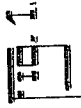


948,179.

11 SHEETS—SHEET 1.



INVENTOR

FREDERICK O. MADSEN.

BY

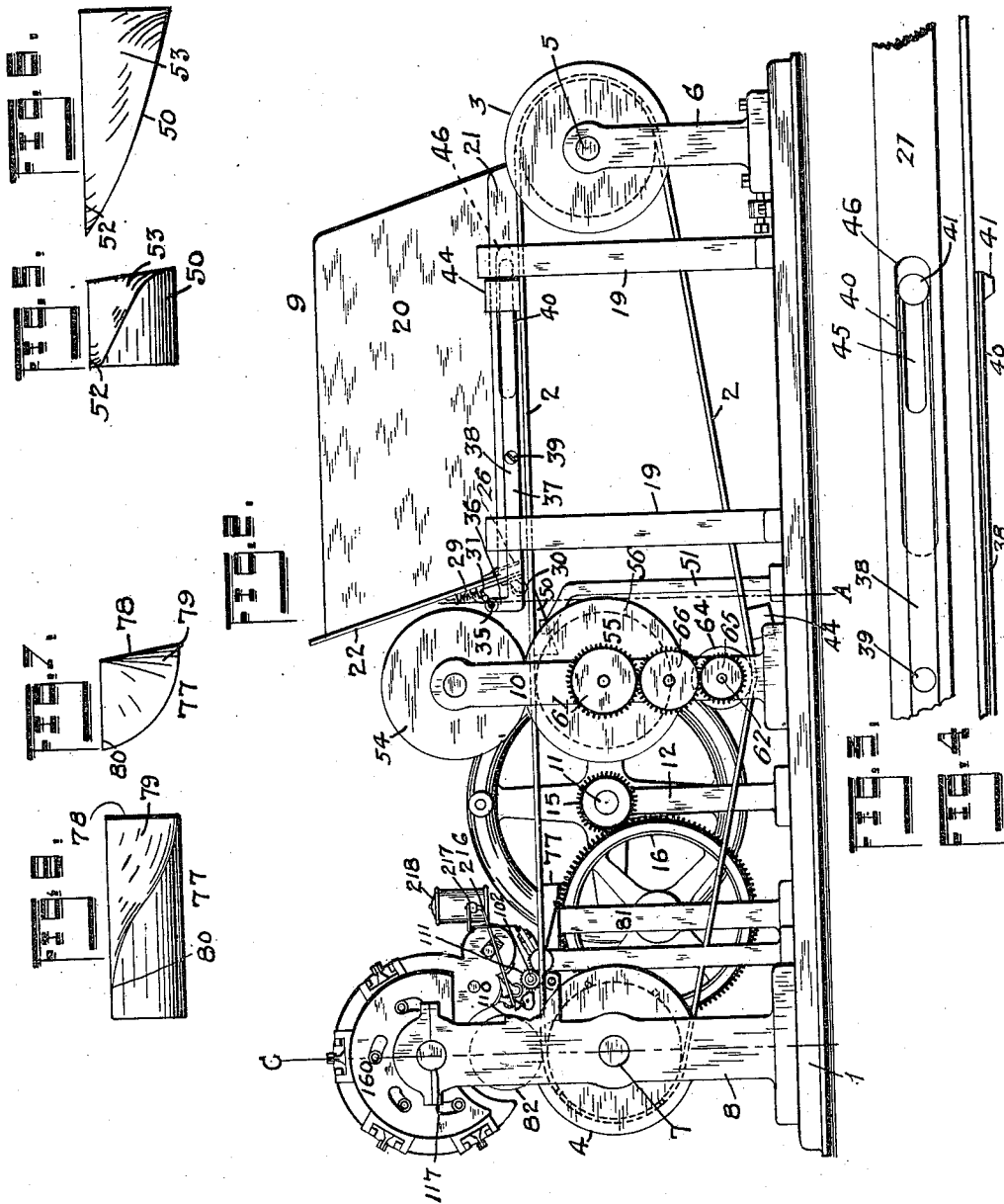
Russell M. Everett,
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 2.

948,179.



WITNESSES

Frederick O. Madsen
Ethel B. Reed

INVENTOR

FREDERICK O. MADSEN,

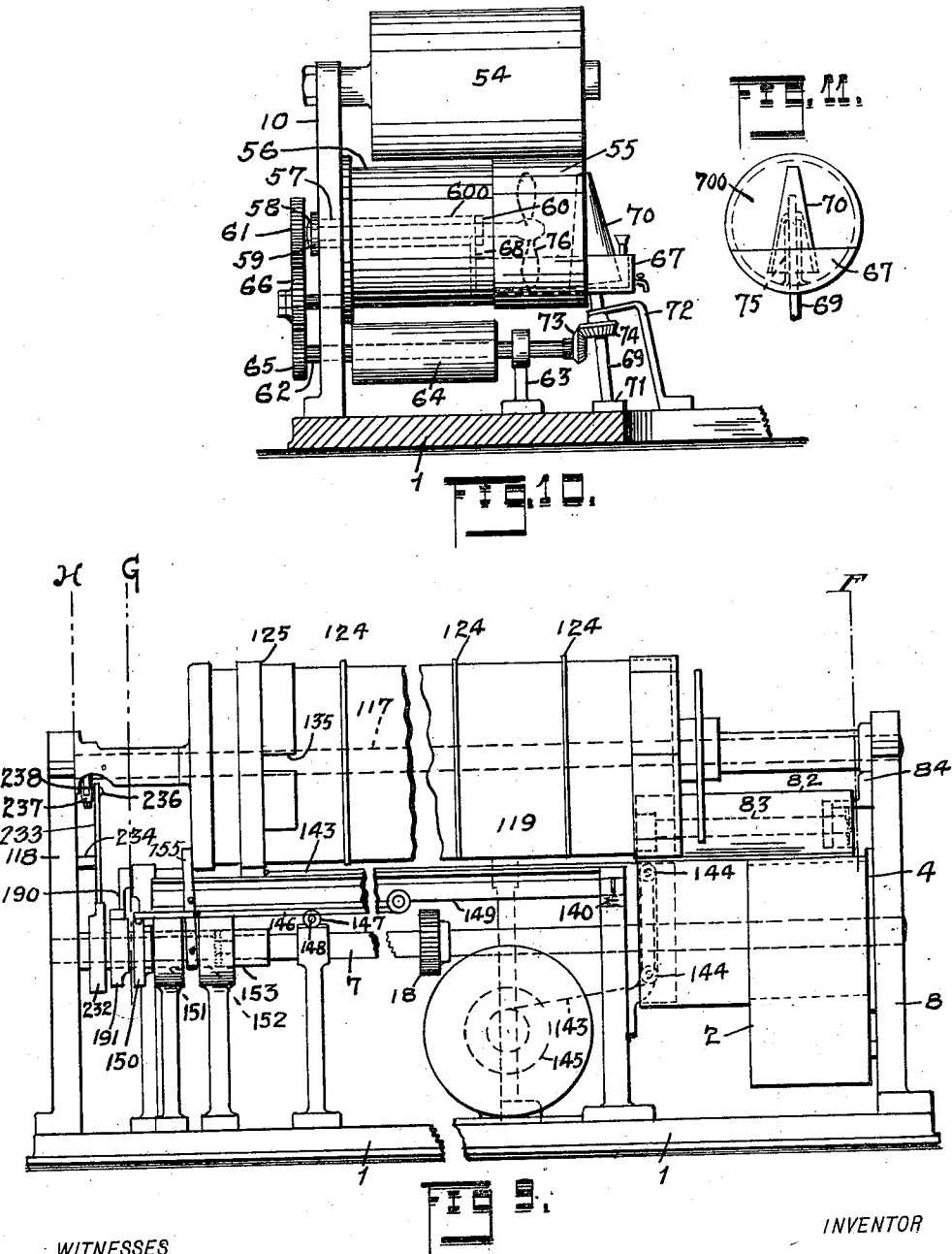
BY

Russell M. Everett
ATTORNEY.

948,179.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

Patented Feb. 1, 1910.
11 SHEETS—SHEET 3.



WITNESSES
Frederick L. Madsen
Ethel B. Reed

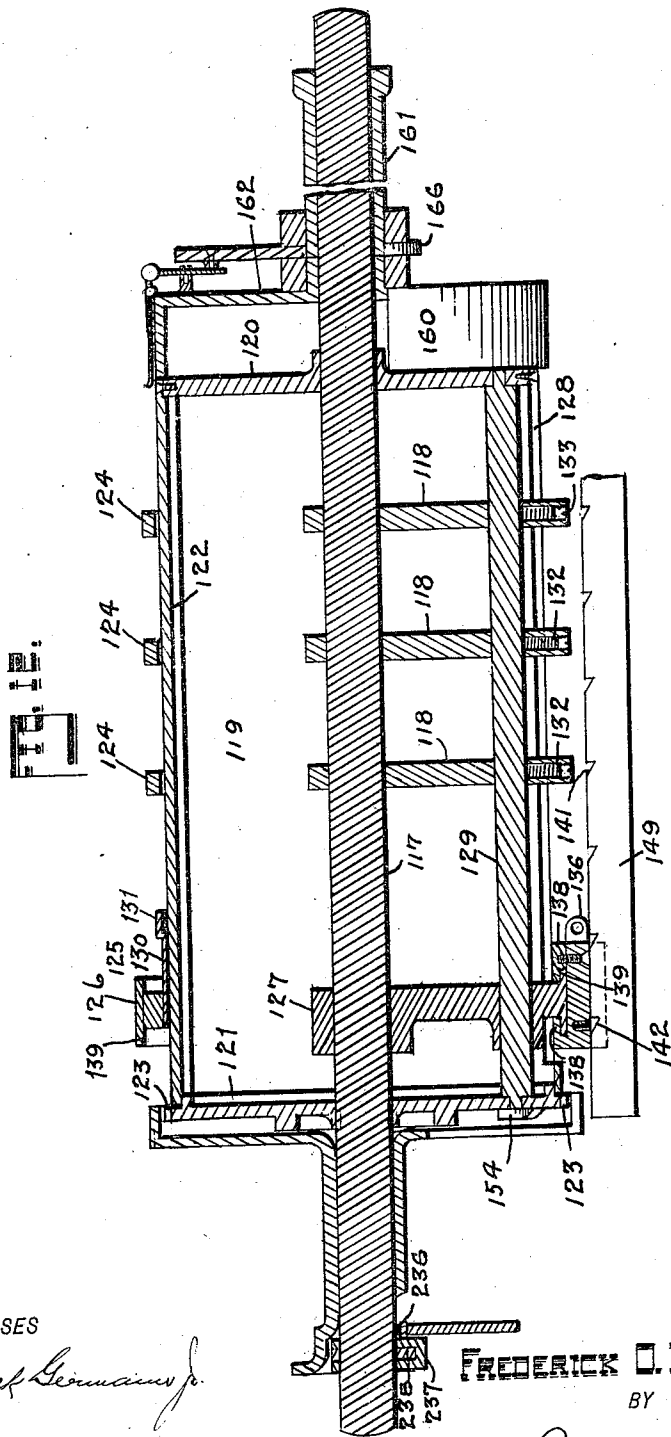
INVENTOR
FREDERICK O. MADSEN,
BY
Russell M. Everett,
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 4.

