May 29, 1934. G. SAGUE 1,960,959

INSERTING AND MAILING MACHINE

Filed July 29, 1927 6 Sheets-Sheet 1

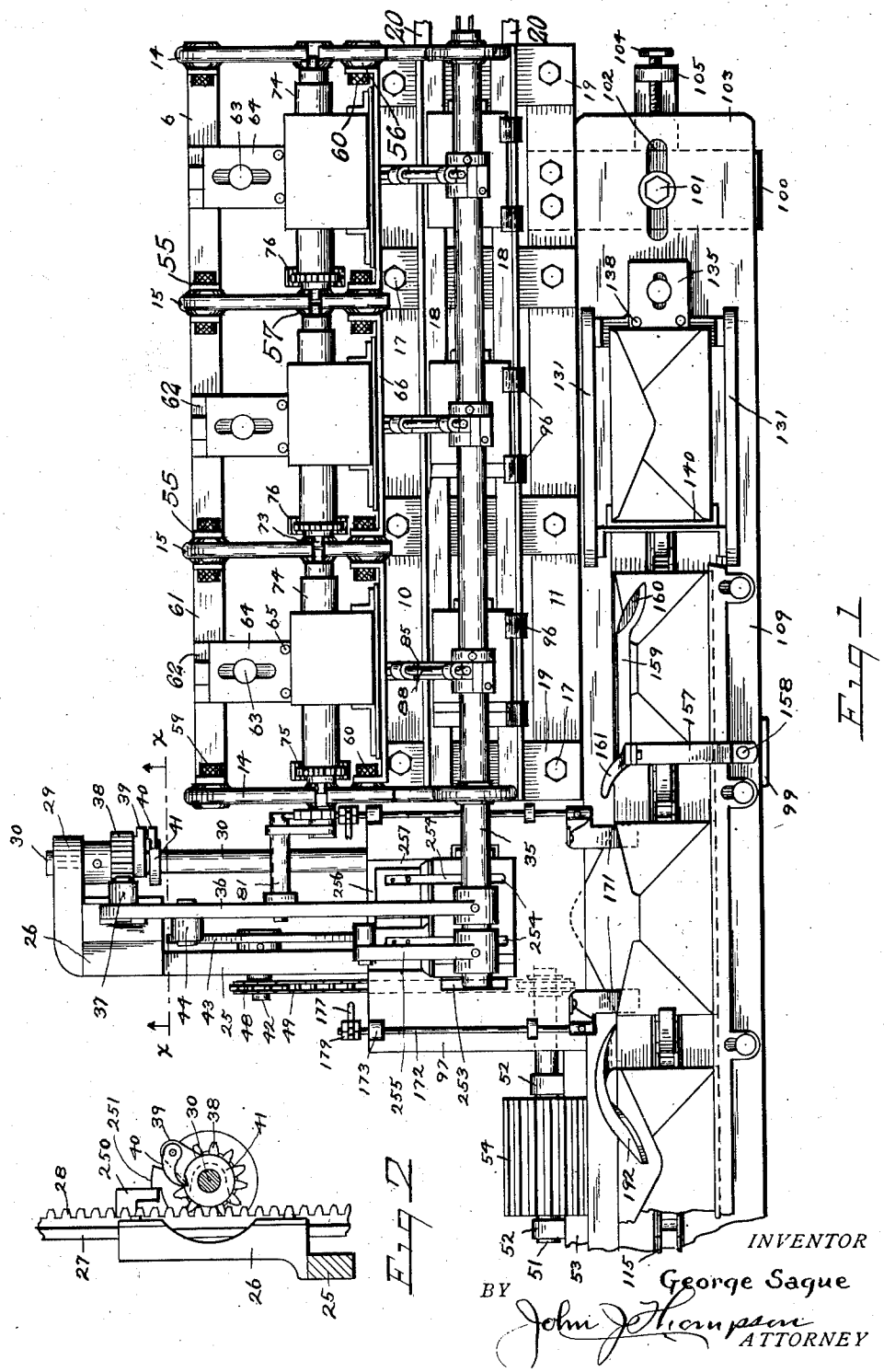

FIG 1

FIG 2

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INSERTING AND MAILING MACHINE

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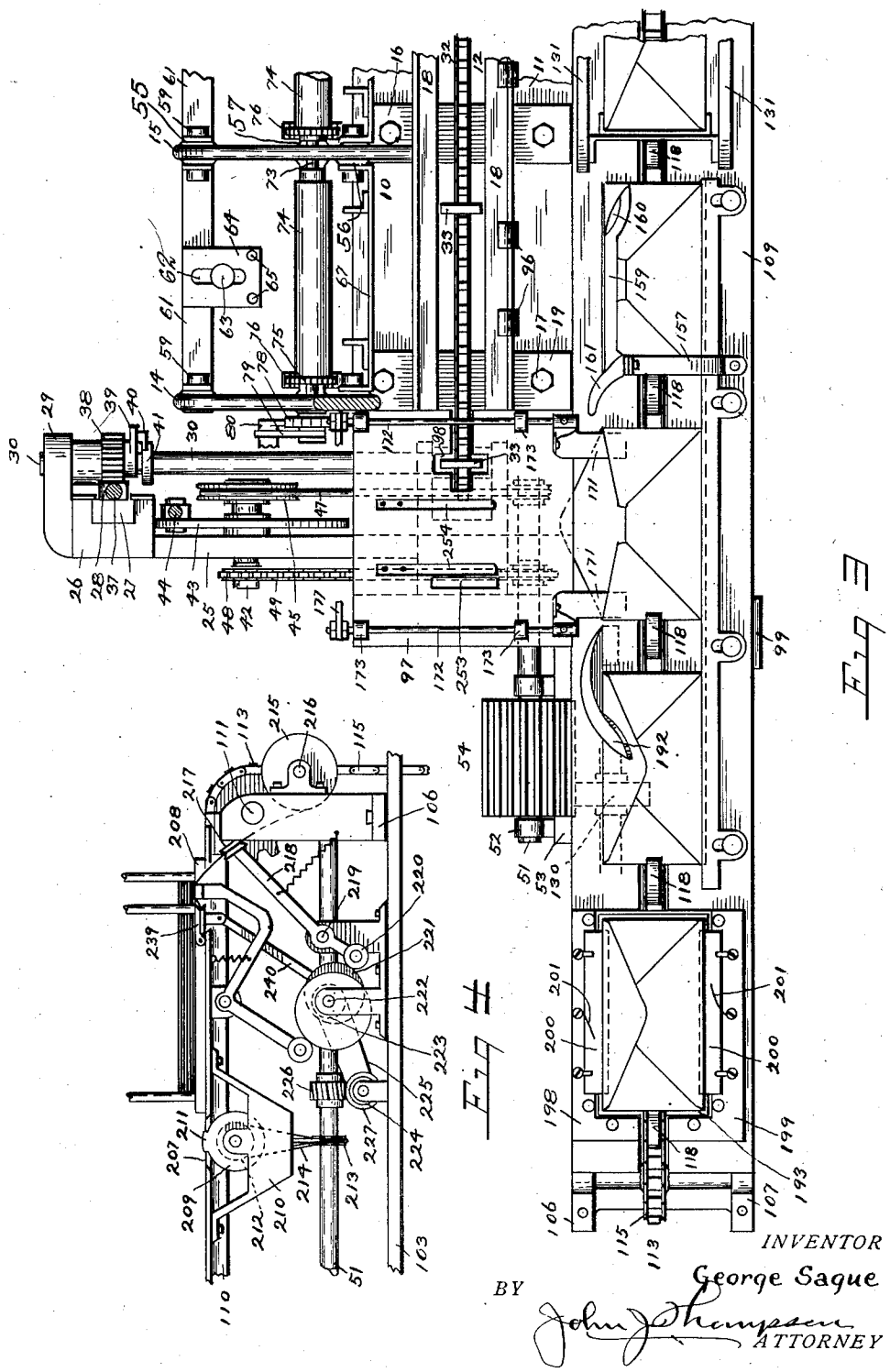

