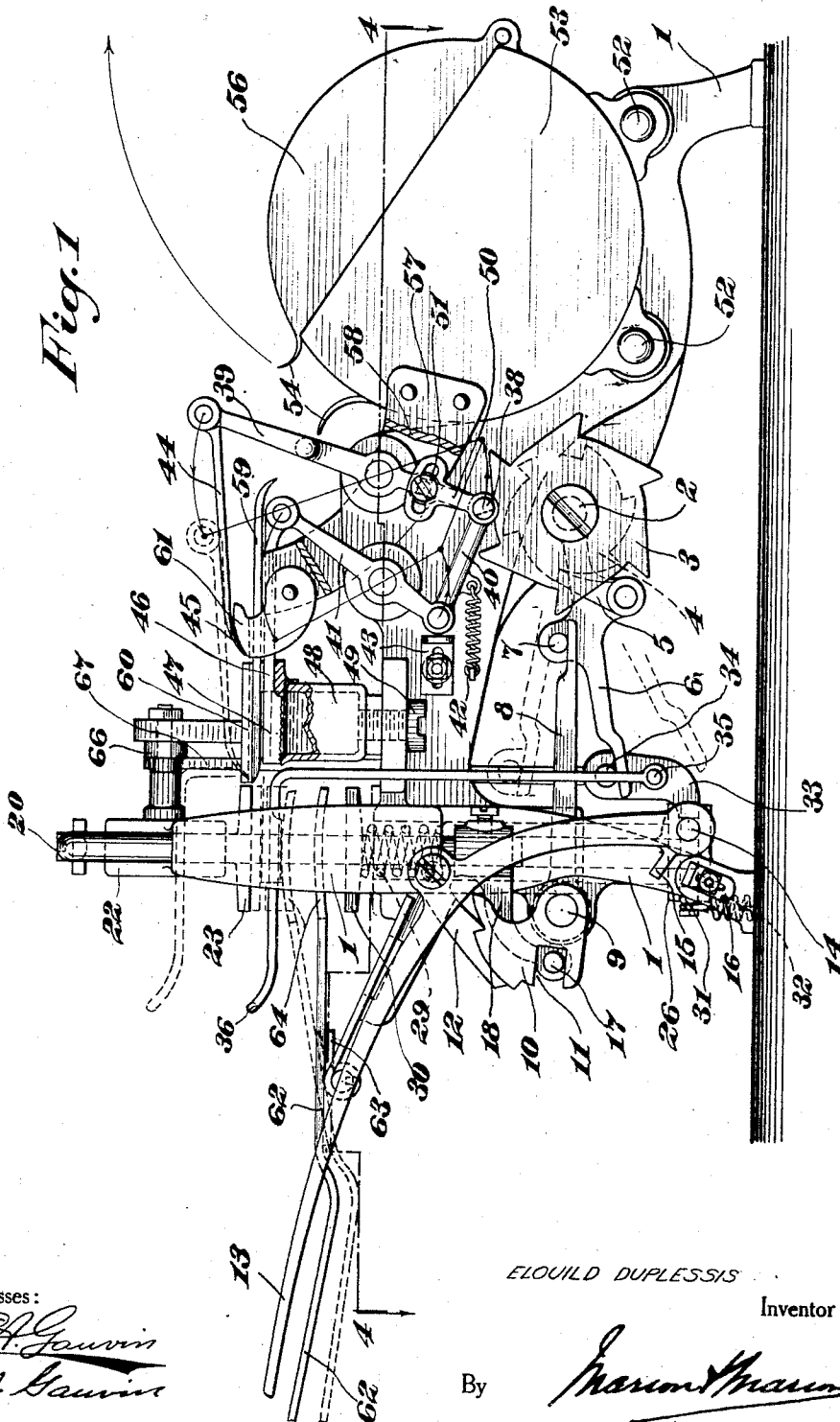


E. DUPLESSIS.
STAMP AFFIXING MACHINE.
APPLICATION FILED APR. 29, 1911.

1,035,558.

Patented Aug. 13, 1912.

