

May 22, 1956

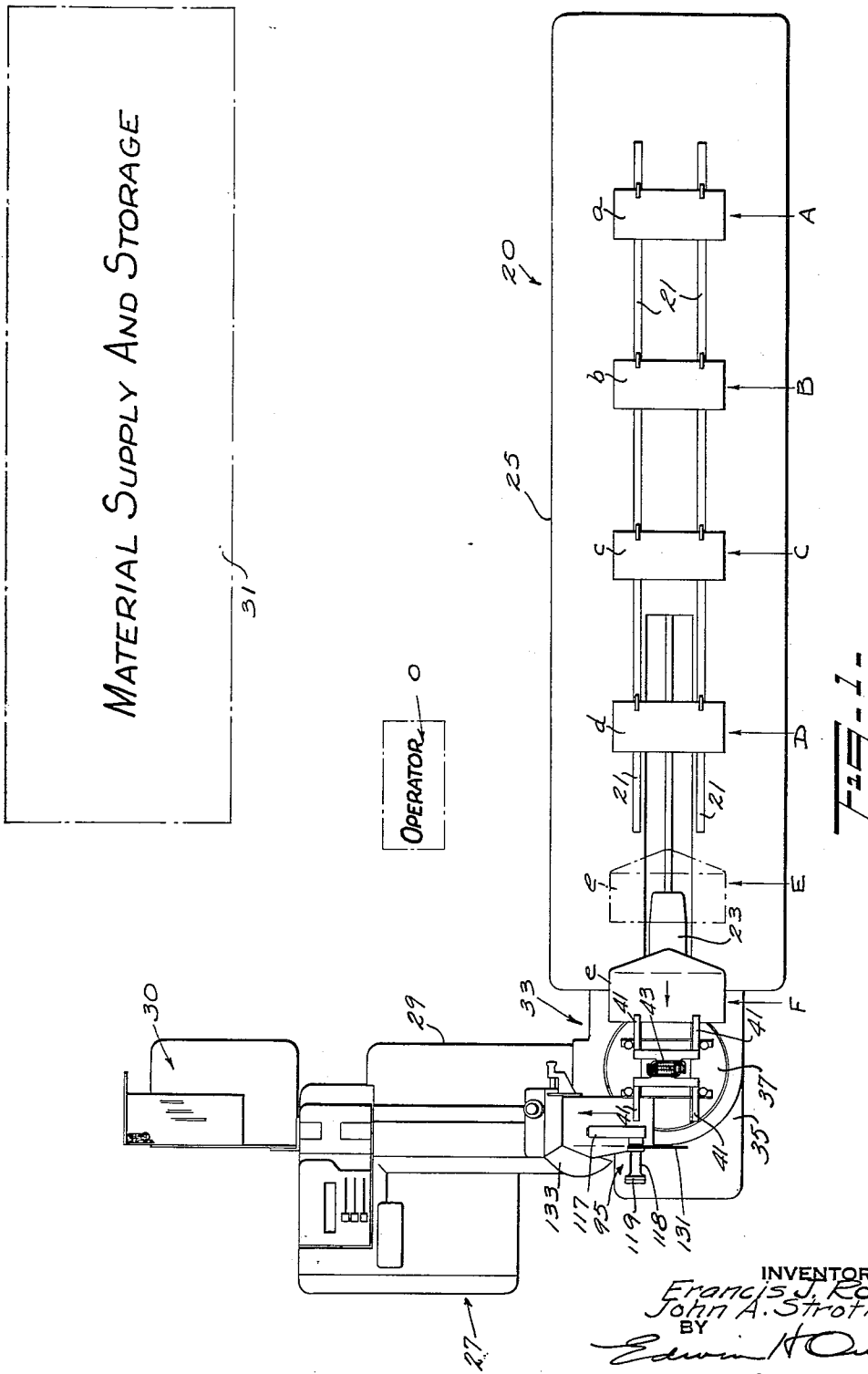
F. J. ROUAN ET AL

2,746,221

ENVELOPE TRANSFER MECHANISM

Filed Dec. 26, 1951

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ENVELOPE TRANSFER MECHANISM

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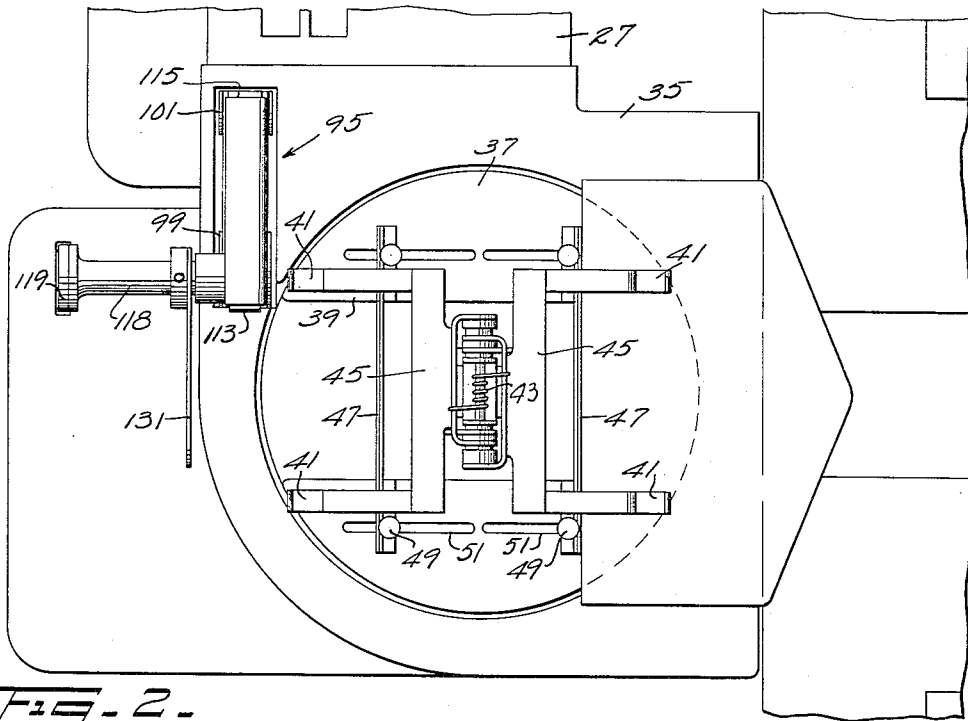


FIG. 2.

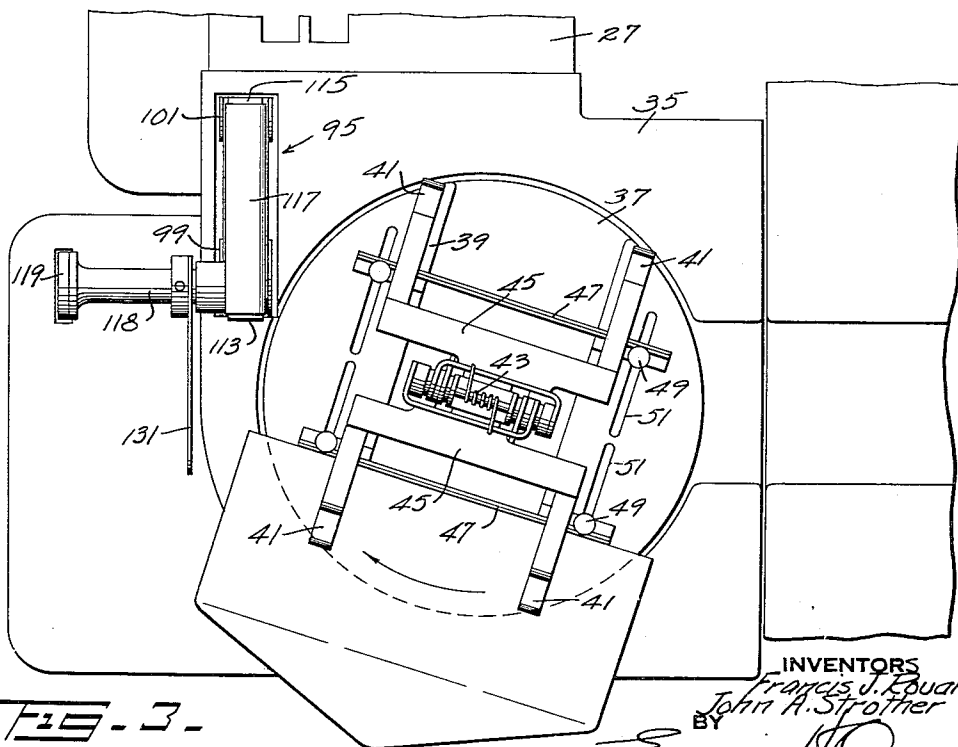


FIG. 3.