948,179.



WITNESSES

Frederick O. Madsen

Ethel B. Reed

INVENTOR

FREDERICK O. MADSEN,

BY

Russell M. Everett
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 5.

948,179.

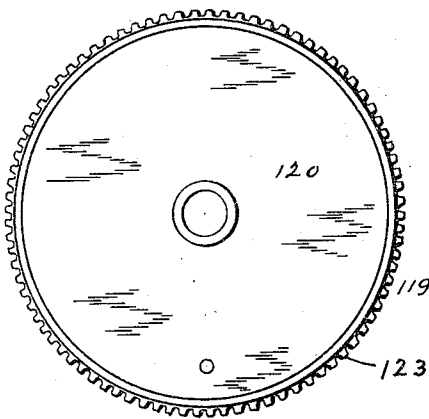


FIG. 14.

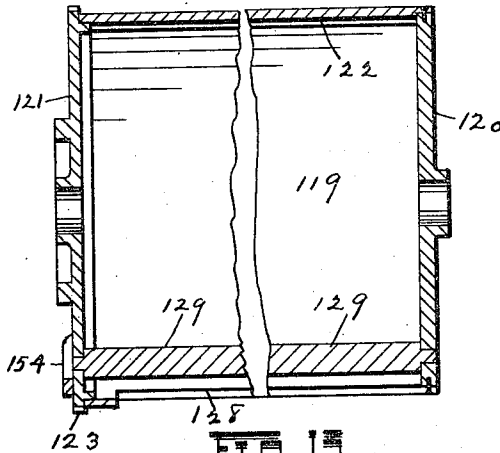


FIG. 13.

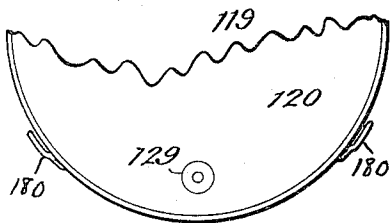


FIG. 15.

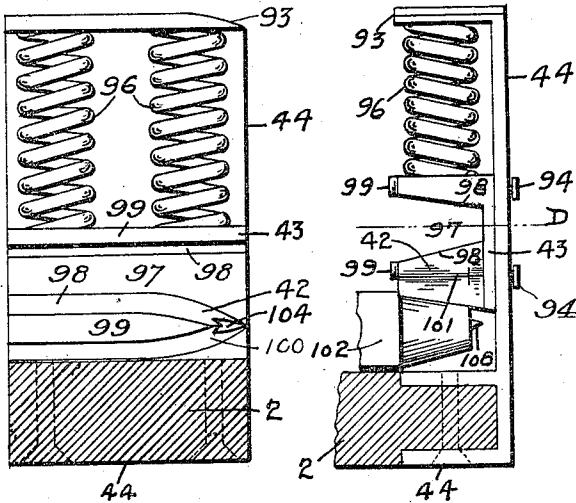


FIG. 16.

WITNESSES

Frederick Gennau
Ethel B. Reed

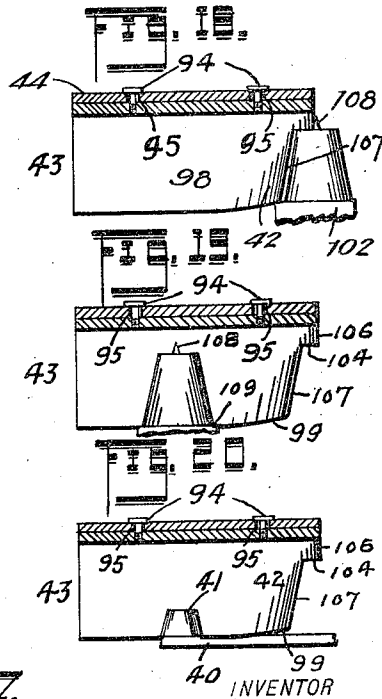


FIG. 17.

FREDERICK O. MADSEN,

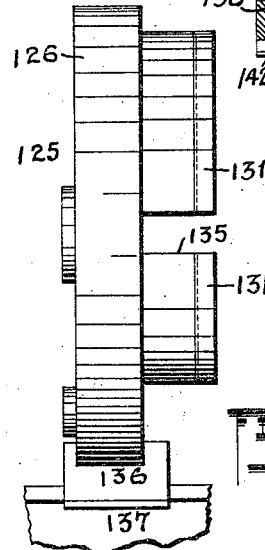
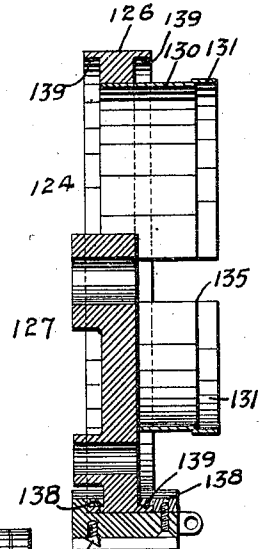
BY

Russell M. Everett
ATTORNEY.

MACHINE FOR SEALING AND STAMPING ENVELOPS.

Patented Feb. 1, 1910.

948,179.



141 141 149

Frederick G. Gamm
Ethel B. Reed

THE P. FREDERICK O. MAGEN,

BY

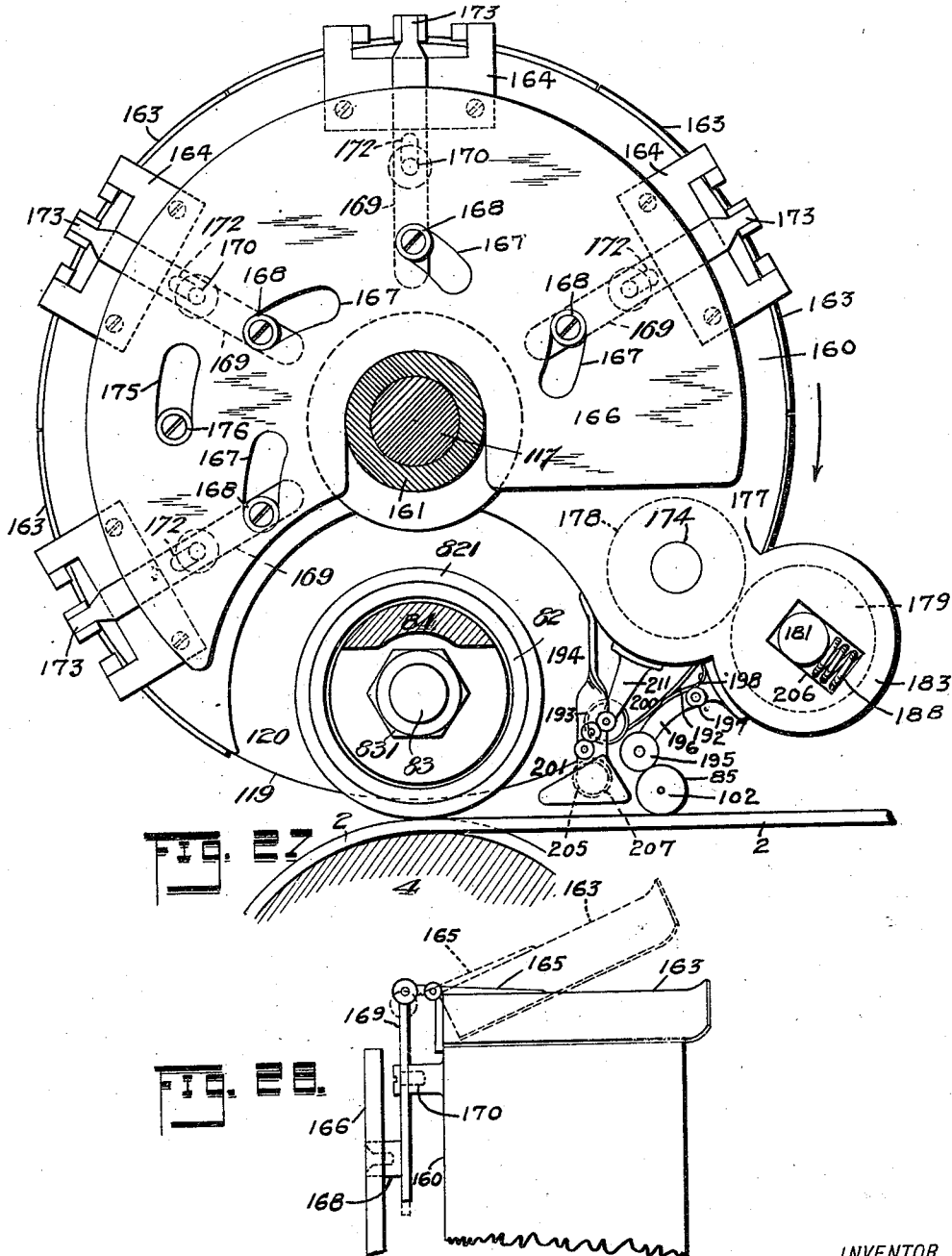
Russell M. Everett,
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

948,179.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 7.



