

No. 872,010.

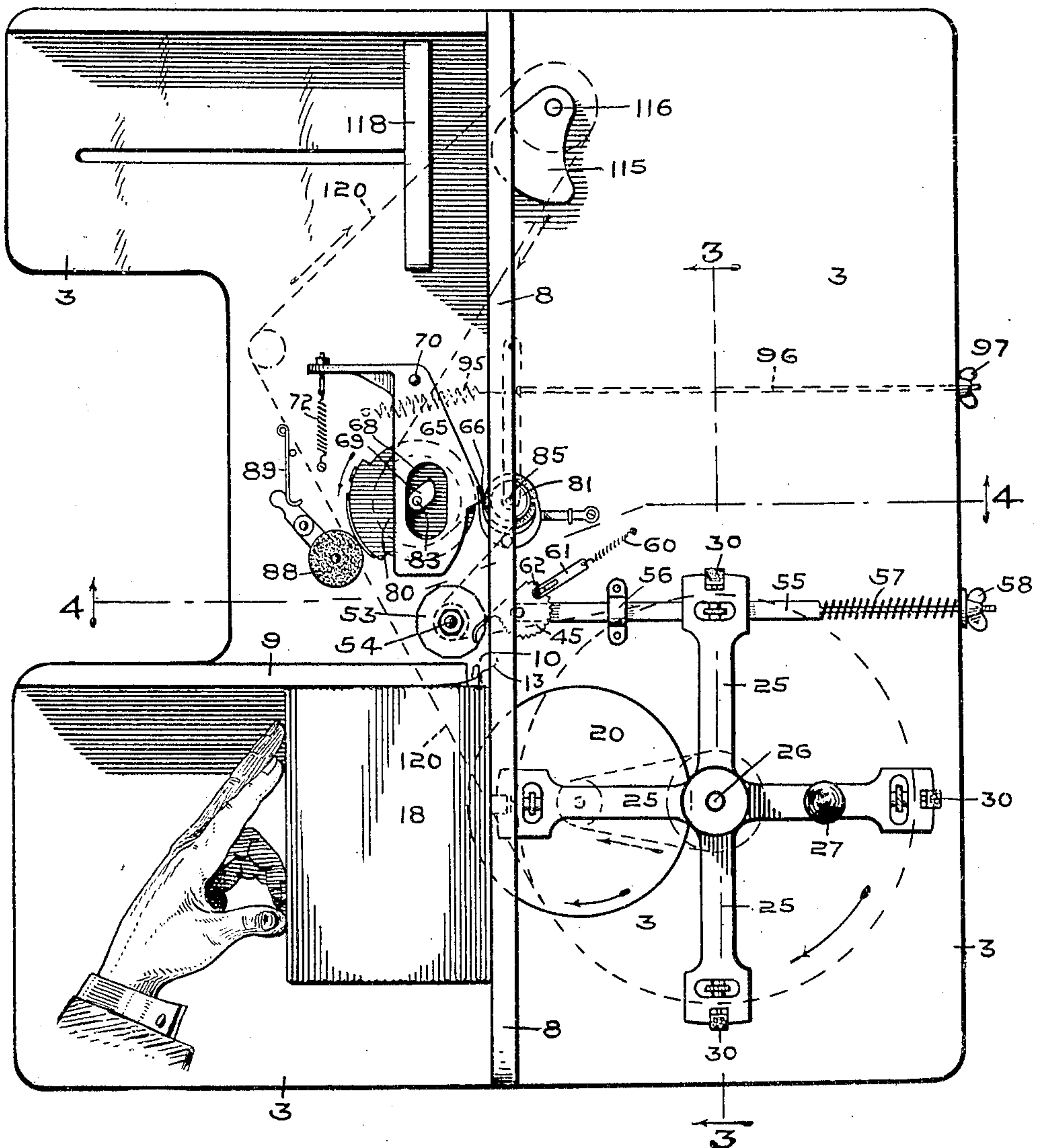
PATENTED NOV. 26, 1907.