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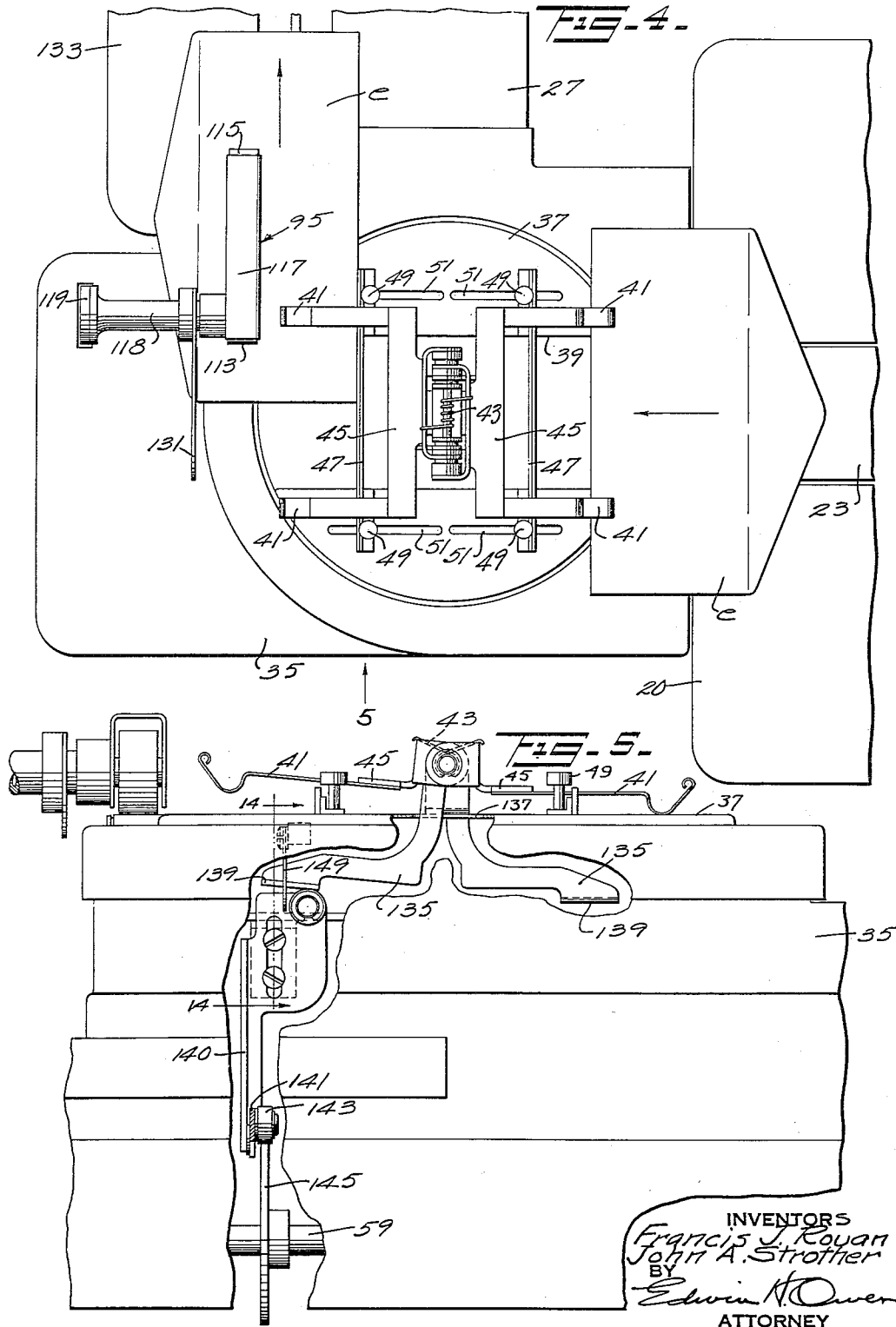
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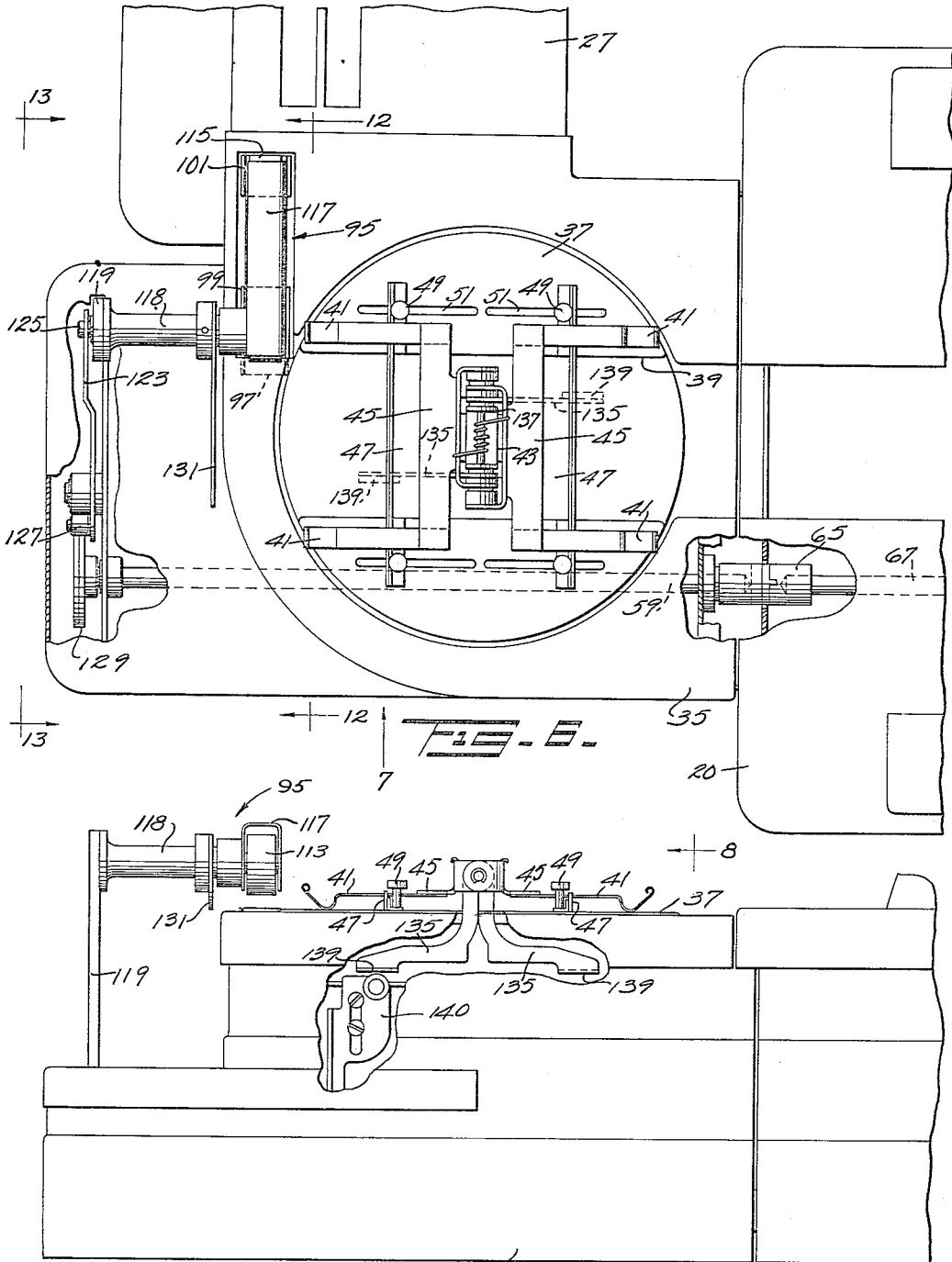


FIG. 7.