4 SHEETS—SHEET 1.



Witnesses:

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E. J. Gaurin

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By

Marion Marion

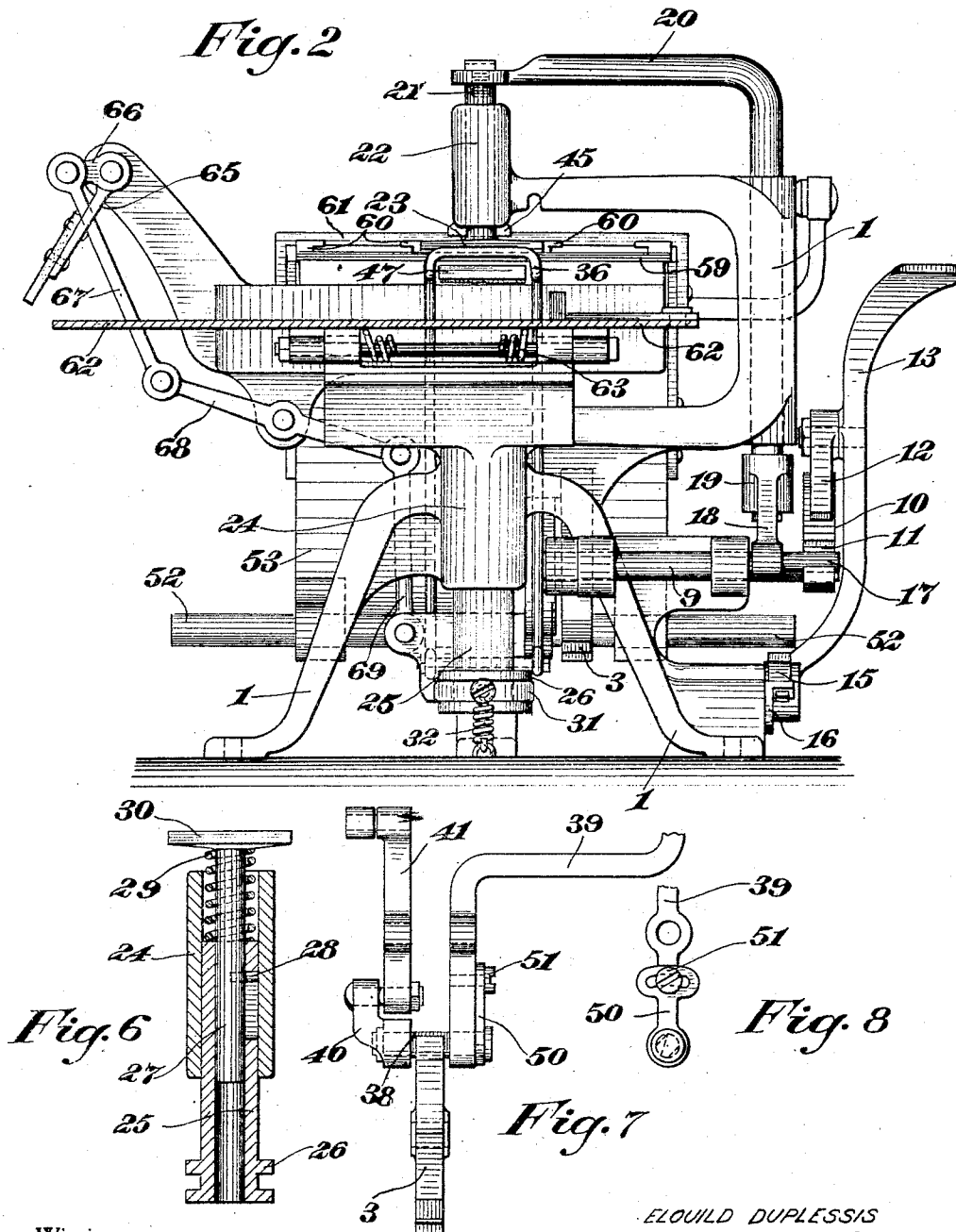
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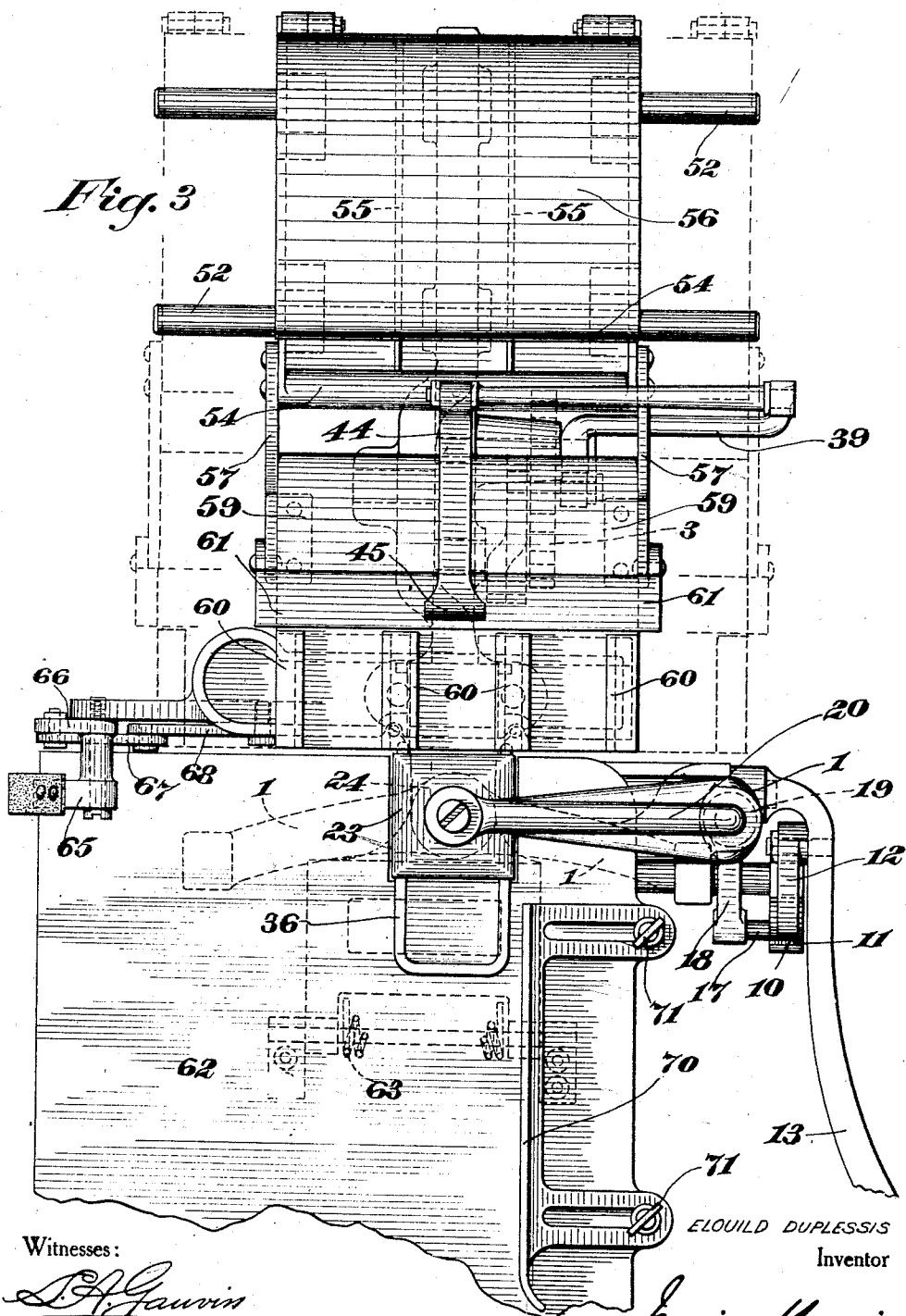
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