WITNESSES

Frederick G. Madsen

Ethel B. Reed

INVENTOR

FREDERICK O. MADSEN,

BY

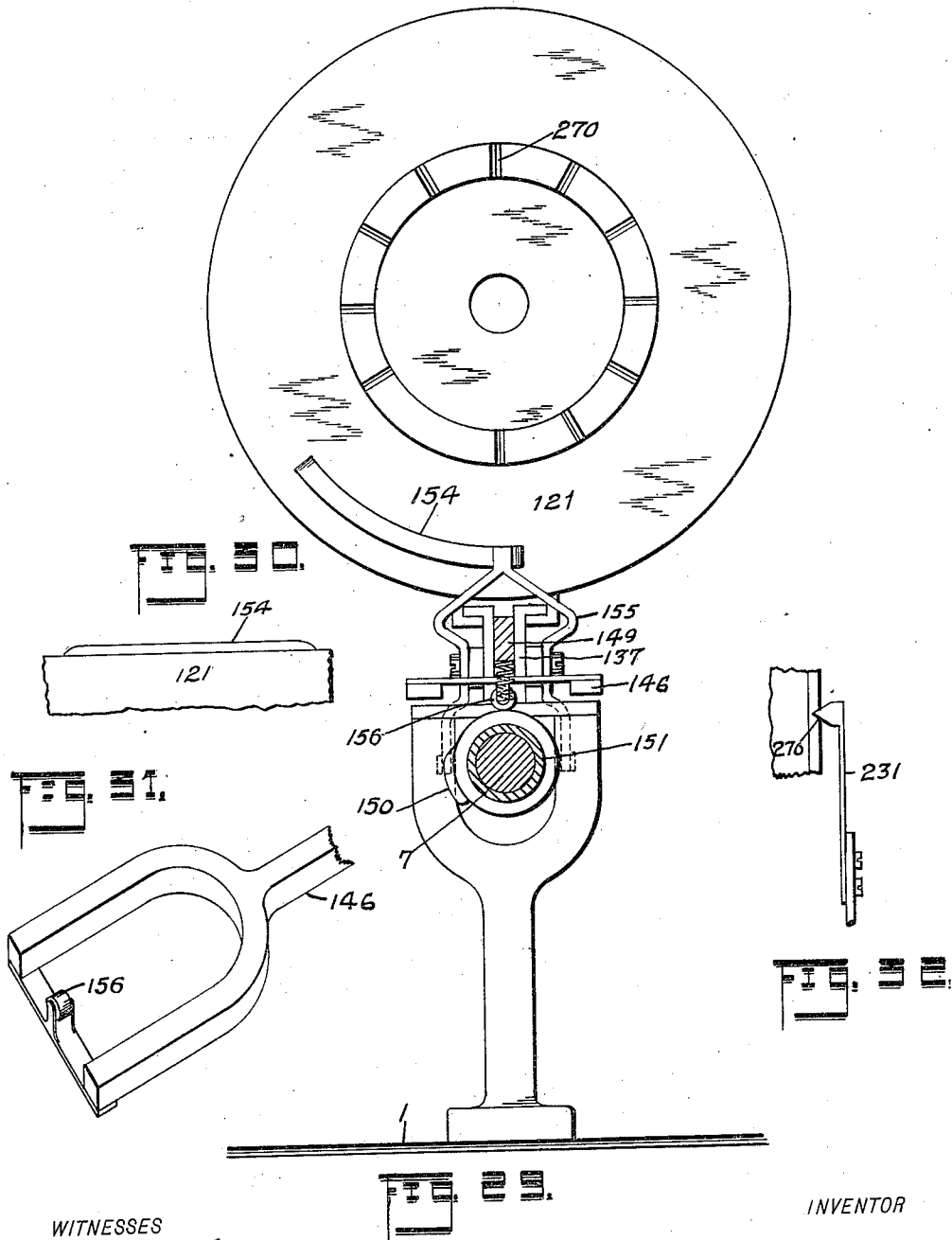
Russell M. Everett
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

948,179.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 8.



WITNESSES
Frederick Madsen Jr.
Ethel B. Reed

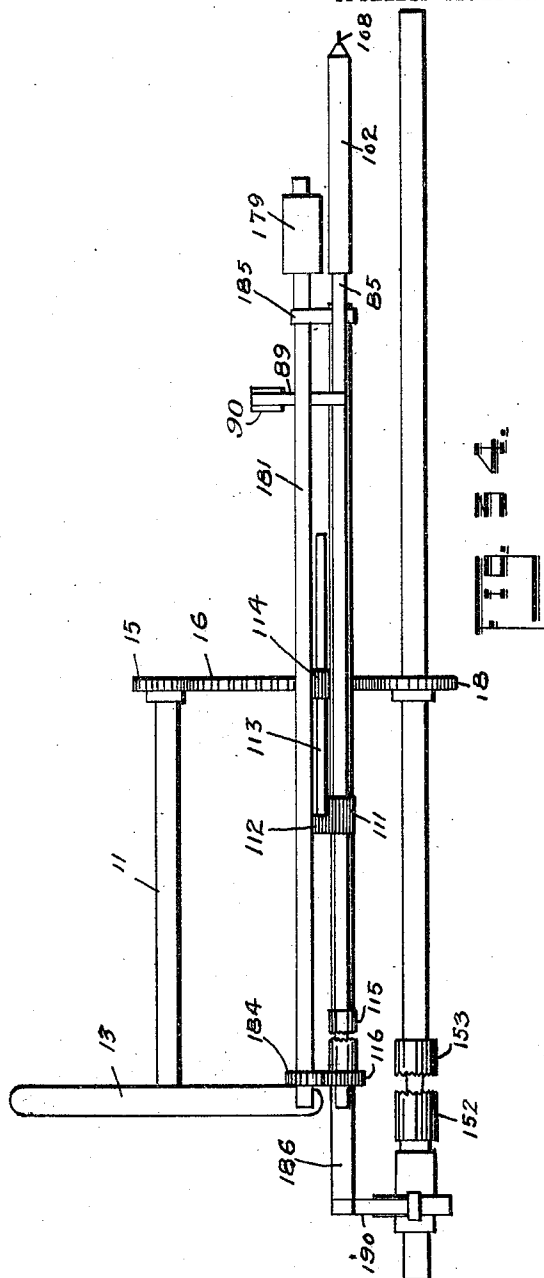
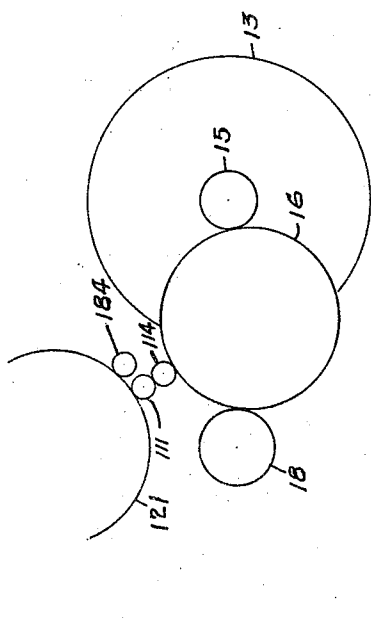
INVENTOR
FREDERICK O. MADSEN,
BY
Russell M. Everett,
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

948,179.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 10.



WITNESSES

Frederick C. Madsen
Ethel B. Reed

INVENTOR

FREDERICK C. MADSEN.

BY

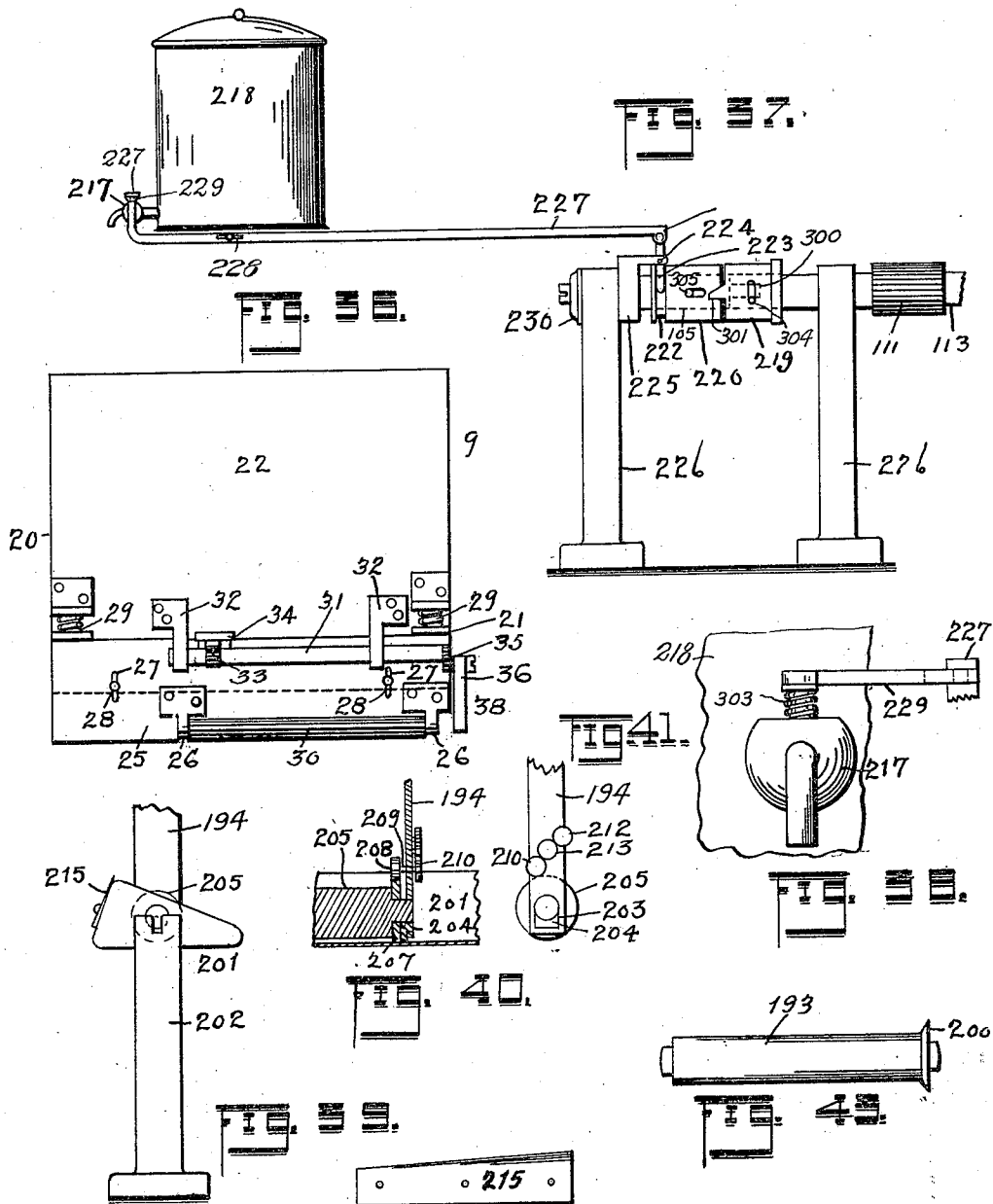
Russell M. Everett
ATTORNEY.

F. O. MADSEN.
MACHINE FOR SEALING AND STAMPING ENVELOPS.
APPLICATION FILED JUNE 20, 1907.

948,179.

Patented Feb. 1, 1910.

11 SHEETS—SHEET 11.



WITNESSES

Frederick O. Madsen
Ethel B. Reed

INVENTOR

FREDERICK O. MADSEN,

BY

Russell M. Everett
ATTORNEY.

UNITED STATES PATENT OFFICE.