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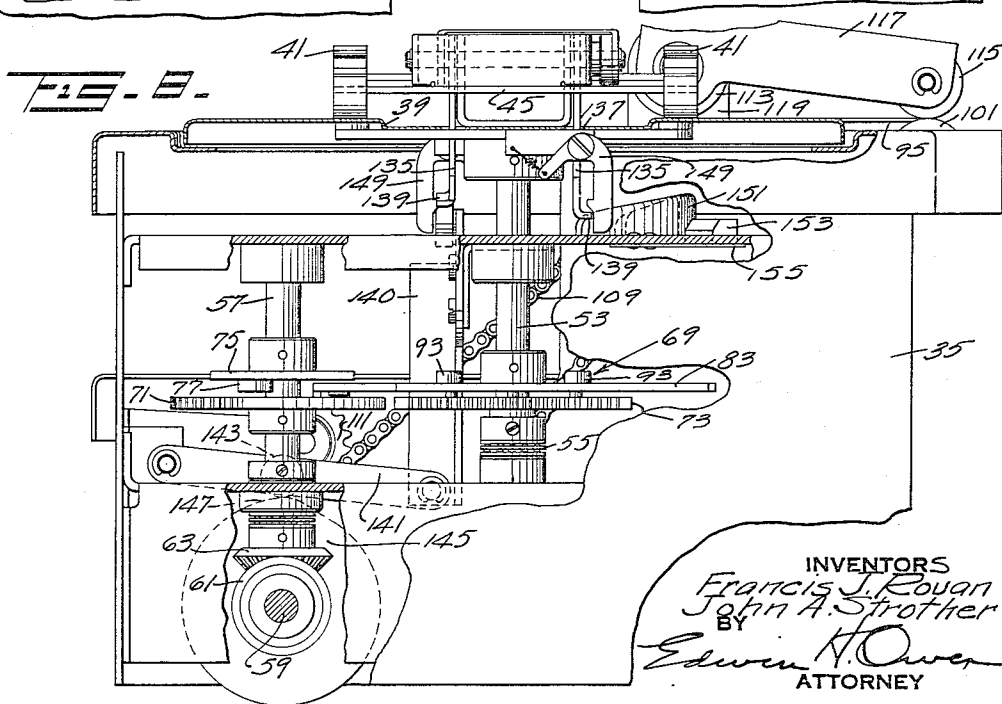
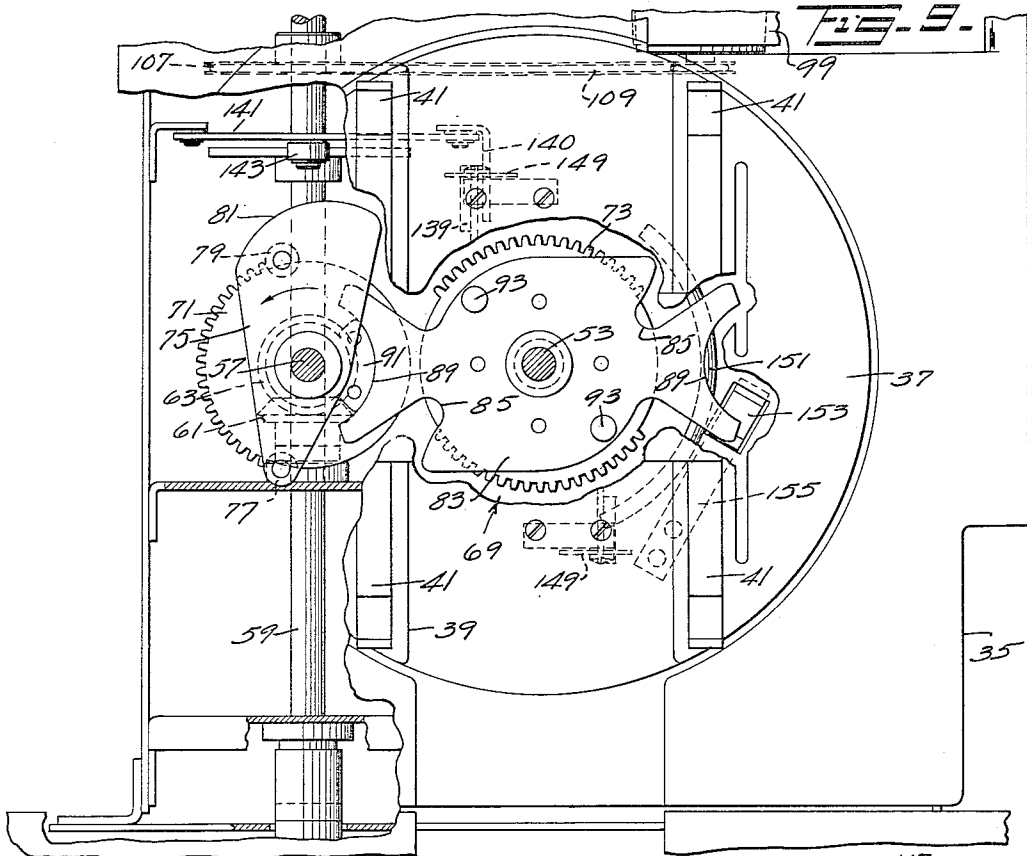
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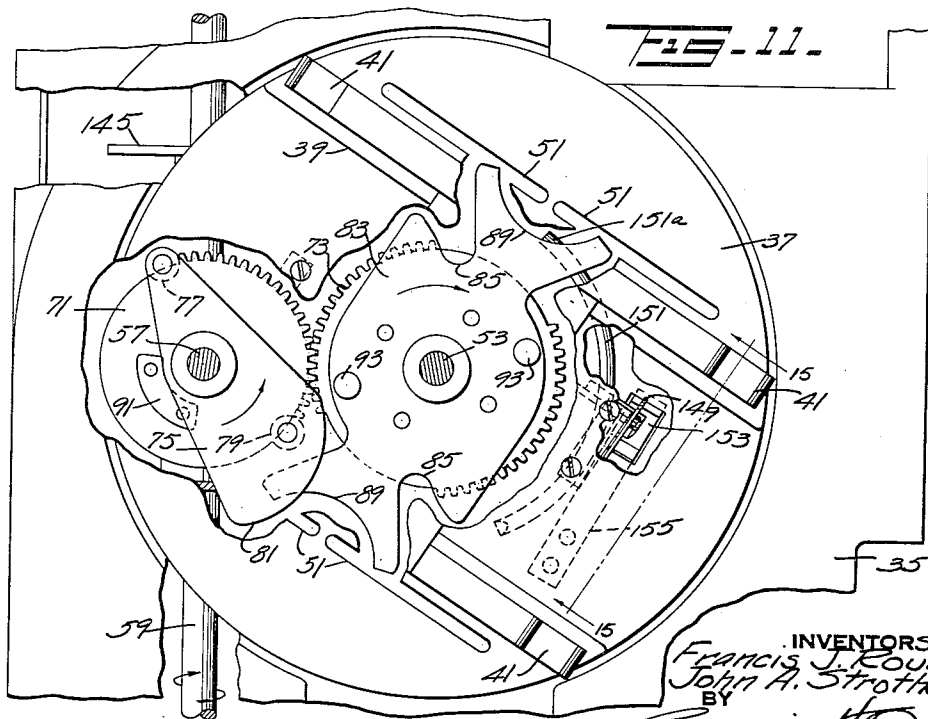
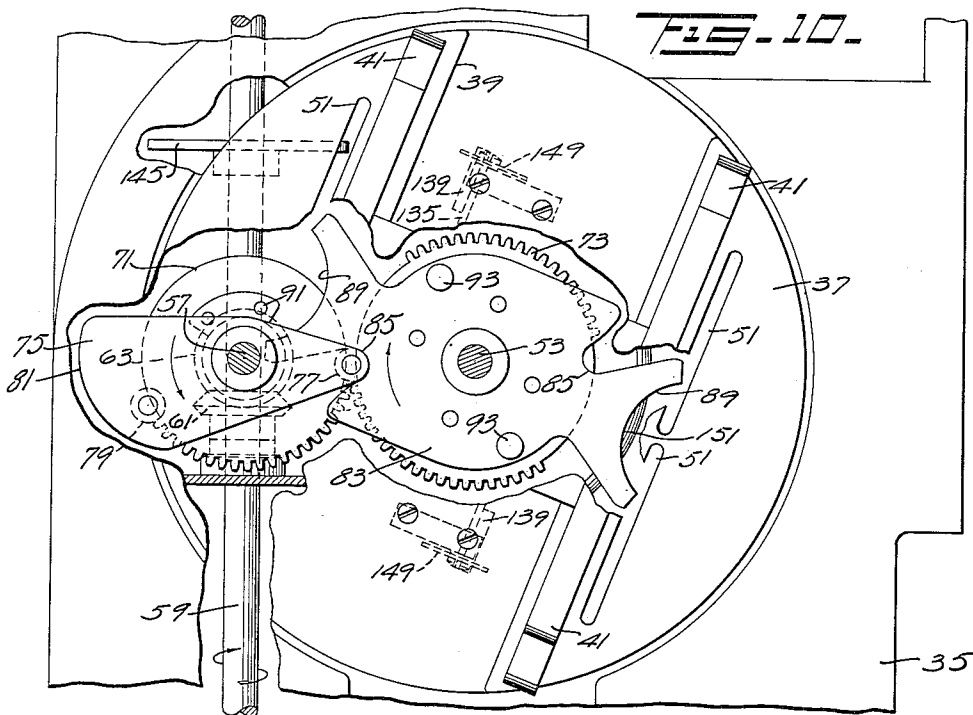
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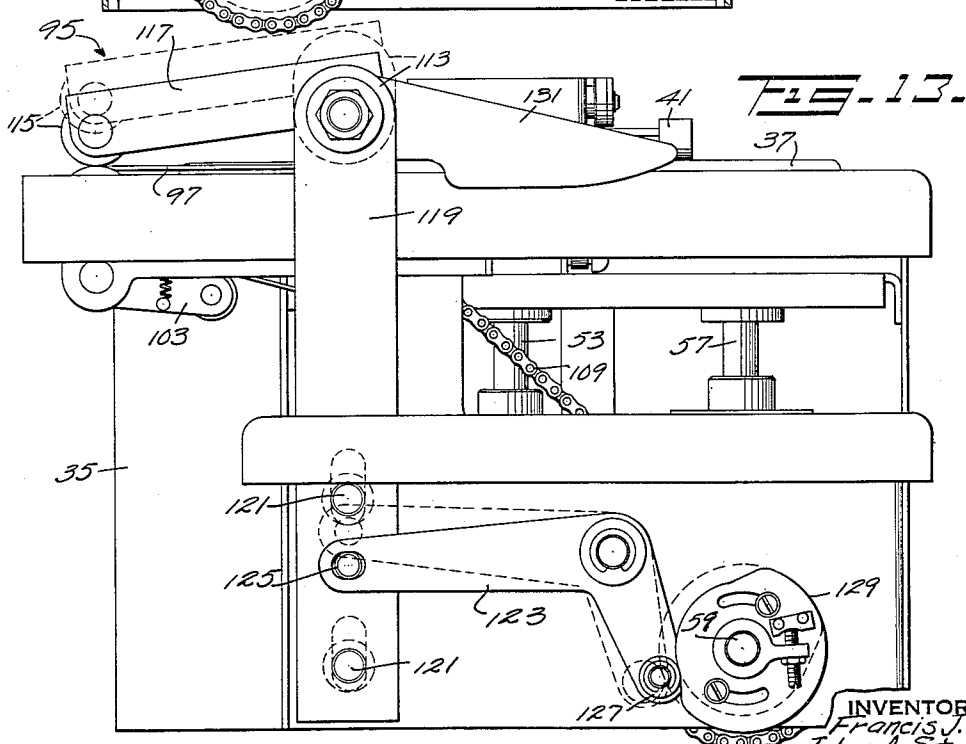
