

No. 646,773.

Patented Apr. 3, 1900.

C. WALKER.
STAMP CANCELING MACHINE.

(Application filed June 4, 1898.)

(No Model.)

3 Sheets—Sheet 1.

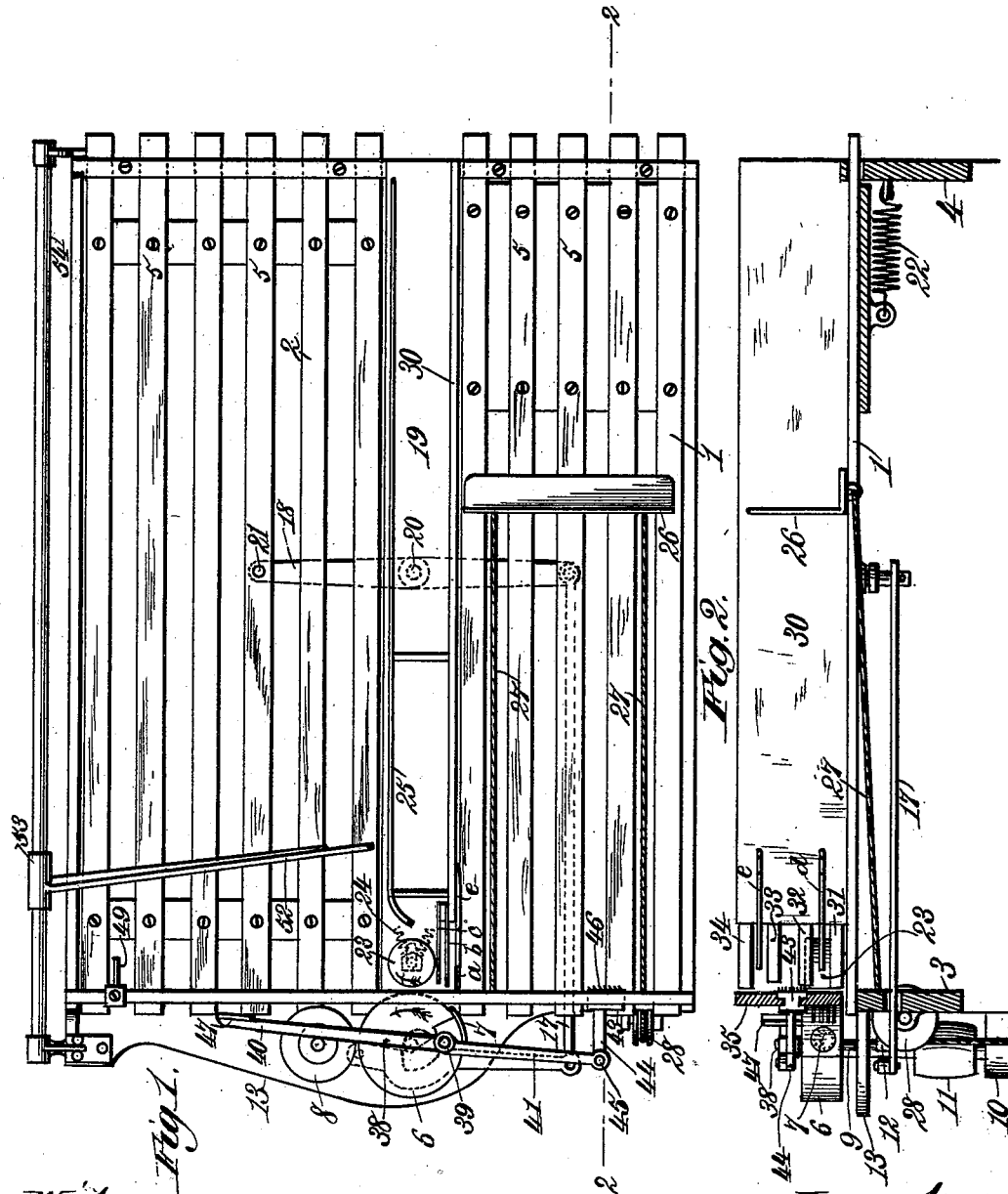


Fig. 1.
Witnesses.
Robert Smith.
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Fig. 2.