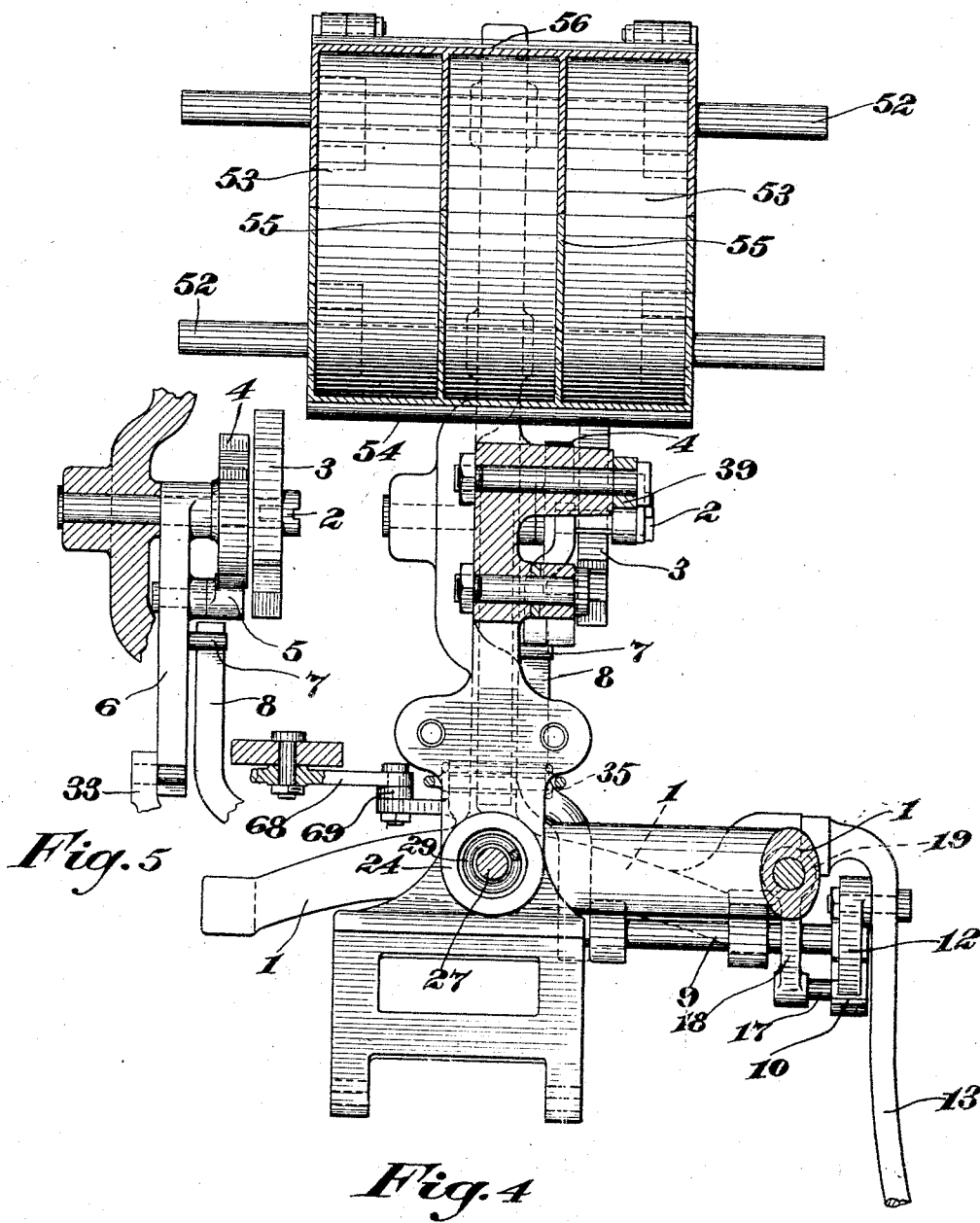
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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STAMP-AFFIXING MACHINE.