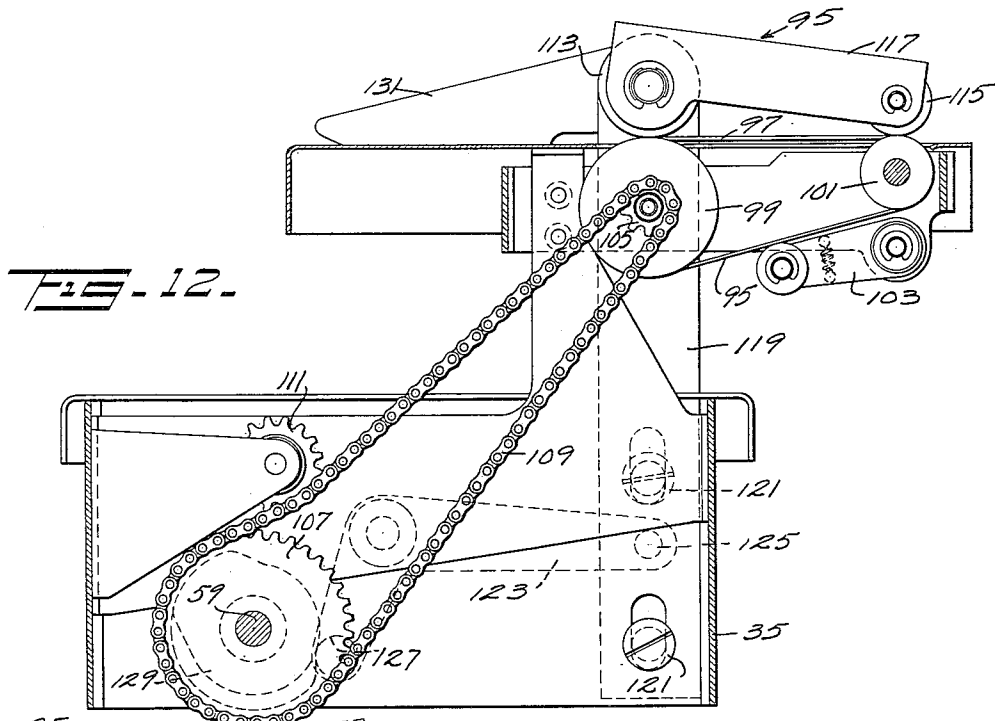
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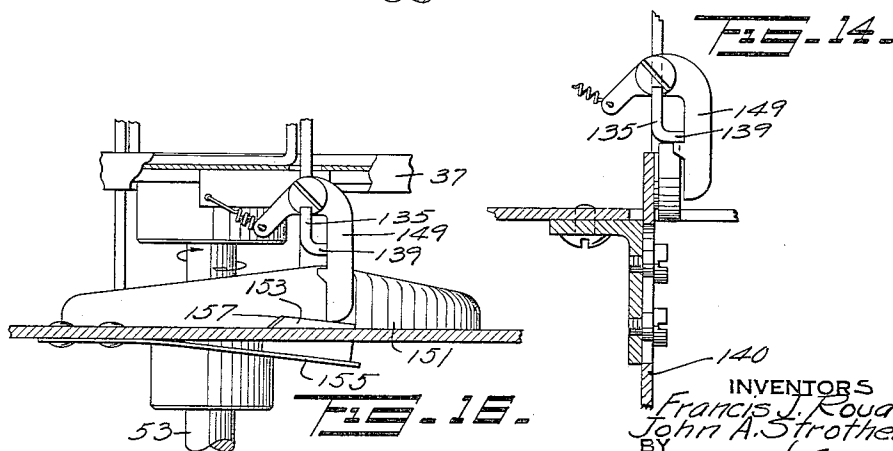
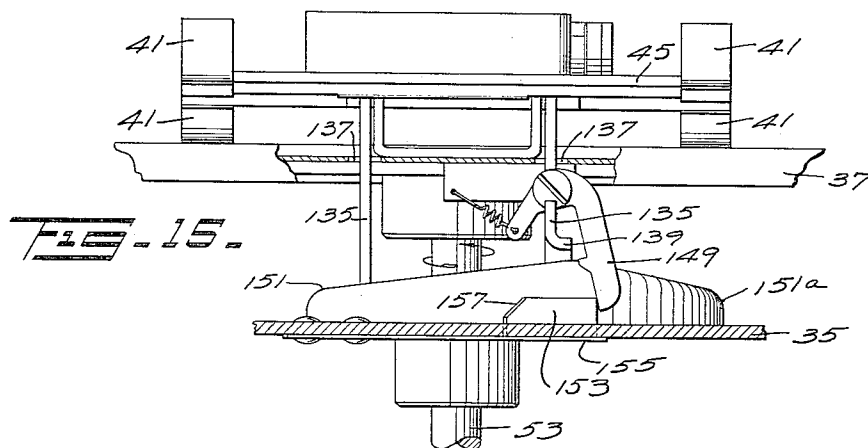
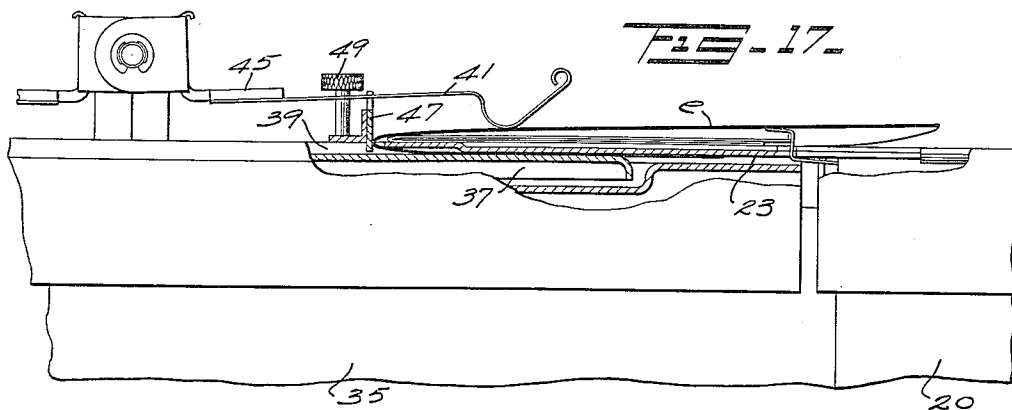
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ENVELOPE TRANSFER MECHANISM

