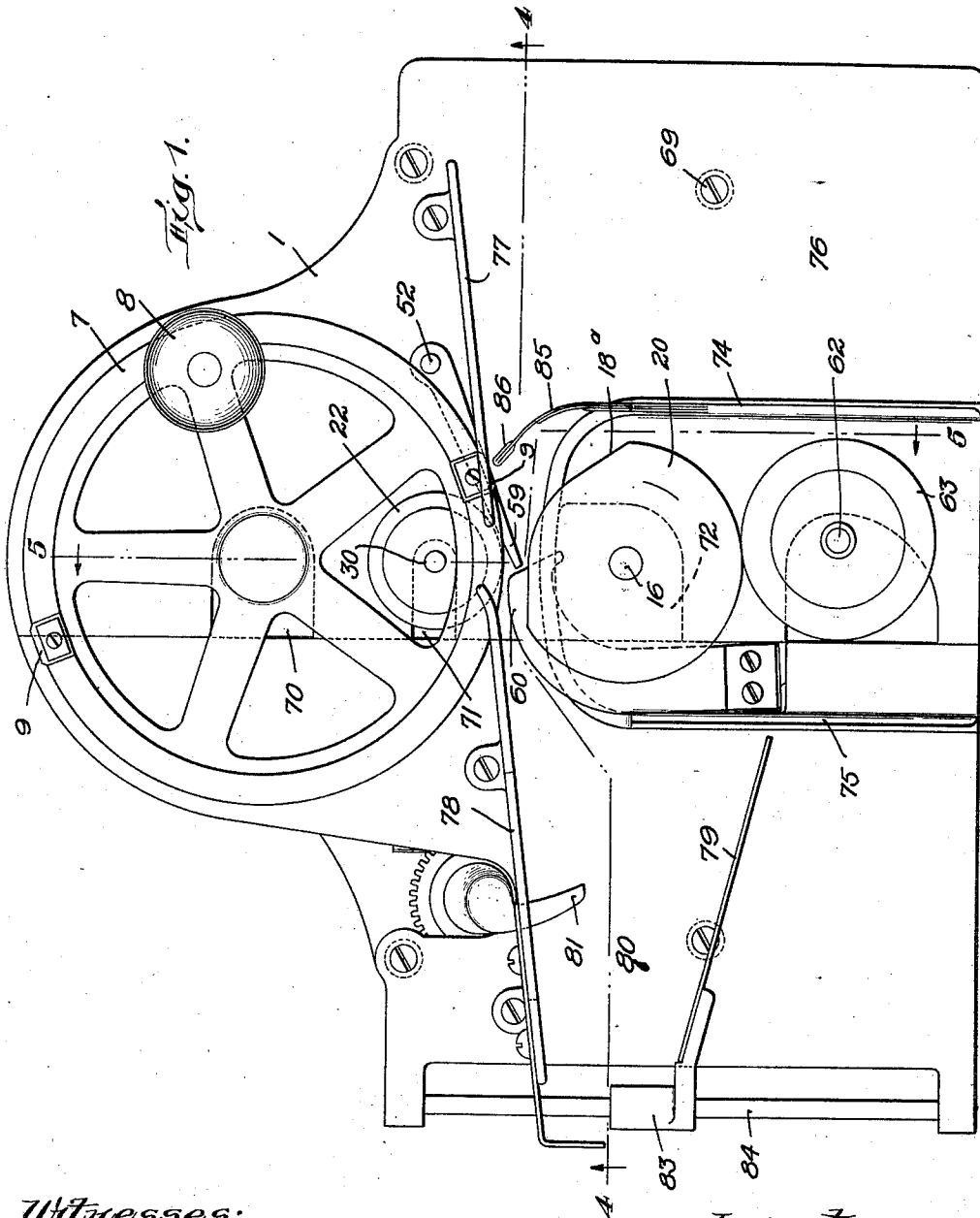


V. BEAUREGARD.
MACHINE FOR MARKING MAIL MATTER.
APPLICATION FILED MAR. 15, 1911.

1,019,296.

Patented Mar. 5, 1912.

7 SHEETS—SHEET 1.



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7 SHEETS—SHEET 2.

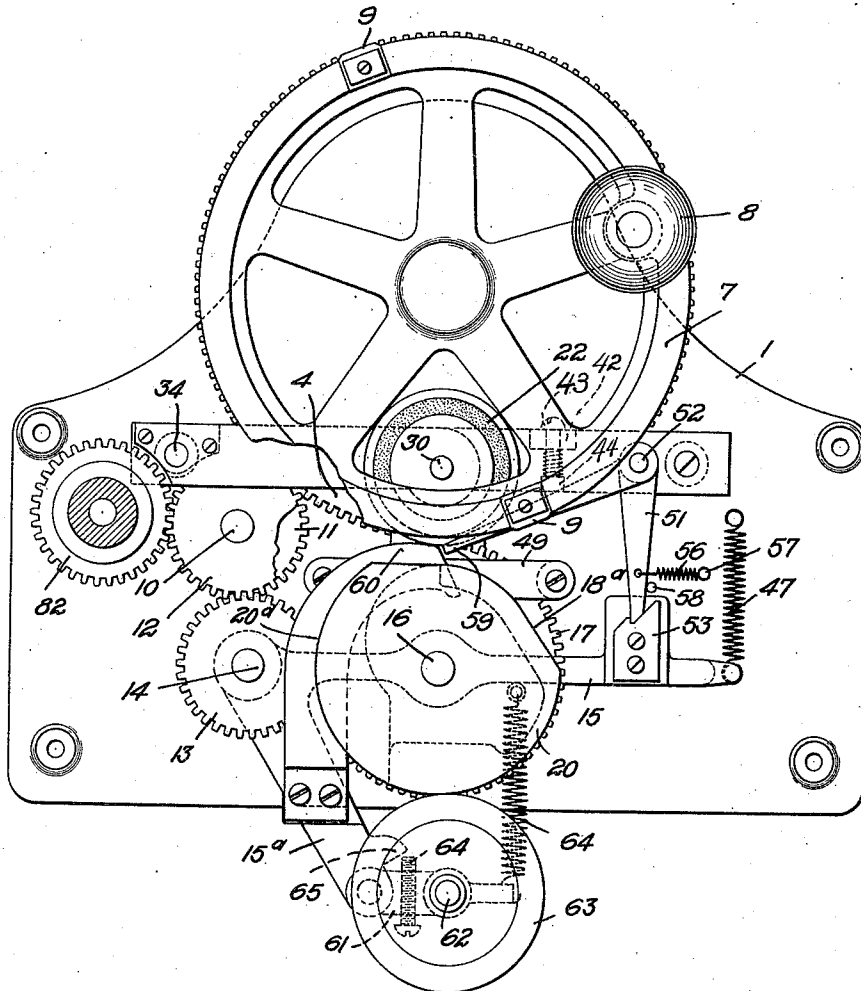


Fig. 2.