Fig 3

Fig 4

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INSERTING AND MAILING MACHINE

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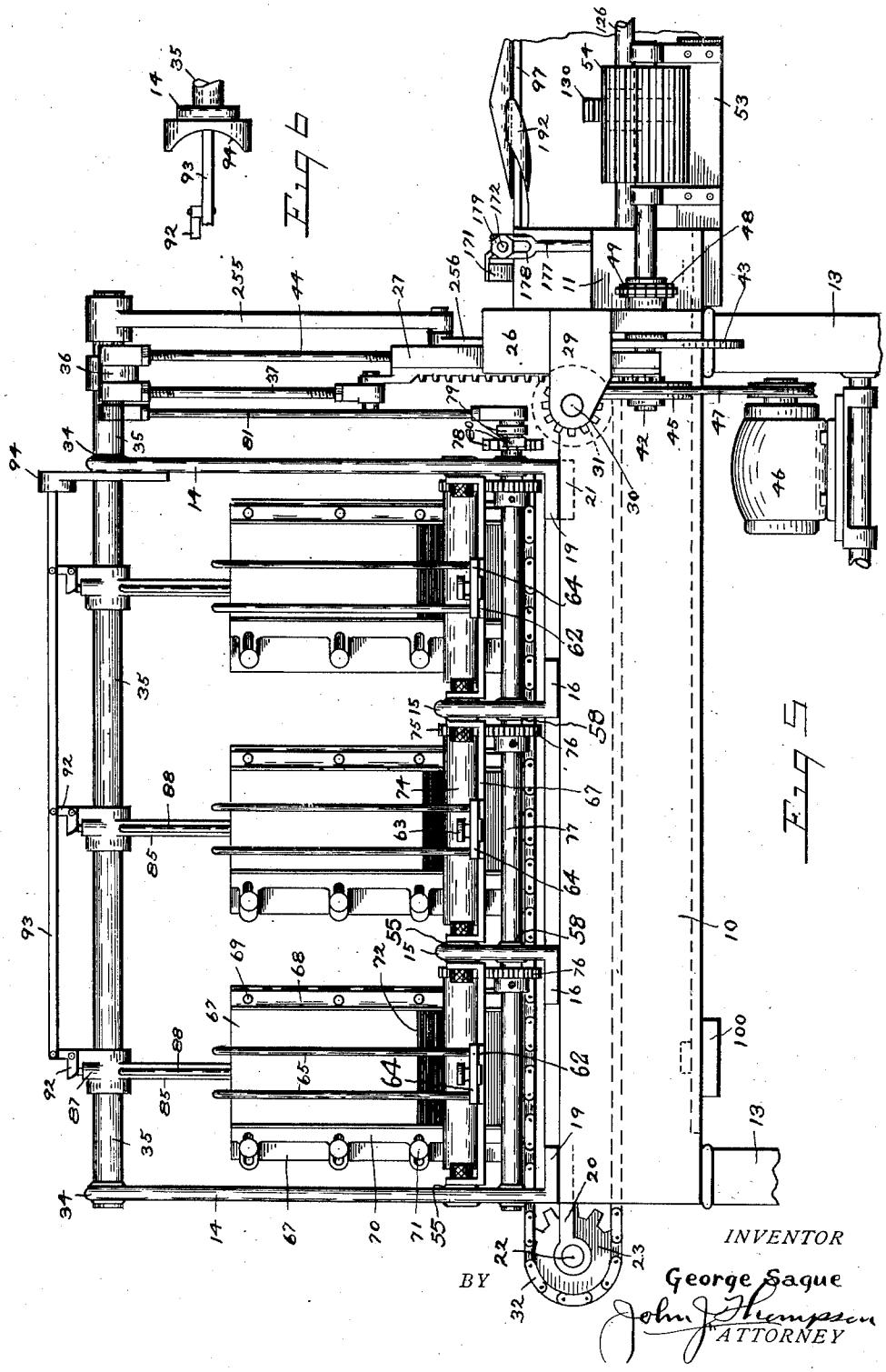

Fig 5

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INSERTING AND MAILING MACHINE