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Application December 26, 1951, Serial No. 263,384

16 Claims. (Cl. 53—31)

This invention relates to mail handling, and particularly to the transfer of loaded envelopes from a device which fills the same, to an envelope processing device, e. g. one which closes, seals and stamps them.

In an application for patent entitled Envelope Stuffing Machine, Serial No. 164,182, filed May 24, 1950, there is disclosed a machine for inserting mailing matter in an envelope, which machine is illustrative of the type of device with which the present invention is found particularly useful.

An envelope stuffing machine of the type disclosed in the aforementioned application is coupled most conveniently to a conventional sealing and postage printing machine when their feed paths are approximately at right angles. Under these circumstances the arrangement is such that, in order that the tending of the machines is to be most convenient, the envelope must be reversed in its own plane after discharge from the stuffing machine, that is, turned through 180°, to thus be in proper position in passing from one machine to the other.

The present invention, therefore, has for its object the transfer of filled envelopes from a stuffing machine to a processing machine such as a sealing and postage printing machine, and particularly the reception and withdrawal of filled envelopes from a stuffing machine of the type disclosed in the aforementioned application, the angular displacement of such envelopes to the proper new position, and the delivery thereof to another machine.

According to the preferred embodiment of the present invention this transfer is carried out by means of an intermittently swinging rotating turntable which swings through a fixed angle at each movement. A filled envelope is received radially at one side of the table while another which has already been rotated 180° is discharged tangentially at the opposite side.

It is a feature of the invention that means is provided to initiate closing of the envelope flap in consonance with the discharge thereof from the transfer mechanism.

Another feature of the invention is the provision of means for securely clamping the envelopes during rotation to prevent accidental disarrangement or discharge of their contents, and the provision of means for releasing the clamps to facilitate envelope discharge.

Another feature of the invention is the provision of adjustable structure which permits the device to handle envelopes of different sizes and which aids in guiding the envelope during discharge.

Another feature of the invention is a separate discharge feeder for withdrawing the envelopes from the turntable and thrusting them into the grasp of the sealing and printing machine feed.

Still another feature of the invention is the provision of an opening and closing movement for the discharge feeder to permit high speed insertion of envelopes by the turntable without danger of damaging the work.

A further feature of the invention is the construction of the operating parts in a manner such that retrograde

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movement thereof is permitted if the same should be necessary to clear a jam.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that various changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

A preferred embodiment of the invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a plan of the floor layout showing the relative positions of the stuffing machine, the sealing and postage printing machine, and the transfer device;

Fig. 2 is a top plan of the transfer device to a larger scale illustrating the same in envelope receiving position, and with the first envelope in place on the turntable;

Fig. 3 is a view similar to Fig. 2, but with the turntable rotated through a part of its movement;

Fig. 4 is a view similar to Fig. 2, showing the position of the turntable after completion of its movement with the first envelope being discharged from the turntable and a second being received;

Fig. 5 is a side elevation, to a still larger scale, of the device of Fig. 4 taken in the direction of the arrow 5 on Fig. 4, with the envelopes omitted, and part of the casing broken away to show the operating mechanism;

Fig. 6 is a view similar to Fig. 4, but with the envelopes omitted and with parts broken away to show the operating mechanism;

Fig. 7 is a side elevation of the transfer device taken in the direction of the arrow 7 on Fig. 6 but to a smaller scale, and with the parts in the position occupied just an instant prior to that shown in Fig. 5;

Fig. 8 is a section to an enlarged scale taken substantially on line 8—8 of Fig. 7, but with the turntable in diametric section, with additional parts broken away to show the operating mechanism, and with the penetration stops removed;

Fig. 9 is a top plan of the device of Fig. 8 projected from Fig. 8 and hence positioned at right angles to the showing in Figs. 2 to 4 and 6, parts being broken away to show the operating mechanism, and the parts being shown in the Fig. 8 position;

Fig. 10 is a view similar to Fig. 9, but with the parts in a position corresponding to the initiation of turntable movement;

Fig. 11 is a view similar to Figs. 9 and 10, but with the parts in a position which they would occupy near the end of the turntable movement;

Fig. 12 is a section taken substantially on line 12—12 of Fig. 6, but to a larger scale;

Fig. 13 is an end elevation of the transfer device taken on line 13—13 of Fig. 6, but to a larger scale;

Fig. 14 is a detail section taken on line 14—14 of Fig. 5, but to a larger scale;

Fig. 15 is a detail section taken on line 15—15 of Fig. 11, but to a larger scale and illustrating the action of the parts during normal operation;

Fig. 16 is a detail section similar to the lower portion of Fig. 15, but illustrating the action of the parts in the event of abnormal reverse rotation; and

Fig. 17 is a detail elevation, partially in section, similar to the right hand portion of Fig. 7 and drawn to a larger scale, but illustrating the placing of a filled envelope on the turntable by the ram of the stuffing machine.

Referring to the drawings, and especially to Fig. 1, the invention relates to mail handling and involves an envelope stuffing machine 20 of the type illustrated and described in said copending application. The machine

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includes four stations A, B, C and D at which various insertion materials *a*, *b*, *c* and *d* are stacked, and a station E which handles a stack of envelopes *e* with their flaps opened. Collating belts 21 carry means for picking up one piece of the insertion material at each of the stations A, B, C and D. A reciprocating ram 23 takes the assembled pieces of material at station D and moves same away from the belts 21 into the open mouth of a waiting envelope *e* at station E. The envelope *e* with contents is then projected further to a discharge station F whereupon the ram is withdrawn.

