

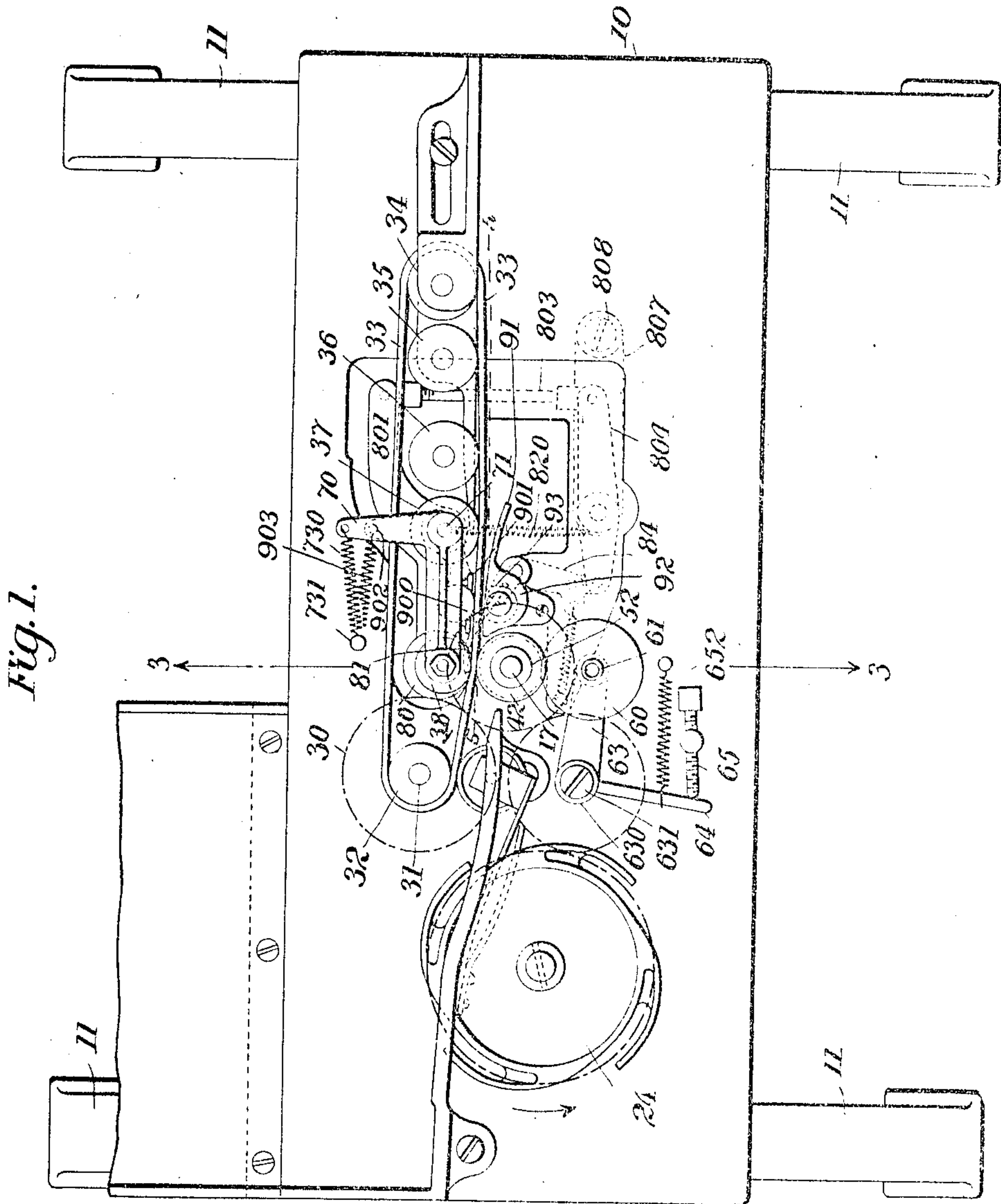
No. 882,519.

PATENTED MAR. 17, 1908.

M. V. B. ETHRIDGE.
CANCELING AND POSTMARKING MACHINE.

APPLICATION FILED MAY 21, 1906.

4 SHEETS—SHEET 1.



Witnesses
J. G. Stinkel
Wm McDonnell.