FREDERICK O. MADSEN, OF NEWARK, NEW JERSEY.

MACHINE FOR SEALING AND STAMPING ENVELOPS.

948,179.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed June 20, 1907. Serial No. 379,944.

To all whom it may concern:

Be it known that I, FREDERICK O. MADSEN, a subject of the King of Denmark, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Machines for Sealing and Stamping Envelops, of which the following is a specification.

The objects of this invention are to provide for office use an improved machine for sealing and stamping envelops; to enable the envelops to be simply stacked in the feeding hopper, from which they pass automatically into the machine, without holding them by the hand; to thus provide a machine which can be operated by simply turning a shaft; to provide a machine which employs sheets of stamps as distinguished from strips; to enable the machine to be used for either sealing or stamping alone; to enable the envelop to be operated upon in horizontally flatwise position and to positively open the flap by having that edge of the envelop left free; to secure an improved system of trips for the machine each of which shall be adapted to operate both the feeding mechanism and the stamping mechanism in succession; to enable the individual stamps of a sheet to be brought successively to the same point for feeding onto an envelop; to provide improved moistening means, and to obtain other advantages and results as may be brought out in the following description.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the several figures, Figure 1 is a plan view of a sealing and stamping machine embodying my invention, and Fig. 2 is a side view of the same; Fig. 3 is a side elevation of a portion of the envelop hopper and envelop releasing lever, in enlarged detail, and Fig. 4 is a plan of the same; Fig. 5 is a rear end view of a certain flap-opening shoe detached, and Fig. 6 is a view of the same from the side opposite that shown in Fig. 2; Fig. 7 is a rear end view of a certain flap-closing shoe detached, and Fig. 8 is an enlarged view of the same as seen in Fig. 2; Fig. 9 is front end elevation of the machine; Fig. 10 is a rear elevation of the flap-moistening device, the bed plate of the machine being in section on line A, Fig. 2; Fig. 11 is an end view of an associated hollow roller, reservoir and flap-moistening roller; Fig. 12 is a central longitudinal

vertical section of a cylinder and associated parts for holding and feeding a sheet of stamps, taken on line B Fig. 1, and line C Fig. 2; Fig. 13 is a sectional detail of the stamp cylinder as it is shown in Fig. 12, but detached from the associated parts; Figs. 14 and 15 illustrate the right and left hand ends of said cylinder, respectively, as it is viewed in Fig. 13 or from the front of the machine, the end plate 121 of the cylinder being removed in Fig. 15; Fig. 16 is an inner side elevation of a certain trip and trip-box carried by the belt, and Fig. 17 is an edge view of the same, showing a certain shaft end passing idly through said trip-box; Figs. 18, 19 and 20 are sections of the trip-box taken on line D, Fig. 17, the last two showing the said shaft end and a certain hopper lever tripped, respectively; Figs. 21 and 22 are plan and edge views, respectively, of a traveling ring and slide for the cylinder, and Fig. 23 is a diametric section of the same on line E Fig. 21; Figs. 24 and 25 are side and edge views, respectively, of a stamp holding band for the cylinder; Fig. 26 shows a bar for the end-ring slide shown in Figs. 21, 22 and 23; Fig. 27 is an end view of the stamp platen and feeding and moistening means, illustrating certain segmental clips and their adjusting means, and being partly in cross section on line F Fig. 9; Fig. 28 is a portion of the said platen and clips in rear elevation; Fig. 29 is an end elevation of the stamp cylinder, the adjacent parts being in section on line G Fig. 9; Fig. 30 is a side view of a certain cam shown in Fig. 29; Fig. 31 shows in detail the bifurcated end of a certain releasing lever for the end-ring on the cylinder; Fig. 32 illustrates a cylinder detent device; Fig. 33 is a view endwise of the cylinder taken on line H Fig. 9, showing certain cam means for turning the cylinder; Figs. 34 and 35 show in plan and end view, respectively, and diagrammatically, the arrangement of shafts at the front end of the machine; Fig. 36 is a front end view of the envelop hopper detached; Figs. 37 and 38 illustrate certain mechanism to control the flow of water to the stamp moistening means the first showing the reservoir in side elevation and the second being a front view of it; Fig. 39 is an elevation of the stamp moistening trough from the opposite side from which it is shown in Fig. 27, and Figs. 40 and 41 are detail views of the strap which supports one end of the trough and its mois-

tening roller; Fig. 42 shows a knife removed from its position on the trough where it severs the long edge of each stamp from the strip as it is applied, and Fig. 43 shows a circular knife on the upper one of a pair of rollers for feeding the strip of stamps adjacent to the moistening trough, and which cuts said strip from the sheet.

In said drawings, 1 indicates a base or bed-plate upon which the different parts of my improved machine are mounted. At one side of this base plate is a horizontally and longitudinally disposed belt 2, which runs over drums 3, 4, at opposite ends of the plate, the drum at the rearward end being mounted upon a shaft 5 having its bearings in posts 6, and the drum 4 at the front end of the machine being mounted upon a shaft 7 turning in standards 8, 118, at opposite sides of the base plate 1. This belt serves at its upper part as a carrier for the envelops, a feeding hopper 9 being arranged adjacent to the top of said belt at the rear end of the machine and the stamping mechanism being located at the opposite or forward end. Adjacent to the said feeding hopper the flap-moistening devices are arranged upon standard 10, and adjacent to the drum shaft 7, preferably at the opposite side of the bed plate from the belt 2, is arranged means for driving the said belt and thus the entire mechanism of the device. Said motive means comprise a shaft 11 journaled in posts 12, 12, extending upward from the base plate, said shaft having a pulley or wheel 13 which may be rotated by a handle 14 or any other suitable means. Said shaft 11 has also a pinion 15 meshing with a gear 16 mounted between posts 17 and which engages a gear 18 on the shaft 7, (see Fig. 9). The said feeding hopper 9 is supported by posts 19 extending upward from the base plate on opposite sides of the belt 2, and comprises sides 20, 21, and a front 22 which is preferably inclined forwardly upward, the top and rear end being entirely open. The bottom of said feeding hopper is open except for a narrow ledge 23 at the side away from the belt 2 and which ledge is extended across the rear end of the feeding tray as at 24. It will be understood that the said hopper is of the width of an envelop, while the belt 2 is sufficiently narrower to expose the flap of the envelop and which flap is on the downwardly facing side of the envelop as it passes through the machine. The stack of envelops thus rests normally in part upon the belt 2, being prevented from being carried forward on said belt by the front end wall 22 of the hopper and a certain gate thereon next to be described. This gate 25, referring more particularly to Figs. 2 and 36, is mounted upon the outer side of the front wall 22 of the hopper, near its bottom, and it is adapted to slide up and

down against the belt surface to guard the slit or passage between said belt and certain fingers 26 mounted on the hopper, and which space is sufficient to permit a single letter to pass. I have shown said gate 25 as having slots 27 to receive studs 28 for the gate to slide on; coil springs 29, 29 serve to normally hold the gate downward against the belt, and a roller 30 is mounted upon the lower edge of the gate to prevent its scraping upon an envelop passing through.

For raising the gate a shaft 31 is mounted adjacent to and outside of the same in brackets 32, 32' depending from the hopper wall 22, and said shaft carries a lateral rearwardly projecting finger 33 which is adapted to take under a lifting piece 34 on the gate. At its outer end, the said shaft 31 has a crank arm 35 which is pivoted to the upturned extremity 36 of the forward arm 37 of a lever 38 fulcrumed as at 39 on the outside of the low wall 21 of the hopper. The rearward arm 40 of this lever has an outwardly projecting stud 41 adapted to be engaged by the cam-like surface 42 of a trip 43 shown more particularly in Figs. 17 and 20, and forced upward thereby to swing the said lever 38 and open the gate 25 as will be understood. Said trip is carried in a trip-box 44, shown also in Fig. 2, and several of which at proper intervals are fixed or mounted on the belt 2, at its outer edge, to travel with the same. In order to predetermine the release of a letter at just the proper time, the stud 41 is made adjustable longitudinally of the lever 38 in a slot 45 of the same, and to provide access for this adjustment from the inside of the hopper its said low wall 21 is also slotted as at 46. (See Figs. 3 and 4, also.)

Upon leaving the feeding hopper, the envelop is carried along between the belt 2 and roller 30, its flap being freely exposed downward by reason of the narrowness of the belt as has been above referred to. In this position a deflecting shoe 50 engages the said flap and turns it downwardly outward into vertical plane or beyond. This shoe is mounted upon a post 51 projecting upward from the base plate 1, and has a thin horizontal edge 52 to enter between the flap and body of the envelop, and a curved guiding face 53 to force said flap open, as shown in detail in Figs. 5 and 6. Just beyond the said deflecting shoe 50 are means for moistening the flap of the envelop when opened, comprising upper and lower rollers 54 and 55 mounted on the standard 10. The lower roller 55 is peripherally recessed for a part of its length, as at 56, to receive the belt 2, (see Fig. 10), and is hollow for its end portion away from the standard 10 to receive certain associated parts hereinafter described. This roller is mounted by its hub 57 to turn loosely upon a shaft 58 both being journaled in the stand-

ard 10, and a collar 59, upon said hub outside of the standard 10 holds the hollow roller in place. The outer end of the said shaft 58 has also a gear wheel 61, fixed thereon.

Near the lower part of the standard 10 is a shaft 62 which also bears in a post 63 upon the bed plate and carries a roller 64 beneath those 54, 55 already described, and which is engaged by the lower part of the belt 2 to rotate the shaft 62, as shown in Fig. 2. Upon the outer end of said shaft 62 is gear 65 which meshes into an intermediate gear 66 to transmit motion to the gear 61 upon the shaft 58, as above described.