As the machine 20 is normally constructed, the operator's side of the machine is at 25, since it is found easier in practice to load the hoppers associated with the stations A to E by a person standing at side 25, for instance, at position O, especially if he is right handed. Accordingly the primary controls, adjustments and indicators have been located at the side 25 of the machine 20.

In order to provide a completely automatic operation from envelope stuffing to the completed sealing and stamping of same, it is desirable to provide automatic transfer from the discharge of the stuffing machine 20 to the feed of a conventional envelope sealing and postage printing machine, such as that indicated at 27. Since machines of this character normally feed envelopes lengthwise from left to right when viewed from the operator's side 29, it will be seen that the axis of each envelope as it emerges from the stuffing machine is properly disposed to be moved directly into the feed path of the sealing and printing machine, if the latter feed path is disposed at right angles to the feed path of the stuffing machine. However, it happens that the envelope flaps must be directed away from the operator's side 29 of the machine 27 for the envelopes to be properly sealed and stamped, and hence direct transfer from one feed path to the other could take place only if the machine 27 were extended away from the machine 20 in the direction opposite to that shown in Fig. 1. Since this would be exceedingly inconvenient, involving the loading, unloading and tending of the machines 20 and 27 by movements around an outside corner, it is an arrangement to be avoided if possible.

In order to dispose the machines most favorably, as shown in Fig. 1, the feed paths should be at right angles with the operator's sides of both machines toward the inside of the angle formed by their feed paths. This permits a single operator at O to tend both machines handily by taking supplies from a table, such as 31, to load the hoppers of the stuffing machine 25, and also to unload the discharge station 30 of the sealing and printing machine 27 periodically. The completed letters may also conveniently be stored on a portion of the table 31.

To achieve the foregoing arrangement of machines it is necessary to displace the filled envelopes in a manner which will now be described. From Figs. 1 and 4 it can be seen that the path of envelope movement is in clockwise direction and that the position of the flap, which is initially trailing as compared to its path of travel, will be in a reversed position as the envelope moves endwise through the sealing and postage printing machine. This result is achieved by providing a turntable which swings the envelope on its own plane through an arc of 180° of clockwise rotation, between the time the envelope is accepted from one path and delivered to the other. This transfer operation is accomplished by a novel transfer mechanism indicated generally by reference character 33 in Fig. 1 and now to be described in detail by reference to the other figures of the drawing.

The transfer mechanism includes a shelf or frame 35 designed to connect with the ends of the machines 20 and 27, and on the upper surface thereof is a rotatable turntable 37. The upper surface of the turntable 37 includes a slight depression 39 extending diametrically across the same and positioned to line up with the ram 23 of the stuffing machine.

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Mounted for swinging movement towards and away from the turntable surface are fingers 41 which, combined with the surface of the turntable, form envelope holding clamps. A spring 43 urges the fingers 41 in pairs towards the upper surface of the turntable 37. Preferably the fingers 41 are parallel, extend parallel to the depression 39, and are integrally connected in pairs by crossbars 45. The spring mounting is placed at the central portion of the turntable, and one pair of fingers extends in one direction—the other pair in the opposite direction, each of the pairs being individually operable.

Each set of fingers is provided with a cooperative penetration stop and edge guide 47 which is slidably mounted on the turntable 37 by means of clamping screws 49 received in turntable slots 51. The adjustable stops 47 serve to adjust the machine for different widths of envelopes as will hereinafter appear.

The turntable 37 is mounted at the upper end of a vertical shaft 53, which shaft is suitably mounted for rotation on the frame 35 by means including a thrust bearing 55 (Fig. 8). Another vertical shaft 57 is parallel to shaft 53 and is driven from a main horizontal driving and timing shaft 59 by means of bevel gears 61, 63. As seen in Fig. 6, the shaft 59 may be driven by a suitable connector 65 from a power and timing shaft 67 of the stuffing machine 20. The connection between vertical shafts 57 and 53 is provided by an intermittent gear and geneva movement generally indicated at 69 (Figs. 8 and 9) which causes a one-half rotation of the shaft 53 for each rotation of shaft 57, and a momentary dwell between each half rotation.

The gear and geneva movement comprises a mutilated gear 71 on shaft 57 arranged to mesh at times with the mutilated gear 73 on turntable shaft 53. The drive element 75 of the geneva pair carries a drive pin 77 and a decelerating pin 79, and has a driving surface 81 at one edge. The driven element 83 of the geneva pair is shaped to provide driving notches 85, and concave dwell edges 89 for engagement with a choke member 91 mounted on the upper surface of the gear 71. The upper surface of the driven geneva element 83 also carries two drive pins 93 for engagement with the surface 81.

As will be seen from Figs. 9, 10 and 11, the drive element 75 rotates counterclockwise and the drive pin 77 moves into the notch 85, whereupon the geneva element 83 starts to rotate in a clockwise direction. When the pin 77 engages the bottom of the notch 85 and advances the element 83 slightly, as seen in Fig. 10, the teeth of gear 71 start to mesh with one of the segments on gear 73 and the shaft 53 rotates at a speed proportional to that of the shaft 57. Fig. 11 illustrates a position in which the end of the gear segments on the gears 71 and 73 is being approached. As the gear segments disengage, the deceleration pin 79 comes into engagement with the edge of the driven geneva element 83 while the edge 81 of driving element 75 continues to drive said driven element at a decreasing rate by its contact with pin 93. Finally, as the driven geneva element 83 comes to rest, the choke member 91 engages in the rest concavity 89 and holds the shaft 53 stationary for a portion of a revolution of the shaft 57. With the parts shaped and proportioned as shown, shaft 57 will have about 90° of rotation while the shaft 53 is motionless, and the remaining 270° of each rotation of shaft 57 will provide a one-half rotation of shaft 53 or a complete 180° reversal of the turntable 37.

The invention also provides means for taking an envelope from the turntable and transferring it lengthwise to the inlet of the sealing and printing machine. This means is shown in the drawing, particularly Figs. 1 to 4, 6 to 8, 12 and 13, and is indicated generally by the reference character 95. The means 95 includes a supporting feed belt 97 running over a pair of pulleys 99 and 101, and maintained at proper tension by a spring urged belt tightener 103. Means is provided for continuously driving

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the pulley 99, consisting of a sprocket 105 on the pulley shaft, a sprocket 107 on the main driving and timing shaft 59, and a chain 109 connecting the sprockets. A sprocket chain adjuster 111 is provided for keeping the chain 109 in proper running condition with the correct degree of slack. It can be seen from the ratio of sprockets 107 and 105 that the feed belt 97 is designed to travel at a high surface speed so as to withdraw the envelopes rapidly from the turntable 37, whereby the stopped period thereof can be kept as short as possible and the envelopes can be cleared rapidly from contact with the turntable. The surface speed of belt 97 is, however, somewhat less than that of the feed of machine 27.

Cooperating with the feed belt 97 is a pair of presser rolls 113 and 115 which are rotatably supported in a bracket 117 and designed to rest against the upper surface of belt 97 at the locations of the pulleys 99 and 101 respectively, so that envelopes to be transferred are gripped between the rolls 113 and 115 on one hand, and the surface of belt 97 on the other.

In order that the feed of the means 95 shall not become effective until the envelope has been properly aligned with the sealing and printing machine feed, mechanism is provided for maintaining rollers 113 and 115 up out of feeding contact with the belt 97 until the turntable 37 has substantially stopped, and for lowering the rollers 113 and 115 at the proper time. To this end the roller bracket 117 is supported, by means of a cantilever element 118, on the upper end of a slide bar 119 mounted for vertical sliding movement, as by screws 121. The bar 119 is actuated by a bell crank 123 which has at one end a pin-and-slot connection 125 with the bar 119 and at the other a roller follower 127 for engagement with an actuating cam 129 secured to the main driving and timing shaft 59. The cam 129 is shown as being an adjustable cam of two parallel leaves to provide various lengths of rise, and also adjustable so as to have its angular position about shaft 59 variable, whereby to correct for extreme changes in envelope length if necessary. As a rule, however, cam 129 is suitable for all normal envelope lengths using the settings shown in Fig. 13 of the drawing, and adjustment thereof is not usually required. It will be seen from the foregoing that each rotation of shaft 59 (which corresponds to a single reversal of the turntable 37) produces one lowering of the rollers 113, 115 to feeding position and one raising to non-feeding position.