Inventor.
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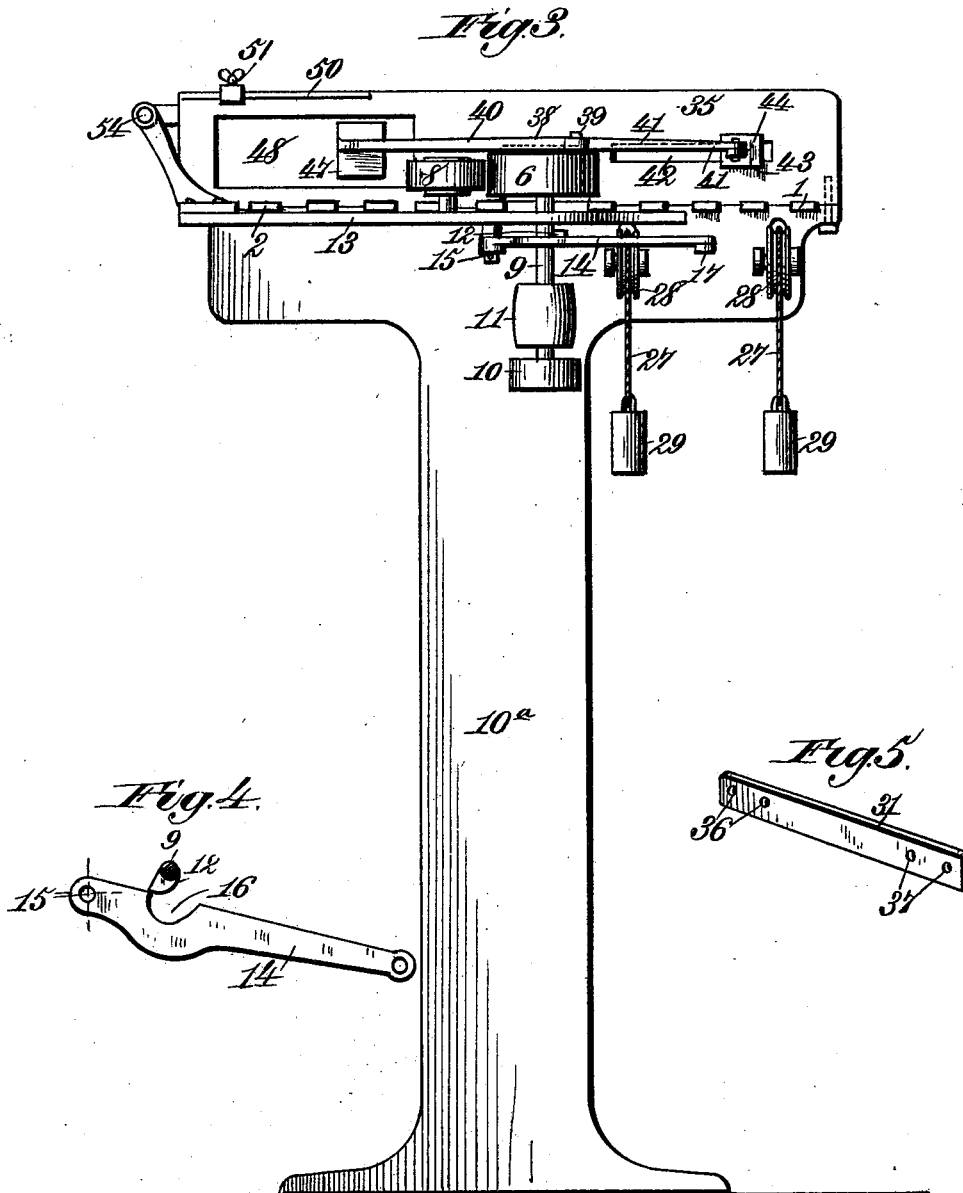
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3 Sheets—Sheet 2.



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3 Sheets—Sheet 3.

Fig. 6.

