provided with a letter-way and printing mechanism adjacent to the outlet thereof, the combination with a letter-guide in front of said outlet, of an endless feeding device and means for adjusting the initial contact-point of the feeding device toward and from said outlet, and laterally across the same.

49. In a mail-marking machine provided with a letter-way and printing mechanism adjacent to the outlet thereof, the combination with two drums, an endless belt thereon, a pressure-roller intermediate said drums, and means for adjusting the position of said roller laterally and longitudinally relatively to the letter-way.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

EDWARD M. VAIL.
GIDEON POTTER.

Witnesses:
H. J. PETERSON,
JAS. K. BLISH.