Martin V. B. Ethridge, Inventor
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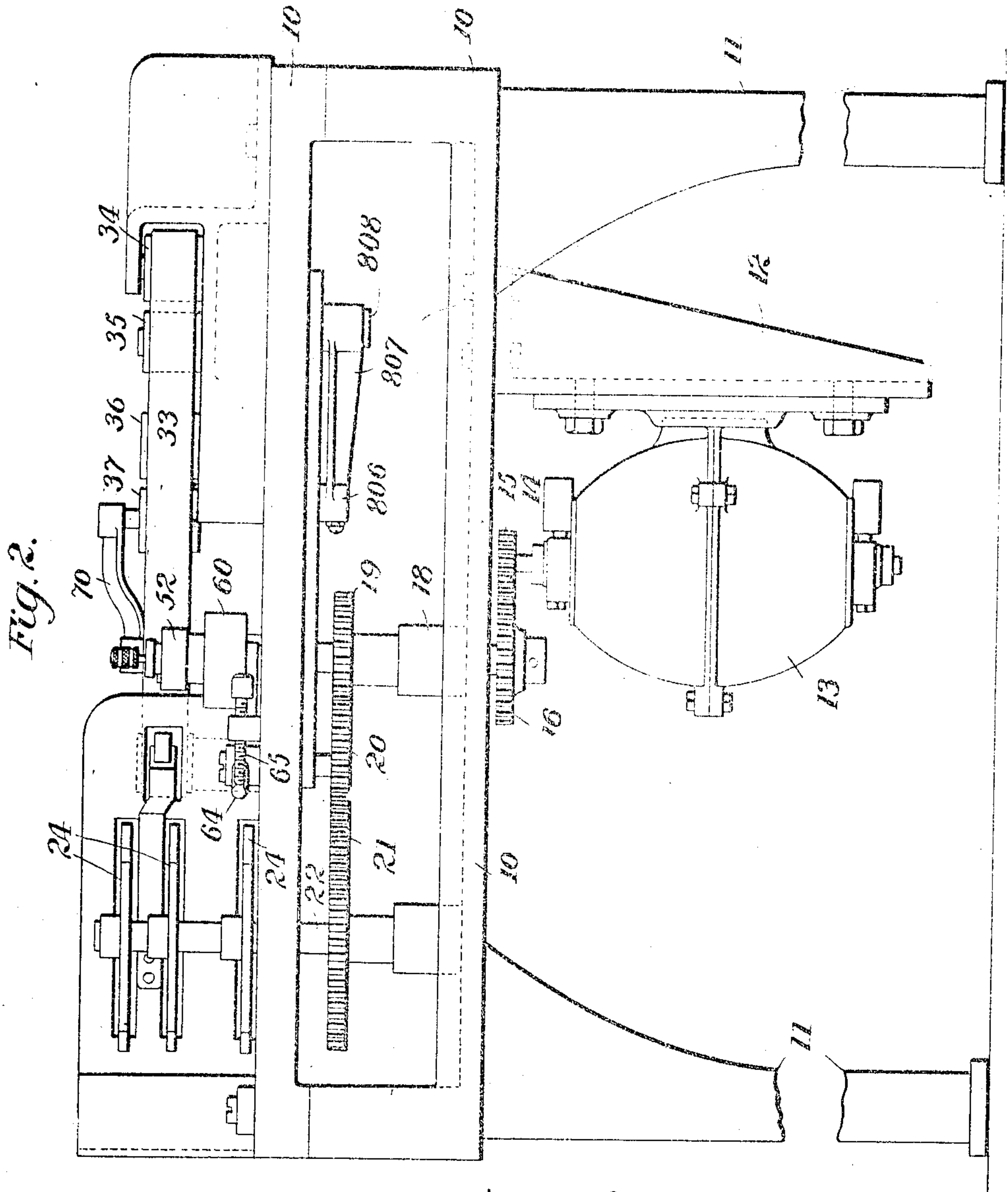
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M. V. B. ETHRIDGE.
CANCELING AND POSTMARKING MACHINE.

APPLICATION FILED MAY 21, 1903.

4 SHEETS-SHEET 2.



Witnesses
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No. 882,519.