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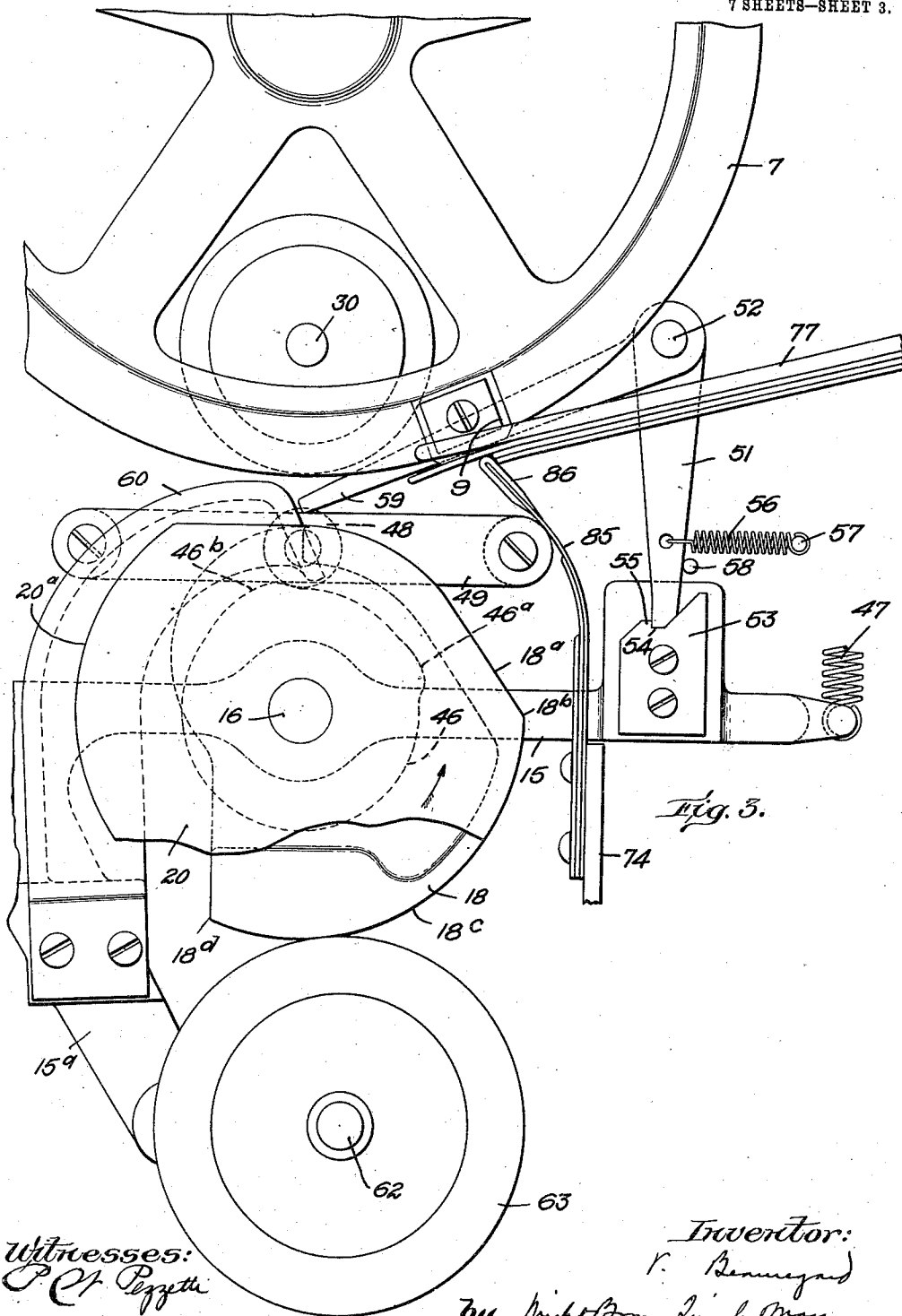
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7 SHEETS—SHEET 3.



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7 SHEETS—SHEET 4.

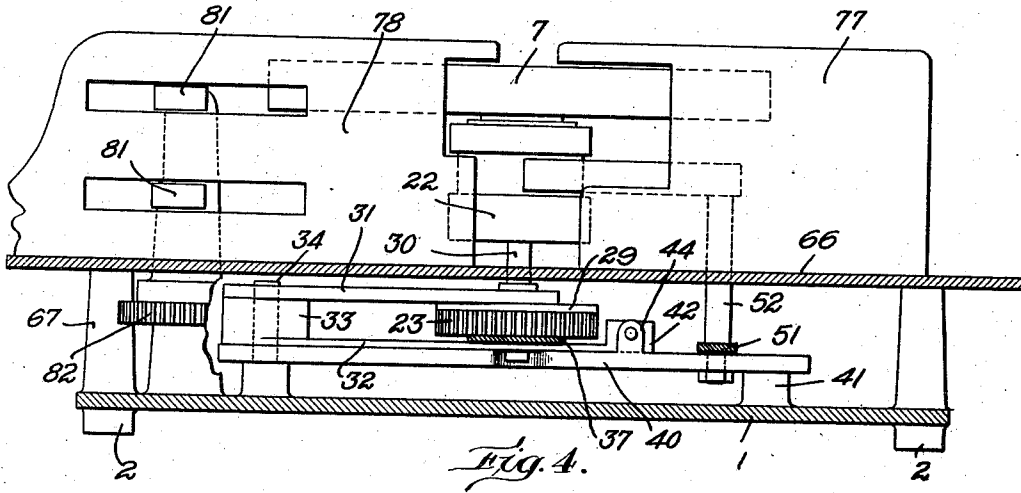


Fig. 6.