C. E. PHILLIPS.  
STAMP CANCELING MACHINE.

APPLICATION FILED FEB. 18, 1907.

3 SHEETS—SHEET 1.

*Fig. 1.*



WITNESSES:

*INVENTOR*

L. B. Woerner.

*Charles E. Phillips,*

By Minton & Koerner,

Wm. Hurte.

ATT'YS.

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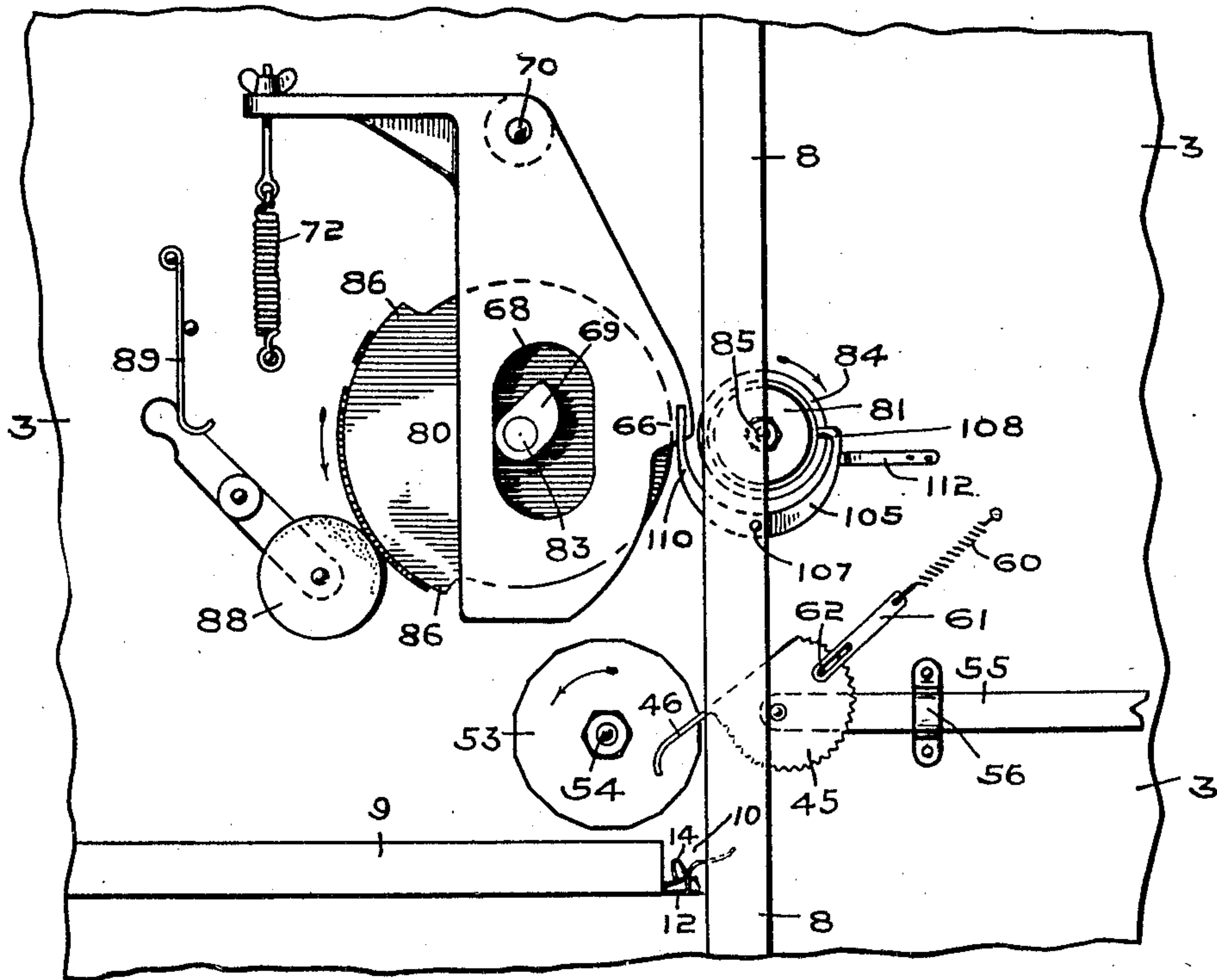
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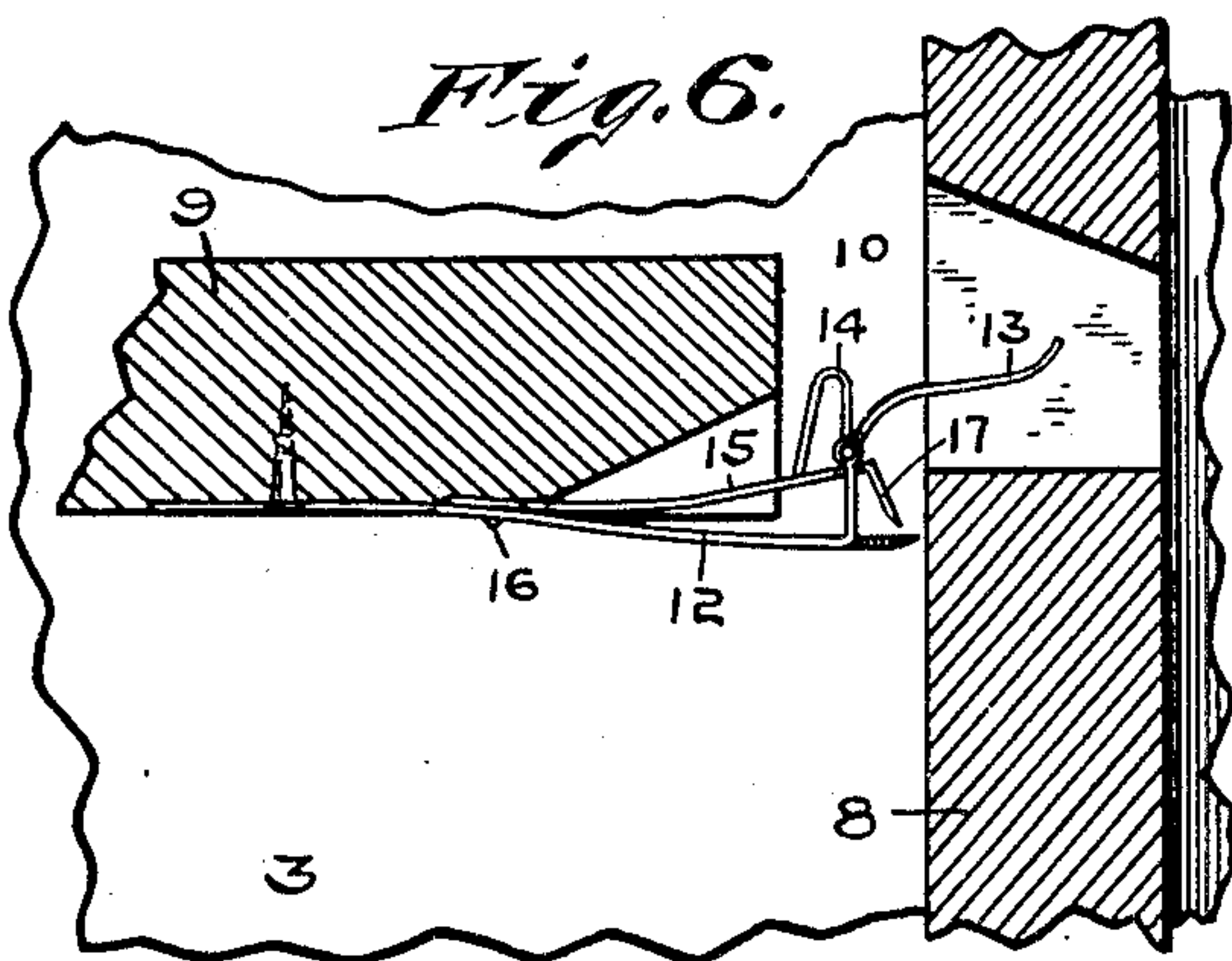
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3 SHEETS—SHEET 2.