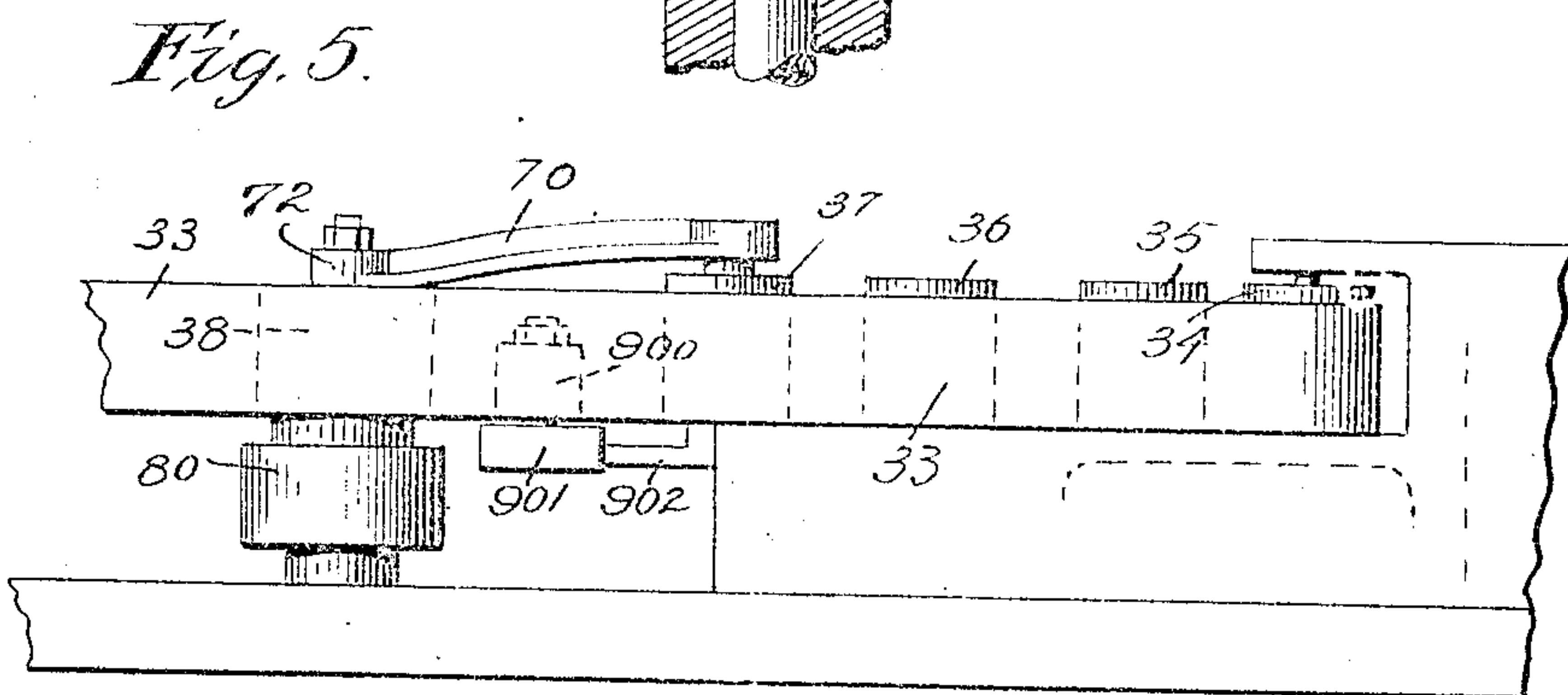
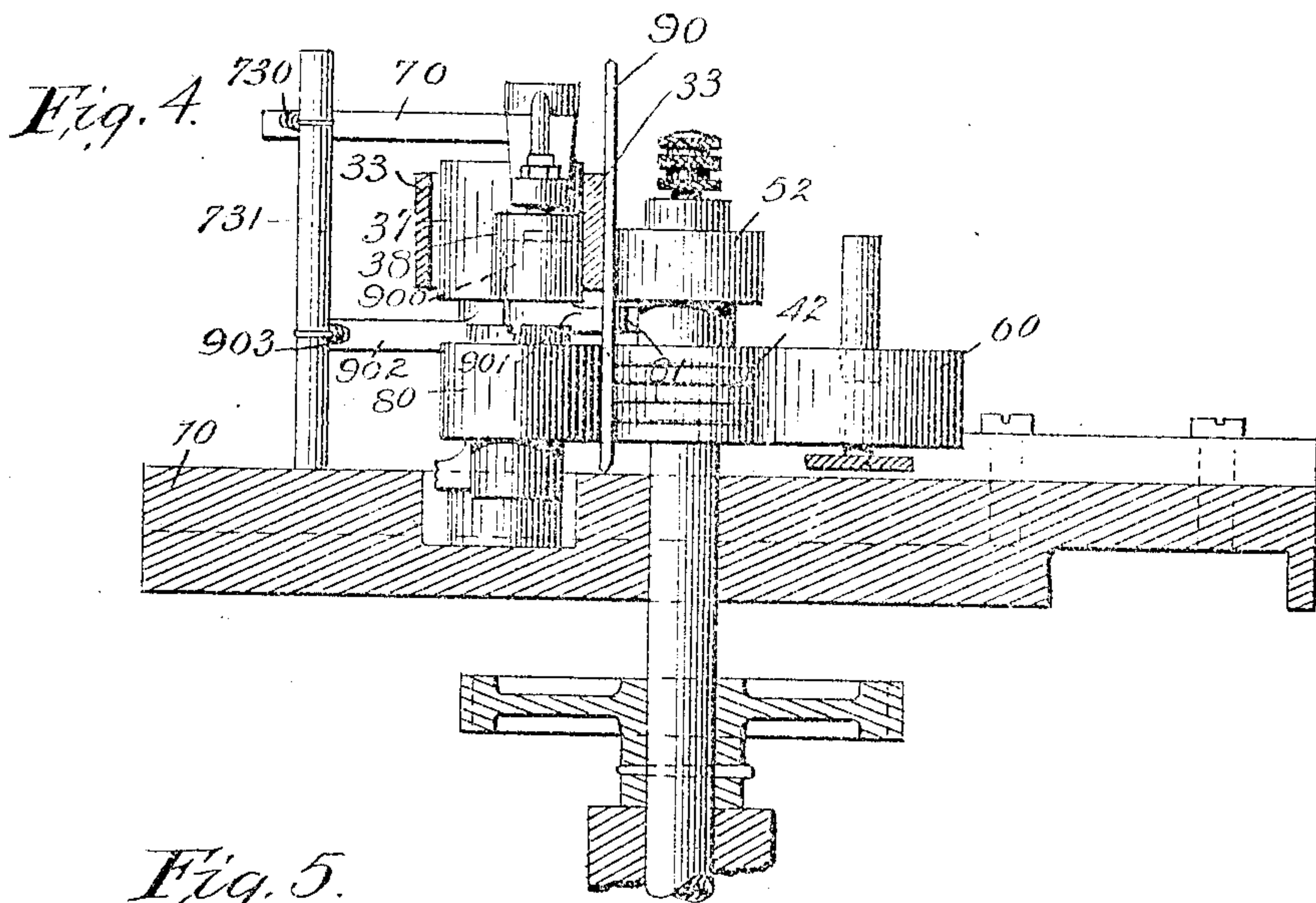
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APPLICATION FILED MAY 21, 1906.

4 SHEETS—SHEET 4.



Witnesses,

Stephen J Cox
Alan Mc Donnell

Alan Mc Donnell.

Inventor.

Martin W. B. Etheridge

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his Att'y.

UNITED STATES PATENT OFFICE.

MARTIN V. B. ETHRIDGE, OF NEW YORK, N. Y.

CANCELING AND POSTMARKING MACHINE.

No. 882,519.

Specification of Letters Patent.

Patented March 17, 1908.

Original application filed June 1, 1905, Serial No. 263,237. Divided and this application filed May 21, 1906.
Serial No. 317,957.

To all whom it may concern:

Be it known that I, MARTIN V. B. ETHRIDGE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Canceling and Postmarking Machines, of which the following is a specification.

The present application relates to certain improvements which I have made in means for postmarking and stamp canceling mail matter, and embodies matter originally embraced in my co-pending application No. 263,237 filed June 1, 1905, and of which the present case is a division.

The present invention more particularly relates to the means of these machines whereby a relative movement toward and from each other of the marking and impression elements is produced under the control of the mail matter to be postmarked and stamp-cancelled; one of its important objects being to produce a novel and reliable means by which a relative movement of said elements away from each other is effected when there is no matter between them to be marked, whereby inking of the conveying means is prevented at such time, and by which also a relative movement of said elements toward each other is produced when matter to be marked reaches the marking station, whereby it is assured of receiving the marking imprint.