1,035,558.

Specification of Letters Patent.

Patented Aug. 13, 1912.

Application filed April 29, 1911. Serial No. 624,122.

To all whom it may concern:

Be it known that I, ELOUILL DUPLESSIS, a subject of the King of England, residing at Maisonneuve, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Stamp-Affixing Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to stamp affixing machines.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a side elevation of the complete machine, with several parts partly broken away; Fig. 2 is a front view of the machine; Fig. 3 is a top plan view of the machine; Fig. 4 is a horizontal cross section on line 4—4 of Fig. 1, looking in the direction of the arrows; Fig. 5 is an enlarged top plan view of the pawl and ratchet and correlated parts; Fig. 6 is an enlarged nearly vertical cross section of the table support; Fig. 7 is an enlarged front elevation of the moistener lever and stamp feed lever; and Fig. 8 is inside elevation of an adjusting device for regulating the movement of these levers.

The main objects of the invention are to provide a simple, economical, durable, efficient, and positively acting machine by which postage stamps of several different denominations may be accurately and rapidly affixed.

Referring to the drawings in detail, 1 indicates a frame work of any usual and well known construction and adapted to support the several working parts of the machine. Extending laterally of this frame and about midway between the front and rear, is journaled a short operating shaft 2 to which are fixed the two oppositely directed ratchet wheels 3 and 4. The ratchet wheel 4 is actuated by a dog 5 pivotally mounted on a rock-arm 6 which is journaled on the shaft 2. This arm is provided with a short pin 7 adapted to be engaged by an arm 8 fixed to one end of a rock-shaft 9

journaled in the forward part of the frame 1. To the opposite end of the shaft is fixed a rigid plate 10 provided with a notch 11, for a purpose to be later disclosed. This ratchet plate is adapted to be engaged and operated by a gravity pawl 12 pivotally mounted on the hand lever 13 which is fulcrumed at 14 in the forward part of the machine frame and provided with an ear 15 adapted to coöperate with the adjustably mounted limit or stop plate 16. Adjustment of the plate 16, of course, regulates the swing or throw of the hand lever 13. As the hand lever is depressed, the arm 8 will be raised, carrying rock-arm 6 to the upper dotted line position of Fig. 1 and, in this way, actuating ratchet wheels 3 and 4.

In the notch 11 of the ratchet plate 10 is loosely seated a pin or lug 17 of an arm 18 projecting from a collar 19 secured to the lower end of a vertical, reciprocable, overhanging angle arm 20 which is slidably mounted in a tubular bore of a vertical branch or arm of the frame 1. An upper overhanging end of this arm is provided with a small bar 21 slidably mounted in a tubular bearing 22 and having a stamping head or block 23 secured thereto, for a purpose to be later disclosed. Thus whenever the hand lever 13 is depressed, the stamping head 23 will also be depressed.

In the forward part of the frame, between the legs, is formed a large, tubular, vertical bearing 24 in which is slidably mounted a sleeve 25 provided with an elongated slot in one side and an annularly grooved collar or ring 26 on its lower end. Slidably mounted in the upper end of the sleeve 25 is a rod 27 provided with a stop pin 28 adapted to play freely in the slot of the sleeve 25. This pin and slot connection allows limited relative movement between the sleeve 25 and rod 27. A coil spring 29 acts to hold these parts, normally, in their extended positions. At one end, it bears upon the upper end of the sleeve 25, and at the other end against the under face of a small presser head 30, all as clearly shown in Fig. 6. Then the annular groove of collar 26 is seated on yoke or band 31 to which is secured one end of a retracting spring 32, the other end being secured to the floor on which the machine stands, or to the lower part of the frame 1. This spring acts to draw the sleeve 25 and its connected parts

downwardly through the bearing 24, as will be clear on reference to Figs. 2 and 6. From the rear of the yoke 31 extends a plate or bracket 33 provided with a pin 34 adapted to overlie and engage the free end of the rock arm 6 and depress the same as the sleeve 25 is drawn downwardly by its spring 32. In this bracket is mounted a pin or rod 35 to the opposite ends of which are secured the uprights or vertical arms of a skeleton envelop holder 36, the horizontal holding arms of which extend forwardly from beneath the stamping head 23. The result is that, as the rock arm 6 is lifted, as previously explained, the plate or bracket 33 will be lifted. This plate, in turn, will carry upwardly with it the sleeve 25 and its rod 27 and table 30. Thus, depression of lever 13 will simultaneously effect operation of the ratchet wheels, raising of the envelop holder, and raising of the presser head.

