

Sept. 24, 1935.

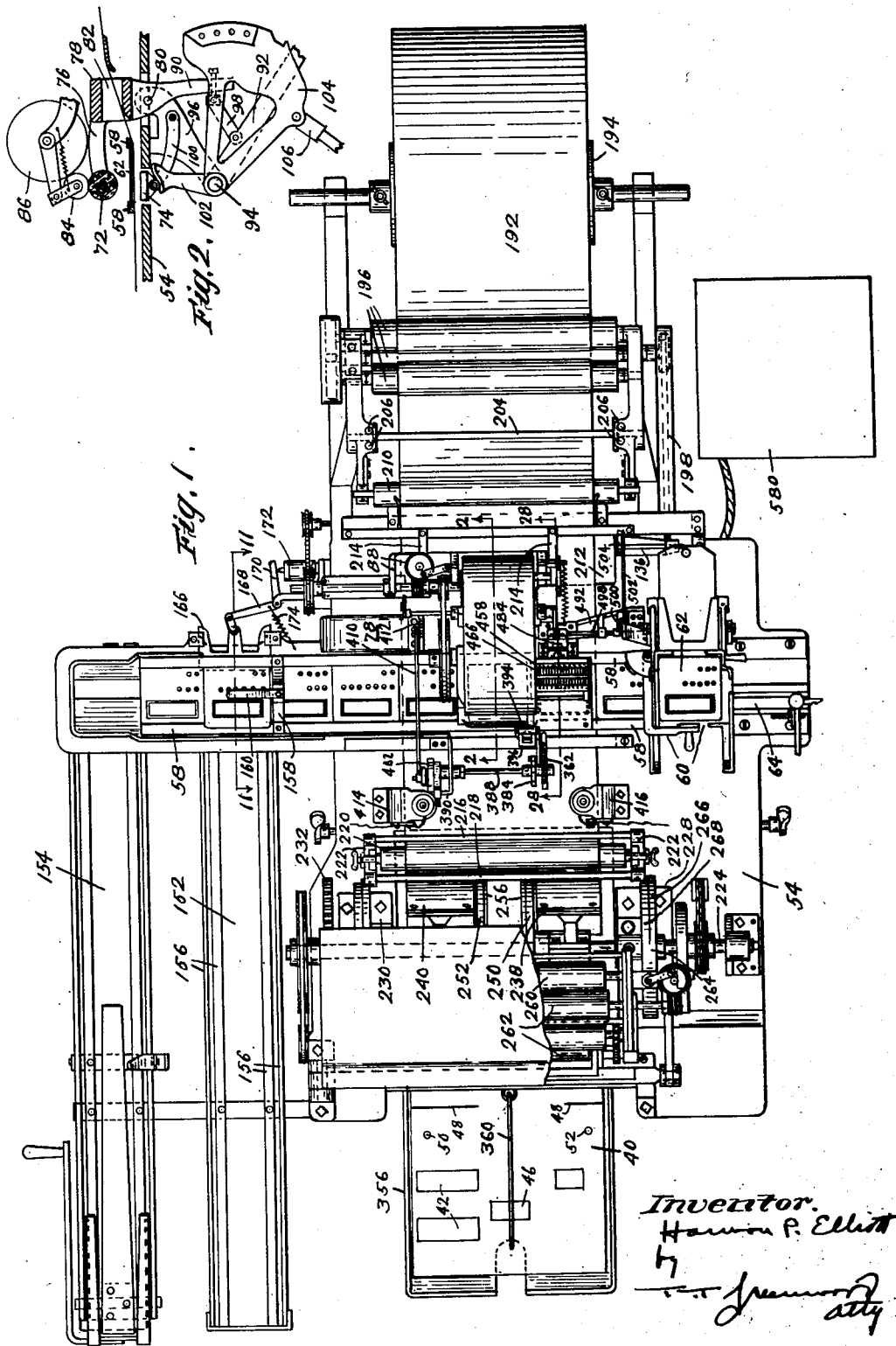
H. P. ELLIOTT

2,015,552

WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 1



Sept. 24, 1935.