In machines of this class letters of different thicknesses are required to be treated and it frequently happens that those whose thickness varies from what may be regarded as an average thickness do not receive a proper imprint, for the reason that they are subjected to too much or to too little pressure during the marking operation. At any rate, the mechanism of such machines has not, as far as I know, been arranged so as automatically to adjust itself to produce substantially uniform impressions upon widely varying thicknesses of mail matter. Therefore, in providing mechanism for producing the relative movement hereinbefore referred to, between the marking and impression elements, I have sought to provide a means whereby the tension between the marking and impression elements may be automatically regulated under the control of the piece of mail matter to be postmarked and stamp

cancelled, in such manner as to be substantially constant regardless of the thickness of said matter. In carrying out this important object of the invention I have provided a tension or pressure regulating mechanism which comprises certain spring-actuated elements which are primarily or ultimately controlled or operated by each individual piece of mail matter and which may be so associated with each other that up to a certain predetermined extent of relative movement between the marking and impression elements, the tension upon the mail is entirely that of one of the spring elements, and beyond such limit of movement the other spring element comes into play, in such manner as to permit further relative movement between the marking and impression elements without substantially increasing the force of the pressure exerted by the spring elements.

In the accompanying drawings I have illustrated a form of mechanism adapted to accomplish the purpose stated, and which, furthermore, is otherwise advantageous, and for said reason is itself made the subject matter of claims based upon the elements employed therein.

It is to be understood, however, that in so far as the first and most important feature of the invention hereinbefore referred to is concerned, it is not restricted to the detail exemplification herein illustrated, and that the invention in every aspect thereof is to be considered as comprehending any and all means which fairly fall within the terms and spirit of the appended claims, which are to be construed as broadly as possible without actual violence to the language employed therein.

In the drawings:—Figure 1 is a top plan view of a machine embodying my present improvements. Fig. 2 is a front elevation thereof. Fig. 3 is an enlarged plan view of the means for regulating the pressure at the point of print. Fig. 4 is a vertical section on the plane of the line 3—3 in Fig. 1; and Fig. 5 is a longitudinal vertical section on the line 5—5 of Fig. 1.

The same characters of reference designate the same parts in the several views.

10 is a table or other means of support appropriate to the mechanism of the present invention. It is provided with legs 11, and

with a bracket 12, adapted to support a casing 13 within which is confined a motor (not shown) of any suitable size and construction.

Extending upward from the casing 13 is the actuating shaft 14 of the motor. To this shaft there is secured a toothed pinion 15 which is adapted to mesh with a gear 16. This gear 16 is mounted upon a shaft 17 which rotates in suitable bearings, as 18, in the frame of the machine, and carries the marking cylinder 42 by which the postmarking data and stamp canceling marks are imprinted on the letters successively presented thereto. On the shaft 17 there is secured a second gear wheel, 19, which is the first one of the train of mechanism, comprising also gears 20 and 21 and a shaft 22, which communicate motion to the dispersing wheel 24. This dispersing wheel is or may be of usual and well known construction and needs no further description. The gear 19 further meshes with a gear 30, shown in dotted lines in Fig. 1, mounted upon a shaft 31 suitably suspended in bearings in the frame of the machine. This shaft 31 carries a pulley 32 which drives an upright conveyer belt 33, which belt also passes around the idlers 34, 35, 36, 37 and 38. The idler 38 holds the belt 33 yieldably against the letter and is arranged near to, but above the horizontal plane of, the marking element which, as usual, is preferably in the form of a cylinder 42. Said idler 38 is also arranged opposite a roller 52, and it is mounted upon a yielding bearing, preferably composed of a bell crank lever 70, which is fulcrumed at 71 and provided with a spring 730 secured to a post 731 projecting from the frame of the machine. The roller 52 is rotatably mounted directly above the marking cylinder 42 and opposite the belt 33 and idler 38 and coöperates with the belt and idler in assuring proper feeding of the letter, one side of which it engages.

60 is the inking roll. This roll is mounted upon a suitable shaft 61 and is held yieldably against the printing cylinder 42, which it supplies with ink, preferably by mounting its shaft 61 upon one of the members 63 of a horizontal bell crank lever, the other member (64) of which is adapted to bear against an adjustable stop 65 and is provided with a spring 652. This lever is fulcrumed at the junction of its members 63 and 64, by a pin 630 having a head 631 to prevent vertical displacement of the lever.

80 designates the impression element which, as usual, is preferably a roll. In the illustrated form of the invention it is movable toward and from the printing element 42 and is herein shown as carried by a pivoted arm or lever 801, and is loosely mounted to rotate upon a threaded pin, the head of which is seen at 800, with which the end of the lever or arm just referred to, is provided. This impression roll bears upon the side of

the letter 90, at a place directly opposite the marking cylinder 42 and is preferably arranged beneath the plane of the lower edge of the belt 33 by which the letters are conveyed between the impression roll and marking cylinder. The pivoted arm or lever 801 is fulcrumed between its ends (at 802, Fig. 4) upon a fixed post 821 and, in the form herein shown, all the movements of the impression element, both toward and from the marking element and for thin and thick letters, are around this post 821 as a fulcrum.

Mounted at a convenient place and above the marking cylinder, and so as to bear upon or engage the same side of the letter as the cylinder, is the actuating element of the spring mechanism by which in the illustrated embodiment of the invention the movement of the impression element toward the marking element is accomplished when a letter is brought into marking position. This actuating element is preferably a flat trip 81, and it is carried by the member 82 of a bell crank lever, which is fulcrumed at 83 and has its other member 84 provided with a spring 85, which acts thereupon to hold the trip 81 yieldably in the path of the mail.