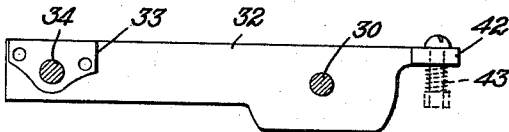
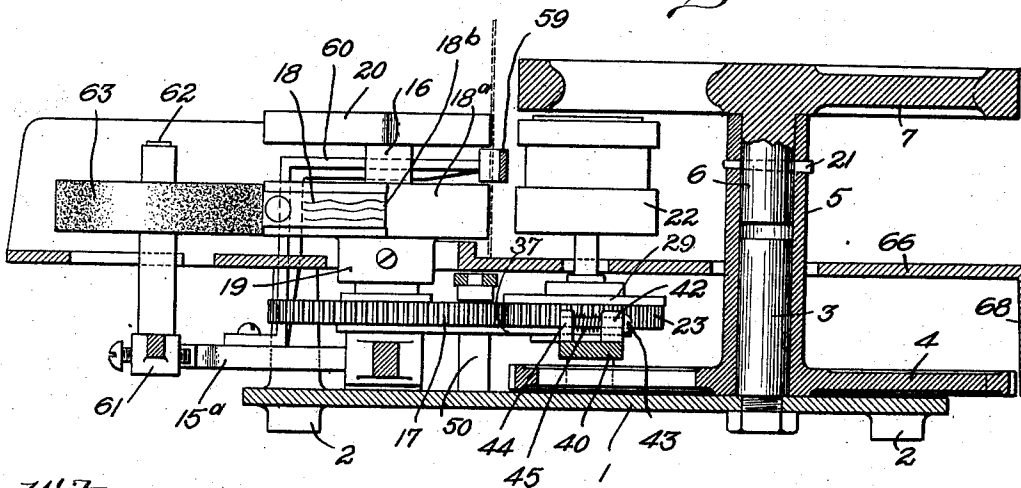


Fig. 5.



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7 SHEETS—SHEET 5.

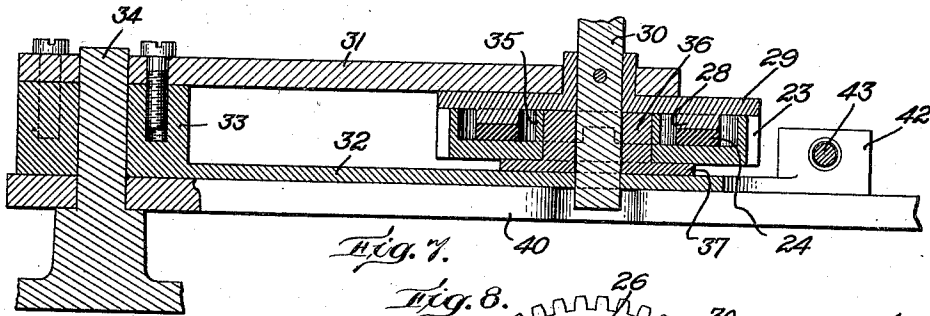


Fig. 7.

Fig. 8.

Fig. 9.

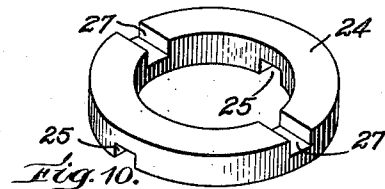


Fig. 10.

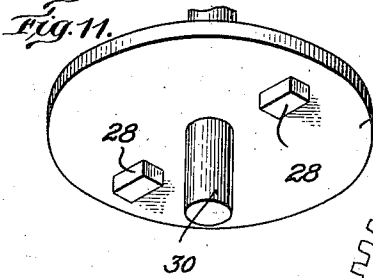


Fig. 11.

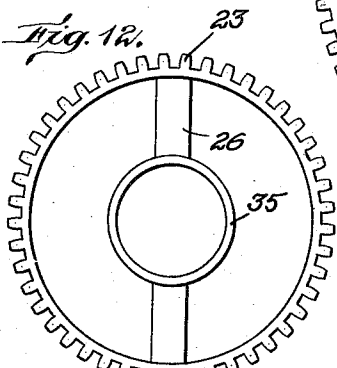
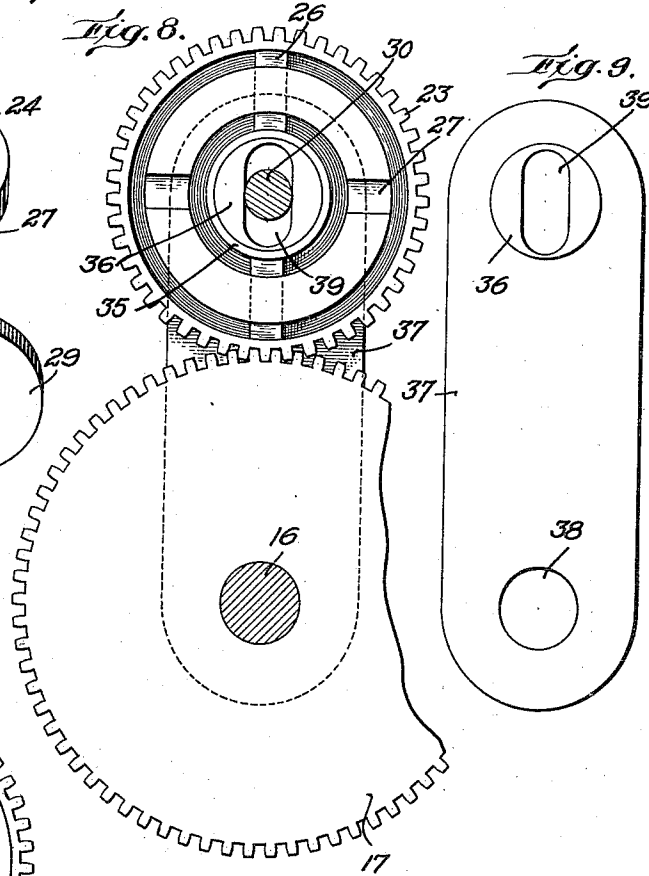


Fig. 12.