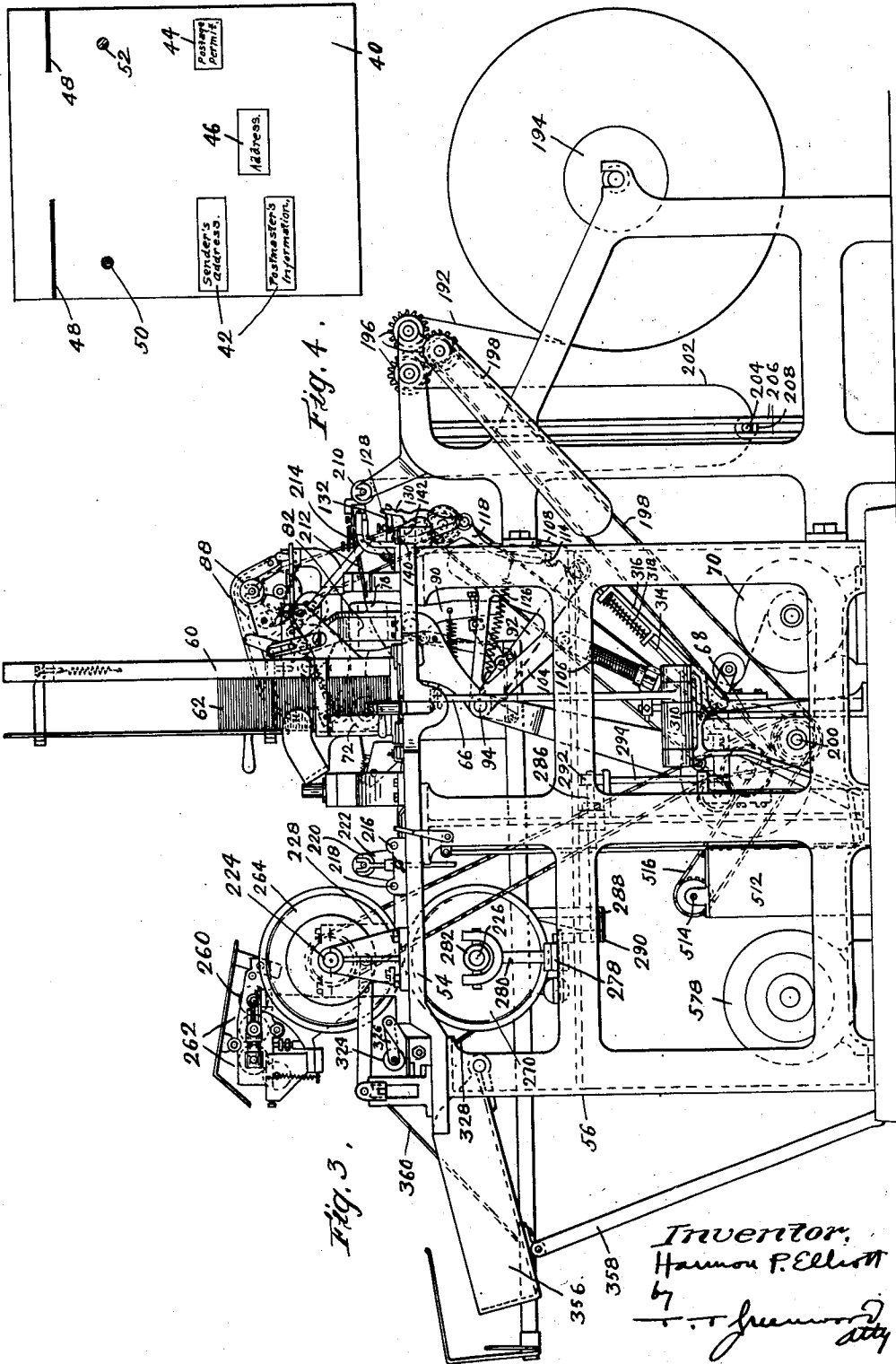
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 2



Sept. 24, 1935.