The arm or lever 801 constitutes, in the form herein shown, a swinging bearing for the impression element 80, and between it and the bell crank lever just referred to connections are provided by which it becomes possible to maintain a substantially uniform pressure upon the mail matter regardless of the thickness of the latter. These connections comprise a link 803, one end of which is connected to the end of the lever 801 remote from the impression roll, and a second lever or arm, 804, to which the other end of the link is connected. This second arm or lever is pivoted upon a pin 805, carried by the end 806 of a swinging arm 807, shown in full lines in Fig. 2 and in dotted lines in Figs. 1 and 4. To this swinging arm is attached one end of a spring 820, the other end of which is secured to the before mentioned post 821 or other suitable holding means provided for the purpose. The end of this swinging arm remote from the pin 805 and spring 820 is pivoted at 808 to the frame of the machine. The end of the second arm or lever 804 remote from the link 803 is pivotally connected at 860 to one end of a toggle link 86 the other end of which is pivoted at 861 to the end of the adjacent member 84 of the angle lever hereinbefore referred to.

The operation of the parts described is as follows:—When no mail is between the marking cylinder and impression roll, the free end of the trip 81 will project beyond the face of the marking cylinder, or into or across the path of the mail, as shown in Fig. 1. In this position of the parts, the toggle link 86 is inclined, as toward the right from the member 84, and the impression roll 80 is

held away from the marking cylinder 42 by the tension of the spring 85, as hereinafter more fully set forth. When a letter, 90, is fed by the belt 32 into position between the marking cylinder and impression roll, it strikes the trip 81 and turns the angle lever upon its fulcrum 83, forcing the member 84 thereof toward the right until it strikes the shoulder 84^a which acts to stop its further movement in such direction. This movement of the member 84 causes the link 86 to straighten and to press upon the end of the second arm 804, causing said second arm to turn upon its fulcrum at 805 so as to act, through the link 803, upon the arm 801 and cause the impression roll 80 to advance toward the marking cylinder 42 and into position to engage the side of the mail. In this position the parts are held yieldably by the spring 85 which has been stretched by the described movement of the member 84 of the angle lever. The fulcrum 83 and the pivots 861 and 860 connecting the toggle link 86 with the member 84 and lever 804 are now approximately in line with each other so that the toggle link and the member 84 are locked together forming in effect a rigid piece which extends from the fulcrum 83 to the pivotal connection at 860 of the toggle link with the arm 804. In this position of the parts, the second arm or lever 804 is locked thereby against pivotal movement around its fulcrum at 805. It will now be seen that if the letter is of thickness greater than the space thus provided between the impression roll and marking cylinder, the tendency will be to force the impression roll away from the marking cylinder, the trip being locked by the shoulder 84^a against movement away from the impression roll. This will cause the arm 801 to turn upon its fulcrum 802, thus causing the link 803 to press upon the arm 804. As the link 86 is lengthwise of the path of movement of the contiguous end of the arm 804 around the fulcrum 805, it is apparent that the arm is compelled to turn upon or around the pivot 860 as a fulcrum, thus swinging the arm 807 and putting the spring 820 under tension the pressure of which is thereby exerted against the mail. When the mail has passed beyond the marking cylinder and impression roll the tension of the spring 820 is relaxed, the arm 807 is returned to its former position, abutting, at 2, upon the frame of the machine or other stop provided therefor; the spring 85 acts upon the member 84 of the angle lever to restore the trip to its previous position across the path of the mail and the previous relation of the toggle link 86 and arm 804 is restored. In assuming this position of the parts the pull of the spring 85 exerted on the member 84 is transmitted through the link 86 to the contiguous end of the arm 804, pulling the same toward the member 84 and causing the

arm to turn upon the pivot 805, thus, through the link 803, pulling upon arm 801, and moving the impression roll away from the marking cylinder, whereby the deposition of ink on the impression roll is prevented. This position of the impression roll is maintained by the spring 85 until its tendency to increase the distance between the impression cylinder and marking cylinder is counteracted by the action of the regulating means described, between it and the impression cylinder under the control of the mail matter to be postmarked and stamp-canceled.

Having thus described the preferred embodiment of my invention, the adaptability thereof to the maintaining of a substantially constant pressure on pieces of mail matter regardless of the thickness thereof will be apparent. Thus, it has already been seen that the trip carrying bell crank lever acts, under the control of the mail matter and through its connections with the impression element, to advance the latter toward its impression position. At this time the impression element is under the tension of the primary spring 85, and it is obvious that the parts may be and in fact in my practice are so related to each other that the movement described is such as to produce proper pressure upon mail matter of a pre-determined thickness, such as a usual or average thickness thereof, the spring pressure in such event being that of the spring 85 only, the spring 820 being in its normal or inactive condition. Now, when a thicker piece of mail matter is brought into marking position the second spring 820 comes into play, by the swinging of the arm 804 around its fulcrum at 860, for such additional thickness, thus permitting the latter to be accommodated without increasing the tension of the spring 85. Thus, the mechanism adjusts itself automatically to the thickness of the matter to be postmarked and stamp canceled in such manner as to maintain a constant or uniform tension between the impression roll and marking cylinder, assuring proper and uniform impressions upon all thicknesses of such matter.

A suitable guiding means preferably comprised of the plate 93 supported in any suitable manner at one side of the path of the mail and a second plate 901 arranged at the other side of the path of the mail, is preferably provided. These plates engage opposite sides of the mail matter and stiffen the same so as to correct tendency of the edge thereof to curl and strike the impression roll. The plate 901 is preferably carried by one end of a bell-crank lever 902, which is fulcrumed at 71 and has its other end provided with a spring 903 which holds the plate 901 yieldably toward the path of the mail. The lever 902 may also be provided with a roll 900 to bear upon the belt 32 above the plate 901. The lever 902 is preferably arranged

beneath the plane of the lever 70 which carries the idler 38, and the plate 901 is preferably formed as shown, by providing the edge of the lever which is presented toward the mail-path with a plane-surface shoe or flange which is arranged beneath the plane of the belt 33 so as to be adapted directly to engage the side of the mail. The roll 900 is preferably mounted on the end of the lever in a sufficiently elevated position to engage the belt 33.

It will be noted that the means described effectually feed the mail to and between the marking and impression elements, without liability of the belt receiving ink from the marking element.