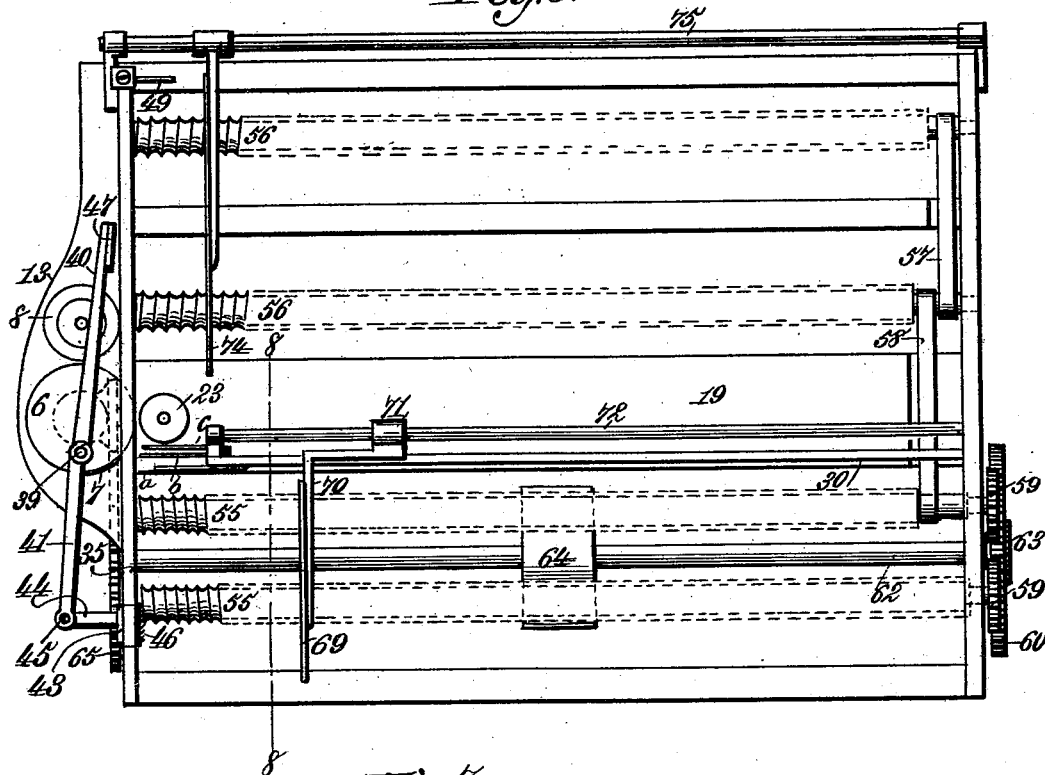


Fig. 7.

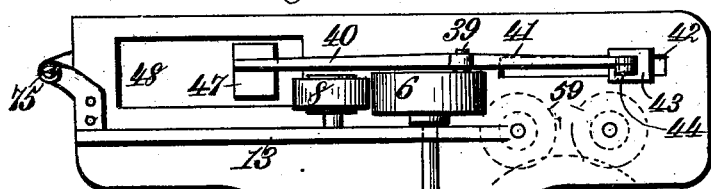
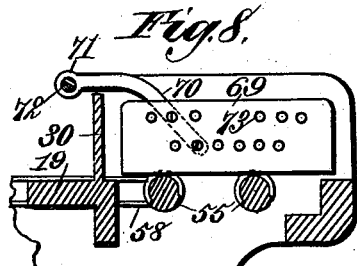


Fig. 8.



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UNITED STATES PATENT OFFICE.

CHARLES WALKER, OF EBENEZER, TENNESSEE.

STAMP-CANCELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 646,773, dated April 3, 1900.

Application filed June 4, 1898. Serial No. 682,619. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WALKER, a citizen of the United States, residing at Ebenezer, in the county of Knox and State of Tennessee, have invented certain new and useful Improvements in Stamp-Canceling Machines, of which the following is a specification.

My invention relates to an improvement in stamp-canceling machines.

My invention in its preferred form has relation to improvements in that class of stamp-canceling machines employing reciprocating racks for delivering the letters to and receiving them from the feeding and canceling mechanism, and has for one object to provide improved mechanism for imparting a slow forward and quick backward movement to the delivery-rack and a quick forward and slow backward movement to the receiving-rack.

A further object of the invention relates to an improved device operating at one side of the machine to feed the letters to the canceling mechanism and at the opposite side to knock the letters back on the receiving-rack.

A further object of the invention relates to the location and arrangement of a series of springs for controlling the passage of the mail-matter to the canceling mechanism and operating to prevent the passage to the latter of more than one letter or card at a time.

Still further objects of the invention relate to certain details of construction and operations of parts, all of which will more fully hereinafter appear.

In the accompanying drawings, Figure 1 is a top plan view of a machine constructed according to my invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is an end elevation. Figs. 4 and 5 are detail views. Fig. 6 is a top plan view of a modified form of a machine. Fig. 7 is an end elevation of the same, and Fig. 8 is a section on the line 8 8 of Fig. 6.