In the lower part of the open end of the drum or roller 55 is arranged a tank 67 which lies partly within the roller and partly projecting therefrom. This tank has at its inner end an upward extension 68 provided with a long sleeve 600 which receives the shaft 58, between the standard 10 and a fixed collar 60, to support the tank. At the open end of the said drum 55 is mounted upon an approximately vertical shaft 69 a conical moistening roller 70, which lies partly within the drum in a transverse position with respect to the end thereof. The said shaft 69 has bearings in a seat 71 upon the bed-plate and at a higher point in a bracket 72 on the bed-plate, and is driven by means of bevel gears 73, 74, from the shaft 62. This conical moistening roller 70 is inside the tank 67, and is hollow at its bottom part to receive a sleeve 75, which projects up from the bottom of the tank to afford a bearing around the shaft 69, and to prevent escape of water from the tank. This roller 70, it will be understood, is adapted to engage at its sides the flap of an envelop passing through the machine and thus moisten the same, a paddle wheel 76 in the tank 67, and mounted on the shaft 58, serving to throw water against the said moistening roller 70 to keep it continually wet. A shield 700 on the tank closes the open end of the drum around said roller 70. The envelop thus has its flap moistened while in opened position, and then the envelop passing onward by the motion of the belt 2, said flap is engaged at its outer or surface side by the upright edge 78 of a shoe 77, which has a face 79 curving from said edge into a substantially horizontal plane at the other end of the shoe, as at 80, and thus adapted to close the flap of the envelop. This shoe 77 is preferably mounted upon a post 81 on the bed-plate 1. After having its flap closed as thus described, the envelop passes beneath the stamping devices and receives a stamp, as will be hereinafter set forth in detail. Then the envelop immediately passes between the end roller 4 for the belt and a higher roller 82, and is discharged from the machine, the pressure of said rollers serv-

ing to press both the flap and the stamp securely fast to the envelop. The said roller 82 rotates on a stud 83 secured in a bracket 84 mounted on the standard 8 and projecting into the hollow end of the roller. (See Fig. 9.) A nut 831 on said stud at the outer side of the bracket removably secures the roller in place. This roller 82 lies against the envelop from above at its discharge from the machine, directly above the end roller 4 for the belt 2, and is provided with a yielding surface 821 of rubber or the like which will allow the envelop to pass between said rollers with pressure. The belt roller 4 is recessed to receive the belt 2, so that the peripheral portion of itself which the belt does not extend over is flush with said belt and properly coöperates with the upper roller 82, as will be understood. As an envelop leaves the flap-closing mechanism on its way to the stamping devices, the trip-box 44 which caused the discharge of said envelop from the hopper 9 sets the stamping mechanism in motion, as will next be described, and said mechanism is timed to apply a stamp to said envelop as it comes along, at just the proper point.

A long shaft 85, extends transversely of the machine with respect to the belt 2, and is journaled at its end farthest from said belt in a bearing 86 on the lower rear edge of a certain end guard 87 of the stamp supply cylinder hereinafter described, (see Fig. 33). This shaft 85 is capable of a limited longitudinal movement, for purposes presently to be set forth, and a leaf spring 88 on the end of said bearing presses against the extremity of the shaft to normally hold it toward the belt 2. Another bearing for this shaft 85 is provided adjacent to the pathway of the envelops in the outer end of an arm 89, which extends forwardly in substantially horizontal position from a post 90, to which it is hinged to swing up and down (see also Fig. 34). This allows the shaft 85 to raise and lower at its enlarged end 102 next the envelop belt 2, for purposes presently to be set forth, and a spring 91 bears on the said arm 89 to hold it downward, while an adjusting screw 92 beneath provides a limiting stop for the arm. The free end of said shaft 85 projects across the belt 2 and is adapted to be engaged by the trip and slid longitudinally as next described, particular reference being had to Figs. 16-20, inclusive.

The trip box 44 at its inner side or side facing the belt provides between its overhanging top 93, and the belt 2, a vertical slide way for the trip 43, said trip being mounted by headed bolts 94, 94, working in slots 95, of the box, and being normally held down against the belt by upper springs 96. The inner face of this trip provides at its upper part a channel 97 parallel to the belt and the side walls of which are at their inner

surfaces beveled outwardly apart as at 98, 98; furthermore, the inner face of the trip has on opposite sides of said channel 97 and adjacent thereto, inclines 99, 99 which slant rearwardly inward. The lower part of the trip is tapered equally from top and bottom to a sharp edge or point 101 at its front end, and provides upper and lower longitudinal bevels 42 and 100. This sharp edge 101 lies normally just enough higher than the said free end of the shaft 85 so that it will pass over the same and the trip only be idly pushed up, as shown in Fig. 17, to drop back into place again. But if there is a letter to be stamped, its thickness in passing beneath the shaft end 102 upon the belt 2, raises said shaft end sufficiently so that the lower part of the trip passes beneath said shaft end and the same is accordingly lifted into the channel 97 of the trip.

In order to more accurately determine whether the shaft end shall pass above or below the lower part of the trip 43 the beveled forward end of said trip is divided on a vertical plane longitudinally of the belt, as at 104, into a thin inner portion having a long taper 106, and a thicker outer portion 107 having a more abrupt taper. The end 102 of the shaft 85 does not reach inward to the long taper, but said end is provided with a needle point 108 which passes either above or below the long tapered edge, according as an envelop is on the belt or not. This needle having primarily determined which way the parts are to engage, the shaft end immediately impinges upon the outer bevel (either upper or lower) to take the strain of engagement. When the shaft passes through the channel 97 of the trip its shoulders 109 adjacent to the engaging end 102, bear against the inclined surfaces 99, 99, and the shaft is accordingly pushed longitudinally. As shown, the trip box is not rigid enough to take the reaction of this, but is reinforced by an adjacent parallel portion 110 of the standard 8 as shown in Fig. 1. This longitudinal movement of the shaft 85, which is always receiving rotary movement through a gear 111 on itself engaging another gear 112 on an auxiliary shaft 113, which in turn carries a second gear 114 meshing with the said gear 16, (see Figs. 34 and 35) throws into engagement a clutch 115 on the shaft so that a gear 116 thereon transmits motion to the stamp supplying cylinder. This cylinder, referring more particularly to Figs. 1 and 12, is mounted at the forward end of the machine in transverse position with respect to the belt, fast upon a shaft 117 which is journaled at one end of the standard 8 and at the other end in another standard 118. The cylinder proper is designated by reference numeral 119 and comprises end disks 120, 121 having central bearings for the shaft

117, and a cylindrical shell 122 secured thereto, one of the said end disks, as 121, having its periphery toothed as at 123 to be engaged by the said gear 116 and receive rotation. This cylinder 119 is designed to carry upon its surface a sheet of postage stamps such as is obtainable at any post-office, said sheet lying upon the cylinder with its gummed surface outward, the long sides of the individual stamps extending longitudinally of the cylinder, and their bottom edges toward the belt 2, in order that the stamps be put onto the envelopes right side up. The cylinder is to supply or feed the stamps one by one to the envelopes as they go through the machine.

Longitudinal clips 180 (see Fig. 15) are provided upon the cylinder 119 to retain the edges of the sheet of stamps, and said cylinder also carries holding bands 124 and a feeding ring 125 to otherwise secure the sheet. Said feeding ring 125 is farthest from the belt 2, and has a body portion 126 encircling the cylinder 119 and an inner radial arm 127 projecting through a longitudinal slot 128 in the bottom of the cylinder which therefore permits sliding of the ring 125, the end of said slot 128 serving as a stop to keep the ring away from the gear 123. Said arm is apertured at its end to receive the axial shaft 117 of the cylinder, and also near the circumferential body of the ring to receive a rod 129 extending longitudinally of the cylinder and mounted in its end pieces 120, 121. These bearings prevent rotation of the ring on the cylinder, and give it an even sliding movement thereon. At its side next the belt 2, the said ring has a thin sheet metal extension 130 fitting the cylinder and a stepped end 131 which allows sufficient space between it and the drum to accommodate the sheet of stamps. Between said ring 125 and the end of the cylinder next to the belt 2 are a plurality of holding bands 124, each of which surrounds the cylinder and has an inner radial arm 118 lying in the slot 128 of the cylinder and apertured to have bearings upon both the rod 129 and the shaft 117, like the end ring described. These bands are adapted to be slid anywhere on the cylinder that they are needed to confine a sheet of stamps, and are provided with inner radial projections 134 to engage the sheet at intervals, the extension of the end ring being recessed or slotted as at 135 to receive such projections and thus permit the bands to be all picked up by the end ring as it approaches the end of the cylinder next to the belt 2. Preferably, each band 124 has a friction spring 132 seated in a socket and confined by a screw plug 132, to bear against the rod and prevent undue freedom in sliding. At the bottom of the end ring 125 is a shoe 136 which straddles a fixed bracket or track 137 beneath the cyl-

under 119 and has flanges 138 which loosely embrace the T-rim 139 of the end ring, whereby said end ring is free to turn but must move longitudinally with the said shoe to feed the sheet of stamps endwise of the cylinder when one circumferential row is used up and bring the next row into position. Between the halves of the said bracket is a vertically slidable bar 149 normally held upward by springs 140, and having in its upper edge notches 141 to receive a tooth 142 on the shoe, said notches being spaced to correspond to the width of the circumferential rows of stamps or length of an individual stamp. By momentarily depressing the bar, the end ring is allowed to be drawn one notch forward by cords 143 extending over pulleys 144, 144 to a drum with tension springs 145, as will be understood.

The depressing means comprises a lever 146 fulcrumed as at 147 on a stud 148, one end of said lever being pivoted to the middle of said bar 149 and the other end adapted to be pushed upward by a cam 150 on a sleeve 151 of the shaft 7, which carries the belt roller 4. (See Figs. 9 and 29.) For convenience, the end of said lever 146 is bifurcated as shown in Figs. 29 and 31, and carries a cross piece upon which a friction roller 156 is mounted to engage the cam 150. Said sleeve carrying the cam 150, generally stands still or idle upon the shaft 7, but is provided with a clutch member 152 to engage a cooperating member 153 on the shaft itself and which shaft continually turns, as will be remembered. It is desired to engage the said clutch members and thus operate the cam and feed the sheet of stamps longitudinally of the cylinder, as soon as one circumferential row of stamps has been used up or fed to the envelops by the rotation of the cylinder. Therefore, a cam 154 is arranged upon the outside of the end disks 121 of the cylinder 119 at such a point that when the cylinder has turned far enough to completely discharge a circumferential row of stamps, its continued turning engages said cam 154 with the upper end of a forked lever 155, fulcrumed on the bracket 137 astraddle of the same and engaging at its lower end the sleeve 151 in the usual manner to slide its clutch member 152 thereon into engagement with the driving clutch member 153. In this connection, it should be noted that the sheet of stamps does not reach clear around the cylinder, but a considerable gap occurs between the clips 180, 180, (see Fig. 15). Time is thus given for shifting the sheet lengthwise of the cylinder, before the newly placed circumferential row begins to be fed out.