From the foregoing the construction, operation and advantages of the present invention will readily be seen, and it will be understood that while the mechanism has been shown and described with some degree of particularity, yet it is not to be assumed therefrom that the invention is restricted to the mechanism detailed, which in the broader aspects of the invention is merely to be regarded as illustrative or suggestive of suitable or preferred embodiments within the scope of the invention. Because of peculiar advantages of the mechanism illustrated and described, it is, however, made the subject matter of some claims more or less restricted thereto.

Having thus described the invention what I believe to be new and desire to secure by Letters Patent, is:—

1. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same and a regulating mechanism adapted to maintain a substantially constant tension between said elements and comprising a plurality of springs and means whereby each of said springs acts yieldably to hold one of said elements toward the other and the springs are placed successively under tension for such action.

2. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same and a regulating mechanism adapted to maintain a substantially constant tension between said elements and comprising a pair of springs successively brought into operation for mail exceeding a predetermined thickness, one of said springs being active for thickness within that predetermined and the other inactive for the same and exerting its pressure for thickness in excess thereof.

3. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same, and a regulating mechanism, having a swinging arm provided with a plurality of fulcrums,

means acting upon said arm to turn it upon one of its fulcrums for mail up to a predetermined thickness, said means having a primary spring which is set to operate for mail up to said predetermined thickness, and also having a device whereby the arm is locked against movement on said fulcrum by an excess of such thickness, a second spring connected with said arm and operated by the movement of the arm on its second fulcrum for thickness in excess of that predetermined for the primary spring, and connections between said arm and one of said elements.

4. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same, and a regulating mechanism, comprising a swinging arm carrying one of said elements, a second swinging arm having a plurality of fulcrums, a link connecting said arms with each other, means connected with said arms at one of the fulcrums thereof and adapted to turn it upon said fulcrum for mail up to a predetermined thickness, said means having a primary spring which is placed under tension in the movement of said arm on said fulcrum and also having a device whereby the arm is locked against further movement on said fulcrum by an excess of said predetermined thickness, and a second spring connected with said arm and operated by the movement of the arm on its second fulcrum for thickness in excess of that predetermined for the primary spring.

5. In a machine of the kind described, relatively movable impression and marking elements, means for conveying mail matter of varying thickness between the same, and a regulating mechanism, comprising a swinging arm carrying one of said elements, a second swinging arm having a plurality of fulcrums, a swinging bearing for the first of said fulcrums, a link connecting said arms with each other, means connected with said arms at the second of its fulcrums and adapted to turn it upon said first fulcrum for mail up to a predetermined thickness, said means having a primary spring which is placed under tension in the movement of said arm on said fulcrum and also having a device whereby the arm is locked against further movement on said first fulcrum by an excess of said predetermined thickness, and a second spring connected with said arm and operated by the movement of the arm on its second fulcrum for thickness in excess of that predetermined for the primary spring, said arm in the latter movement swinging said bearing of the first fulcrum.

6. A machine of the class described having its printing couple composed of a marking element and an impression element, and means for moving one of the same bodily toward and from the other about the same ful-

crum point at all times, said means comprising a plurality of springs and devices whereby each spring is adapted to hold the latter element yieldably toward the other and the springs are placed successively under tension for such action.

7. A machine of the class described having its printing couple composed of a marking element and an impression element, and means for moving one of the same bodily toward and from the other, said means comprising a plurality of springs, a pivoted arm, around the pivot of which the movable element moves bodily at all times, and devices whereby each spring is adapted to act to hold the latter element yieldably toward the other and the springs are placed successively under tension for such action.

8. A machine of the kind described, having its printing couple composed of a marking element and an impression element, and means for moving the same bodily toward and from the other, said means having an actuating device which is arranged in the path of the mail and is adapted to be controlled thereby, a plurality of springs a pivoted arm around the pivot of which the movable element moves bodily at all times, and devices whereby each spring is adapted to hold the latter element yieldably toward the other and the springs are placed successively under tension for such action by movement of the actuating device and said impression element respectively.

9. A machine of the kind described, having its printing couple composed of a marking element and an impression element, and means for moving one of said elements bodily toward and from the other element constantly about the same fulcrum point, comprising a pivoted arm which carries the movable element and around the pivot of which the movable element moves bodily at all times, a plurality of springs and mechanism for bringing the springs successively into action and causing each to hold the movable element yieldably toward the other element, comprising an actuating element which is operated by the mail and is connected with one of the springs, a second arm which is connected with the first arm and with the actuating device and communicates movement to the first arm from the actuating device, and a swinging bearing to which the second arm is pivoted between its ends and around the fulcrum of which it moves when pressure is transmitted thereto from the movable element the other of said springs being arranged to be placed under tension by the latter movement.

10. In a machine of the kind described, a conveying means, a marking element and means for holding the mail matter to the action of marking element, comprising instrumentalities having mail engaging por-

tions which are arranged on opposite sides of the path of the mail and engage opposite sides of the mail and are each held yieldably thereto.

11. In a machine of the kind described, a conveying means, a marking element and means for holding the mail matter to the action of the marking element, comprising instrumentalities which are arranged on opposite sides of the mail-path and in position to engage opposite sides of the mail, each of said instrumentalities provided with a spring by which it is held against the mail and is adapted to yield to the thickness thereof, and means by which one of said instrumentalities is adjusted to operative position by movement of the other.

12. In a machine of the kind described, a conveying means a marking element and means for holding the mail matter to the action of the marking element, comprising instrumentalities to engage opposite sides of the mail matter and means whereby each of the devices is yieldable to the thickness of said matter and is held thereto, comprising a regulating mechanism connected with one of said instrumentalities and having a spring, a spring having connection with the other of said instrumentalities, and connections between the latter instrumentality and the regulating mechanism.