Mounted on the cantilever arm 118 adjacent the roller bracket 117 is a guide plate 131 which is positioned so as to deflect the envelope flap downwardly and provide an initial closing movement therefor in preparation for entering the flap closing horn 133 of the sealing and printing machine 27 (Fig. 1).

To provide a smooth transfer of the envelopes *e* from the turntable 37 to the feed 95, the invention provides means for raising the fingers 41 as they reach their stopped position adjacent the feed means 95, and for lowering them again before they reach their stopped, envelope receiving position. To this end each cross bar 45 is formed with an integral depending operator or bell crank 135 which projects through a central opening 137 in the turntable 37, and then radially a substantial amount to terminate in a pad 139. When the turntable reaches its stopped position, that pad 139 which is associated with the finger 41 which project towards the feed device 95 defines a location at which is found a vertically slidable pusher 140 designed to come into contact with the pad 139 and lift the same so as to raise the corresponding fingers 41. The lower end of the pusher is connected to a link 141 which carries a follower roller 143 actuated by a cam 145 mounted on the main timing shaft 59 (see Figs. 5 and 8). A short rise portion 147 on the cam 145 (Fig. 8) lifts the pusher 140 momentarily for each revolution of the shaft 59, and thus opens the resilient clip formed by the arms 41 and the upper surface of the turntable 37. This

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opening movement is timed to occur after the turntable has stopped and preferably simultaneously with lowering movement of the presser rolls 113 and 115 of the feed 95 so as to prevent any substantial loss of control over the envelope being transferred.

It is desirable to maintain the arms 41 in raised position for some time after their opening so as to avoid any interference with a released envelope, and to lower them again before they reach a receiving position. This is accomplished according to the invention by providing a spring-pressed latch 149 adjacent the pad 139 on each operating arm 135, arranged to catch and hold the same whenever it reaches raised position (see Figs. 5 and 14). Thus the arm 135 and associated fingers 41 will remain raised even after the cam 145 lowers the pusher 140 and after the turntable 37 starts to rotate to remove the pad 139 from the area of influence of the pusher.

As the turntable 37 approaches the receiving position with one pair of arms 41 raised, means is provided for lowering them, as shown especially in Figs. 8, 9, 11 and 15. A fixed cam 151 mounted at a suitable location on the frame 35 strikes the pad 139 and raises the same slightly to free it from frictional contact with the latch 149, and then an obstruction block 153 in the path of a portion of the latch 149 engages the same and draws it back from latching position. In the meantime lower portions of the cam 151 encountered during continued rotation of the turntable 37, allow the pad 139 to lower slowly under the influence of spring 43 so that by the time latch 149 has swung far enough to be released by the block 153, the pad 139 and arm 135 are low enough to prevent relatching. Thereafter arm 135 and fingers 41 continue to lower until the latter are in contact with the surface of turntable 37.

As best seen in Fig. 15, the cam 151 also provides a long sloping approach section 151a which is not normally operative but is provided in case a latch failure should present a lowered arm 135 to the cam 151. In such a case an abrupt commencement of the cam 151 could cause severe damage to the arms 135 which possibility is hereby avoided.

While for normal operation, obstruction block 153 could be fixedly mounted on the frame 35, the resilient mounting shown in Figs. 15 and 16 e. g. using a leaf spring 155, is preferred. This permits the machine to be run in reverse direction as illustrated in Fig. 16, with the latch 149 striking a sloping face 157 of block 153 and forcing the same to one side. The clearing of a possible jam in the stuffing machine 20 is sometimes greatly facilitated by moving the machine in a reverse direction by manual power, and if reversal of the transfer mechanism 33 is permissible as shown, it facilitates the clearing operation by avoiding the necessity for disconnecting the machines 20 and 33 from one another.

In order to provide for envelopes of different widths the machine is made adjustable by means of the slidable guide and stop means 47 previously described. By reference to Figs. 1 and 2 to 4, it can be seen that the envelope, in leaving the transfer device 53, must have the flap crease always substantially on the same line to enter the machine 27 properly. This means that wider envelopes must project farther onto the turntable than narrower ones. A suitable point is marked for the flap fold at the reception side of the turntable, corresponding to the necessary radial placement at the outgoing side. This may conveniently be the junction line of the casings of machines 20 and 33 as seen in Fig. 2. With the flap crease of a sample envelope on this line the stop 47 is moved into position to contact the leading edge (i. e. the bottom crease) of the envelope, and is clamped in place by means of screws 49. The ram 23 of the stuffing machine is then adjusted to the proper length to penetrate to the bottom of the envelope, and is then secured at this length where its end will be slightly spaced from the stop 47, as can be seen in Fig. 17. The machine is

then ready for use with the particular size of envelopes for which adjustment has been made.

In operation, the belts 21 will pick one piece from each of the stacks at locations A, B, C and D and will approach the insertion point with the insertion pieces *a*, *b*, *c* and *d* in assembled relationship. The reciprocating ram 23 first retracts to pick up the assembly of insertion material and then advances to insert the assembly into an envelope *e*, thereafter carrying the filled envelope forward and placing it firmly in the grip between spring pressed fingers 41 and the upper surface of turntable 37 (Fig. 1). It will be understood that the turntable 37 is stationary during this operation by virtue of its timed interconnection with the stuffing machine 20 through the shaft 67 thereof. The fingers 41 are spaced sufficiently to permit the ram 23 top ass between them, and to clamp the envelope *e* and its contents at either side of the ram. Just after the ram 23 is withdrawn from the envelope (Fig. 2) the turntable 23 starts to rotate due to the action of the intermittent drive 69. One position during this rotation is illustrated in Figs. 3. As the turntable reaches 180° position it comes to rest, as in Fig. 7, and fingers 41 which carry the envelope *e* are raised by the action of cam 145 through pusher 140 and arms 141, to be latched in said raised positions by latch dog 149 (Fig. 5). Simultaneously presser rolls 113 and 115 are lowered against the envelope *e* and force the same against feed belt 97 and thus rapidly withdraw the envelope *e* from the turntable 37 into the feed of the sealing and postage printing machine. It will be seen from Fig. 4 that while the turntable was coming to its stopped position, the envelope flap was being partially depressed by the plate 131 in readiness to be received by the flap closing horn 133 of the machine 27, and that when motion due to the feed belt commences, the envelope will be accurately guided for lengthwise movement between the plate 131 and the guide and stop member 47.

At this same stopped position, and while the first envelope *e* is being withdrawn by the feed 95, a second loaded envelope *e* is being placed on the turntable in the grip of the second pair of fingers 41 by the ram 23 as seen in Fig. 4. The receiving and discharging operations are completed at about the same instant, whereupon the turntable 23 starts its second rotary movement of 180°. The first pair of fingers 41 remain latched upwardly until the latch 149 is released by block 153, and the fingers 41 are permitted to close gradually as controlled by the upper surface of cam 151. As the turntable 37 approaches its initial stopped position, both pairs of fingers 41 will be found to be in closed positions, and one pair (the second pair) bears an envelope *e* which is being moved into release position. All of the incidents concerned with the second envelope *e* are identical with those of the first and are accordingly not described in detail. When the stopped position is reached, the second envelope *e* is discharged as previously described and a new envelope *e* is brought up by the ram 23. Each 180° partial rotation of the turntable 37, therefore effects the transfer of one envelope from the stuffing machine 20 to the sealing and postage printing machine 27, and at each stopped position of the turntable one envelope is presented thereto, and one withdrawn therefrom. When the device continues to operate as described above a regular and reliable flow of filled envelopes from the stuffing machine 20 to the flap sealer and postage printer 27 is established.