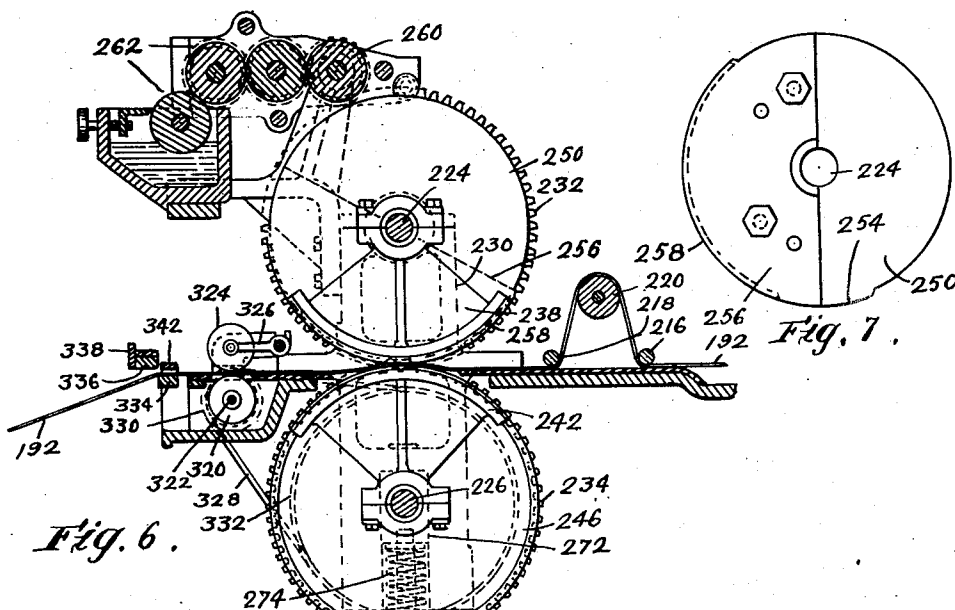
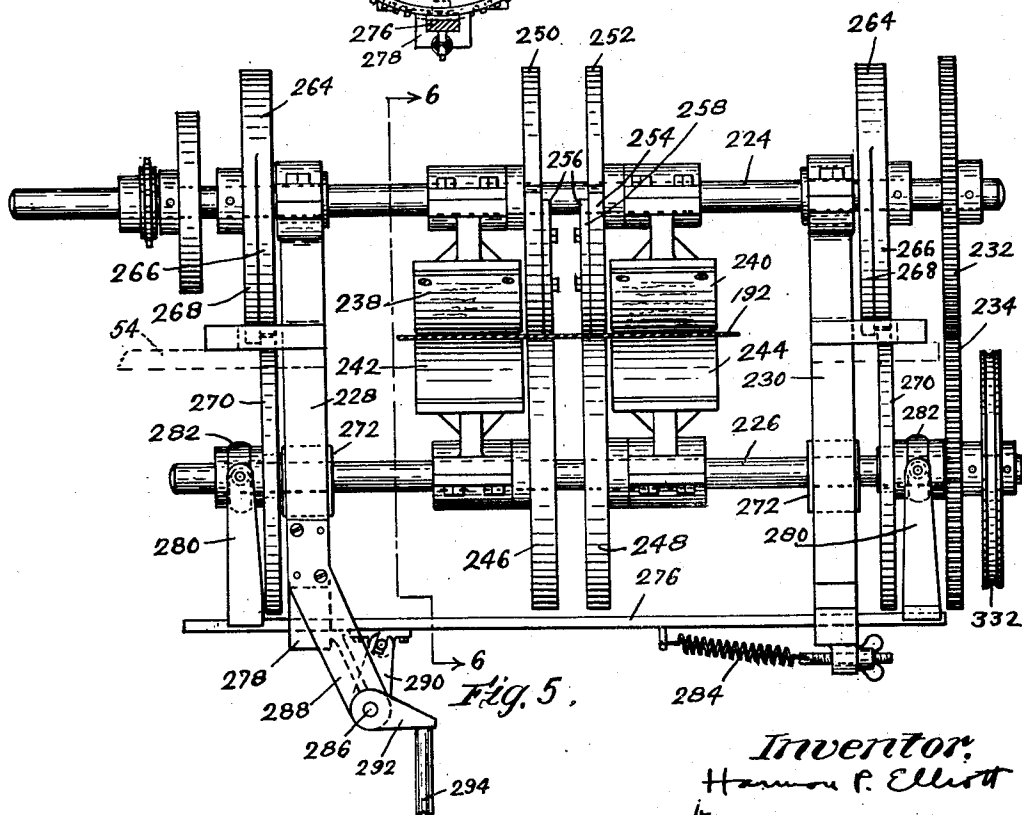
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 3



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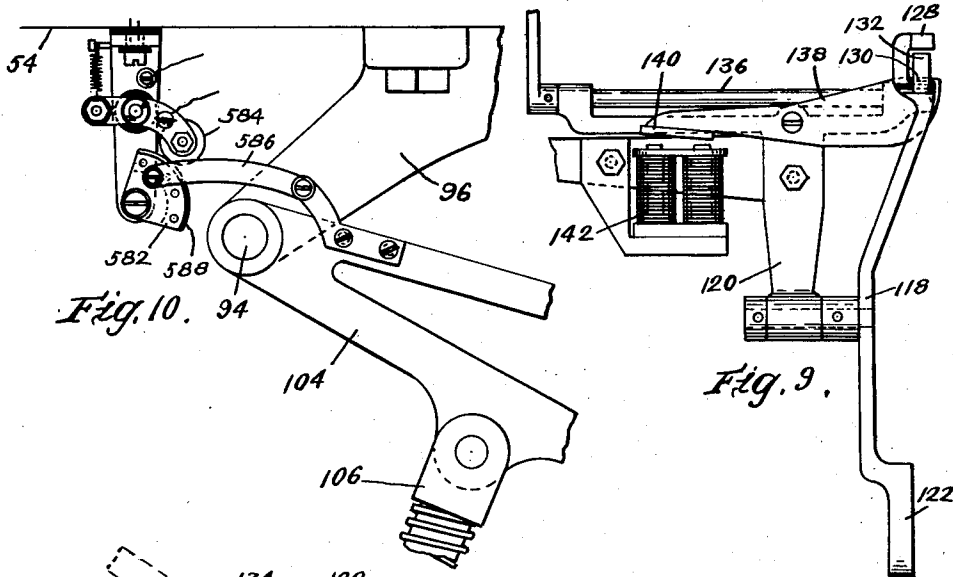
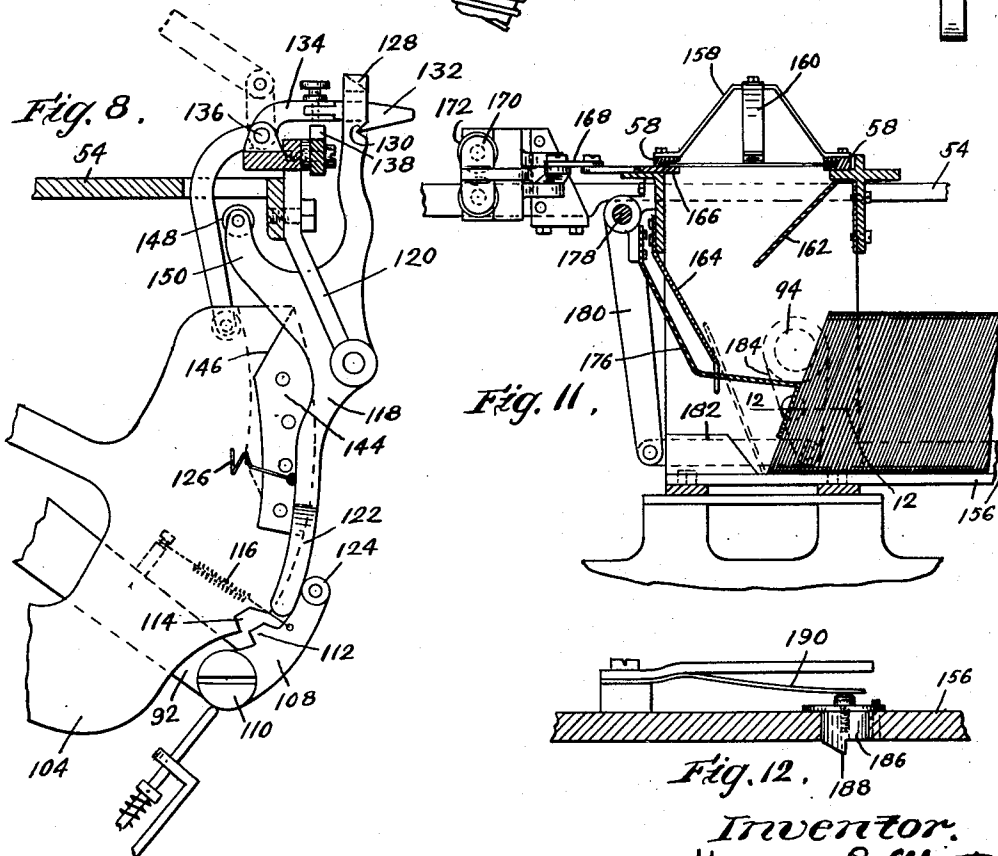
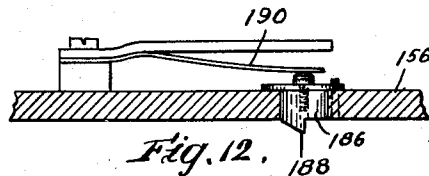
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 4