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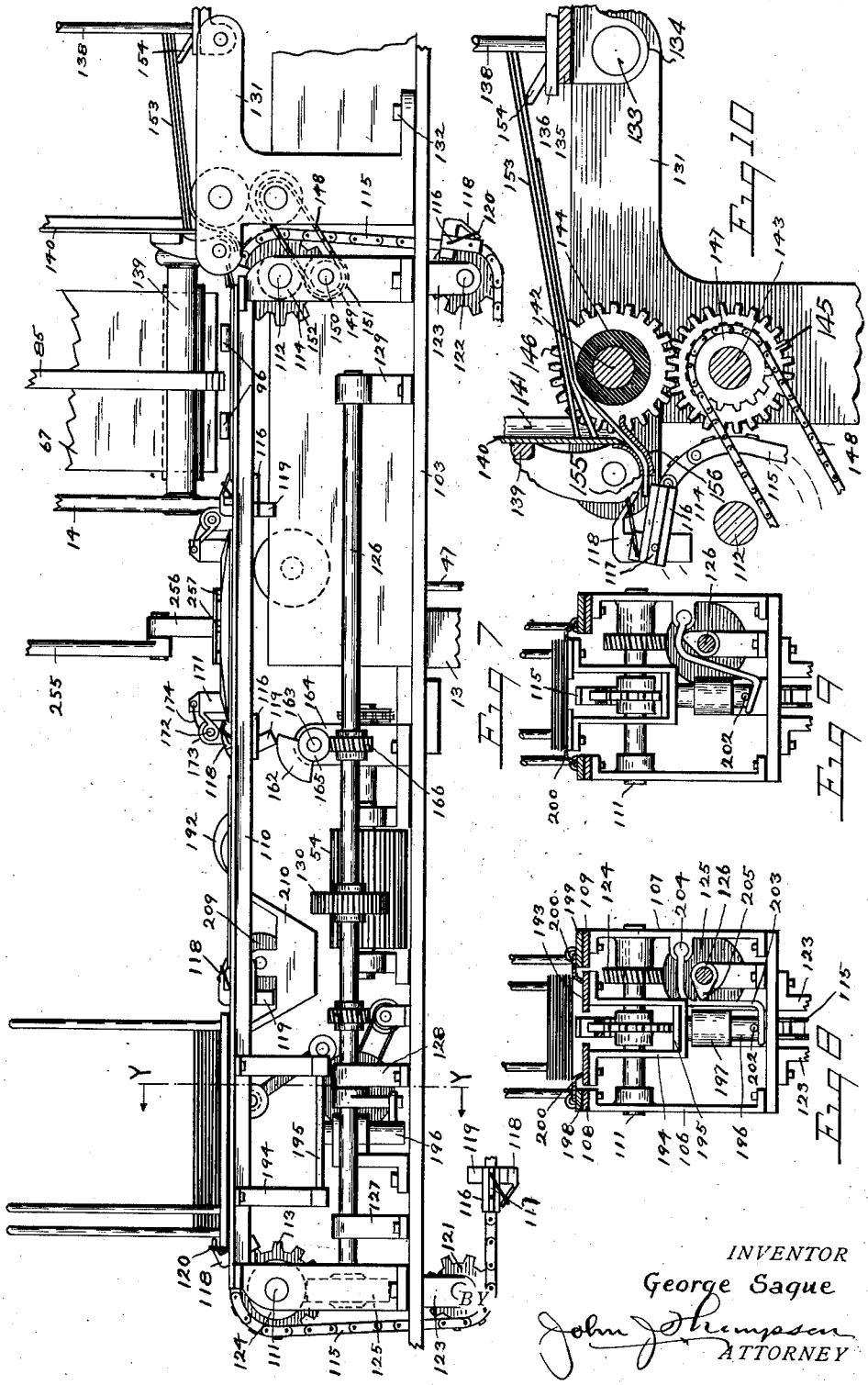

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INSERTING AND MAILING MACHINE

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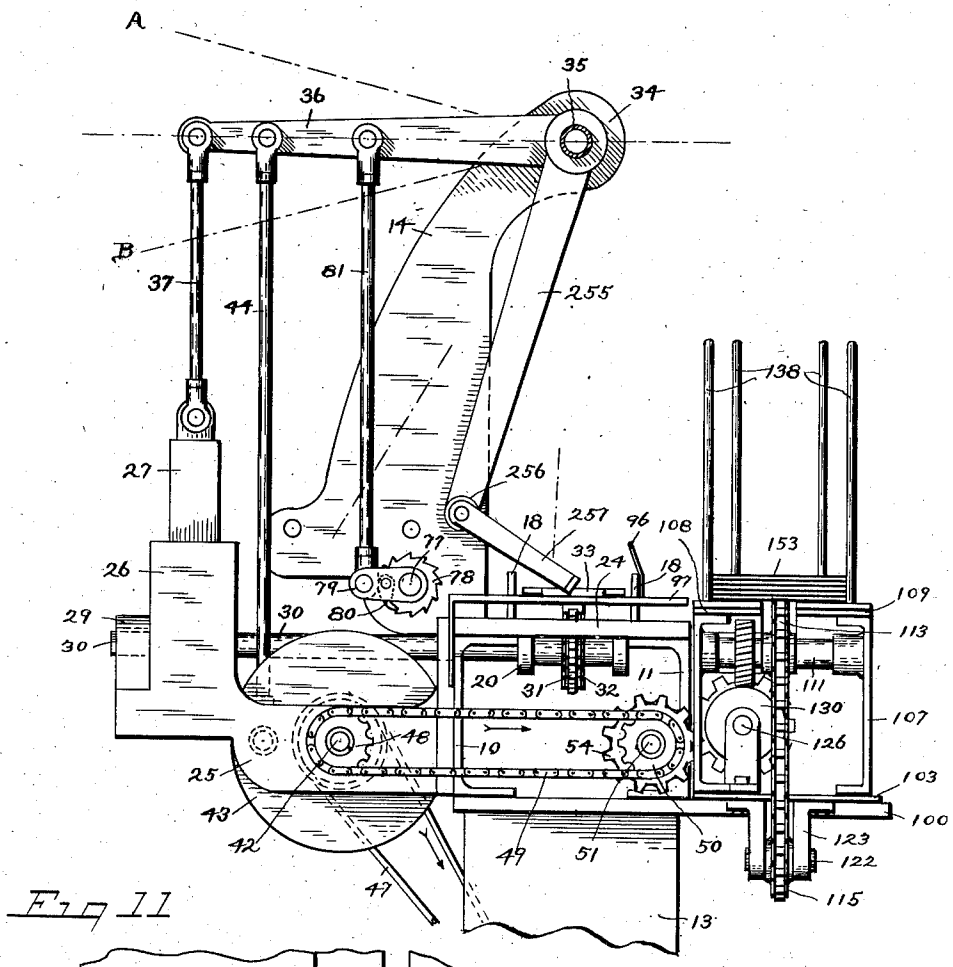