The reference-numeral 1 indicates the delivery-rack, and 2 the receiving-rack, these racks being mounted to reciprocate back and forth on the front and rear frame members 3 4. The racks 1 and 2 are preferably composed of strips 5 of wood or metal, connected by cross-bars in the usual manner. The nu-

meral 6 indicates the roller containing the stamping dye or type, (indicated by 7.) Arranged to revolve in contact with the roller 6 is an inking-roller 8. The roller 6 is fast on the end of an upright shaft 9, which at its lower end is journaled in a bearing 10, mounted on the upright 10^a of the machine. Secured on said shaft is a pulley 11, adapted to receive a driving-belt, (not shown,) by means of which the shaft 9 may be revolved and with it the roller 6. Secured on the shaft 9 is a cam 12. Pivottally mounted at one end on the under side of a projection or flange 13, extending outward from the front end of the machine, is a lever-arm 14, its pivot or fulcrum being denoted by 15. Said arm 14 extends immediately in front of the shaft 9 and in line with the cam 12 and is provided with a curved cut-out or recess 16, which cooperates with said cam in a manner to be presently described. Pivottally connected to the opposite or outer end of the lever-arm 14 is one end of a rod 17, which extends backward beneath the rack 1 and at its inner end is pivottally connected to the under side of the rack 1 and also to one end of a rock-arm 18. Said rock-arm is centrally and pivottally mounted at a point intermediate the racks 1 and 2 on the under side of a frame-bar 19, as shown at 20. The opposite end of the rock-arm 18 is pivottally connected to the under side of the rack 2, as indicated at 21. On the under side of the rack 1 and at its rear end is secured one end of a coiled spring 22, the opposite end of which is connected to the rear frame member 4. As the shaft 9 revolves the cam 12 will bear against the lever-arm 14 and move the same outward in the manner indicated in Fig. 4. This movement of arm 14 will, through the medium of rod 17, carry the rack 1 slowly forward, while the connection of the outer end of the rock-arm 18 will operate at the same time to move the rack 2 slowly backward. As the shaft 9 continues to revolve the cam 12 will turn out of engagement with the arm 14 and to a position opposite the recess 16, when the spring 22 will operate to draw the rack 1 rapidly backward and through the connection described the rack 2 rapidly forward. Thus this motion of the racks insures that the letters shall be carried forward by rack 1, while the quick re-

turn of this rack will prevent the letters being carried back with it, while on the opposite side of the machine the letters are carried backward by rack 2, and its quick return prevents the letters being carried forward by the rack.

The numeral 23 indicates the impression-roller, between which and the roller 6 the letters are carried to be canceled by the stamp or type on said roller 6. The roller 23 has a slotted journal-bearing, so that it is capable of moving to or from the roller 6 and is held in yielding contact with the roller 6 by means of two springs 24, which press the roller 23 toward the roller 6.

The numeral 25 indicates a guide for the letters on the receiving-rack 2.

The numeral 26 indicates a follower slidably mounted on the rack 1 and which is actuated by cords 27, passing over pulleys 28 on the front end of the machine and each having a weight 29 secured on its end, as shown in Fig. 3.

The numeral 30 indicates a steel or other partition extending the length of the machine, to the front end of which are secured a series of spring-arms for preventing the passage of more than one card or letter at a time to the canceling-roller. These spring-arms are arranged in three vertical rows *a b c*, the inner row *a*, or that next to the letters, being shown in Fig. 2 and the spring-arms being denoted, respectively, by the numerals 31, 32, 33, and 34.

Extending across the machine from side to side and above the racks 1 and 2 is a steel or other plate 35, between which and the ends of the various spring-arms the letters and cards must pass before being canceled. As shown in Fig. 2, the ends of spring-arms 31 and 34 are supposed to be removed from the plate 35 a distance equal to the thickness of a postal card, the end of spring-arm 32 a distance equal to the thickness of two postal cards, and the end of spring-arm 33 a distance equal to the average thickness of a letter. The second row of spring-arms *b* is removed from the first row *a* about an eighth of an inch. The spring-arms in this second row are somewhat stronger than the spring-arms in the first row and alternate with them. The end of one of the spring-arms in the second row will be removed from the plate 35 a distance equal to the thickness of a letter, while the ends of the remaining spring-arms will be removed from said plate a distance equal to twice the thickness of an ordinary letter. In like manner the spring-arms in the third row *c* are stronger than those in row *b* and distant therefrom about an eighth of an inch. The end of one of the spring-arms in this third row is removed from the plate 35 a distance equal to double the thickness of an ordinary letter, while the ends of the remaining spring-arms will be removed from said plate a distance equal to about two and one-half times the thickness of an ordinary

letter. I have indicated one arrangement of the spring-arms for the purpose of rendering the construction clear. The number and arrangement of the spring-arms and the distance their ends are removed from the plate 35 may be varied according to the strength or power of the springs and the character of mail-matter to be canceled. As shown in Fig. 5, each of these spring-arms is provided near opposite ends with two apertures 36 37, by means of which either end may be secured by screws to the partition 30, and when the free end becomes worn the arm may be reversed and its opposite end secured to the partition.