Contiguous to the end of the cylinder 119 next the belt 2, and in fact overlying said belt to be in alinement with that part of an

envelop thereon where the stamp should be affixed, (see Fig. 1), is a cylindrical platen head 160, of equal diameter with the cylinder and preferably wide enough for the circumferential row of stamps being fed, to lie wholly thereon. This platen head 160 does not rotate, but is held in fixed position by a sleeve 161, on the shaft 7 bolted to the standard 8, and connected to the closed outer end 162 of the platen head 160, its end next the cylinder being open (see Fig. 12). Overlapping the surface of said platen head 160 and projecting from its outer end inward, are segmental shields 163 (see Figs. 27 and 28), which normally lie at a little distance away from said platen surface and parallel thereto, so as to provide a slide way or space between for the stamps. Each shield 163 is hinged to the end edge of the platen head 160, as by means of a plate 164, and has an arm 165 projecting endwise from the platen head 160, so that they can all be raised or opened outwardly away from the platen head surface, as shown in dotted lines in Fig. 28, to allow the placing of a new sheet of stamps on the cylinder with facility. For securing greater convenience by enabling all the said shields to be opened and closed together, I have provided the means shown more in detail in Figs. 27 and 28, where 166 indicates a segmental disk rotatably mounted on the sleeve 161, and having eccentric slots 167, each of which receives a pin 168 on a connecting strip 169 extending radially outward to one of the segmental shields 163. Preferably, the said connecting strips 169 are guided by studs 170 on the head 160 of the platen entering longitudinal slots 172 in the strips, and of course the outer ends of the strips must be pivoted to the arms, as at 173. By this construction, the segmental shields can be all manipulated together by simply twisting or turning the disk 166 by hand. The segmental disk 166 also preferably has a slot receiving a fixed stud 176 on the platen head, to provide limits to its rotary movement.

When the cylinder is in position as shown in the drawings, and the end row of stamps is lying on the platen, rotation of the cylinder as described feeds the stamps rearwardly downward, or in the direction shown by the arrow in Fig. 27, and as the row of stamps leaves the platen surface at 177, it passes between feed rollers 178, 179. The inner one 178, of these rollers is mounted on a stud 174 projecting horizontally from the platen head 160 and within said platen, while the rearward or outer feed roller 179 is fast upon a shaft 181 journaled at one end in a lower rear edge extension 182 of the end guard 87 of the cylinder, (see Fig. 33), and at its other end in an extension 183 of the platen head, (see Fig. 27). This platen

head extension 183 is slotted as at 206, in a direction away from the other roller 178 to form the bearing for the shaft end, and said shaft end is normally pushed forward by a spring 188 to hold the rollers in feeding engagement with a row of stamps. This shaft is driven by a gear 184 meshing with the end gear 123 of the cylinder (see Fig. 35). To provide for separating said rollers to permit the insertion of a new sheet of stamps, or to bring a new row of stamps into position, and to do the same automatically, an arm 185 is provided upon a lower forward shaft 186 which arm reaches up and against the shaft 181 to push it backward against the power of the spring 188 (see Figs. 33 and 34). The said shaft 186 carrying said arm 185 is journaled in posts 189, 189 on the bed plate, and at its end farthest from the belt 2 said shaft has a fixed arm 190 which overlies the shaft 7. A cam 191 upon the sleeve 151 on said shaft 7, adapted to engage said arm 190, then rocks the shaft 186 at suitable intervals to deflect the roller shaft 181 and disengage said roller 179.

As the sheet of stamps passes beyond the rollers 178, 179, it slides under a guide 192 attached to the platen head, the main portion of the sheet being on the cylinder, turning therewith and still connected to the row. At the end of this guide is a small roller 193 mounted in brackets 211 on the platen 160. This roller 193 is idle unless the original actuating shaft 85 is raised by the trip as has been described, when said shaft presses an intermediate roller 195 mounted in a bracket 196, hinged as at 197 to the platen and forced downward by a spring 198, against the roller 193 on the opposite side of the stamps therefrom. Said rollers 193 and 195 then feed the stamps on downward to the moistening means, and at the same time a circular knife 200 on the end of the upper roller 193 nearest the cylinder cuts the row of stamps loose and free from the sheet.

The moistening means comprise a small bath 201 which is somewhat triangular in end view, being arranged transversely of the belt 2 with its low edge forward, as shown in Fig. 27. This bath 201 is supported at one end by a post 202 on the bed plate, and at its other end by the hanger strap 194 which reaches down into the bath and is apertured as at 203 to receive a lug 204 on the bottom of the bath (see detail Figs. 39, 40 and 41). A moistening roller 205 is then journaled at one end in the top of said lug 204 and in the aperture 203 of the hanger strap, while the other end finds a bearing on the wall of the bath 201. Said roller 205 projects peripherally from the bath, as shown, and to rotate the same it carries in the bath a gear 207 which meshes with a higher pinion 208 on a short shaft 209 extending through the hanger strap and having on its opposite end

a pinion 210 which receives motion through an intermediate pinion 213 from a pinion 212 on the shaft of the feed roller 193. The arrangement of pinions 208 and 210 on opposite sides of the hanger strap 194 prevents the transmission of water from the bath to prematurely moisten stamps farther back than the end one desired to be moistened for immediate application. In thus passing over the moistening roller 205, the forward edge of the stamp engages the envelop and is caught by the roller 82 before its rear edge has reached the moistening roller 205. Then as the feeding rollers 193 and 195, cease feeding the row of stamps forward, a knife 215 mounted upon the rear edge of the bath, in just right position, severs the end stamp from the row as it is still drawn forward by the roller 82 and belt 2, the next succeeding stamp being held tight between the feed rollers 178, 179. To secure a drawing cut, the said knife edge is preferably slanted as shown in detail in Fig. 42.

For supplying the bath 201 with water, a tube 216 leads thereto from the faucet 217 of a reservoir 218, and this faucet is automatically operated by connection with the auxiliary shaft 113 before described. This shaft, as shown in detail in Fig. 37, carries a sleeve 219 adapted to engage and slide longitudinally an adjacent sleeve member 220 on a longitudinally aligned but separate shaft 105. Said shaft portion 105 preferably has a reduced end 300 entering a recess in the end of the shaft 113, as shown in dotted lines, and at the other end of the said shaft portion 105, outside its bearing in the post 226, is a spring friction washer 230, which insures that the sleeve member 220 will be operated before said shaft portion begins to turn, it being understood that the beveled projections 301 on the sleeve 219 never entirely leave their correspondingly shaped recesses in the sleeve member 220. The second sleeve 220 has an annular groove 222 receiving the fork of a lever 223 fulcrumed as at 224 on a bracket 225 fast to one of the posts 226, 226, in which the shaft is journaled. The upper end of said lever 223 is pivoted to the end of a horizontally disposed and longitudinally movable connecting rod 227, slotted as at 228 to receive a supporting pin on which it slides, and this rod in turn is secured by a slot and pin connection to the arm 229 of the said faucet 217 of the reservoir to open the same, a coiled spring 303 normally holding said faucet closed. A pin 304 projecting into a transverse slot of the sleeve 219, and a pin 305 projecting into a longitudinal slot of the sleeve member 220, serve to limit the movement of said parts and prevent their displacement.

In operation of the above parts, the pin 304 on the shaft 113, as the latter turns, en-

gages the forward end of its slot in the sleeve 219 and turns said sleeve; this causes the beveled projections 301 on the said sleeve 219 to bear against the correspond-
 5 ingly beveled walls of their recesses in the sleeve 220 and consequently slide said sleeve as far as its pin 305 will permit. Obviously, this sliding of the sleeve member 220 swings the lever 223, causing it to shift the rod 227
 10 longitudinally and turn the faucet. It will be understood that as soon as the sleeve member 220 has made its longitudinal movement, it remains in its new position and turns with the other sleeve member 219 be-
 15 cause the projections 301 do not entirely leave their recesses, and the spring 230 does not prevent turning when sufficient power is applied. When the shaft 113 stops turning, the spring 303 of the faucet closes the same, throwing the rod 207 and lever 223 back to
 20 their original positions, and thus sliding the sleeve member 220 back toward the member 219, which causes the beveled projections 301 to entirely enter the recesses, the transverse
 25 slot in the sleeve member 219 for the pin 304 permitting the slight reverse turning of said sleeve member 219 which is necessary for this purpose.

The cylinder shown 119 is adapted to re-
 30 ceive sheets of stamps having ten in each circumferential row, and as before stated these rows do not reach entirely around the cylinder, but there is an unoccupied space of two stamp widths. The cylinder is ro-
 35 tated enough to feed each successive stamp in a row, by the means already described, a spring detent 231 engaging spaced notches 270 on the end of the cylinder farthest from the belt 2 to accurately determine the points
 40 of stopping of said cylinder 119 between successive stamps. (See Figs. 30 and 32). When the last stamp in a row has been discharged or fed out, it is necessary to turn the cylinder along the two vacant spaces
 45 in order to be ready to begin on the first end of the next row of stamps as another envelop comes along. To automatically accomplish this, the means next described is employed.

50 Upon the sleeve 151 of the constantly rotating shaft 7, and adjacent to the standard 8 farthest from the belt 2 as shown in the drawings, is arranged a cam 232, (see Figs. 9 and 33), which is adapted to engage the
 55 lower end of an upright lever 233 fulcrumed as at 234 and having its upper end slotted as at 235, to receive a pin 236 of a yoke 237 hung loosely on the cylinder shaft 117. This yoke straddles the edge of a disk 238 fast
 60 on the cylinder shaft, and having a notch 239 to receive a spring pawl 240 on the yoke 237. Thus as the yoke 237 is oscillated by the lever 233, it carries with it on its forward motion the disk 238 and therefore the
 65 shaft 117 and cylinder thereon, and then

returns to initial position, as by a spring or equivalent means. The movement thus imparted to the cylinder is regulated so as to cover just the two vacant spaces and bring the first end of the next row of stamps into
 70 proper position for feeding.

The envelop conveying belt 2 is preferably provided with a longitudinal series of holes 199 along its middle and which engage pin-
 75 tles on the driving roller 4, whereby said belt is more positively driven.

Having thus described the invention, what I claim as new is:

1. In an envelop sealing and stamping machine, the combination with an endless con-
 80 veying belt and means for driving the same, of envelop supplying means, flap sealing means and stamp supplying and affixing means arranged along said belt in a series and operated thereby.

2. In an envelop sealing and stamping machine, the combination with end rollers 3, 4 and lower intermediate roller 64, a belt ex-
 85 tending around said rollers, and means for driving one of said rollers, of envelop sup- 90 plying means, flap sealing means and stamp supplying and affixing means arranged along said belt in a series and adapted to be operated thereby.

3. In an envelop stamping machine, the
 95 combination with a conveyer belt, of stamping means adapted to be actuated by an envelop on said conveyer, means for operating said stamping means from said conveyer belt, and means for driving the conveyer
 100 belt.

4. In an envelop sealing and stamping machine, the combination of an endless conveyer, envelop feeding mechanism and stamp
 105 supplying mechanism arranged adjacent to said conveyer, trip means upon said conveyer adapted to actuate both said mechanisms, and a common driving means.