Fig 11

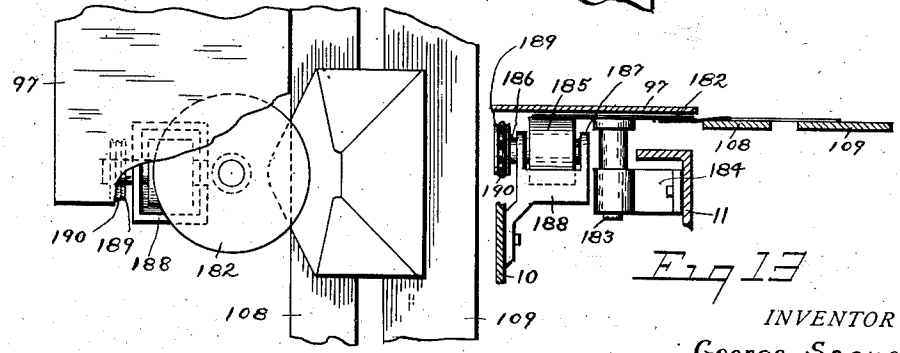

Fig 13

Fig 12

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INSERTING AND MAILING MACHINE

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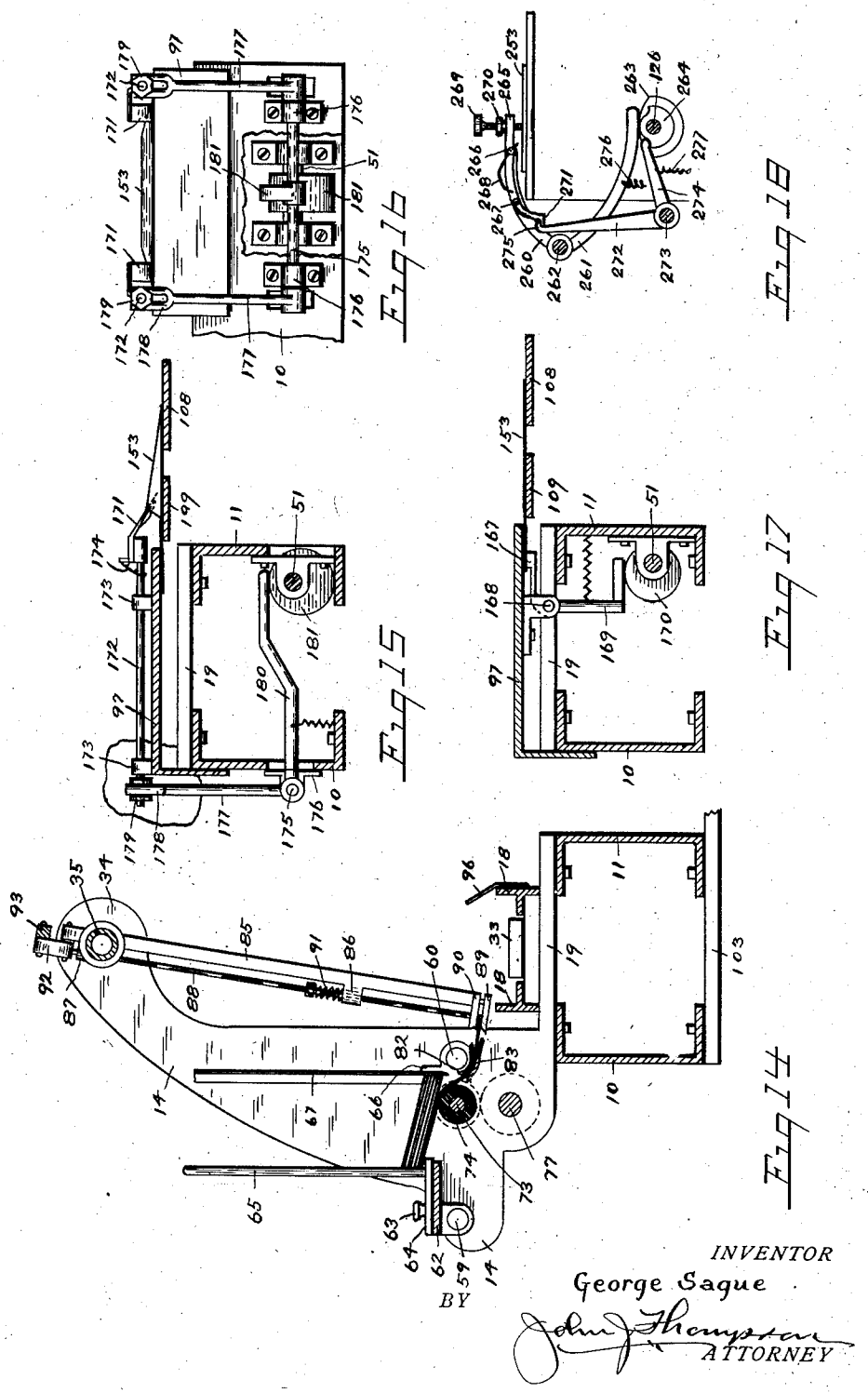

Fig 16

Fig 18

Fig 15

Fig 17

Fig 14

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Patented May 29, 1934 1,960,959

UNITED STATES PATENT OFFICE

1,960,959

INSERTING AND MAILING MACHINE

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Application July 29, 1927, Serial No. 209,273

4 Claims. (Cl. 93—6)

This invention relates to a combined inserting and mailing machine of that class where the envelopes are carried through the machine, and during their travel therethrough, they are opened, the inserts placed therein and the flap moistened and closed, and the envelopes stamped or imprinted with a mailing permit mark, or other printing, and stacked.

While there are a number of machines that open envelopes and insert the contents, there is no machine that combines all of the acts of inserting and preparing the envelope and contents ready for mailing.