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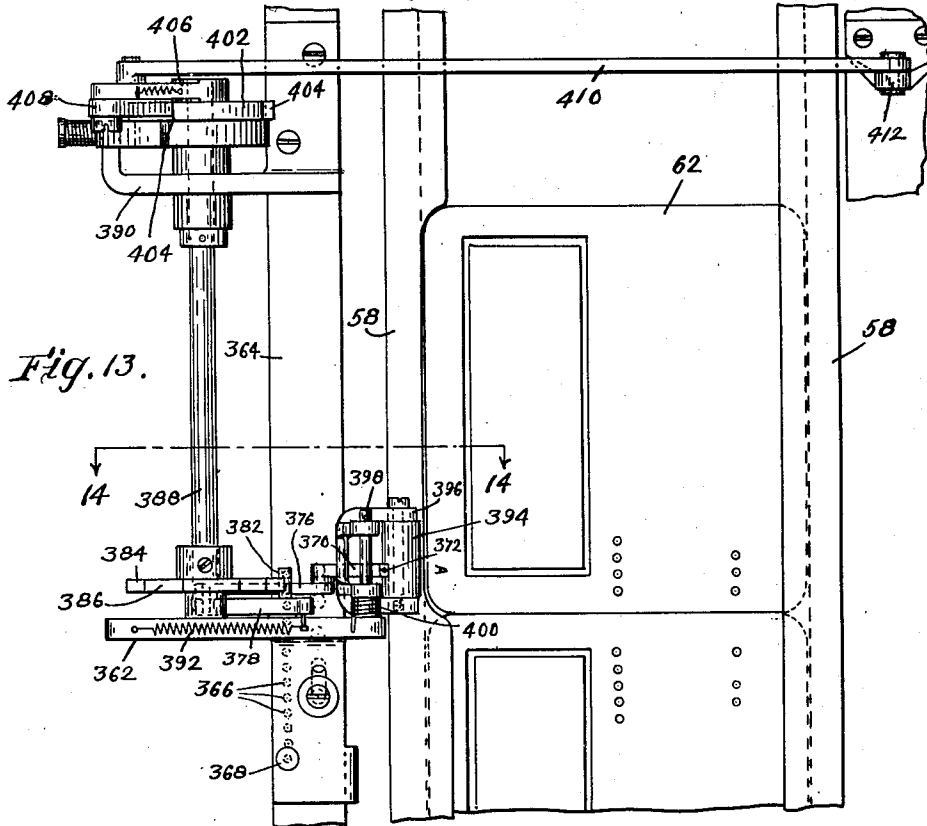
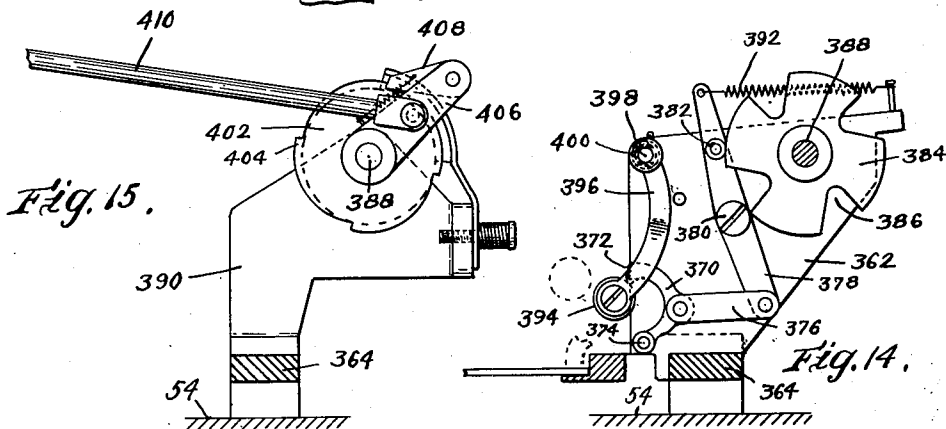
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 5