Having thus described the invention, what is claimed is:

1. The method of transferring filled envelopes from an envelope stuffing machine having a reciprocating ram type of filling and ejecting mechanism to an envelope processing machine having a lengthwise envelope feed, which comprises gripping the filled envelope at each side of the projected ram; withdrawing the ram from the envelope; while still gripping the envelope, swinging the

same in an arc of substantially 180°; and releasing the grip on the envelope and substantially simultaneously feeding the envelope lengthwise in a line tangent to said arc and into said lengthwise envelope feed mechanism.

2. In a device of the type described an envelope closing mechanism having a lengthwise envelope feed; means for inserting material into an envelope including a reciprocating ram which enters the envelope and thrusts it forward to a projected position; means for gripping said envelope when in said projected position and for holding the envelope while said ram is withdrawn; means to shift the position of said gripping means to direct the envelope opening away from the ram; and means for causing said gripping means to release said envelope and for causing the feeding of said envelope lengthwise into said envelope closing mechanism.

3. A mailing machine comprising an envelope stuffing mechanism having means for thrusting mailing material into an envelope and for moving the latter, bottom edge foremost, into a projected position; and envelope processing mechanism having a feed for advancing the envelope lengthwise with its opening away from the thrusting means of the stuffing mechanism during feeding; means to receive an envelope at said projected position, reverse the envelope to properly place the opening with respect to the processing mechanism, and to deliver the envelope to the feed of said processing mechanism.

4. A mailing machine comprising an envelope stuffing mechanism having means for thrusting mailing material into an envelope and for moving the latter, bottom edge foremost, into a projected position; an envelope processing mechanism having a feed for advancing the envelope lengthwise with its opening away from the thrusting means of the stuffing mechanism during feeding; means to grasp the envelope at said projected position and reverse the envelope to properly place the opening with respect to the processing mechanism; and means to take the envelope from the grasping and reversing means and feed it lengthwise into the processing mechanism.

5. A mailing machine comprising an envelope stuffing mechanism having means for thrusting mailing material into an envelope and for moving the latter, bottom edge foremost, into a projected position; an envelope processing mechanism having a feed for advancing the envelope lengthwise with its opening away from the thrusting means of the stuffing mechanism during feeding; means driven in timed relation to said stuffing mechanism to grasp the envelope at said projected position, and after withdrawal of said thrusting means reverse the envelope to properly place the opening with respect to the processing mechanism; and means to take the envelope from the grasping and reversing means and feed it lengthwise into the processing mechanism.

6. A mailing machine comprising an envelope stuffing mechanism having means for thrusting mailing material into an envelope and for moving the latter, bottom edge foremost, into a projected position; and envelope processing mechanism having a feed for advancing the envelope lengthwise with its opening away from the thrusting means of the stuffing mechanism during feeding; said envelopes remaining in substantially the same horizontal plane; a turntable in said horizontal plane; a gripper thereon to receive the envelope in said projected position; means to rotate said turntable and envelope thereon to position the latter for lengthwise feeding into said processing mechanism; and means for releasing said gripper and causing the envelope to feed into said processing mechanism.

7. In an envelope transfer device a rotary turntable; spring closed envelope clamping means carried by said turntable and opening outwardly thereof; and a guide adjustable transversely of itself and inwardly and outwardly of said turntable for limiting the degree of penetration of an envelope into said clamping means.

8. For use with an envelope stuffing machine including a reciprocating envelope filling and projecting ram and a rotating timing shaft, an envelope transfer device comprising a rotary turntable; releasable envelope clamping means carried by said turntable; means for periodically and partially rotating said turntable to move said clamping means to position adjacent said ram and for maintaining the turntable stationary between said partial rotary movements; and means for operating said means from said timing shaft in such manner that the turntable is held stationary with clamping means adjacent said ram during the projection and withdrawal thereof.

9. For use with an envelope stuffing machine including a reciprocating envelope filling and projecting ram and a rotating timing shaft, an envelope transfer device comprising a rotary turntable; releasable envelope clamping means carried by said turntable; operating means for periodically and partially rotating said turntable to a position remote from the ram and for maintaining the turntable stationary between said partial rotary movements; means for driving said operating means in such manner that the turntable is held stationary with the envelope in said remote position; means for releasing the clamping means in said remote position; and feed means for withdrawing the envelope from said clamping means when released.

10. For use with an envelope stuffing machine including a reciprocating envelope filling and projecting ram, an envelope transfer device comprising a rotary turntable; two diametrically disposed releasable envelope clamping means carried by said turntable; operating means for periodically rotating said turntable to interchange the positions of said clamping means between stationary envelope receiving and delivering positions; and means for driving said operating means in such manner that the turntable is stationary with one of said clamping means in envelope receiving position adjacent said ram during the projection thereof and with the other clamping means in envelope delivering position.

11. For use with an envelope stuffing machine including a reciprocating envelope filling and projecting ram, an envelope transfer device comprising a rotary turntable; two diametrically disposed releasable envelope clamping means carried by said turntable; operating means for periodically rotating said turntable to interchange the positions of said clamping means between stationary envelope receiving and delivering positions; means for driving said operating means in such manner that the turntable is stationary with one of said clamping means in envelope receiving position adjacent said ram during the projection thereof and with the other clamping means in envelope delivering position; means for releasing the clamp in delivering position while the turntable is stationary; feed means at said delivering position open for envelope reception when said turntable is rotating; and means to close said feed means on said envelope simultaneously with the releasing of the clamping means holding the same.

12. An envelope transfer device comprising a rotary turntable; two diametrically disposed envelope clamping means carried by said turntable; means for periodically rotating said turntable to interchange the positions of said clamping means between receiving and delivering positions; means to present an envelope to one of said clamping means when in envelope-receiving position; means to withdraw an envelope from said clamping means when in envelope delivering position; and a flap contacting plate adjacent said delivering position for urging the flap of an envelope towards a closed position as the same is carried

ried thereagainst by a clamp during the rotation of said turntable.

13. An envelope transfer device comprising a rotary turntable; two diametrically disposed envelope clamping means carried by said turntable; means for periodically rotating said turntable to interchange the positions of said clamping means between receiving and delivering positions; means to present an envelope to one of said clamping means when in envelope-receiving position; means to withdraw an envelope from said clamping means when in envelope delivering position; a flap contacting plate adjacent said delivering position for urging the flap of an envelope towards a closed position as the same is carried thereagainst by a clamp during the rotation of said turntable; and penetration stop means adjacent each of said clamping means adjustable to determine the position of the envelope flap crease when held by the corresponding clamp, whereby, when the clamping means are in delivering position the flap crease will be properly positioned with respect to said flap contacting plate, and said plate and said stop means will act as opposed edge guides during withdrawal of an envelope.

14. In an envelope transfer device a rotary turntable; two oppositely directed spring closed clamping means carried by said turntable; means to cause said clamps to open when in a given angular position during turntable rotation; latch means for holding each clamp in open position; and means responsive to subsequent rotation of said turntable for releasing said latch to allow the opened clamp to close again.

15. In an envelope transfer device a rotary turntable; two oppositely directed spring closed clamping means carried by said turntable; means to cause said clamps to open when in a given angular position during turntable rotation; a swingable latch for latching and holding each clamp in open position; a stationary cam for first releasing the clamp from contact with the latch and then allowing the same to move gradually towards closing position during subsequent turntable rotation and an abutment for swinging said latch to release position and for cooperating with said cam to hold the latch inoperative while said clamp is allowed to return to closed position.

16. In an envelope transfer device a rotary turntable; two oppositely directed spring closed clamping means carried by said turntable; means to cause said clamps to open when in a given angular position during turntable rotation; a swingable latch for latching and holding each clamp in open position; a stationary cam for first releasing the clamp from contact with the latch and then allowing the same to move gradually towards closing position during subsequent turntable rotation and an abutment for swinging said latch to release position and for cooperating with said cam to hold the latch inoperative while said clamp is allowed to return to closed position, said abutment being resiliently mounted, and said abutment and latch having cooperating surface configurations such that the latch can force the abutment aside and out of its path to permit the turntable to be reversely rotated when necessary.

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