The object of the present invention is to provide a machine in which the matter to be inserted in the envelopes is collected together from a number of supply stations, and at the same time an envelope is brought from the envelope supply station, the flap opened, the envelope opened, the contents inserted therein, the flap moistened, the flap turned or folded upon the envelope, the stamp affixed or the permit printed thereon, and the envelope stacked and sealed, ready for mailing.

With these and other objects in view, my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed, and illustrated in the accompanying drawings which form a part thereof and in which like figures of reference refer to corresponding parts in all of the views, and it is understood that slight changes may be made without departing from the spirit of the invention.

In the drawings:—

Figure 1 is a partial top plan view of the machine, with the gripper or transfer operating rod removed.

Figure 2 is a sectional view taken on the line X—X of Figure 1.

Figure 3 is a partial top plan view of the machine, partly in section and with some of the parts removed, to more fully show those below.

Figure 4 is a partial elevation of the stamp affixer, looking at the same from the back of the machine.

Figure 5 is a partial rear view of the machine, showing the insert stations, and means for operating the same.

Figure 6 shows the method of operating the gripper latch operating rod.

Figure 7 is a partial front elevation of the machine, showing the operation of some of the parts.

Figure 8 is a cross sectional view of the stacker taken on the line Y—Y of Figure 7, showing the same in its lowered position.

Figure 9 is a similar view of the same, but showing the stacker in its raised position.

Figure 10 is an enlarged detail view, partly in section of the envelope supply station, showing the method of feeding the envelopes therefrom.

Figure 11 is a partial end elevation of the machine, taken from the stacker end.

Figure 12 is a detail plan view of the flap moistening means.

Figure 13 is a cross sectional view of the same, showing the method of moistening the gum on the envelope flap.

Figure 14 is a partial cross sectional view through one of the insert supply stations, showing the method of feeding inserts therefrom.

Figure 15 is a cross sectional view of the insert collecting table, showing the manner of opening the envelope.

Figure 16 is a rear view of the same, further illustrating the operative means.

Figure 17 is a cross sectional view of the insert collecting table, showing the manner of holding the flap of the envelope during the loading thereof.

Figure 18 is a detail view of the device for detecting the number of inserts in the envelopes.

In the several views of the drawings, for the sake of clearness some of the parts are not shown, but taking all of the drawings together, every part of the machine is illustrated and described.

Referring to the drawings, the machine really comprises two units mounted in coacting and adjustable relation with each other, and comprising a gathering unit for gathering or collecting together inserts or matter to be mailed, and an inserting unit for feeding envelopes, opening and filling the same, and closing and stamping or imprinting them.

In machines of this class where the envelopes are carried through the machine in an intermittent or step by step manner and are brought to a loading station where the inserts have been made ready for placing in the same, it is of great importance that the envelopes register with the pile of inserts so that the inserts will enter the envelope in a proper manner, and as the size of the envelope and the inserts may vary in many cases, I have provided an adjustment between the two units of the machine.

Referring to Figures 1, 2, 5 and 11 of the drawings, the machine comprises a main frame composed of the two channel irons 10 and 11, which are arranged in parallel relation with each other and spaced apart as at 12, and secured to the legs 13 of the machine.

Upon the upper side thereof and at suitable spacings are secured the bearing members 14 and 15 by their legs 16 and 19, and the bolts 17; the legs 16 being at right angles to said channel irons and securing them together.

On the upper surface of said legs or cross braces 16 and 19 are secured the two angle irons 18 in spaced relation with each other and parallel with the channels 10 and 11, to form a track or guide; while adjacent to the ends of said track 18 and to the legs 19 are secured the bearing members 20 and 21.

Within the bearing 20 is mounted a shaft 22 upon which is secured a sprocket 23; while adjacent to the other end of the main frame and secured to the channels 10 and 11, is the cross brace 24, which is integral with an arm 25 (see Figures 1, 3 and 11) which is formed with a vertical end 26, (see Figure 2) which is formed with a groove for the reception of a plunger 27, to which is attached a rack 28.

Said end 26 is provided with a bearing 29 alined with the bearing 21, and within these bearings is rotatably mounted a shaft 30, and upon which the sprocket 31 is secured and which with the sprocket 23 carries the conveyor chain 32.

Said conveyor chain 32 being provided at the proper intervals with the transverse pushers 33, which travel between said guides 18.

Referring to Figures 1, 5 and 11, the two end bearing members 14 extend upward and over the track 18 and have formed in their upper ends the bearings 34, within which is mounted the rocker shaft 35, and on which is secured an arm 36, having a vertical movement as indicated by "A" and "B" (see Figure 11) and to the end of said arm 36 is pivoted a rod 37 having its lower end pivoted to the rack plunger 27.

Said rack 28 is reciprocated by the action of the arm 36 and rotates a pinion 38 mounted freely rotatable on the shaft 30 and rotated by the action of an arm 39 secured to said pinion 38 and carrying a pawl 40 for engagement with a one tooth ratchet 41 secured to the shaft 30.

As a means for preventing any overthrow or slap of the chain 32 due to the downward movement of the plunger 27; said plunger 27 is provided with a finger 250 which as the plunger descends provides a positive stop for a lug 251 which is formed on a disk 252 secured on the shaft 30.

For imparting movement to the arm 36, a shaft 42 is mounted in the arm 25, and has secured thereon a disk 43 which acts as a crank and to which is secured or pivoted the lower end of a rod 44, the upper end of which is pivoted to the arm 36 and raises and lowers the same as the shaft 42 is rotated; said rotation being accomplished by a sheeve wheel 45 secured on said shaft 42 and belted to a motor 46 by the belt 47.

The shaft 42 is also provided with a sprocket 48 connected by a chain 49 to a sprocket 50 secured on a shaft 51 mounted in bearings 52 secured to the member 53 which extends from and is secured to the channel 11; while on said shaft 51 between the bearings 52 is secured a long faced gear 54 which is employed to operate the inserting unit of the machine.

While I have only illustrated three insert supply stations, it is understood that there may be any number as required as they are all operated in the same manner and at the same time, the only change required being in the total length of the machine, so it will only be necessary to describe the construction and operation of the three stations as shown

Each of said insert supply stations is made up of one of the bearing members 14 and 15 (with the exception of the intermediate stations) and by referring to Figures 1, 3, 5 and 14 it will be noted that said bearing members are formed with two bosses 55 and 56, and two bearings 57 and 58, the bosses 55 and 56 being threaded for the reception of the thumb screws 59 and 60.