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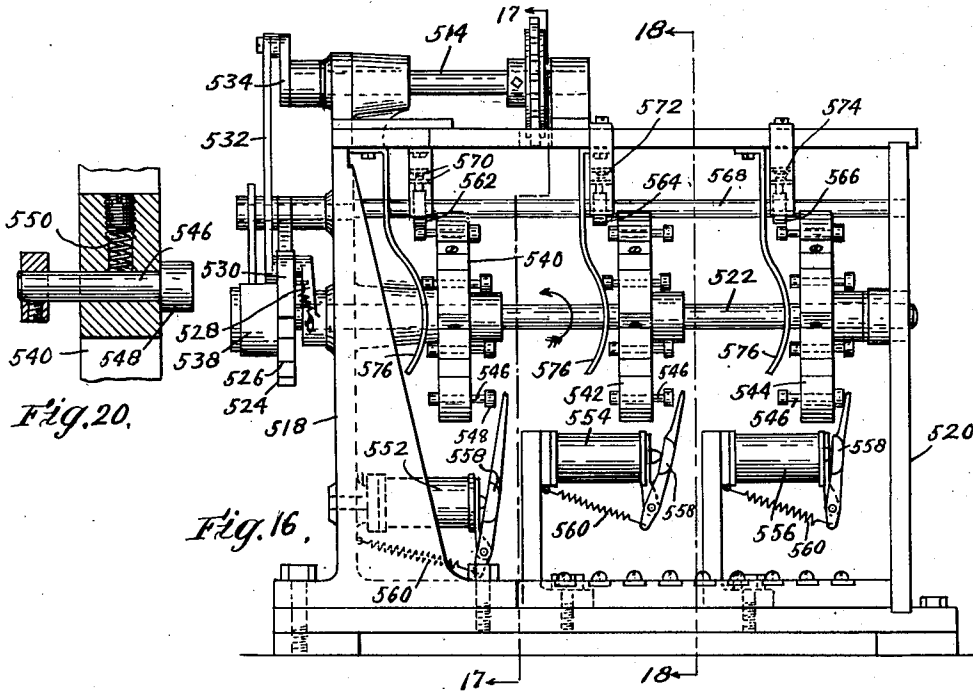
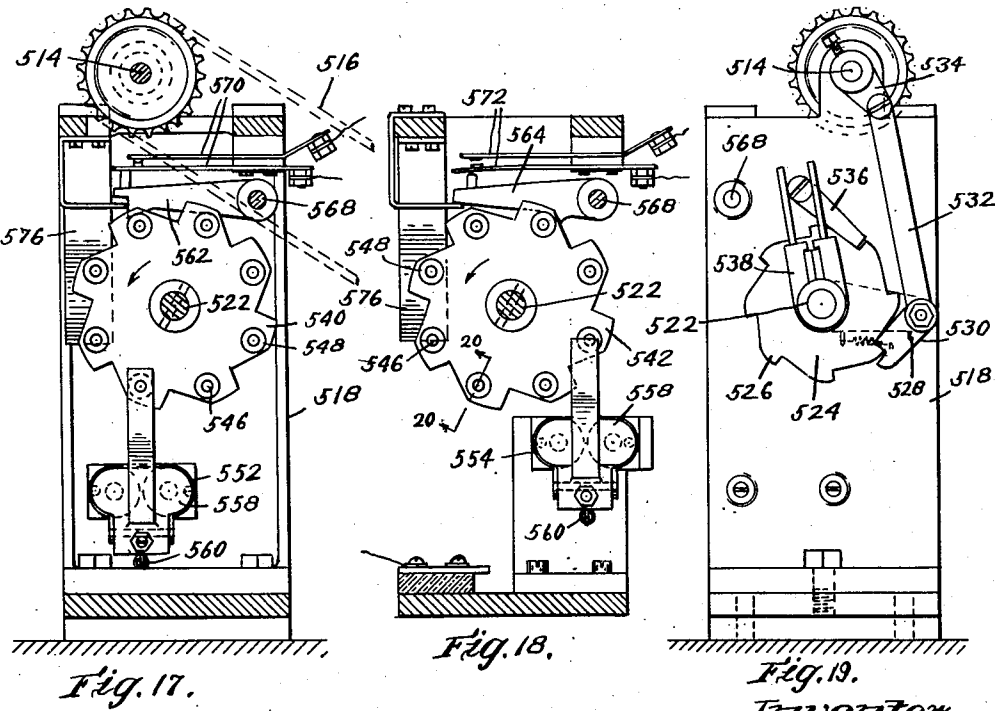
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 6