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E. Baeholder

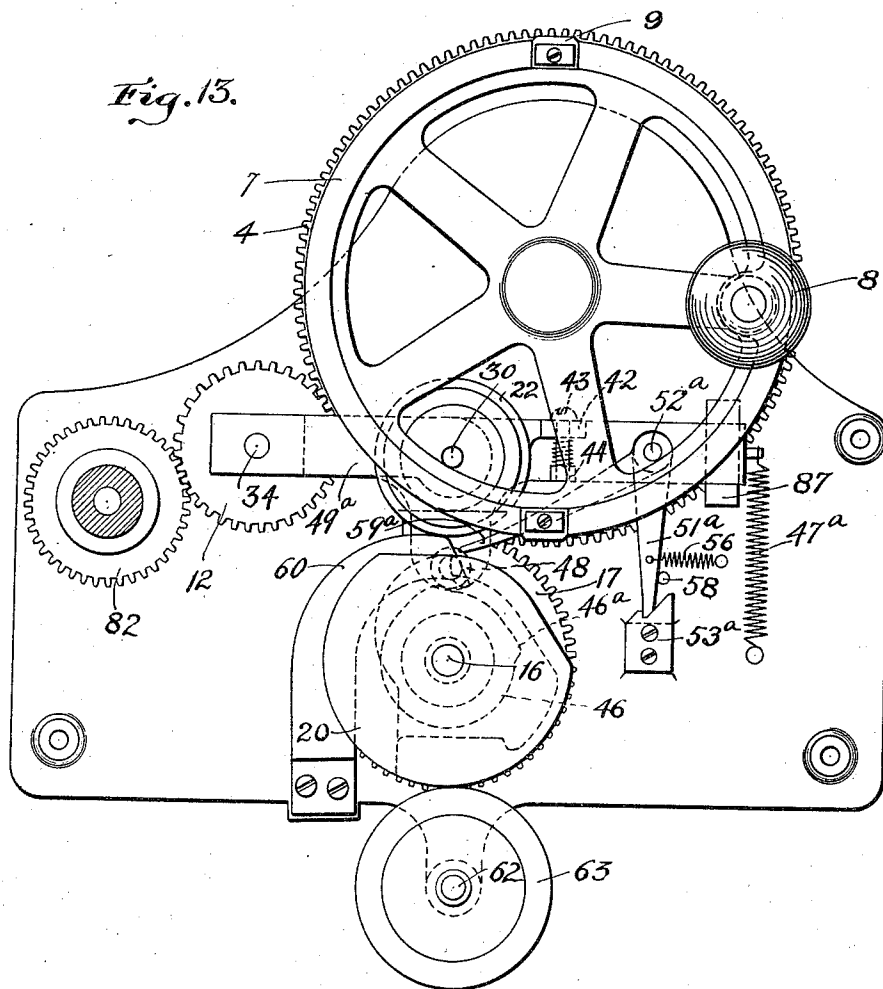
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May

V. BEAUREGARD.
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Patented Mar. 5, 1912.

7 SHEETS—SHEET 6.



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UNITED STATES PATENT OFFICE.

VICTOR BEAUREGARD, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
EDWARD BROUGHTON WAITE, OF CHICAGO, ILLINOIS.

MACHINE FOR MARKING MAIL-MATTER.

1,019,296.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed March 15, 1911. Serial No. 614,597.

To all whom it may concern:

Be it known that I, VICTOR BEAUREGARD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Marking Mail-Matter, of which the following is a specification.

This invention relates to machines for marking mail matter to cancel the postage stamps on such matter, and in addition to apply a post mark so accurately and evenly as to be legible; and embodies certain improvements over the machines for this purpose which have been in continuous commercial use for the past twenty-five or more years.

More particularly, the invention consists in improvements over the machines illustrated in the following patents, viz.,—Ethridge, No. 323,799, for a power-driven mail-marking machine, which discloses, so far as I am aware, the first instance in the art of a constantly traveling printing couple, of which the members are normally held apart by a trip or abutment operated by the pieces of mail matter; Maas and Fischer, No. 75,638, including preliminary feeding members projecting from the periphery of a feed wheel, which is also an impression, or bed, roll; and Loffelhardt, No. 311,340, which has, among other features, preliminary feeding fingers of rubber operative to advance letters to the printing position, together with feeding segments and the members of a printing couple which grasp and print on the letters after they have reached this position.

The object of the invention is mainly to provide a simple and light running hand-operated machine as distinguished from one requiring power to drive it, in which the desirable features of the machines above referred to are present, in combination with new and important features, to produce a machine having an automatic letter feed, capable of being driven at a high speed by hand and also so simple in construction and operation and so inexpensive as to be practical for use even in the numerous small post-offices which handle relatively small volumes of letter mail. The first of the machines referred to above is of such character that it cannot be operated by hand, while the other machines have no provision for preventing deposit of ink on the im-

pression member or bed when the machine is operated and letters fail to pass. I have provided by my invention a machine in which separation of the marking and impression members is effected when letters fail to pass, and one at the same time so compact in construction and of such light weight that it can be placed upon any ordinary table or stand and moved from one place to another, as well as operated manually, with very little muscular exertion.

In the accompanying drawings I have illustrated a machine which I have invented to carry the foregoing invention into effect and secure the object named.