*Fig. 2.*



*Fig. 6.*





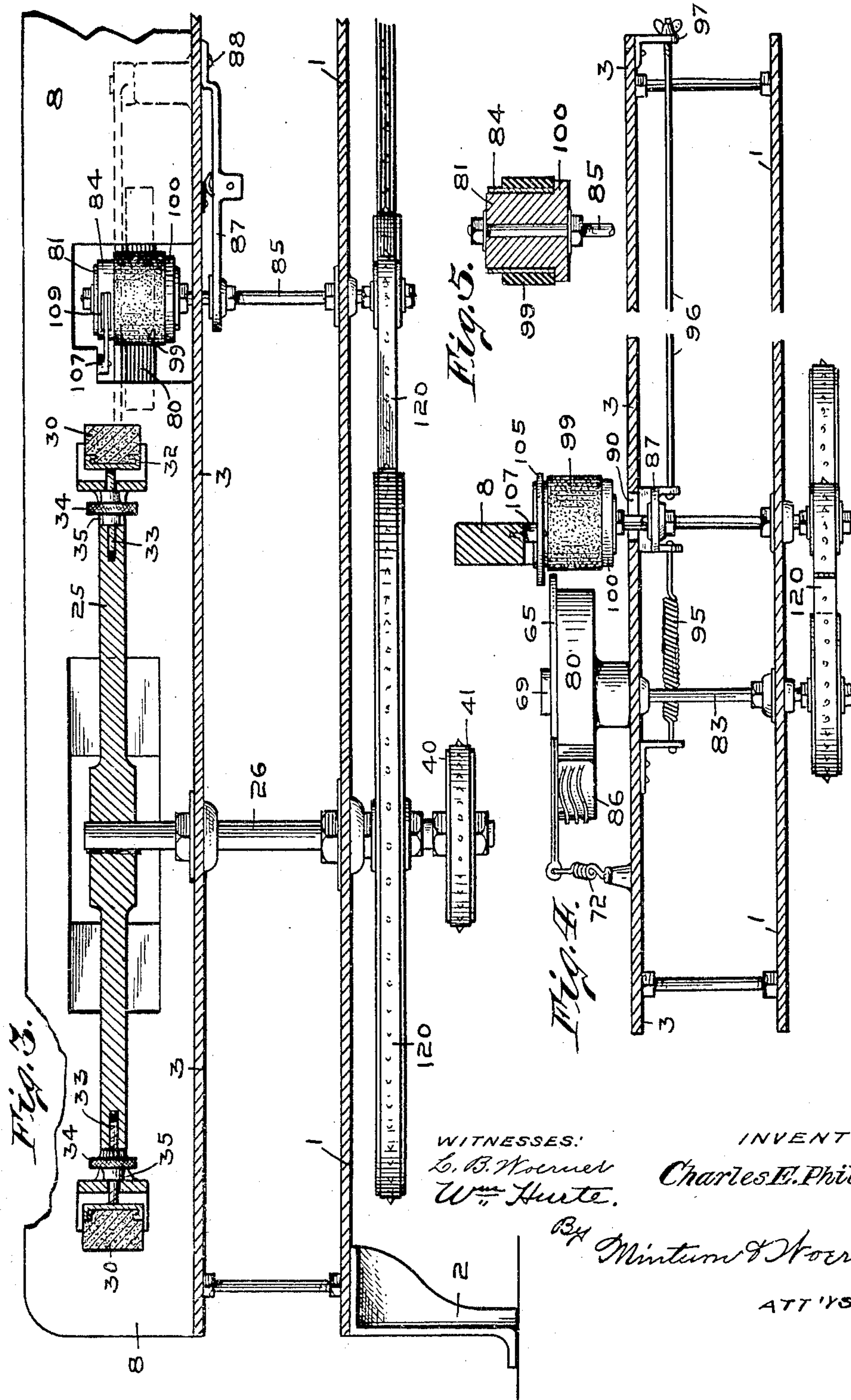
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L. B. Hoerner  
Wm. Hurte.