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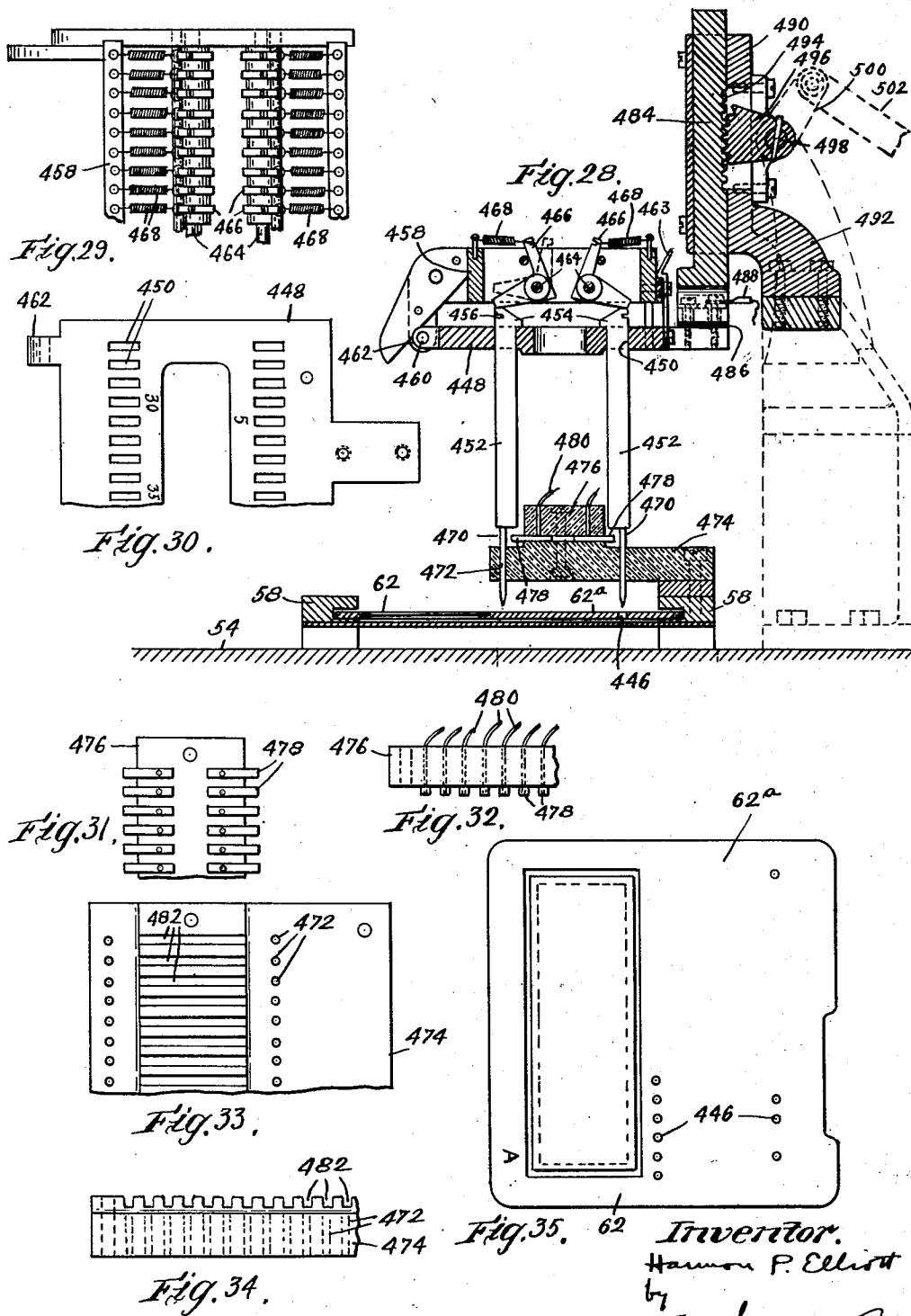
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 8