To the bosses 55 are secured by the screws 59 the ends of the member 61 which is formed with an extension 62 to which is adjustably secured by the thumb screw 63 a plate 64 which is provided with the two piling guide rods 65.

To the bosses 56 is adjustably secured by the screws 60 a channel shaped member 66, which is provided with the piling guide plate 67; said plate having secured to its face the guide angle 68 by the screws 69, and the adjustable guide angle 70 by the thumb screws 71, in such a manner that these guides can be adjusted for inserts 72 of different lengths.

Adjacent to the bosses 56 and on the same plane as the bosses 55, is located the bearing 57 which is formed with a vertical slot to allow the shaft to be removed; and within said bearings is freely mounted a shaft 73, on which is mounted a rubber roller 74, and a spur gear 75, which is in mesh with and driven by a spur gear 76 secured on a shaft 77 which is mounted in the bearings 58 and extends the entire length of the insert supply stations.

This feature of the removal of the shafts 73 carrying the rubber rollers 74, without having to dissemble the machine, is of great importance, as it has been found that these rollers must be removed from time to time to renew or clean.

On the end of said shaft 77 is secured a ratchet 78, and adjacent thereto is mounted an arm 79 having a pawl 80 in engagement with said ratchet; while said arm 79 is reciprocated by a rod 81 having its lower end secured thereto and its upper end pivoted to the arm 36, by which means the roller 74 is rotated in one direction only.

The member 66 is provided adjacent to the rubber roll 74 with the two guides 82 and 83 which are curved and spaced apart to receive the end of the insert 72 as its forward end is carried ahead by the roller 74 past the lower edge of the plate 67; the roller 74 pushing the insert through or between said guides 82 and 83.

As the edge of the insert 72 projects from the guides 82 and 83, it is engaged by the jaws 84 of the transfer arm 85, and carried over and deposited upon the conveyor 32, as follows: the transfer arm 85 is secured on the shaft 35 and swings with it as said shaft 35 is operated by the pinion 38, rack 28, rod 37 and the lever 36.

The transfer arm 85 is formed with the two bearings 86 and 87 within which is slidably mounted the latch rod 88, to the lower end of which is secured the jaw 89 coacting with the jaw 90 secured to the lower end of said arm 85; said jaws being normally closed by the action of the spring 91; while adjacent to the upper end of said rod 88 and to the upper end of the arm 85 is pivoted a bell crank 92, having one of its ends rounded and bearing on the end of the rod 88, and the other end pivoted to a latch rod 93, the end of which rod 93 abuts against the curved surface 94 of a member 95 secured on the bearing member 14 (see Figure 6) in such a manner that as the arm 85 swings, the end of the rod 93 will follow the curve 94 giving to said rod 93 a reciprocating movement to operate the bell

cranks 92 and the jaws through the action of the rods 88, closing on the insert, swinging out the transfer arm and opening the jaws to drop the insert on the conveyor; the two stripper plates 96 being provided to insure the insert leaving the jaw.

It must be noted that when the machine is first started that an insert from each station must be placed by hand on the conveyor, that is, on the conveyor in front of the second station will be placed one insert from the first station; in front of the third station an insert from the first and second stations, and so on until a complete pile of collected inserts is placed on the delivery plate, so that as the machine starts to operate, the required number of inserts will be on the conveyor before each station, so that the insert fed out by the machine will be placed on the proper number from the other stations, as the conveyor is carried forward in the step by step movement and stops at each station in turn, finally carrying a bunch of completed inserts from each station, to the loading plate 97, which is mounted adjacent to the end of the track and on the same plane, the pusher 33 after delivering the bunch, following the sprocket 31 down through an opening 98 formed in said plate (see Figure 3).

Referring to Figure 1 of the drawings, for making a neat pile of the collected inserts on the plate 97 and temporarily holding the same until they are inserted into the envelope, there is provided an adjustable stop 253 secured to said plate 97 on the surface thereof and against which the inserts are carried by the pusher 33, before said pusher descends through the plate and from contact with them.

For holding the collected inserts in this position, there are provided two spring holders 254 which are of resilient material and which have their rear ends secured to the plate 97, while their forward ends lightly press upon the inserts, and one of their edges being curved upward insures the easy insertion of the inserts thereunder, and in this manner the collected pile is held until the loading fingers push the same into the envelope, which is done as follows.

Referring to Figures 1, 11 and 18 of the drawings, an arm 255 is secured on the rocker shaft 35 and to the lower end thereof is pivoted a head 256 which is formed with three loading fingers 257, which rest upon the surface of the plate 97 and have a reciprocating movement imparted to them by said arm 255, so that upon their forward stroke they push the collected pile of inserts into the distended envelope and then recede allowing another pile of inserts to take their place on the plate 97, when the same action is repeated.

The envelope now having been filled, it is important that before it is sealed that it be checked to see if it contains the proper number of inserts, that is not too many nor too few, and this is done in an automatic manner by measuring the thickness of the filled envelope, in the following manner.

Adjacent to the loading station and that portion on the bars 108 and 109 where the envelopes are held while being loaded, there is mounted or pivoted an arm 260 as at 262, and pivoted to said arm 260 is an arm 265 as at 266 which has its movement limited as at 267, and which carries a gaging screw 269 threaded in the end thereof and locked by a nut 270; while the rear end of said arm 265 is formed with a hook 271, and is held in a lowered position with relation to the arm 260 by the spring 268.

Said arm 260 is formed with a lower portion 261 which is in contact with the face of a cam 263 which is mounted on the shaft 126; said arm 261 being held in contact by the spring 276.

Also on the shaft 126 is a second cam 264 upon which rides the end of an arm 274 which is pivoted as at 273, and which is formed with an upper part 272 formed with a hooked end 275 adapted to engage the hook 271, said arm being held by the spring 277.