As the ratchet wheel is rotated, its teeth will successively engage a short rod 38. This rod is journaled, at one end, in the lower end of a bent rocking lever arm 39 and at its opposite end in a short link 40. This link is flexibly connected to the lower end of a second rocking lever arm 41—see Fig. 7. Both lever arms are mounted on pins or pivots projecting from the frame 1—see Fig. 1. The result of these connections is that step by step rotation of the ratchet wheel 3 will cause intermittent rearward swinging of the lower ends of the rocking levers 39 and 41. In order to return them to their initial positions, a spring 42 has been provided. This spring is connected, at its opposite ends, to the frame work 1, and to the link 40. An adjustable stop plate 43 is slidably mounted on the frame in a position to anticipate the lower end of the lever arm 41 and limit its forward swing, to the desired amount.

Pivotaly secured to the upper end of the lever 39 is a stamp feeding claw 44 provided with a kerf and serrated or roughening end 45 adapted to engage the perforated lines of a stamp strip and feed it forwardly, although it may move rearwardly over the same strip without moving it. Similarly connected to the upper end of the arm 41 is a wiper arm 46 to the outer end of which is secured a moistening pad 47. This pad, in its retracted position, lies across the top of a small wetting tank 48 removably secured to the frame 1 by bolts 49 extending upwardly through the frame and threaded into the bottom face or wall of the tank.

In order to have the machine operate to its best advantage, it is necessary, of course, to provide means for regulating the time of engagement between the rod 38 and the teeth of ratchet 3. This is done by pro-

viding the rod with one flat face and one squared projecting end. To this squared projecting end is secured the lower end of an adjusting T-arm 50. The head of this T-arm is provided with an elongated slot extending, substantially, its entire length. A clamping screw 51 extends through this slot and is threaded into the adjacent face of the arm 39. By swinging arm 50, the rod 38 will be partially rotated so that the flat side will be swung toward or from position to engage the teeth of ratchet wheel 3. In Fig. 1 it is shown as in position for the flat side to engage the next tooth of the ratchet wheel. In such position, the tooth will engage the rod a little later than would be the case if the rod were rotated so that the round face would engage the tooth. Neither the lever arms, ratchet wheels, rock arm, operating lever, stamping head, presser head, or any of their cooperating parts have either lateral or longitudinal movement relatively to the machine frame 1.

In the rear of the frame 1 are mounted two parallel guide rods 52. Slidably mounted on these rods is a cylindrical stamp receptacle 53 provided with a longitudinal delivery opening in its upper forward side and having curved guiding lips 54 leading therefrom. This receptacle is divided into three separate compartments by two parallel lateral partitions 55 and is provided with a hinged rearwardly swinging cover section 56. Strips of stamps of three different denominations may be placed in these compartments (one denomination in each) and drawn out through the opening and over the forward guide lip 54. From the opposite ends of this receptacle extend bracket arms 57 connected by transverse bars or plates 58 to form an open frame work. To the top of this frame work is secured a shelf or platform 59 the rear edge of which is formed as a downward curve to receive the stamp strips from the lip 54. The forward part of this shelf is divided into three guide ways all overhanging angle plates 60. These plates are so arranged that their vertical walls are spaced apart a distance equal to the width of the stamp. The overhanging, or horizontal, walls prevent vertical movement or displacement of the stamp as it is fed forward by the claw 44. To prevent the stamp strip from being drawn rearwardly with the claw 44, a light pressure bar 61 is provided. This bar extends entirely across the shelf 59 and is provided with ears by which it is pivotally connected to the upper ends of the bracket arms 57. As shown in Fig. 1, the swing of this bar is forwardly and downwardly toward the top of the platform or shelf 59. The bar itself curves upwardly and rearwardly from its engagement with the top

of the shelf 59. Thus, the stamp strips may be drawn forwardly between the edge of the pressure bar and the table top, for feeding, although the pressure bar edge prevents their return movement.