INVENTOR

Charles E. Phillips,

By Minton & Hoerner,

ATT'YS.



# UNITED STATES PATENT OFFICE.

CHARLES E. PHILLIPS, OF INDIANAPOLIS, INDIANA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-HALF TO WILLIAM W. KNAPP AND ONE-HALF TO IVA A. PHILLIPS, OF INDIANAPOLIS, INDIANA.

## STAMP-CANCELING MACHINE.

No. 872,010.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed February 18, 1907. Serial No. 358,097.

*To all whom it may concern:*

Be it known that I, CHARLES E. PHILLIPS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Stamp-Canceling Machines, of which the following is a specification.

This invention relates to a machine for canceling postage stamps; and the objects of the invention consists, first, in providing a machine with a pressure roller having an intermittent movement, so that during its operative period it will firmly hold the envelopes against the printing or canceling disk when the stamps are being canceled, and stands idle between each such operation.

The second object is to provide a machine with a spacing device which will insure that the envelopes will be uniformly fed to the printing or canceling disk, the arrangement being to cause the cancellation marks to uniformly appear on each envelop.

The third object consists in providing a machine of the above character which includes a separating device, its function being to prevent more than one envelop from being fed to the spacing and printing devices, and thereby remove the possibility of an uncanceled envelop being discharged from the machine.

I accomplish the objects of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1, is a top or plan view of a machine for canceling postage stamps, embodying my said invention. Fig. 2, is a fragmentary detail in plan view, on an enlarged scale, of that portion of the machine that embodies the envelop-separating device, the feed and spacing device, the pressure roller, and the printing disk. Fig. 3, is a fragmentary detail view in longitudinal section, of the machine on the dotted line 3—3, in Fig. 1. Fig. 4, is a fragmentary detail view in cross-section of the machine, on the dotted line 4—4 in Fig. 1. Fig. 5, is a central vertical section of the pressure roller. Fig. 6, is a fragmentary detail view showing the envelop-separating device in plan view. Fig. 7, is a view similar to Fig. 6, except that the separating device is shown in its operating position so as to pre-

vent more than one letter from simultaneously passing through the machine.

In the drawings, 1 constitutes the frame in which all the mechanism is mounted, the same being provided, if desired, with suitable legs 2 for supporting same. The frame 1 is provided with a top 3, having a vertically positioned and longitudinally extending guide-plate 8 along which the envelopes move when passing through the machine. An edge-plate 9 is also secured to the top 3 and stands at right angle to the guide-plate 8, its function being to uniformly arrange the ends of the envelopes which are presented to the spacing and canceling devices. The end of the edge-plate 9 does not abut the side of the guide-plate 8, but it is sufficiently removed therefrom to permit a passage-way for the envelopes.

Secured to the end of the edge-plate 9 and projecting into the passage-way 10 is a yieldable separating device, to permit the passage only of one envelop at a time to the printing or canceling disk. This separating device (see Fig. 6) consists of a thin flexible arm 12, which is secured at one end to the edge-plate 9 while its free end forms a pivot point for the movable arm 13. One end of the arm 13, when occupying normal position, is disposed so as to extend into the path and is actuated by the envelopes 18. The opposite end 14 of the arm 13 is bent in a U-shaped manner so that its free end will rest upon the surface of and actuate the yieldable arm 15. The arm 15 is composed of thin flexible material, and is rigidly secured to the arm 12 at 16, while the free end of the arm 15 is bent at an obtuse angle to form a point 17 which extends into the opposite direction in which the envelopes travel. When the arm 13 is actuated by the envelopes 18 it will move backward to permit the envelopes to pass. This movement of said arm and through the U-shaped bend 14 therein actuates the arm 15, causing the obtuse point 17 to contact the adjacent face of the envelop and thereby prevents more than one envelop from simultaneously passing through.