Now as the shaft 126 is rotated, the arm 260 brings the screw 269 down on the filled envelope and if the required amount of inserts are therein, the hooks 271 and 275 will become engaged as the cam 264 operates the arm 274, but if the arm 265 descends further owing to there not being enough inserts in the envelope, the hooks 271 and 275 will not engage and the machine will stop through the action of a suitable electrical contact switch (not shown) being operated by the circuit being broken; or if the screw 269 does not descend far enough owing to there being too many inserts in the envelope the hooks will also not engage and the circuit will again be broken and the machine stop, so that the mistake can be corrected.

The inserts now having been collected ready on the plate 97 for insertion into the envelope, I will describe the inserting unit of the machine. The main frame of the machine 10 and 11 is provided with two brackets 99 and 100, upon which the inserting unit is secured in an adjustable manner by the bolts 101 threaded into said brackets and passing through the slots 102 formed in the base plate 103 of said unit; the adjustment being accomplished by means of the screw 104 which abuts the plate 103 and is threaded into the extension 105 of the bracket 100.

The inserting unit comprises a base plate 103 to which are secured the uprights 106 and 107 (see Figures 7, 8 and 9) which have secured to their upper ends the two parallel plates 108 and 109, to which are secured the guide rails 110.

Within the uprights 106 and 107 are rotatably mounted the two short shafts 111 and 112, upon which are secured the sprockets 113 and 114, which carry the conveyor chain 115; said chain being supplied at stated intervals with special links on which are mounted the envelope grippers 116, which are formed with the side tongues 117, which slide in the grooves of the guide rails 110; and a gripper finger 118 having a depending arm 119 pivoted in said gripper 116; said finger being normally held in a closed position by the spring 120.

Said chain after passing along and between said guide rails 110, is carried down and over the idler sprockets 121 which are mounted on the shafts 122 in the brackets 123 secured to the base plate 103.

Movement is imparted to said chain in the following manner; a spiral gear 124 is secured on the shaft 111, and is driven by a spiral gear 125 mounted on the end of a shaft 126 which extends lengthwise of the machine and is rotatably mounted in the bearings 127, 128 and 129; said shaft 126 being rotated by a spur gear 130 secured thereon and which is in mesh with and driven by the wide face gear 54 of the gathering unit.

Mounted adjacent to one end of the plates 108 and 109 is the envelope supply station, which comprises the two side frames 131 which are secured

to the base plate 103 by the bolts 132; said side frames 131 are formed in a similar manner to the members 14 and 15, and are provided with the bosses 134 which are threaded to receive the thumb screws 133; the screws 133 retaining in an adjustable manner the rear cross member 135, which has attached thereto the slide 136 by the thumb screw 137, allowing it to have an in and out adjustment, and to said slide 136 are attached the piling guide rods 138.

The forward bosses is secured also in an adjustable manner by the screws 134, the member 139, to which is mounted the piling guide plate 140, to the inner surface of which are secured the envelope guide angles 141, one of which is adjustable to take envelopes of different sizes.

Within slotted bearings in said side frames 131 are mounted the shafts 142 and 143; and on the shaft 142 is secured the rubber feed roller 144, and the spur gear 145, which is in mesh with and driven by the spur gear 146 secured on the shaft 143, and said shaft 142 can be lifted out of said bearing, as the same is slotted.

Said shaft 143 being rotated by a sprocket 147 secured thereon and connected by the chain 148 to a sprocket 149, secured on a shaft 150 mounted in the uprights 106 and 107, and which is driven by a pair of gears 151 and 152 on said shaft and on the shaft 112.

The pile of envelopes 153 rests on the roller 144 and the rest 154, with their forward ends abutting against the piling plate 140, and as the lower envelope of the pile is fed forward by the rotation of the roller 144, its end being against the plate 140 on an incline, it will slide down when forced against the plate and will enter a guideway formed by a curved strip 155 secured to the member 139 and a similar curved strip 156 secured to the frames 131; and as the envelope end projects from said guideway it will enter the jaw of the gripper 116 which due to the proper timing is in the right position to receive it (see Figure 10). The jaw of the gripper 116 closing on the end of the envelope.

The envelope is now carried by the gripper attached to the conveyor chain 115 in a step by step movement, first to the flap opener, second to the loading station or plate, where it is opened and the inserts placed therein; third past a moistener where the gum on the flap is moistened, then to a closer, where the flap is folded down on the filled envelope, and lastly to the stacker, where it is inserted on the bottom of the stack, moistened for the postage stamp, which is affixed thereto and both the flap and the stamp pressed by the weight of the stack, or in place of the stamp affixer there may be employed a printing device for imprinting the envelope with a mailing permit mark or other printed matter.

The means for opening or distending the envelope after the flap is opened, comprises a bracket 157 which is secured to the plate 109 by the screws 158, and which curves up and over the envelope to allow their free passage thereunder, and has secured to the end thereof an opener bar 159, formed with the beveled and curved end 160 which enters under the flap of the envelope as the same travels forward and turns the flap upward or at right angles to the envelope, where it is engaged by the curved part 161 and turned down or on the same plane as the envelope, keeping it in this position until it passes under the loading or delivery plate 97.

As soon as it has reached this position and comes to rest, the gripper jaw releases the envelope by the action of the cam 162 (see Figure 7) which engages the tail of said gripper to open the same against the action of the spring; and said cam is mounted on a shaft 163 which is mounted in the bearing 164 attached to the plate 103, and said shaft is rotated by a spiral gear 165 secured thereon and driven by a gear 166 secured on the shaft 126.

As this releasing of the envelope takes place a finger 167 (see Figure 17) which is pivoted to a bracket which is secured to the plate 97 as at 168 to the plate 97, and which is formed with the depending part 169 in contact with a cam 170 mounted on the shaft 51, is by the action of said cam 170 brought into pressing contact with the flap of the envelope, holding the same against the under side of the plate 97 during the time of filling or loading, and during the time that the face of the cam 170 is in contact with the tail of the gripper.

At the moment that the envelope is so held from movement, the openers act to distend the envelope to receive its contents, in the following manner. Referring to Figures 1 and 15, the openers comprise the right and left hand curved fingers 171 which are mounted on the forward ends of the sliding rods 172 which are mounted in the bearings 173 secured to the plate 97; said fingers being held in position by the springs 174 so that as they are moved forward they will enter the envelope and distend the same, holding it in this position during the interval while the collected pile of inserts on the plate 97 is pushed into the envelope under said fingers.