On reference to Fig. 1, it will be noticed that the pressure bar meets the top of the shelf immediately in the rear of the angle plates 60. In addition to holding the stamp strips down, the curved pressure bar acts to engage the under face of claw 44 and raise it from engagement with the stamp strip at the instant that the claw passes from between the angle plates. The guide ways at the forward part of the shelf 59 are exactly alined with the openings of the three different compartments of the receptacle 53. It will be noticed that the stamping head 23, envelop holder 36, and feeding claw 44 are stationary with relation to the lateral movements of the receptacle 53, platform 59, and pressure bar 61. It will also be noticed that the stamp feeding claw 44 is always in a position to feed a stamp through one of the guide ways and directly beneath the stamping head. The several parts are so proportioned that the claw 44 will move the stamp strip forward a distance equal to the length of one stamp, at each operation. Thus, the stamp will project from its guide directly in the path of the descending head and the line of perforations will be at the edge of the guide. As the head descends on the stamp close to the edge of the guide, there will be a shearing action and the stamp will be torn from its strip. The claw 44 cooperates with the shelf 59 to grip the strips of course. It is necessary, obviously, to lead the stamp strip into the guide way from the receptacle, before the claw 44 can engage it. This will be done by hand. Consequently, by sliding the receptacle 53 and its connected parts in one direction or the other, it is possible to deliver any one of the three denominations, by means of the feeding claw.

On reference to Fig. 1, it will be seen that the moistening pad 47 will be moved outwardly beneath and beyond the forward edge of the stamp guides and between the horizontal branches of the envelop holder, at the same time that the stamp is being fed forward from the guide by the claw 44. Thus, the stamp will be above the moistener while the envelop is being dampened thereby. As the moistener and claw are retracted, the stamp will be forced down by the stamping head 23 and on to the dampened surface, as previously explained.

A shelf or table 62 is pivotally mounted in the forward part of the frame work for supporting a quantity of envelops to be stamped. It is held, yieldingly, in the dotted line position of Fig. 1, by means of a leaf spring 63, or the like. The rear por-

tion of this table is slightly convexed or curved, as at 64, to afford approximately the same bearing surface for the stamping head in all positions of the table. If the table were perfectly flat there would be an inclined surface presented to the stamping head and the stamp might not become firmly affixed. A small opening is made through the rear portion of this table for the passage of the presser head 30 which cooperates with the stamping head 23 in affixing the stamp.

A machine of this kind, of course, is particularly designed for rapid work. Consequently, it is desirable to have some automatic means for removing the envelops as rapidly as the stamps are affixed thereto. For this purpose, a sweep is provided. This sweep is in the nature of a small tubular rock shaft journaled about a pin projecting from the frame T and provided with a long crank or sweep arm 65 and a short arm 66. The lower end of the sweep arm 65 is adapted to swing close across the face of the table when the table is in raised position, just after the envelop has been moved from between the stamping and presser heads. The arm 66 is connected by suitable links 67 and 68, and lever 69, with the bracket 32. Thus, as the presser head 30 moves down away from a stamped envelop, the sweep arm 65 will be swung to discharge the last preceding stamped envelop from the table.

The parts are so proportioned that the upper wall of the notch of the ratchet plate 10 does not engage the pin 17 until just at the instant that the spring 42 comes into play. Likewise, it will be noticed that the presser head 30, normally, has a short upward movement before it comes into active use and that the slot and pin connection between its rod 27 and the sleeve 25 allow of additional retardation. Thus, there will be no clash between the stamp feeding, envelop dampening, and stamp affixing parts of the machine.

In order to properly gage the position of the envelop, while stamping, a gage plate 70 has been provided. The plate is slidably mounted on the shelf or table 62 and is provided with slotted ears adapted to receive threaded rods or bolts on which clamping nuts 71 are threaded. In stamping, the envelop is placed with one edge against this gage plate 70 and slid forward beneath the holder 36 and stamping head 23.

From the preceding detailed description, it will be seen that the machine is automatic in all of its operations except as to the sliding of the stamp receptacle and connected parts.