When the envelopes 18 are stacked and in position to be canceled, as shown in Fig. 1, they are urged to pass through the separating device by two distinct means, first of



which consists of a movable disk 20 which stands flush with the top 3 and forms a portion of the floor on which the envelops rest immediately before passing through the machine to be canceled.

The second device consists of a means formed similarly to a turnstile, comprising the cross-arms 25 which are secured together and are mounted on a rotatable vertically extending shaft 26 which is properly journaled in the frame of the machine. The cross-arms 25 are provided with a grasp-handle 27 by which it may be rotated and the ends of the cross-arms are provided with frictional contact plugs 30, composed of rubber or similar material, which contact the sides of the envelops and move them through the separating device, when the cross-arms are rotated. The frictional plugs 30 are held in the channel-shaped holders 32 (see Fig. 3) which are provided with integrally formed shanks 33. These shanks engage threaded apertures in the ends of the cross-arms 25, and by means of the exteriorly milled thumb-nuts 34, which are let into snugly fitting apertures 35 in the arms 25, the plugs 30 may be moved or adjusted so as to compensate for any wear due to the frictional contact with the envelops. The vertical shaft 26 is also provided with a fixed pin-wheel 40, and carries a suitable belt 41 that leads to and drives the movable disk-wheel 20 which imparts frictional attraction to the lower edges of the envelops; the latter being supplementary to the cross-arms 25. The envelops after passing through the separating device engage and are taken in charge by a spacing device which arranges the ends of the envelops so that they will uniformly be delivered to the canceling disk and at the same time hold them so that the passage of the envelops is mechanically controlled from the time they enter and pass through the separating device until they are discharged from the printing or canceling disk.

The spacing device consists of a cam-shaped disk 45, having a serrated edge which engages the surfaces of the envelops, and said disk is also provided with an arm 46 which projects into the path of travel and is actuated by the envelops 18. The circumference of the disk 45 equals approximately the distance from the normal position of the arm 46 to the point where the envelops are contacted by the printing or canceling disk, so that each envelop will uniformly be presented to said disk at the proper time. When the cam-shaped disk is actuated by the envelops the increasing radius of said disk more tightly presses against the envelops and thus firmly holds them against the feed-disk 53, which is positioned oppositely and adjacently thereto. This latter disk is mounted on the vertical shaft 54. As the increasing radius of the cam-disk 45 moves

between its axis and the envelop, some adjustment must be extended to said disk to compensate for the increased radius, or distance, between its axis and the envelop. To accomplish this end I mount the said disk on a sliding-bar 55 which lies on the surface of the top 3 and held in a given plane by means of the guide-loops 56. The sliding-bar is held in normal position by means of a spring 57; and the wing-nut 58 serves to increase or decrease the tension of said spring upon said bar. The spring 57 permits the disk to move away from the envelops when the increased diameter thereof passes between its axis and the envelop. After an envelop has passed between the cam-disk 45 and the feed-disk 53, the former will be returned to normal position by means of a spring 60 and a plate 61 which engages with a pin 62 on the face of said disk.

The envelops after being delivered to the printing or canceling disk have a momentary pause which, when the machine is in operation, is scarcely perceptible to the eye, but such pause does exist and the object therefor is to permit the extended peripheral portion of the canceling disk, which carries the characters that effect the cancellation of the stamps, to reach that point where the envelops are admitted, so that the cancellation impressions will be accurately and uniformly placed upon the envelops. This momentary pause of the envelops is effected by means of a rocking-plate 65 having a projecting-nose 66 against which the ends of the envelops abut. The rocking-plate 65 is situated immediately above the printing or canceling disk and is provided with an aperture 68 through which a cam 69 projects. This cam is formed integrally with the printing disk, and its formation and relation with the extended peripheral portion 86 of the disk is such that the rocking-plate 65 will be actuated at the proper time, to permit the ends of the envelops to enter between the canceling disk and the pressure-roller. The rocking-plate 65 is pivoted at 70 and is held and returned to normal position, after being actuated, by means of a spring 72.