For operating said fingers 171 (see Figure 16) there is a shaft 175 mounted in bearings 176 attached to the web of the frame 10, and on the ends of said shaft 175 are secured the arms 177 which have forked ends 178 which embrace the rods 172 between the nuts 173 which are threaded thereon; said shaft 175 being rocked by the action of an arm 180 which is secured thereon and which is in contact with a cam 181 secured on the shaft 51, and in this manner the openers are timed to enter and hold open the envelope during the filling period, and then recede allowing the envelope to close and at the same time the gripper will become released from the cam 162 and again hold and carry the envelope forward past the moistener which is mounted under the plate 97 and comprises a wheel 182, (see Figures 12 and 13) mounted on a vertical shaft 183 freely rotating in the bearing member 184 secured to the frame 11; said wheel 182 being in contact with the gummed flap of the envelope as the same passes under the same between the wheel and the plate 97; and for imparting movement and water to said wheel 182, there is mounted under said wheel and in contact therewith a water wheel 185 of felt or other suitable material, on a shaft 186 mounted in bearings 187 integral with a water tank 188 mounted on the frame 10, and on said shaft 186 is a sheeve wheel 189 connected by the belt 190 to a similar wheel 191 mounted on the shaft 126.

The envelope now having passed the moistener and the gum on the flap having been wet, it is carried under the curved closing finger 192 which is secured to the plate 108; said finger being formed with a curve that engages the flap and turns it over and down upon the envelope in a sealing position, when it is now carried into the stacker, which comprises (see Figures 7, 8 and 9) a stacker plate 193 mounted on two yokes 194 secured together by a bar 195 mounted on the

top of a plunger 196 having vertical movement in a bearing 197 secured to the plate 103; said stacker plate 193 is divided in the center to allow of the passage of the conveyor chain 115, and normally occupies the cut out portion of the plates 108 and 109.

Adjacent to the sides of said stacker plate 193 are secured to the strips 108 and 109 the parts 198 and 199, to which are hinged the latches 200, which overlap the opening between said plate 193 and the strips 198 and 199, and support the envelopes as shown in Figure 8; said latches being held in place by the springs 201.

For operating the stacker, there is provided a pin 202 in the lower end of the plunger 197, which is engaged by the end of a lever 203 which is pivoted as at 204 and actuated by a cam 205 secured on the shaft 126, in such a manner that as said shaft rotates with its intermittent movement, said stacker plate will be raised and lowered; and as the envelope is drawn over and onto said stacker plate 193, the gripper jaw will be opened by having its tail come into contact with a trip 206, releasing the envelope, which will be carried up into the stack by the action of the plunger 197 and held there by the action of the latches 200 which it passes, allowing the envelope to go up but not down.

Before passing up into the stack by the action of the plunger 197, the postage stamp is affixed to the face of the envelope as follows.

Referring to Figure 4 of the drawings, adjacent to the stacker, the stacker plate 193 is cut out as at 208 and the strip 108 as at 207; while at the opening 207 is mounted a water wheel 209 rotating in a water tank 210; said wheel 209 being formed with a pad 211 of the approximate size of the postage stamp, and which as said wheel rotates will contact with and moisten each envelope in turn as it reaches the stacker; said wheel 209 being operated by the sheeve wheels 212 and 213 and the belt 214.

The roll of postage stamps 215 is mounted as at 216 and the end of said strip of stamps is threaded through the jaws 217 on the end of the arm 218 which arm is pivoted as at 219, and given a reciprocating movement by the roller 220 in contact with the cam 221 secured on the shaft 222; said shaft 222 being rotated by the sheeve wheels 223 and 224 and the belt 225 by the gear 226 on the shaft 51 and in mesh with the gear 227; said jaws 217 being closed on the strip of stamps 215 in the position shown in Figure 4 to carry the stamps upward, where it is opened by the latch 238. The jaw 117 is made to operate by a rod mounted in the arm 218 and actuated by the cam 221, and as this mechanism forms the subject matter of Patent No. 1,714,278, issued May 21, 1929 it is not described in detail here.

The end of the strip of stamps 215 when carried upward by the jaws 217 enters the jaw 239, which is operated by the lever 240 which has its lower end pivoted to a disk 241 on the shaft 222, in such a manner that when the end of the strip is delivered to said jaws 239 they will grip the same very near the edge of the first stamp, and the jaws 217 will then open and slide back on the strip of stamps and again grip the same; while the arm or stamp affixer 242 which is pivoted as at 243 will by the action of its roller in contact with the cam 244 press the stamp upward against the moistened portion of the envelope, at the same time tearing off said stamp from the roll or strip of stamps and pulling the same out of the jaws 239; this operation being repeated for every envelope as it reaches the stacker, and as the envelopes are pushed up into the stacker, the flaps and the stamps are pressed on the envelopes by the weight of the other envelopes in the stack, which effects the sealing of the envelopes and the sticking thereon of the stamp.

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

1. In a machine of the class described and in combination with a series of insert supply stations, an envelope supply station each supplied with feeding means, of a collecting plate adjacent thereto, means for collecting the inserts thereon, means for holding said inserts in collected relation on said plate comprising a pair of resilient arms mounted on said plate, means for registering an opened envelope with said plate and means for placing said collected inserts therein.

2. In a machine of the class described and in combination with a series of insert supply stations, an envelope supply station and feeding means for said stations, of a collecting plate adjacent thereto, means for collecting said inserts thereon, means for retaining said inserts in said collected relation comprising two resilient arms for holding down said inserts upon said plate and preventing lateral movement other than that of placing the same in an envelope.

3. In a machine of the class described and in combination with insert supply stations, an envelope supply station and feeding means for said stations, a collecting plate and means for collecting said inserts thereon, means for opening an envelope and placing said inserts therein, of means for detecting if the predetermined number of inserts have been placed in said envelope before sealing the same.

4. In an inserting and mailing machine, in combination with a series of insert supply stations, an envelope station and feeding means therefor, of a delivery plate, means for collecting said inserts thereon in a pile, means for holding said inserts in said pile comprising two resilient arms secured to said delivery plate, and means for transferring said inserts from said holding means to the envelope.

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