In the drawings, Figure 1 is a plan view of the machine. Fig. 2 is a view similar in the main, but differing in that the table is removed and the gearing is illustrated. Fig. 3 is a plan view on an enlarged scale of the members which constitute the printing couple and other parts associated therewith. Fig. 4 is a cross sectional view of the machine on line 4—4 of Fig. 1. Fig. 5 is a vertical sectional view on line 5—5 of Fig. 1. Fig. 6 is a detail of the means for adjusting the impression roll. Fig. 7 is a detail view showing in vertical section the supporting and adjusting means for the impression roll. Fig. 8 is a plan view of the driving connection between the printing and impression members. Fig. 9 is a plan view of the connecting strap between the complementary intermeshing gears of the printing and impression members. Figs. 10 and 11 are perspective views of the members of the coupling between the impression roll and the gear by which it is driven. Fig. 12 is a plan view of the gear last above referred to. Fig. 13 is a plan view of a modification of the mechanism capable of accomplishing the same general results. Fig. 14 is a longitudinal section of the embodiment of the invention illustrated in Fig. 13. Fig. 15 is a plan view of a further modified embodiment of the invention.

Referring first to Figs. 2 and 5, it will be seen that the machine consists of a base 1 which is adapted to rest loosely upon a table or other support when the machine is in use, and by which all the working parts of the machine are carried. On the under side of the base are feet 2, and from its upper side rises a stud 3 on which is journaled the main drive wheel or driving gear

4. This wheel has a hub 5 which rises above the top of the stud 3 and forms a socket into which projects a stud 6 on the under side of a disk or wheel 7 which carries a handle 8. The wheel 7 constitutes both a balance wheel and a preliminary feeder, having feeding elements 9 which engage letters held in a pack and carry them to the printing position in a manner presently to be described. Such feeding elements are conveniently blocks or fingers of frictional material such as rubber, which are secured in recesses in the rim of the wheel and project somewhat beyond the outer periphery thereof.

Rotatively mounted upon a stud 10 which rises from the base 1 is a pinion 11 meshing with the driving gear 4, and secured to such pinion is a second pinion 12, represented herein as of the same size as the pinion meshing with a third pinion 13 on a stud 14 also rising from the base 1. Journaled upon the same stud 14 is a rocker 15 carrying a pin 16 whereon is journaled a gear wheel 17 in mesh with the pinion 13. The pinions described constitute a train of gears by which rotation is transmitted from the driving gear 4 to the wheel 17, and thus to the marking member. The marking member is designated as 18 and consists of a segment which is secured to the same pin as the gear wheel 17, having a hub 19 which surrounds and is securely fastened to such pin. Also secured to the pin or stud 16 is a feeding disk 20 which turns in unison with the printing segment and the wheel 17. The gear ratio between the wheels 4 and 17 is such that the marking member rotates with a fixed timed relation to the driving wheel, and in the present embodiment of the invention makes two revolutions for every one of the wheel. The hand wheel is so firmly connected to the gear wheel as by means of pin 21 that the preliminary feed member 9 is in proper timed relation to the printing segment.

Cooperating with the marking or printing member is a bed member, which is preferably a roll 22 having its outer surface covered with yielding frictional material such as rubber. The bed or impression roll is positively driven at the same peripheral speed as the marking surface of the printing members by means of a pinion 23 meshing with the gear wheel 17 and having a positive driving connection with the roll 22. The connection between the gear 23 and impression roll is such as to permit separation between the marking member and the said roll when no letters are passing and to permit yielding to accommodate thick letters, and adjustment of the impression roll when its surface wears away. Said connection consists, in the form herein illustrated, of a ring 24 (shown best in Fig. 10), which

is contained in a recess in the upper face of the gear 23, and has grooves 25 in one face diametrically opposite to each other, adapted to fit over diametral ribs 26 in the gear 23. In the opposite face of the ring 24 are grooves or notches 27 diametrically in line and intermediately disposed between the grooves 25, which receive lugs or ribs 28 on the under side of the plate 29 which overlies the gear 23 and is secured to the axis or shaft 30 of the impression roll. This shaft is secured in two arms 31 and 32 arranged respectively above and below the plate 29 and gear 23, and both secured to a hub 33 which is mounted upon a stud 34 rising from the base 1, so as to be capable of swinging thereon. The gear 23 has a hub 35 which is rotatably mounted upon a bearing 36 rising from a strap 37 which is connected to the shaft 16 of the gear 17 and the printing member, the strap having a perforation 38 through which said shaft extends. In the bearing stud 36 is an elongated slot 39 through which the shaft 30 passes, such slot being substantially equal in width to the diameter of the shaft but of greater length. Thus relative movement of the shaft 30 and impression roll with respect to the gear 23, or of the gear with respect to the roll and shaft, is permitted, without disengaging the driving connection, for the ring 24 makes a coupling between the gear and plate 29 which permits relative movement back and forth from the printing member and maintains a rotation-transmitting connection.

As a convenient feature of construction the arms 31 and 32 which constitute a two-armed holder for the impression roll rest upon a bridge bar 40 which is supported upon a shoulder on the stud 34 and another stud 41, and extends over the driving gear 4, thereby supporting the impression roll and its driving mechanism clear of the said driving gear. The two-armed holder is adjustable to enable the impression roll to be moved toward the printing member as its diameter decreases in consequence of its surface becoming worn away. To produce this adjustment the lower arm 32 of the holder is provided with a lug 42 through which passes a screw 43 which is threaded into an ear 44 on the bridge piece 40. A spring 45 is interposed between the ear and lug and holds the impression roll as far as possible away from the printing member.