Situated immediately below and on a transverse line of the nose 66 are the printing or canceling disk and the pressure-roller 81. The printing or canceling disk 80 is mounted on a vertical shaft 83 which is properly journaled in the frame 1, while the pressure-roller 81 is mounted on a vertically extending parallel shaft 85. (See Fig. 2.) The printing disk 80 is provided with a peripheral extension 86 which carries the characters and configurations for applying the impressions to the face of the envelops. An ink roller 88 is pivotally mounted adjacent to the printing disk and applies ink thereto, and the said ink roller is held in contact with the printing disk by means of the spring 89.



In order that the envelops may firmly be held against the printing disk, so as to insure good cancellation impressions, and still permit mail matter of various thicknesses to be canceled with despatch, I provide a pressure-roller 81 which will be mounted so as to have slight movement to and from the printing disk 80, in order to compensate for the different thicknesses of mail matter passing between the two. This construction will relieve the pressure-roller 81 from undue strain, and will also remove the possibility of the mail matter being mutilated or torn.

Particular attention is invited to the peculiar formation of my pressure-roller 81, in that the surface of the roller that comes in direct contact with the envelops is formed of a metal cylinder 84 having its outer surface covered with rubber or like material 99. (See Fig. 5). The cylinder 84, which comprises the outer surface of the roller 81, has an intermittent movement and rotates only when an envelop is passing between it and the printing disk 80. The cylinder 84 is released by means of a certain mechanism operated by the approaching envelop, and will be hereinafter described. The movement of the cylinder 84 immediately ceases when the envelop has passed so that at no time does the peripheral extended portion 86 of the canceling disk 80 come in contact with the cylinder 84. One of the chief features of this invention is to prevent the ink from reaching the cylinder 84, and by so doing thus prevents the besmearing of the envelops subsequently passing through the machine. This often happens with the machines now in use. To obviate this objection is accomplished by the peculiar construction of my pressure-roller 81, which will now be described.

As before stated, the pressure-roller 81 is mounted on a vertical shaft 85, which stands parallel with the vertical shaft 83 on which the printing or canceling disk 80 is mounted. The upper end of the pressure-roller shaft 85 is journaled in a movable arm 87 which is pivotally connected at 88 to the underside of the top 3. The upper end of the shaft 85 forms no contact with the top 3, but extends through an elongated aperture 90 so that said shaft and the pressure-roller may have movement to and from the printing or canceling disk 80. The pressure-roller 81 is held in normal yieldable relation with the printing disk 80 by means of the spring 95 connecting with the arm 87, which normal relation may be changed and its movement limited by means of the connecting-rod 96 and the wing-nut 97. See Fig. 4. The upper end of the vertical shaft 85 carries the pressure-roller 81, as has heretofore been pointed out. This roller is securely fixed to said shaft and has a continual movement. The lower end of the pressure-roller has the

horizontally extending flange 100 which forms a seat for the hollow pressure-cylinder 84. This cylinder is driven by frictional contact with the periphery of the pressure-roller 81, as has heretofore been stated, and has its outer surface composed of elastic material which serves to pull the envelops past the printing disk 80. Normally, the hollow cylinder 84 stands idle except when an envelop is being canceled, at which time it rotates with the pressure-roller 81. The movement of this cylinder is controlled by means of the crescent-shaped arm 105 which is pivotally secured to the guide-plate 8 at 107. One end of the 105 arm is provided with a hook 108, which engages a slot 109 in the periphery of the surface of the hollow cylinder 84, and the other end 110 of said arm projects into the path of travel and is actuated by the envelops. When the end 110 of the arm 105 is actuated by an approaching envelop, said end is forced toward the end of the axis of the pressure-roller 81, thus forcing the hooked end 108 of said arm 105 out of the slot 109 in the cylinder 84. This releases said cylinder and permits it to rotate with the pressure-roller 81. As soon as the envelop passes from the end 110 of the arm 105 the latter is returned to normal, causing the hook 108 to engage in the slot 109 of the cylinder 84 when the two register. This return movement is effected by means of the spring 112.