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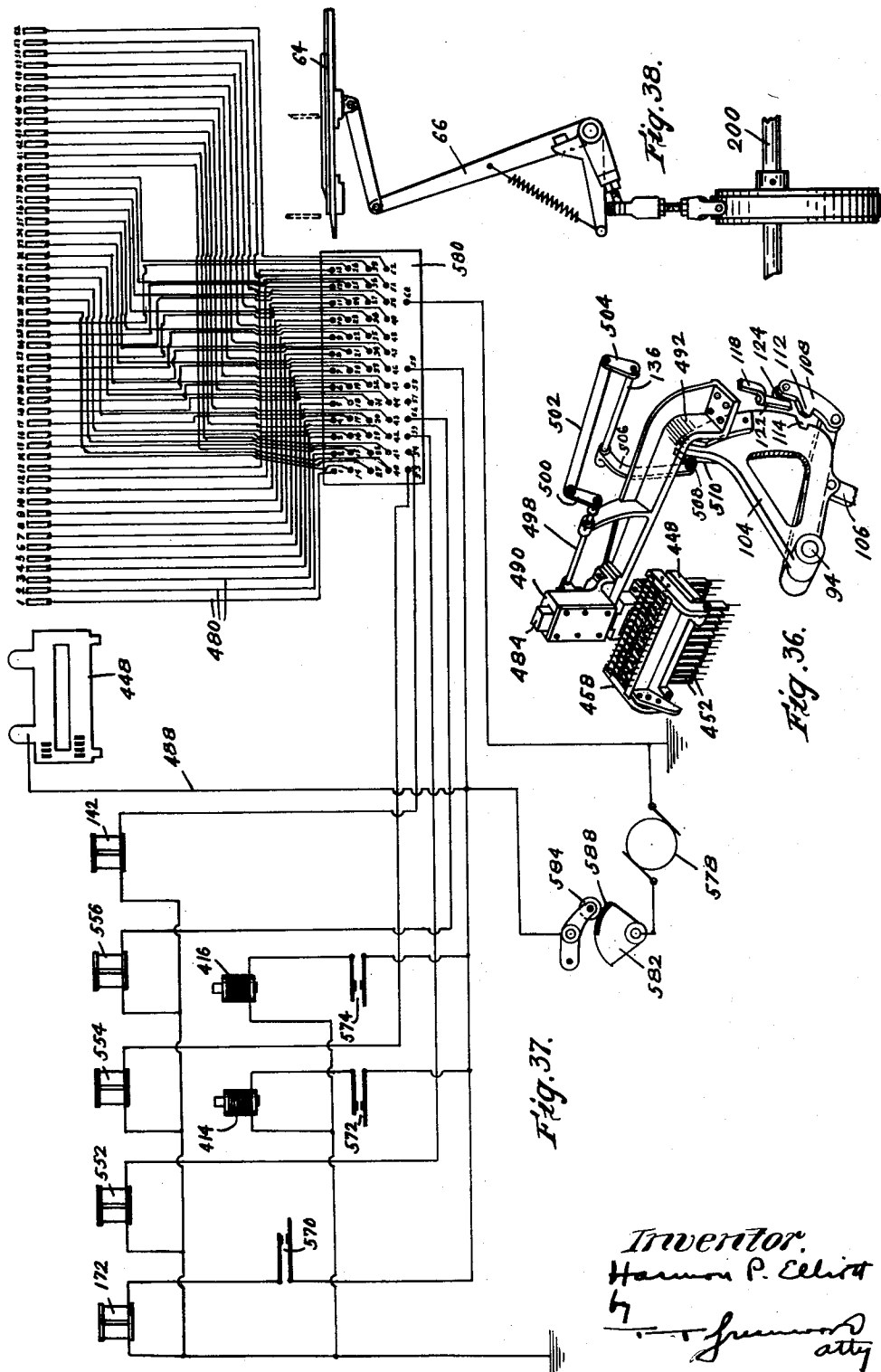
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WRAPPER PRINTING AND ADDRESSING MACHINE

Filed Dec. 30, 1933

9 Sheets-Sheet 9



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UNITED STATES PATENT OFFICE

2,015,552

WRAPPER PRINTING AND ADDRESSING
MACHINE

Harmon P. Elliott, Watertown, Mass.

Application December 30, 1933, Serial No. 704,659

38 Claims. (Cl. 101—58)

This invention relates to combined addressing and printing machines particularly adapted for printing and addressing wrappers such as are used for wrapping about catalogues and the like that are sent through the mails.

The wrapping, addressing and printing machine embodying the present invention comprises a mechanism wherein a long sheet or web of paper is addressed and printed to form the wrapper and then the wrapper is severed from the web or at least the mechanism forms a series of separate printed and addressed wrappers from a long sheet or web.

Large mercantile houses have a large mailing list containing the names of actual and prospective customers for their various commodities and have a practice of frequently mailing general and specific catalogues to all or selected names of their list.

An object of the present invention comprises the placing or printing of an identifying mark or marks upon the successive wrappers, or certain of them, so that corresponding catalogues can be enclosed within the wrappers, a certain mark or a mark in a certain position on the wrapper indicating one kind of catalogue, a different mark or the same mark in another position on the wrapper indicating another kind of catalogue, the absence of any identifying mark indicating a third kind of catalogue, and so on.

A wrapper having a catalogue identifying mark constitutes a further object of the invention.

Another object of the invention comprises the printing of an identifying mark upon each printing device or stencil the address of which is transferred to a wrapper so that the printing device or stencil will contain a visible indication that a catalogue was sent to that address. Preferably the identification mark is located in a different position on the stencil or the mark itself may be different for each mailing period. If the mailing periods are a month apart, for instance, the stencil or printing device may have provision for receiving twelve different marks or the same mark positioned in twelve different places so that the number of catalogues or printed matter sent to the address borne by the stencil and also if desired the type of catalogue sent is designated upon the stencil.