The rocker 15 is oscillatively movable about the stud 14 and carries the printing member toward or from the impression member under the control of a cam 46 and spring 47. The cam is secured to the hub of gear 17 of the marking member and acts against abutment 48 which is conveniently a roll journaled upon a bar 49 secured at its ends to posts 50 rising from the base 1

so as to bridge the gear 17. Whenever the high parts of the cam 46 come against the roll 48 the rocker and printing member are moved away from the impression member, while the spring 47 tends to hold the cam against the abutment roll and to move the printing member toward the impression member, except when prevented by a lock or stop 51. Such stop is conveniently an arm secured to a rocker 52 mounted on the base and coöperating with an abutment 53. The latter is secured to the rocker 15 and has a notch 54 to receive the end of the lever 51, at one side of which is a lip 55. A light spring 56 is connected to the arm 51 and to a pin 57 and tends to draw the arm toward the notch 54 and against a pin or stop 58. Secured to the rock shaft 52 is a second arm 59 which extends into the path followed by the letters in passing between the printing and impression members. The arm or gate 59 coöperates with a rigid stop 60 to prevent the mail matter from passing except under conditions which will be presently described. This stop is preferably mounted upon an arm 15^a of the rocker 15 and rises therefrom into the plane between the printing segment 18 and the feeding disk 20, being thence extended into the position indicated in Figs. 2 and 3 nearly up to the line of centers of the printing and impression members. The arm 15^a also carries a holder 61 on which is secured a spindle 62 carrying an ink roll 63 which is drawn by a spring 64 against the periphery of the printing segment. An adjustable stop 64 on the holder 61 co-acts with an abutment 65 on the arm 15^a to limit the inner movement of the ink roll when the cutaway part of the printing segment passes the same.

The gears are covered by a table 66 supported upon posts 67 and having an apron 68 at some of its edges. As shown in Fig. 1 the table is substantially co-extensive in area with the base and is divided longitudinally into two parts so that it may be slipped on and off, being secured in place by screws 69. It has open slots 70, 71, 72 to receive the studs of the driving wheel, impression roll, printing segment and ink roll, with raised walls 74 and 75 flanking the printing member and ink roll. The wall 74 forms one boundary of a space or pocket 76 containing the letters or other mail matter to be marked, the other boundary of this space being formed by a fence 77. A second fence 78 approximately in line with the fence 77 on the opposite side of the machine forms, with the wall 75 and a movable plate 79, a pocket 80 for the marked mail matter. A rotary packer 81 projects through the fence 78 and is rotated by a pinion 82 in mesh with the pinion 12 previously mentioned, to pack the letters against the plate 79 as they are fed into the receiving pocket.

The plate 79 is mounted on a slide 83 which may move upon a rod 84 and thus enlarge the pocket 80 as the marked pack increases.

Having described the mechanical structure of the machine I will now describe its operation.

A pack of letters or other pieces of mail matter is placed in a faced condition in the pocket 76 with the several pieces on edge and their backs against the fence 77. The path in which the preliminary feeders 9 move when the hand wheel 7 is rotated intersects the plane of the fence 77 and these preliminary feeders therefore engage successively the letters nearest to the fence and move them one by one up to the line of centers of the impression and printing members which constitute the printing couple. The letters are so held by the fingers of the operator and a flexible spring 85 shown in Figs. 1 and 3 that they are engaged just back of their forward edges by the preliminary feeding members. The spring 85 has a frictional tip 86 of such material as rubber, which holds back all of the pack except the letter to be acted upon and so prevents feeding of more than one at a time to the printing couple. Immediately upon being advanced each letter comes against the arm or gate 59 which occupies an inclined position across the open throat between the printing and impression members, and as such arm or gate is secured to the rock shaft 52 and is locked by the positive engagement of the lever 51 in the notch 54, it deflects the letter away from the preliminary feeder and guides it until it comes to a stop with its forward edge against the abutment or stop finger 60. The latter is provided to prevent the momentum of the letter from carrying it through the open throat between the members of the printing couple. It should be noted in this connection that the printing segment and feeding disk 20 are so placed on their shaft 16 and so timed with respect to the preliminary feeders 9 that their cutaway sides are adjacent to the impression roll and the hand wheel when the preliminary feed takes place. The letter being in the position noted remains there while the printing segment rotates in the direction indicated by the arrow in Fig. 3. When the inclined eccentric surface 18^a of the printing segment approaches the letter, the rise 46^a of the cam 46 engages the roll 48 and moves the rocker 15 outward sufficiently far for the lip 55 to clear the end of the rocking lever 51, thus unlocking the deflecting arm or gate 59. Thereupon the incline 18^a presses against the letter, causing it to be displaced sidewise and by pressure against the arm or gate 59 moving the same toward the impression roll and swinging the locking member 51 aside from the socket 54 in the abutment plate 53. Immediately thereafter a depression in the

cam face following the rise 46^a allows the rocker to be pulled inward by the spring 47 so that the printing member may press the letter against the impression roll. A corner 5 or shoulder 18^b on the forward end of the protuberant concentric printing face of the printing segment now presses against the letter and in coöperation with the impression roll grasps the letter and feeds it forward. The concentric surface of the printing member, which is designated by 18^c, bears raised portions which apply the stamp cancellation marks, and near the rear end of this surface is the die bearing the types 15 which impress the usual postmark. At the point 18^a the active face of the printing segment abruptly terminates and thereafter the feeding of the letter is accomplished by the surface 20^a of the disk 20. This disk is cut 20 away over the forward cutaway portion of the printing segment so as to leave the latter free to act. The extent of feeding surface of the disk 20^a is sufficient to carry letters of ordinary length entirely through the 25 throat of the printing couple and to throw them into the pocket 80, where they are acted upon by the packer 81 and joined to the marked pack. After the end of the feeding surface has passed the impression roll, a 30 second rise 46^b in the cam 46 displaces the rocker 15 far enough to allow the stop lever 51 to be moved by its spring 56 into alinement with the socket 54, so that after the rise 46^b passes, the rocker may be swung 35 back until the stop lever enters the socket, thereby locking the rocker with the printing member away from the impression member, and being itself locked. This also causes the arm or gate 59 to be locked so that the 40 next following letter will be deflected by this arm and brought up against the abutment 60, being thus positively prevented from slipping through the throat prematurely. The lock 51 holds the printing segment at 45 such a distance from the impression roller that its printing face clears the latter and never comes in contact therewith when the machine is in operation and letters fail to be fed regularly to the throat of the printing 50 couple. Thus depositing of ink on the impression roll is prevented and there is no possibility of the backs of letters being soiled from this cause. The printing segment, however, is always unlocked when a letter is 55 present by reason of the cam 46 and the displacement of the lock through the interposition of the letter itself between the arm or gate 59 and the printing segment. On the other hand, after a letter has passed, the 60 printing segment is again locked in the inoperative position by virtue of its withdrawal under the action of the cam rise 46^b or 46^a, before its printing face has advanced far enough to touch the impression roll. 65 When the printing segment is thus moved