13. In a machine of the kind described, relatively-movable marking and impression elements, means for feeding mail matter between the same, and mechanism for holding the mail matter to the action of the marking element, comprising means having instrumentalities arranged to engage opposite sides of the mail matter, one of said means provided with a lever having a swinging bearing and a spring, and the other of said instrumentalities having pivotal connection with said lever and adapted to lock its end against movement in a predetermined direction.

14. In a machine of the kind described, relatively movable marking and impression elements, and a regulating mechanism having connection with one of the same and comprising an arm, a movable spring-actuating bearing for the arm and with which the same has pivotal connection, and means adapted to be actuated by mail matter to turn said arm on said pivotal connection, said means also adapted to lock said arm against said movement and having pivotal connection therewith to permit it to move relatively thereto with said bearing.

15. In a machine of the kind described, relatively movable marking and impression elements, and a regulating mechanism having connection with one of the same and comprising an arm, a movable spring-actuating bearing for the arm and with which the same has pivotal connection, and means adapted to be actuated by mail matter to turn said

arm on said pivotal connection, said means also adapted to lock said arm against said movement and having pivotal connection therewith to permit it to move relatively thereto with said bearing, and a spring which is placed under tension by movement of said means and is adapted to act through the regulating mechanism to hold the movable element yieldably against the mail.

16. In a machine of the kind described, relatively movable marking and impression elements, and a regulating mechanism having connection with one of the same and comprising an arm, a movable spring-actuating bearing for the arm and with which the same has pivotal connection, and means adapted to be actuated by mail matter to turn the arm relatively to said bearing, said arm having pivotal connection with said means and adapted to turn relatively thereto when moved with said bearing.

17. In a machine of the kind described, relatively movable marking and impression elements, and a regulating mechanism having connection with one of the same and comprising an arm, a movable spring-actuating bearing for the arm and with which the same has pivotal connection, and means adapted to be actuated by mail matter to turn the arm relatively to said bearing, said arm having pivotal connection with said means and adapted to turn relatively thereto when moved with said bearing, and a spring which is placed under tension by movement of said means and is adapted to act through the regulating mechanism to hold the movable element yieldably against the mail.

18. In a machine of the kind described, relatively movable marking and impression elements, a regulating mechanism connected with one of said elements and comprising an arm having a swinging bearing with which it is pivotally connected and a spring which is placed under tension when said bearing is swung in one direction, and means for moving said arm relatively to its swinging bearing, said means having pivotal connection with the arm and said arm adapted to swing with the bearing and relatively to said means by pressure of mail between the marking and impression elements.

19. In a machine of the kind described, relatively movable marking and impression elements, a regulating mechanism connected with one of said elements and comprising an arm having a swinging bearing with which it is pivotally connected and a spring which is placed under tension when said bearing is swung in one direction, and spring-actuating means for moving said arm relatively to its swinging bearing, said means having pivotal connection with the arm and said arm adapted to swing with the bearing and relatively to said means by pressure of mail between the marking and impression elements.

20. In a machine of the kind described, relatively movable marking and impression elements, a regulating mechanism connected with one of said elements and comprising an arm having a swinging bearing with which it is pivotally connected, and a spring which is placed under tension when said bearing is swung in one direction, and an actuating mechanism for said arm comprising a trip device in the path of the mail matter, means connecting said trip device and arm, said arm having pivotal connection with said means and said means adapted in its movement to move said arm pivotally around its pivotal connection with the swinging bearing and to lock said arm against such movement when the movable element has been adjusted toward its companion element, and a spring which is placed under tension by said movement of the connecting means.

21. In a machine of the kind described, relatively movable marking and impression elements, a spring actuating trip device arranged in the path of the matter to be marked, an arm, a swinging support upon which said arm is fulcrumed, connections between the arm and one of said elements whereby movement is communicated between the same, a connection between the arm and trip device, adapted to move the latter around said fulcrum when the trip device is moved and to lock it against said movement when the trip device has reached the end of its movement, and a spring which is placed under tension when said support is swung, said arm being pivotally connected with said connection and turning around said pivotal connection as a center when it is swung with said support.

22. In a machine of the kind described, relatively movable marking and impression elements, a pivotally supported arm carrying one of said elements, a second arm, a swinging bearing with which the second arm is pivotally connected, means connecting said arms with each other whereby movement of one is communicated to the other, a spring having connection with the second arm and placed under tension when said bearing is moved in one direction, a trip device in the path of the mail matter, a connection between said trip device and second arm, said second arm being pivotally connected with said connection and the latter adapted to move the second arm around its first mentioned pivot to adjust the movable element toward its companion and to prevent movement of the second arm around said pivot when the movable element has been thus adjusted, and a spring placed under tension by movement of said trip device.

23. In a machine of the kind described, relatively movable marking and impression elements, a regulating mechanism connected with one of said elements, and comprising an

arm having a swinging bearing with which it is pivotally connected, and a spring which is placed under tension when said bearing is swung in one direction, and an actuating mechanism for said arm comprising an angle lever, a trip device carried by one end thereof and arranged in the path of the mail to be marked, a toggle link pivoted to said angle lever and arm and a spring connected to said angle lever and placed under tension by movement thereof.

24. In a machine of the kind described, relatively movable marking and impression elements, and means for carrying one of the same and regulating its action, comprising a plurality of operatively connected pivoted arms and a swinging bearing to which one of the arms is pivoted between its ends, said means also comprising a spring which is placed under tension by movement thereof and acts therethrough to hold the movable element yieldably toward its companion.

25. In a machine of the kind described, relatively movable marking and impression elements, and means for carrying one of the same and regulating its action, comprising a plurality of operatively connected pivoted arms, a swinging bearing to which one of the arms is pivoted between its ends, and means for locking the end of the latter arm against movement in a predetermined direction, said carrying and regulating means also comprising a spring which is placed under tension by movement thereof and acts therethrough to hold the movable element yieldably toward its companion.