5. The combination with a conveyer belt, stamp feeding means and stamp moistening
 110 means, of a water reservoir, a faucet for said reservoir leading to said stamp moistening means, means normally holding said faucet closed, and means adapted to be operated by the conveyer belt to open said faucet, said
 115 stamp feeding means and faucet opening means adapted to be actuated by an envelop on the conveyer belt.

6. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a
 120 sheet of stamps consisting of a plurality of rows, means for sliding said sheet endwise of the cylinder to project one row of stamps therebeyond, and means for rotating the cylinder to feed said row circumferentially and
 125 bring successive stamps into a given delivery position while yet a part of the sheet.

7. The combination with the envelop conveyer belt, of an envelop hopper adjacent to
 130 said belt, a gate for said hopper, releasing

mechanism, and trip means on said belt adapted to operate said releasing mechanism.

8. The combination of an envelop hopper
5 having an apertured bottom, a conveyer belt adjacent to said hopper and adapted to engage an envelop through the bottom thereof, mechanism for releasing from the hopper an envelop so engaged, and trip means on said
10 belt adapted to operate said releasing mechanism.

9. The combination of an envelop hopper downwardly open at its forward end, a conveyer belt forming the bottom of said hopper at its said forward end, a gate at the
15 front end of the hopper, and trip means on said belt adapted to operate said gate.

10. The combination of an envelop hopper downwardly open at its forward end
20 and having a ledge at one side of its bottom, a conveyer belt forming the bottom of said hopper at the side away from said ledge, a gate at the front end of the hopper, and trip means on said belt adapted to operate
25 said gate.

11. The combination of an envelop hopper open at the forward end of its bottom and having a ledge at the rear end of said bottom, a conveyer belt closing the open
30 portion of the bottom of said hopper, a gate at the front end of the hopper, and trip means on said belt adapted to operate said gate.

12. The combination of a hopper open at
35 the forward end of its bottom, a conveyer belt beneath said open end and adapted to engage an envelop in the hopper, a gate on the front end of the hopper, an operating lever connected to said gate and having a
40 lateral projection, and trip means on said belt adapted to engage said projection.

13. The combination of a hopper open at the forward end of its bottom, a conveyer belt beneath said hopper and adapted to engage an envelop therein, a gate on the front
45 end of the hopper, an operating lever connected to said gate and fulcrumed on the side of the hopper and having a slotted end, a stud adjustably mounted in said slot, and
50 trip means on said belt adapted to engage said stud.

14. The combination of a hopper open at the forward end of its bottom, a conveyer belt beneath said hopper and adapted to engage an envelop therein, a gate mounted on the forward end of the hopper to slide vertically, springs normally holding said gate closed, a rock shaft adapted to move said gate against the power of said springs, a
60 lever fulcrumed on said hopper having one end connected to said rock shaft and the other end provided with a projecting stud, and trip means on the said conveyer belt adapted to engage said stud.

65 15. The combination of a hopper open at

the forward end of its bottom, a conveyer belt beneath said hopper and adapted to engage an envelop therein, a gate arranged on the front end of the hopper to slide vertically, a friction roller mounted on the
70 lower edge of said gate, an operating lever connected to said gate, and trip means on the conveyer belt adapted to actuate said lever.

16. The combination of a hopper open at the forward end of its bottom, a conveyer
75 belt beneath said hopper and adapted to engage an envelop therein, a gate mounted on the outside of the forward end of said hopper and normally engaging the belt, fingers upon the inner wall of said forward end of the hopper and extending downward adjacent to said belt, at their free ends, an operating lever connected to said gate, and trip
80 means on the belt adapted to actuate said lever.

17. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a sheet of stamps consisting of a plurality of rows, means for sliding said sheet endwise of the cylinder to project one row
90 of stamps therebeyond, means for rotating the cylinder to feed said row circumferentially and bring successive stamps into a given delivery position while yet a part of the sheet, and means for severing individual
95 stamps in said position from the sheet and row.

18. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a sheet of stamps consisting of a plurality of rows, means for sliding said sheet endwise of the cylinder to project one row of stamps therebeyond, means for rotating the cylinder to feed said row circumferentially and bring successive stamps into a
105 given delivery position while yet a part of the sheet, and means for severing individual stamps in said position from the sheet and row and feeding them away from said sheet and row independently thereof.

19. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a sheet consisting of a plurality of rows of stamps and a plurality of stamps in each row, means for sliding said sheet endwise of the cylinder to project one row of stamps therebeyond, means for partially
115 severing said projecting row, means for bringing the individual stamps of said row successively into a given position for moistening and detaching, and means for moistening and detaching each stamp after it reaches said position.

20. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a sheet of stamps consisting of a plurality of rows, means for rotating said cylinder continuously in one direction, means for partially severing a circumferential row of stamps, means for diverting the free end
125 of stamps, means for diverting the free end

85

110

120

125

130

of said partially severed rows into a different course than that taken by the rest of the sheet, and means for severing and feeding individual stamps from said free end.

21. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, rollers between which an envelop passes, a transversely disposed moistening roller at the end of said rollers, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

22. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, rollers between which an envelop passes, a transversely disposed moistening roller at the end of said rollers, means for opening and for closing the flap of the envelop, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

23. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, horizontal rollers between which an envelop passes, an upright conical moistening roller at the end of one of said feed rollers, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

24. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, upper and lower feed rollers between which an envelop passes, the lower roller being hollow at one end, a moistening roller located in transverse position partly within the open end of said lower feed roller, means for turning said rollers, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

25. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, upper and lower feed rollers between which an envelop passes the lower roller being hollow at one end, a tank extending into the open end of said roller, a moistening roller arranged transversely of said hollow and partly within the said tank, means for turning said rollers, and stamp supply and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

26. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, upper and lower feed rollers between which an envelop passes, the lower roller being hollow at one end, a tank extending into the open end of said roller, a moistening roller arranged in said tank transversely of the feed roller, a paddle wheel in said tank, means for rotating said rollers and paddle wheel, and stamp supplying and affixing mechanism in conjunction with said

envelop conveying belt at the discharge side of said rollers.

27. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, upper and lower feed rollers between which an envelop passes, the lower roller being hollow at one end, a tank extending into the open end of said roller, a moistening roller arranged in said tank transversely of the feed roller, a bottom roller 64, a belt extending around said rollers, means transmitting motion from said bottom roller to the moistening roller, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

28. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, upper and lower feed rollers between which an envelop passes, the lower roller being hollow at one end, a tank extending into the open end of said roller, a moistening roller arranged in said tank transversely of the feed roller, a paddle wheel in said tank, a bottom roller 64, a belt extending over said rollers, means adapted to transmit motion from said bottom roller to said moistening roller and to said paddle wheel, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

29. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, means for exposing the flap of said envelop, a tank having a tubular sheath projecting upward from its bottom, a hollow conical moistening roller over said sheath and adapted to engage an exposed envelop flap, a shaft extending from said moistening roller through said sheath, means for driving said shaft, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

30. In an envelop sealing and stamping machine, the combination of an envelop conveying belt, the bed plate 1, standard 10 thereon, upper feed roller 54 mounted on said stud, a hollow roller having a hub mounted in said standard, a shaft extending through said roller, a paddle wheel on said shaft within the roller, a tank supported from said shaft, a moistening roller in said tank, means for rotating said shaft and moistening roller, and stamp supplying and affixing mechanism in conjunction with said envelop conveying belt at the discharge side of said rollers.

31. The combination with an envelop conveyer belt, of stamp-supplying mechanism, stamp moistening means, and pressing rollers, all adapted to be operated by said conveyer belt, and means dependent upon an envelop upon the conveyer belt for actuat-

ing said stamp supplying mechanism and moistening means.

32. The combination with an envelop conveying belt, of stamp supplying mechanism adapted to be driven by said conveyer belt, and a trip upon the conveyer belt adapted to actuate said stamp supplying mechanism when an envelop passes on the conveyer belt.

33. The combination with an envelop conveying belt, of stamp supplying mechanism, means for driving said mechanism, a clutch adapted to connect said mechanism and power means, and means upon the conveyer belt adapted to throw said clutch into engagement.

34. The combination with an envelop conveying belt, of stamp supplying mechanism and power means, a clutch adapted to connect said mechanism and power means, a shaft adapted to operate said clutch and projecting over the conveyer belt, and means on said belt for engaging said shaft.

35. The combination with an envelop conveying belt, of stamp supplying mechanism and power means, a clutch adapted to connect said mechanism and power means, a shaft adapted to operate said clutch projecting over the conveyer belt and adapted to be engaged by an envelop on said belt, and trip means on the belt for engaging said shaft.

36. The combination with an envelop conveying belt, of stamp supplying mechanism, power means, a clutch adapted to connect said mechanism and power means, a shaft adapted to operate said clutch projecting over the conveyer belt and adapted to be engaged by an envelop on said belt, and a trip on the belt having opposite faces one or the other of which engages the said shaft according to its position as determined by the presence or absence of an envelop on the conveyer belt.

37. The combination with an envelop conveying belt, and stamp supplying and affixing means having a shaft projecting over said conveyer belt, of a trip box fixed on said belt and providing a slide way transverse to said belt, and a trip movable in said slide way and having opposite faces adapted to engage said shaft.

38. The combination with an envelop conveying belt, and stamp supplying and affixing means having a shaft projecting over said conveyer belt, of a trip-box fixed on said belt and providing a slide way transverse to said belt, a trip movable in said slide way having a narrow forward edge and opposite faces diverging therefrom each adapted to engage the said shaft, and spring means holding said trip in normal position.

39. The combination with an envelop conveying belt, and stamp supplying and affixing means having a shaft projecting over said conveyer belt and provided near its

extremity with an annular shoulder, of a trip-box fixed on said belt and providing a slide way transverse to the belt, and a trip movable in said slide way having a lower face adapted to engage said shaft and an upper face also adapted to engage the shaft and cam surfaces adapted to engage the annular shoulder of the shaft end when the latter is engaged by said upper face of the trip.

40. The combination with an envelop conveying belt, and stamp supplying and affixing means having a shaft projecting over said conveyer belt and provided near its extremity with an annular shoulder, of a trip-box fixed on said belt and providing a slide way transverse to the belt, and a trip movable in said slide way having a lower face adapted to engage said shaft and an upper channel to receive the same, the edges of said channel forming cam surfaces adapted to engage the said annular shoulder of the shaft.

41. The combination with an envelop conveying belt, stamp supplying and affixing means, and an operating shaft projecting from said stamp supplying and affixing means over the said conveying belt and being provided at its extremity with a central needle point, of a trip-box fixed on said belt, a trip slidable in said box in a direction transverse to the belt, said trip having a sharp forward edge and faces oppositely diverging therefrom adapted to engage the said needle point and other similar faces adapted to engage the shaft end, and spring means holding said trip in normal position.