The letters *d e* indicate two arms secured on the front of the partition 30 and extending outward therefrom flush with the vertical series of springs *a* and a sufficient distance to take a portion of the strain from the spring-arms 31 32 33 34, but not far enough to interfere with the passage of the letters to the canceling device.

I will now describe the means for feeding the letters to the canceling-roller.

The numeral 38 indicates an arm which is pivotally mounted on the upper side of the roller 6 near the periphery thereof, as shown at 39. The pivot-point 39 is nearer one end than the other of said arm, so as to present a long arm 40 and a short arm 41. Working in a guideway 42, formed in the front plate 35, is a feed-block 43, rigidly secured to which is an arm 44, the outer end of which is pivotally connected at 45 to the outer end of the short arm 41. The inner or working surface of the feed-block 43 is provided with a series of sharp wires or needles 46, set at an angle, as shown, for engaging the letters. This surface, however, could be made of rubber or in any other suitable way without departing from the spirit of my invention. On the outer end of the long arm 40 is secured a paddle 47, which is adapted to work through an elongated slot 48 in the front plate 35 to knock the letters passing from the canceling-rollers back on the receiving-rack 2.

The numeral 49 indicates a stop for the letters, said stop being mounted on a slide 50, formed on the front plate 35, and adjustable thereon through the medium of a set-screw 51.

The numeral 52 indicates a support for the letters, said support having a collar 53 sliding on a rod 54, secured at the side of the machine adjacent to the rack 2.

The operation is as follows: The shaft 9 revolving, the rack 1 feeds the letters forward, the follower 26 keeping them in an upright position. The revolution of roller 6 causes the feed-block 43 to be reciprocated back and forth in the guideway 42. In moving toward the canceling-roller the needles 46 will engage the letter or card at the front of the pile of letters and carry it between the rollers 6 and 23, the vertical series of spring-arms *a b c* preventing the passage thereto of more than

one card or letter, as previously explained. The letter or card is engaged by the rollers 6 and 23, which revolve, respectively, in the directions indicated by the arrows, and in passing between the rollers is stamped or canceled by the device 7, carried by the roller 6. The rollers 6 and 23 revolve at a sufficient rate of speed to throw the letters or cards outward against the stop 49. The paddle 47 on the end of the long arm 40 will be caused to describe a complex curve and to pass in and out of the slot 48, and the arrangement and operation of the parts are such that as the letter or card is thrown against the stop 49 the paddle 47 will strike it and throw it against the sliding support 52, the operation described being the same with each succeeding card or letter.

In Figs. 6, 7, and 8 I have illustrated a different way of carrying the letters to and from the canceling-rollers. In this form of the invention in place of the reciprocating racks I employ in each case two longitudinal screws, the two sets of screws being denoted, respectively, by the numerals 55 and 56. These screws are journaled in opposite ends of the frame of the machine, the screws 56 being caused to travel together in the same direction by a belt 57 and the inner screw 56 being geared to the inner screw 55 by a belt 58. On the rear end of each screw 55 is a gear-wheel 59, which gear-wheels 59 mesh with a large gear-wheel 60, which is journaled on a stud 61 on the under side of and at the rear end of the machine. Journaled in suitable bearings and extending from end to end of the machine is a shaft 62, having fast on its rear end a gear 63, which meshes with the large gear 60. Centrally of the shaft 62 is secured thereon a belt-pulley 64, whereby by means of a driving-belt passed over said pulley the shaft 62 may be revolved and cause the screws 55 and 56 to revolve through the medium of the gearing described. Fast on the front end of shaft 62 is a gear-wheel 65, which meshes with a gear 66, journaled on a stud at the front of the machine. The gear 66 also carries a bevel-gear 67, which meshes with a bevel-gear 68, fast on the lower end of the shaft 9, which corresponds with shaft 9 in the form of machine first described. Through the medium of the gearing last described the canceling and feeding mechanisms are operated in the manner first described. Screws 55 are pitched to carry the letters forward, the space between threads being about equal to the thickness of an ordinary letter, and as the edges of the letters rest upon these screws they are engaged by the threads and fed forward, as will be understood. The follower 69 in the present form of machine is made of a thin metal plate and has its lower edge engaged by the threads of the screws 55 and is carried forward by said screws to hold the letters or cards in an upright position. This follower is secured to an arm 70, which extends over the partition