26. In a machine of the kind described, relatively movable marking and impression elements, and means for supporting one of the same and regulating its action, comprising a plurality of operatively connected pivoted arms one of which carries the movable element and the other of which is provided with means controlled by the mail matter for locking its end against movement, and a swinging bearing connected to the latter arm between the ends thereof and around the fulcrum of which the same moves when said arm is thus locked, and a spring which is placed under tension when said bearing is moved in a predetermined direction.

27. In a machine of the kind described, relatively movable marking and impression elements, and means for supporting one of the same and regulating its action, comprising connected arms one of which is mounted upon a swinging bearing, a locking means having a spring and provided with an actuating element in the path of the mail matter, and connections between the last mentioned element and one of the first-mentioned arms, adapted to lock the end of the latter against movement in a predetermined direction, and a spring which is placed under tension when said bearing is swung.

28. In a machine of the kind described, relatively-movable marking and impression elements, a pivotally supported arm carrying one of said elements, a second arm, having a swinging bearing with which it is pivotally connected, a spring which is placed under tension when said bearing is swung, a link connecting said arms with each other, and an actuating means comprising a trip in the path of the mail matter, an angle lever carrying said trip, a spring connected with said angle lever, and a toggle link pivotally connected at one end to the angle lever and at its other end to the second arm.

29. In a machine of the kind described, relatively-movable marking and impression elements, and means for moving one of the same, comprising an arm connected thereto, a link connected to said arm, a second arm connected to the link, a spring connected with the second arm, a bell crank lever adapted to be moved by pressure of the mail matter in front of the marking element, and a toggle link between the second arm and the bell crank lever.

30. In a machine of the kind described, relatively-movable marking and impression elements, and means for moving one of the same, comprising an arm connected thereto, a link connected to the arm, a second arm connected to the link, a spring having connection with the second arm and means for locking the end of the second arm against movement, having a trip mounted in the path of the conveyed mail matter.

31. In a machine of the kind described, relatively-movable marking and impression elements, and means for moving one of the same, comprising an arm connected thereto, a link connected to the arm, a second arm connected to the link, a spring having connection with the second arm, a trip mounted in the path of the conveyed mail matter, a bell crank lever adapted to be moved thereby and having connection with the second arm and a spring for holding the trip against the mail matter.

32. In a machine of the kind described, the combination with mail marking and conveying means, of a guiding means comprising elements arranged on opposite sides of the mail path and contiguous to the marking element and adapted to engage the mail and correct tendency of the edge thereof to curl.

33. In a machine of the kind described, the combination with mail marking and conveying means, of a guiding means comprising elements arranged on opposite sides of the mail path and contiguous to the marking element and adapted to engage the mail and correct tendency of the edge thereof to curl, one of said elements being yieldably held toward the mail path.

34. In a machine of the kind described, the combination with mail marking and con-

veying means, of a guiding means comprising elements arranged on opposite sides of the mail path and contiguous to the marking element and adapted to engage the mail and correct tendency of the edge thereof to curl, one of said elements being yieldably held toward the mail path and provided with a roller to engage the conveying means.

35. In a machine of the kind described, the combination with mail marking means and a mail-conveying belt, of a guiding means comprising plates arranged to engage opposite sides of the mail contiguous to the marking element and adapted to correct tendency of the edge of the mail to curl, one of said plates yieldably held toward the mail path.

36. In a machine of the kind described, the combination with mail marking means and a mail-conveying belt of a guiding means comprising devices arranged to engage opposite sides of the mail contiguous to the marking element and adapted to correct tendency of the edge of the mail to curl, one of said devices being provided with a roller to engage the belt, and a spring connected with one of said devices and holding it yieldably toward its companion.

37. In a machine of the kind described, marking and impression elements, means controlled by the mail for moving one of said elements toward the other, guiding devices arranged in advance thereof and cooperating with each other to overcome tendency of the edge of the mail to curl, and a belt disposed at one side of the plane of the marking and impression elements and guiding devices and feeding the mail between the same, said belt having a sidewise engagement with the mail.

38. In a machine of the kind described, marking and impression elements, devices cooperating with each other to overcome the tendency of the edge of the mail to curl, arranged immediately in advance of the marking and impression elements and engaging opposite sides of the mail, one of said devices provided with a roller and the other a plate, and a belt for feeding the mail between said elements and between said devices, arranged in a different horizontal plane than the same, said belt engaged by said roller.

39. In a machine of the kind described, the combination with a marking element and an impression element, of means for feeding the mail between said elements, comprising a traveling belt arranged above the plane of the marking and impression elements and devices arranged to engage opposite sides of the mail beneath the plane of the belt and contiguous to the marking element and adapted to correct tendency of the edge of the mail to curl, and a yieldably held support for one of said devices carrying a roller arranged to engage the belt.

40. In a machine of the kind described, the combination with a marking element and an impression element, of means for feeding the mail between said elements, comprising a traveling belt arranged above the plane of the marking and impression elements and devices arranged to engage opposite sides of the mail beneath the plane of the belt and contiguous to the marking element and adapted to correct tendency of the edge of the mail to curl, one of said devices comprising an angle lever having a mail engaging portion at one end and provided with a spring for pressing its mail-engaging portion toward the mail.

41. In a machine of the kind described, the combination with a marking element and an impression element, of means for feeding the mail between said elements comprising a traveling belt arranged above the plane of the marking and impression element, and rollers arranged on opposite sides of the mail path above the marking and impression elements respectively, said rollers arranged opposite each other and one of the same engaging the belt and the other of the same engaging the mail, and means arranged contiguous to the marking and impression elements and engaging the portion of the mail below the belt and adapted to prevent tendency of the edge thereof to curl.

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

MARTIN V. B. ETHRIDGE.

Witnesses:

MAY HUGHES,
ALAN McDONNELL.