After the envelops have been canceled, they are discharged into the stacking device which tacks the envelops. This device consists of a movable cam 115, mounted on the vertical rotating shaft 116. The increasing size of the stack of envelops is permitted by the movable tail-block 118.

The shafts 26, 54, 83, 85 and 116 are all provided with pin wheels of certain relative diameters with one another to insure a properly timed movement between them, and are all simultaneously operated by means of a single belt 120, when the shaft 26 is operated.

Thus it will be seen that I have provided a machine for canceling stamps which will be simple in construction and efficient in its operation so that a machine of this character can be sold at a price that will permit of its introduction into the smaller post-offices, where the Government has not yet seen fit to place the higher priced machines, for the reason that the receipts of said smaller offices cannot warrant the expense of installing the higher priced machines. While I have shown in the drawings a machine operated by manual power it is obvious that the machine can be equipped with electric or other motive power wherever the same is available, which will so increase the machine's capacity as to make it equally as desirable in the larger post-offices throughout the country.

Having thus fully described my said in-



vention, what I desire to secure by Letters Patent of the United States, is—

1. In a stamp canceling machine, the frame, a canceling disk mounted therein, means for operating said disk, a pressure-roller mounted adjacently to said canceling disk, means for rotating said roller, a cylinder surrounding said roller a trip means for normally holding said cylinder against rotation, said trip means being actuated by the envelopes.

2. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelopes against the canceling disk, means arranged on said frame for stacking the envelopes, a rotatable disk located in and standing flush with the floor for starting the envelopes, and adjustably mounted frictional contacts for engaging the envelopes.

3. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelopes against the canceling disk, and an adjustably mounted cam-shaped spacing device mounted independently of the canceling disk and actuated by the envelopes for uniformly presenting the envelopes to the canceling disk.

4. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelopes against the canceling disk, an adjustably mounted cam-shaped spacing device mounted independently of the canceling disk and actuated by the envelopes for uniformly presenting the envelopes to the canceling disk, and means for applying a tension to said spacing device.

5. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelopes against the canceling disk, an adjustably mounted cam-shaped spacing device mounted independently of the canceling disk and actuated by the envelopes for uniformly presenting the envelopes to the canceling disk, means for applying a tension to said spacing device, and means for returning said spacing device to normal.

6. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, means for operating said disk, a pressure-roller mounted adjacently to said canceling disk, means for rotating said roller, a

cylinder surrounding said roller, an envelop actuated trip means for normally holding said cylinder against rotation, and an independently and adjustably mounted cam-shaped envelop spacing device for uniformly presenting the envelopes to the canceling disk.

7. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, means for operating said disk, a pressure-roller mounted adjacently to said canceling disk, means for rotating said roller, a cylinder surrounding said roller, an envelop actuated trip means for normally holding said cylinder against rotation, an independently and adjustably mounted cam-shaped envelop spacing device for uniformly presenting the envelopes to the canceling disk, and means for applying a tension to said envelop spacing device.

8. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, means for operating said disk, a pressure-roller mounted adjacently to said canceling disk, means for rotating said roller, a cylinder surrounding said roller, an envelop actuated trip means for normally holding said cylinder against rotation, an independently and adjustably mounted cam-shaped envelop spacing device for uniformly presenting the envelopes to the canceling disk, means for applying a tension to said envelop spacing device, and means for returning said envelop spacing device to normal.

9. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelopes against the canceling disk, an independently and adjustably mounted cam-shaped spacing device actuated by the envelopes, an arm carried by said cam against which the envelopes abut in their travel toward the canceling disk, a slidable-bar for mounting said cam, means for yieldably holding said cam in position, means for applying a tension to said cam, and means for returning said cam to normal.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this, 1st day of February, A. D. one thousand nine hundred and seven.

CHARLES E. PHILLIPS. [L. s.]

Witnesses:

F. W. WOERNER,  
S. A. BOONSTRA.