30 and is provided with a sleeve 71, which slides on a rod 72, located adjacent to the partition 30. The follower is adjustably secured to the arm 70 through the medium of a series of apertures 73, through which screws are passed to secure the follower to said arm. As will be seen, these apertures are arranged in parallel lines on opposite sides of the center of the plate or follower 69, so that said plate may be moved laterally in either direction or turned end for end and connected to the arm 70 through one or the other set of apertures 73 to vary the point of contact of the plate with the screws 55 to compensate for wear. Said plate being thin will lie in the grooves of said screws and in operation will tend to deepen said grooves rather than wear off the threads.

The support 74 on the delivery side of the machine is mounted to slide on a rod 75 and is carried backward and forward by the screws 56 in the same manner as the follower 69. The feeding and canceling mechanism is the same in this form of the machine as in the form first described and need not be again referred to in detail.

Having thus fully described my invention, what I claim as new is—

1. In a stamp-canceling machine, the combination with the frame, of a canceling device mounted thereon, a feed-block slidably mounted in the front plate of the machine for carrying the letters to the canceling device, means for reciprocating said feed-block, a series of vertical rows of spring-arms located in the path of the feed-block and having their ends arranged at different distances, respectively, from the face of the front plate whereby to prevent the passage between said front plate and spring-arms of more than one letter or card at a time, means for feeding the letters to said feed-block and mechanism for receiving and carrying away the canceled letters, substantially as described.

2. In a stamp-canceling machine, the combination with the frame, of a canceling device mounted thereon comprising a revoluble roller, a feed-block slidably mounted in the front plate of the machine for carrying the letters to the canceling device, means for reciprocating said feed-block, a series of vertical rows of spring-arms located in the path of the feed-block and having their ends arranged at different distances, respectively, from the face of the front plate whereby to prevent the passage between said front plate and spring-arms of more than one letter or card at a time, means for feeding the letters to said feed-block, mechanism for receiving and carrying away the canceled letters, and an arm carried by said roller and actuated in the revolution thereof to knock the canceled letters back on the receiving mechanism, substantially as described.

3. In a stamp-canceling machine, the combination with the frame, of a canceling device mounted thereon comprising a revoluble

roller, a feed-block slidably mounted in the front plate of the frame, an arm eccentrically mounted on said roller and pivotally connected at one end to said feed-block, means for
 5 feeding the letters to said feed-block, mechanism for receiving and carrying away the canceled letters, means for revolving said roller whereby the feed-block will be reciprocated to carry the letters to the canceling device and the free end of said arm will be moved
 10 in a manner to knock the letters passing from the canceling device back on the said receiving mechanism and a series of vertical rows of spring-arms located in the path of the feed-block and having their ends arranged at different distances, respectively, from the face
 15 of the front plate whereby to prevent the passage between said front plate and spring-arms of more than one letter or card at a time, substantially as described.
 20

4. In a stamp-canceling machine, the combination with the frame of a delivery-rack and a receiving-rack slidably mounted thereon, canceling mechanism, comprising an upright
 25 shaft journaled on the frame and having a cam, and means for imparting simultaneously a slow forward and quick backward movement to the delivery-rack and a quick forward and slow backward movement to the receiving-rack comprising a lever-arm pivoted
 30 at one end to the frame in line with said cam

and having a recess for said cam, a lever-arm centrally pivoted beneath the racks and having one end pivotally connected to the receiving-rack, a rod connecting the free ends of
 35 said lever-arms and a spring operating to draw the delivery-rack backward, the combination operating in the manner and for the purpose described.

5. In a stamp-canceling machine, the combination with the front plate and with the canceling and feed mechanisms, of a number of vertical series of spring-arms located in the path of the feed mechanism, the springs in each vertical series having their ends arranged, respectively, at different distances
 45 from the face of the front plate, substantially as and for the purpose described.

6. In a stamp-canceling machine, the combination with the front plate and with the canceling and feed mechanisms, of a number of vertical series of spring-arms located in the path of the feed mechanism and having their ends arranged, respectively, at different distances from the face of the front plate and
 55 two or more rigid arms extending between the front series of springs for taking the strain therefrom, substantially as described.

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Witnesses:

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 R. F. CROSS.