42. The combination of a standard or frame, a belt roller mounted therein, a conveyer belt passing over said roller, stamp supplying and affixing means having a shaft projecting over said conveyer belt, trip means on said belt adapted to engage said shaft end, and an extension of said standard or frame forming a rigid backing for the said trip means.

43. The combination with an envelop conveying belt, of stamp supplying means comprising a cylinder adapted to carry a sheet of stamps, a platen in endwise alignment with said cylinder, means for moving said cylinder to feed the stamps, means for detaching single stamps successively from the sheet, and moistening means.

44. The combination with an envelop conveying belt, of means for supporting a sheet of stamps and bringing the individual stamps thereof successively into affixing position while yet integral with the sheet, means for detaching each stamp from the sheet as it is brought into said position, and means for moistening each stamp.

45. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a sheet of stamps consisting of a

plurality of rows, means for rotating said cylinder continuously in one direction, means for partially severing a circumferential row of stamps, means for leading the free end of said row of stamps to an envelop, means for moistening the end stamp before it reaches the envelop, and means for detaching and affixing the stamp.

46. In a stamp feeding mechanism, the combination of a cylinder adapted to receive a sheet of stamps consisting of a plurality of rows, means for rotating said cylinder continuously in one direction, means for partially severing a circumferential row of stamps, means for leading the free end of said row of stamps to an envelop, means for moistening the end stamp before it reaches the envelop, means for affixing the forward end of said stamp to the envelop, and means for subsequently detaching it from the sheet.

47. The stamp feeding mechanism herein described, comprising a cylinder adapted to receive a sheet of stamps on its surface, means for holding said sheet, means for sliding said sheet longitudinally of the cylinder, and means for rotating said cylinder.

48. In a stamp feeding mechanism, the combination of a rotary cylinder adapted to receive on its surface a sheet of stamps, a stationary platen at one end of said cylinder, means on said platen for holding one edge of the sheet of stamps, means on the cylinder for holding the other edge of the sheet of stamps and sliding said sheet longitudinally of the cylinder, and means for turning said cylinder.

49. In a stamp feeding mechanism, the combination of a cylinder adapted to receive on its surface a sheet of stamps, an end ring on said cylinder adapted to engage one edge of the sheet, means for rotating said cylinder, and means for sliding said end ring longitudinally of the cylinder and adapted to be operated by the rotation of said cylinder.

50. In a stamp feeding mechanism, the combination with a cylinder adapted to receive a sheet of stamps, of an end-ring on said cylinder having an extension adapted to engage the edge of the sheet of stamps, bands on said cylinder adapted to be telescoped upon said extension of the end-ring, means for preventing the rotation of said end-ring and bands on said cylinder, and means for rotating the cylinder and for sliding said end-ring longitudinally of the cylinder.

51. In a stamp feeding mechanism, the combination with a cylinder adapted to receive a sheet of stamps and being longitudinally slotted, an end-ring on said cylinder having a radial extension projecting inwardly through said slot, a shaft for said cylinder extending through said radial projection, means for rotating said cylinder on

said shaft, and means for sliding said end-ring longitudinally of the shaft.

52. In a stamp feeding mechanism, the combination of a cylinder longitudinally slotted at one side and adapted to receive a sheet of stamps, bands surrounding said cylinder and having radial projections extending inwardly through the slot of the cylinder, means for rotating said cylinder, and means for sliding a sheet of stamps thereon longitudinally of the cylinder.

53. In a stamp feeding mechanism, the combination with a cylinder adapted to receive a sheet of stamps, of a cylindrical platen in axial alinement with said cylinder, segmental shields adapted to hold the stamps on said platen, means for opening and closing said shields, and means for turning the cylinder.

54. In a stamp feeding mechanism, the combination of a rotary cylinder adapted to receive a sheet of stamps, a stationary cylindrical platen in axial alinement with said cylinder, segmental shields hinged to said platen, sliding rods connected to said shields and radially disposed upon the platen head, and a rotary plate upon said platen head adapted to operate said rods simultaneously.

55. In a stamp feeding mechanism, the combination of a rotary cylinder adapted to receive a sheet of stamps, an end ring surrounding said cylinder and adapted to engage the edge of a sheet of stamps, a shoe adapted to slide longitudinally of the cylinder and engaging said end ring, an escapement bar having notches to engage said shoe, means operated by said cylinder to depress said bar, means for rotating the cylinder and means for sliding said shoe longitudinally.

56. In a stamp feeding mechanism, the combination of a rotary cylinder adapted to receive a sheet of stamps, a cam on the end of said cylinder, a rotary shaft having a clutch member, a sleeve on said shaft having a cooperating clutch member, a lever operated by said cam on the cylinder to throw said clutch into engagement, a rotary cam on said sleeve, and means for feeding the sheet of stamps adapted to be operated by said cams.

57. In a stamp feeding mechanism, the combination of a rotary cylinder adapted to receive a sheet of stamps and having a cam surface at its end, a rotary shaft having a clutch member, a sleeve on said shaft having a cooperating clutch member, a lever operated by said cylinder cam surface to throw said clutch into engagement, an end-ring on the cylinder tending to force the sheet of stamps longitudinally, escapement means for allowing a step by step movement of said end-ring, a cam on said sleeve adapted to operate said escapement, and means for rotating said cylinder and shaft.

58. In a stamp feeding mechanism, the

combination of a rotary cylinder adapted to receive a sheet of stamps and having a cam surface at its end, a rotary shaft having a clutch member, a sleeve on said shaft having
 5 a coöperating clutch member, a lever operated by said cylinder cam surface to throw said clutch into engagement, feed rollers mounted upon shafts one movable with respect to the other, means operated by said
 10 sleeve for displacing said movable shaft, and a spring for returning said shaft to normal position.

59. In a stamp feeding mechanism, the combination of a rotary cylinder adapted to
 15 receive a sheet of stamps and having a cam surface at its end, a rotary shaft having a clutch member, a sleeve on said shaft having a coöperating clutch member, a lever operated by said cylinder cam surface to
 20 throw said clutch into engagement, feed rollers mounted upon shafts one movable toward and away from the other, a spring holding the movable shaft in normal position, a rock shaft having an arm engaging said movable
 25 shaft, and a second arm projecting toward said sleeve, and a cam on said sleeve adapted to engage said second arm.

60. The combination with an envelop conveyer belt, of a stamp sheet cylinder, longitudinal clips on said cylinder adapted to receive between themselves a sheet of stamps,
 30 means actuated by said belt for rotating said cylinder for that portion of a circumference between the stamp holding portions of said clips, and independent means operated by
 35 said cylinder for rotating it through the remaining portion of its circumference.

61. The combination with an envelop conveyer belt, of a stamp-sheet cylinder, longitudinal clips on said cylinder adapted to receive between themselves a sheet of stamps,
 40 means actuated by said belt for rotating said cylinder for that portion of its circumference between the stamp holding portions of said clips, and independent means operated
 45 by said cylinder for rotating it through the remaining portion of its circumference and for shifting the sheet of stamps longitudinally of the cylinder.

62. The combination with an envelop conveyer belt, of a stamp-sheet cylinder, longitudinal clips on said cylinder adapted to receive between themselves a sheet of stamps,
 50 means actuated by said belt for rotating said cylinder for that portion of its circumference between the stamp holding portions of said clips, feed rollers receiving one end row of the stamps in said sheet, and independent
 55 means operated by said cylinder for turning it through the remaining portion of its circumference, for separating said feed rollers, and for shifting the sheet of stamps longitudinally of the cylinder.

63. The combination with an envelop conveyer belt, of a stamp-sheet cylinder, means

actuated by said belt for rotating said cylinder through a portion of its circumference, a rotary shaft having a clutch member, a sleeve on said shaft having a coöperating
 70 clutch member, means operated by said cylinder for throwing said clutch into engagement, a cam on said sleeve, a disk fast on the cylinder shaft, a yoke loose on said shaft and having a pawl-tooth adapted to engage
 75 said disk, and a lever connected at one end to said yoke and adapted at its other end to engage the said cam on the sleeve.

64. The combination with the stamp-sheet cylinder and platen, of a water bath suspended from said platen, a moistening roller
 80 in said bath and lying in the path of the endmost row of stamps, stamp detaching means adjacent to said bath, means for operating said moistening roller and stamp detaching means, and an envelop conveying
 85 belt adapted to actuate said operating means.

65. The combination with the envelop conveying belt the stamp-sheet cylinder and platen, of a water bath suspended from said platen, moistening roller in said bath, a
 90 feed roller in stationary bearings adjacent to said bath, gearing adapted to transmit motion from said feed roller to said moistening roller, a coöperating feed roller arranged in hinged bearings, and a movable
 95 shaft in engagement with said last mentioned feed roller and the conveyer belt.

66. The combination with a stamp-sheet cylinder and platen, of a water bath suspended from said platen, a moistening roller
 100 in said bath, a guide adjacent to said bath, a rotary knife shearing against said guide, a fixed knife on the water bath, and means for feeding the stamps over said moistening roller and actuating said rotary parts.
 105

67. The combination of the conveyer belt, roller 82 engaging the same, stamp feeding rollers adapted to grip between themselves
 110 a strip of stamps, a water bath between said roller 82 and feed rollers, a knife on said water bath disposed transversely of the strip of stamps, means for rotating said feed rollers during the passage of an envelop on said
 115 conveyer belt only, and means for driving the conveyer belt continuously.

68. The combination with a conveyer belt, stamp feeding means, and stamp moistening means, of a water reservoir, a faucet for
 120 said reservoir leading to said stamp moistening means, means normally holding said faucet closed, and means adapted to be operated by the conveyer belt to open said faucet.

69. The combination with the conveyer belt and individual stamp moistening means,
 125 of a water reservoir, a faucet for said reservoir, a spring normally holding said faucet closed, a shaft rotated by said conveyer belt, a separate shaft portion in alinement with said shaft, a sleeve on said shaft having
 130

beveled projections, a second sleeve on the adjacent shaft portion having corresponding recesses and capable of a limited longitudinal movement, a forked lever engaged by the second sleeve, and a connecting rod extending from said lever to the said faucet.

70. The combination with an envelop conveying belt, of stamp supplying mechanism, means for driving said mechanism, a make-and-break device connecting said

mechanism and power means, a trip on the conveyer belt, and means adapted to be moved by an envelop on the conveying belt into engagement with said trip to make connection between the stamp supplying mechanism and power means.

FREDERICK O. MADSEN.

In the presence of—

RUSSELL M. EVERETT,

ETHEL B. RIED.