toward and from the impression roll the driving gear 23 of the latter is correspondingly moved by the link 37 and is thus retained continuously in proper mesh with the gear 17. At the same time the connection 70 between the gear 23 and impression roll already described causes the roll to be driven positively at the same peripheral speed as the printing and feeding surface of the segment and disk. This is a feature of great 75 importance because thereby the life of the impression roll is greatly increased. Where a rubber-faced impression roll is driven as an idler the drag caused by its inertia when a letter comes in contact with it causes great 80 strain to be put on the rubber surface, with the result that the surface is quickly torn and worn away. When positively driven the only drag on the surface of the roll is caused by the inertia of the letter, which is much 85 less than that of the roll and is in part overcome by the printing segment. More important still is the fact that a better impression is secured by positively driving the impression roll, since the impression roll thus 90 assists in feeding the letter along the surface of the printing member, instead of tending to retard it and cause the impression to be blurred.

Owing to the peculiar coupling which 95 connects the gear 23 with the impression roll and to the fact that such gear is held by a link 37 at an invariable distance from the gear 17, no amount of separation between the rolls suffices to draw the teeth of the 100 gears out of engagement, or to break the connection between the gear 23 and the impression roll, even though letters of a thickness greater than the length of the gear teeth should pass between the printing and 105 impression members, and thus separate the members by a distance approximately as great as such thickness.

Instead of having the printing member with its associated feeding disk and driving 110 gear mounted upon a rocker and moved bodily therewith, it is feasible to omit the rocker, secure the parts heretofore described as carried thereby in a stationary location upon the base, and have only the impression 115 roll movable in such a direction as to increase or diminish the distance between the rolls. Such an arrangement as that last suggested is shown in Fig. 13, where the shaft 16 of the printing segment is mounted directly upon the base and is immovable. The 120 gear 17, printing segment 18 and feeding disk 20 are mounted upon this shaft as previously described, and may be driven from the drive wheel 4 through a gear train 125 such as that described, or directly through engagement of the driving wheel 4 with a second gear 86 on the shaft 16. The shaft or spindle 30 of the impression roll is mounted upon a bridge member 49^a, which, however, 130

instead of being fixed at both ends, is pivoted at one end upon the support 34 and thus constitutes a rocker or in other words a rocking carrier for the impression roll. An abutment roll 48 is carried by the rocker 49^a and engages the periphery of cam 46 secured as previously described to the gear 17. This cam by acting through its rises upon the roll 48 swings the rocking carrier 49^a and therewith the impression roll away from the printing segment, these swinging parts being returned whenever permitted toward the printing member by a spring 47^a. The swinging end of the rocker 49^a rests on a pedestal 87 and carries a rock shaft 52^a carrying a locking lever 51^a and an arm or gate 59^a which corresponds to the gate or deflector 59 already described. The locking arm 51^a coöperates with an abutment 53^a secured to the base and having a notch with a locking lip precisely as already described in connection with the abutment 53. The gear 23 of the impression roll is connected with the gear 17 of the printing roll by a strap 37 or equivalent means such as described already, and is coupled to the impression roll by a flexible or shiftable coupling such as described. Furthermore the impression roll is adjustable toward the printing segment independent of the rocker 49^a by just such an adjustment as has already been described, and which is designated in Fig. 13 by the same characters used in the other figures. In principle and in mode of operation this embodiment of the invention is identical with that previously described, the difference being that separation between the members of the printing couple is accomplished by moving the impression member instead of the printing member. As the impression member may contain less mass of material and be less heavy, this arrangement may in some cases be an advantage over the one first described. Owing to the fact also that the printing member is not shifted out of its normal position, the same may be driven directly from the main wheel 4 and the additional train of gears shown in Fig. 2 may be omitted.

In Fig. 15 is shown an embodiment of the invention in which the impression roll is moved away from the printing member when no letters pass, but is prevented from so moving when letters are present, and in which the printing member yields and separates from the impression member to accommodate thick letters. This figure is somewhat diagrammatic, being designed to show those features in which variations from the structures previously described occur, and omitting most of the parts which are similar to those heretofore described. In this figure the printing member or segment is not shown, as it is hidden by the feeding disk 20. It is to be understood, however, that the

printing member is the same as that shown in the preceding figures. The impression member 22 is indicated by a dotted circle and is carried by an arm 90 which is pivoted at 91 upon the bridge 40. The impression roll shaft 30 is contained in a bearing in the arm 90, and carries a coupling identical with that shown in Figs. 7 to 12 which connects it with a gear corresponding to the gear 23, which latter is held in mesh with the gear 17 on the printing segment shaft by means substantially identical with that heretofore described. A spring 92 acts on the arm 90, throwing the impression roll outward toward the printing segment. An arm 93 which is pivoted at 94 to the arm or holder 90 is pressed by a spring 95 against a cam 46 which rotates with the printing segment. A gate or arm 59^b is pivotally mounted upon the arm 90 and extends diagonally across the throat between the printing and impression members, occupying a position corresponding to that of the gates 59 and 59^a shown in the other figures. The end of the gate 59^b is bent back and bears against a stop arm 96 which is thrown outward by a spring 97 and has a stop shoulder or abutment 98 close to the end of a finger 99 on the impression roll holder 90. The machine is driven as heretofore described by a hand wheel 7 connected to a main driving gear 4 which drives a train of gears 12, 13 and so rotates the gear 17. When the machine is running and no letters pass, the cam 46 acts on the arm 93 and retracts the impression roll whenever the high part of the cam passes the arm 93, thus keeping the impression roll out of contact with the face of the printing segment and preventing it from becoming soiled. The spring 95 is stiffer than spring 92 and so accomplishes this result. However, when a letter is present and is fed by the preliminary feeder as heretofore described, it rests against the gate 59^b and is engaged by the corner or shoulder 20^b of the feeding disk 20 and the corresponding shoulder on the printing segment. It is thereby deflected and deflects the gate 59^b, which in turn moves the arm 96 and places the shoulder 98 behind the finger 99 of the impression roll holder. The impression roll is thus locked so that when the high part of cam 46 passes the arm 93, spring 95 yields and the impression roll remains in a position practically tangent to the printing face of the printing member, whereby the letter is supported while receiving a printed impression from the canceling and post-marking dies. In order to accommodate letters of extraordinary thickness, the printing member is allowed to yield as it is carried by the rocker 15 and drawn yieldingly toward the impression roll by a spring 47, as heretofore described. It is prevented from approaching too near the impression roll

when no letters are passing by an adjustable stop 100 which may be moved as the impression roll wears away so as to secure a sufficiently firm impression. By virtue of the

5 gearing and coupling between the printing and impression members, these latter are rotated positively and in unison at the same peripheral speed, as heretofore described.