The operation of the machine is as follows: First adjust the gage plate 70 as desired. Then slide the stamp receptacle 53 and its connected parts to such position that the guide for the desired denomination will

fall directly in front of the stamp feeding claw 44. The machine is now ready for the stamp affixing operation. Depression of the operating handle 13 will cause upward swing of the arm 8 and downward movement of the arm 18, collar 19, overhanging angle arm 20, and stamping head 23. As the arm 8 swings up, it carries rock arm 6 with it. This upward movement of the rock arm 6 actuates the ratchet wheels 3 and 4. Ratchet wheel 3 engages the short rod 38 and draws it rearwardly against the action of spring 42. This causes the levers 41 and 39 to swing forwardly together so that the envelop is dampened and a stamp is fed to position for affixing. As soon as the levers 41 and 39 reach the forward limit of their travel, the rod 38 will escape from the ratchet wheel 3. Then the spring 42 will come into play and the levers and connected parts will be instantaneously returned to their original positions. On referring to Fig. 1, it will be seen that the arm 6 lifts the plate or bracket 33 at the same time that it actuates the ratchet wheels 3 and 4. This causes an upward movement of the presser head 30 toward the stamping head 23, and a simultaneously upward movement of the envelop holder 36 to inoperative position, as indicated in dotted lines. Upward movement of the plate or bracket 33 swings the sweep arm 65 inward toward the stamping head 23. As soon as the stamp is affixed, the operator removes the envelop and slides it toward the sweep arm, at the same time releasing the handle 13. The spring 32 will then draw the sleeve 25 downwardly and actuate the sweep arm 65 to remove the envelop. As the spring 32 draws the sleeve 25 downward, the plate 33 will move downwardly with it. This plate, of course, will return the envelop holder 36 to its original position. At the same time, its pin or lug 34 will engage the arm 6 and swing it downwardly, and the pin on it will engage the arm 8 and swing it downwardly. This, in turn, will cause the partial rotation of the shaft 9 with the notched ratchet plate 10, carrying the shaft and plate back to their original positions. As the plate 10 returns to its original position, it engages pin 17 and carries it back, thus returning the stamping head 23 to its original position. Thus, as soon as the hand lever 13 is released, all parts directly operated by it will be returned to their original positions, by means of the spring 32.

It is thought that the operation and use of the invention will be clearly understood from the preceding detailed description.

Changes may be made in the construction, arrangement, and disposition of the several parts of the invention without in any way

departing from the field and scope of the same and it is meant to include all such within this application wherein only a preferred form has been disclosed.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A machine of the character described comprising a frame, an operating lever mounted therein, a rock shaft journaled in said frame, an arm fixed to said rock shaft, connections between said rock shaft and said lever, an operating shaft journaled in said frame, a rock arm freely mounted on said operating shaft and actuated by the aforesaid arm which is fixed on the aforesaid rock shaft, means carried by said rock arm and adapted to actuate said operating shaft, a ratchet wheel carried by said operating shaft, a rod adapted to be engaged and operated by the teeth of said ratchet wheel, and a stamp feeding device connected to said rod.

2. A machine of the character described comprising a frame, an operating lever mounted therein, a rock shaft journaled in said frame, an arm fixed to said rock shaft, connections between said rock shaft and said lever, an operating shaft journaled in said frame, a rock arm freely mounted on said operating shaft and actuated by the aforesaid arm which is fixed on the aforesaid rock shaft, means carried by said rock arm and adapted to actuate said operating shaft, a ratchet wheel carried by said operating shaft, a rod adapted to be engaged and operated by the teeth of said ratchet wheel, a stamp feeding device connected to said rod, and means for regulating the time of engagement between said rod and the teeth of the ratchet wheel.

3. A machine of the character described comprising a frame, an operating lever mounted therein, a rock shaft journaled in said frame, an arm fixed to said rock shaft, connections between said rock shaft and said lever, an operating shaft journaled in said frame, a rock arm freely mounted on said operating shaft and actuated by the aforesaid arm which is fixed on the aforesaid rock shaft, means carried by said rock arm and adapted to actuate said operating shaft, a ratchet wheel carried by said operating shaft, a rod adapted to be engaged and operated by the teeth of said ratchet wheel, a stamp feeding device connected to said rod, and means for returning said stamp feeding device to inoperative position.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ELOUILL DUPLESSIS.

Witnesses:

T. MYNARD,

E. J. GAUVIN.