I claim,—

10 1. In a mail marking machine, a rotary printing member and a rotary impression member, intermeshing gears connecting the members, means for adjusting the impression member transversely of its axis with

15 respect to the printing member to take up wear, one of the members being also yieldable away from the other to accommodate thick letters, means for retaining the gears of said members in fixed and invariable relation with each other, and a coupling between the shaft of the impression member

20 and its gear constructed to permit movement of the member and its shaft relatively to the gear in a direction perpendicular to its axis, the axes of the members, shafts and gears being always parallel.

2. In a mail marking machine, a feed wheel having a handle for manual operation, feeding projections on the periphery of said

30 wheel, a driving gear directly connected to said feed wheel, a printing member having a gear meshing with said driving gear, an impression member, gears connected to the printing and impression members and continuously in mesh for causing the impression member to rotate positively and in unison with the printing member, a holder independent of the gearing on which the impression member is mounted constructed to

40 yield for thick letters, means for adjusting the impression member on the holder to compensate for wear, and a coupling between the shaft of the impression member and its gear.

45 3. A mail marking machine comprising a hand-operated driver, a rotary printing member having a cut-away portion geared thereto and operated thereby, a rotary impression member in positive geared connection with said printing member, a lock normally holding the members apart, a cam releasing the lock, yielding means tending to press the members together, a gate controlled by a letter passing between the members arranged to deflect the letter into the

50 cut-away portion of the printing member beyond the line of centers of the members and connected with said lock whereby to render the same inoperative when said gate is pressed upon by the part of the printing member adjacent to said cut-away portion, and an abutment arranged in connection with the gate to close the passage between the printing and impression members.

65 4. A mail marking machine comprising in

its construction a rotary printing member and a rotary impression member arranged to rotate about parallel axes, a gear secured to the printing member, a link connected to the printing member and having a slotted bearing, a second gear rotated and mounted on said bearing and meshing with the first gear, a holder for the impression member extending across said bearing, a shaft for the impression member rotated and contained in the holder and passing through the slot of said bearing whereby relative movement between the impression member and the second gear in a prescribed path is permitted, and a coupling between the impression member shaft and gear having a sliding engagement with each.

5. In a mail marking machine, printing and impression members rotatably mounted with their axes parallel, a holder for one of said members movable therewith toward and from the other member, a gear rigidly fastened to one of the members, a second gear in mesh with the first gear, a link having a bearing upon which the second gear is rotatably mounted for maintaining said gears in unchanging relation with one another, and a coupling between the second gear and the other member having provision for sliding with respect to both the member and gear transversely of their axes while remaining in driving connection with both.

6. In a mail-marking machine the combination of a printing member and an impression member, a holder for the impression member movable therewith toward and from the printing member, a gear fixed to the printing member, a second gear meshing with said first-named gear, means for preventing separation of said gears, and a coupling between said second gear and the impression roll having positive motion-transmitting elements so constructed as to permit displacement of the impression roll bodily with respect to the second gear in a direction substantially perpendicular to their axes and also to permit the impression roll to remain always parallel to the printing roll and in the same plane in all positions, the entire coupling being approximately in the plane of said gears, whereby the said members and gears may be arranged in closely adjacent planes.

7. In a mail-marking machine, the combination with a printing member, and an impression member, of a feed wheel extending over the impression member having feeding means on its periphery and arranged to engage and advance letters to the nip of said members, a flexible separator projecting toward the feed wheel across the path in which the letters travel, arranged to cooperate with the feed wheel to hold back the unmarked letters of a pack and cause the feed wheel to

advance the letters singly, gearing between the feed wheel and printing member whereby the latter is rotated by the former and in timed relation therewith, gearing between the printing and impression members for driving them positively in unison, a yielding holder carrying the impression member and permitting the same to yield away from the printing member, means to prevent separation of the gearing, and a coupling between the impression member and gearing constructed to transmit rotation positively and at the same time permit relative movement of the impression member transversely of its axis.

8. A mail-marking machine comprising a hand operated driving wheel, a printing member, an impression member, letter receptacles for unmarked and marked letters located on respectively opposite sides of the printing member, a preliminary feeder associated with said driving wheel and arranged to travel from the receptacle for unmarked letters toward the printing and impression members, a stacker on the opposite side of said members, letter feeders connected to both the printing and impression members above the operative surfaces thereof arranged to bear upon opposite sides of a

letter and propel the same, a separator adjacent to said preliminary feeder for holding back all letters except the one engaged with said feeder, an abutment in the path of the letters for arresting letters until the printing and impression members are able to grasp the same, a lock normally holding the printing and impression members apart, a gate connected to said lock and projecting across the path of the letter for displacing said lock, gearing connecting said driving wheel, printing member, impression member, and stacker, for causing all to be driven positively in timed relation with one another, and coupling means intermediate one of the gears of such gearing and the impression member, and having positive rotation-transmitting engagement with each, said coupling being constructed to permit yielding of the impression member for thick letters without altering the relation of said gear to the rest of the gearing.

In testimony whereof I have affixed my signature, in presence of two witnesses.

VICTOR BEAUREGARD.

Witnesses:

FORREST R. ROULSTONE,
P. W. PEZZETTI.