With a large mailing list it is desirable to send different catalogues to different addresses or certain catalogues to only certain addresses of the list and it is a further object of the present invention to provide mechanism so arranged that as the stencils or printed matter bearing such names

pass through the printing and addressing machine the wrappers will be printed and addressed and the catalogue identifying marks applied to the wrappers only as may be indicated by the stencils or printing devices so that some stencils or printing devices will pass through the machine without effecting the printing and addressing of a wrapper and others will effect the printing and addressing of the wrappers and the application of various catalogue identifying marks thereon.

At each printing operation it is desirable to eliminate from the list the stencils of inactive addresses and it is an object of the present invention to provide an improved mechanism for this purpose.

In the usual addressing machine that is provided with mechanism for discarding unwanted stencils from the collection it has been customary to discard the unwanted stencil immediately after the address printing operation. In the machine of the present invention, however, it is most convenient to discard the unwanted stencil from the collection several stencil lengths away from the address printing position. Furthermore, the wrapper printing mechanism and especially the catalogue identifying printing mechanism is or may be located more than one wrapper length away from the addressing position. Hence it is a further object of the present invention to provide accumulator mechanism in control of the wrapper printing mechanism, the stencil eliminating mechanism and the like, the accumulator mechanism being so arranged that it can be operated by any stencil of the collection to effect the operation of said mechanisms but only after a certain delay following its setting in operation by the selector mechanism or not until the stencil or the wrapper is in the proper position to be operated upon by the mechanism controlled through the selector mechanism.

A further object is generally to improve the construction and operation of addressing and wrapper printing machines.

Fig. 1 is a plan view of the wrapper addressing and printing machine embodying the present invention.

Fig. 2 is a sectional detail taken along line 2—2 of Fig. 1 and illustrating the stencil printing mechanism.

Fig. 3 is a side elevation of the machine of Fig. 2.

Fig. 4 is a plan view of a wrapper that comprises the product of the present invention.

Fig. 5 is a front elevation of the wrapper print-

ing mechanism, the inking mechanism being omitted.

Fig. 6 is a sectional view taken along line 6—6 of Fig. 5 and including the inking mechanism.

Fig. 7 is a plan detail of one of the sheet driving discs of the wrapper printing mechanism illustrated in Figs. 5 and 6.

Fig. 8 is an enlarged detail of the selector mechanism for controlling the connection between the reciprocating actuating arm and a printing arm of the addressing mechanism illustrated generally in Fig. 2.

Fig. 9 is a front elevation of the latch controlling member of the selector mechanism of Fig. 8.

Fig. 10 is a detail illustrating the circuit controlling switch for the selector circuits.

Fig. 11 is a sectional elevation taken along line 11—11 of Fig. 1 and illustrating the means for removing unwanted stencils from the collection.

Fig. 12 is a detail taken along line 12—12 of Fig. 11.

Fig. 13 is a plan detail of the mechanism for printing upon the successive stencils.

Fig. 14 is a section taken along line 14—14 of Fig. 13.

Fig. 15 is an end view of the intermittent operating mechanism for the printing mechanism of Fig. 13.

Fig. 16 is a front elevation of the accumulator mechanism associated with the selector mechanism.

Fig. 17 is a section taken along line 17—17 of Fig. 16.

Fig. 18 is a section taken along line 18—18 of Fig. 16.

Fig. 19 is an end view of the accumulator mechanism of Fig. 16.

Fig. 20 is a sectional detail through one of the accumulator discs and an accumulator pin thereof taken along line 20—20 of Fig. 18.

Fig. 21 is a sectional detail of the mechanism for controlling the movement of the sheet feeding rolls of the wrapper printing mechanism between feed and non-feed positions.

Fig. 22 is a detailed front elevation of the wrapper printing and feeding mechanism, similar to Fig. 5, but with the feeding rolls and printing segments in non-printing relation.

Fig. 23 is a detailed end view of the control discs for the wrapper printing and feeding mechanisms of Figs. 5 and 22.

Fig. 24 is a front elevation of the knife for severing the printed and addressed wrappers from the long sheet.

Fig. 25 is a section taken along line 25—25 of Fig. 24 and illustrating the cam operating mechanism for reciprocating the knife of Fig. 24.

Fig. 26 is a side elevation of the printing mechanism for applying a catalogue identifying mark to the wrappers.

Fig. 27 is a front elevation of the inking mechanism for the printing plate of Fig. 26.

Fig. 28 is a sectional elevation taken along line 28—28 of Fig. 1 and illustrating the selector mechanism.

Fig. 29 is a plan detail of the spring mechanism for the selector pins of the selector mechanism.

Fig. 30 is a plan detail of the selector pin guide plate of Fig. 28.

Fig. 31 is a plan detail and Fig. 32 is a detailed side elevation of the contact carrying plate of

the selector circuit controller illustrated in section in Fig. 28.

Fig. 33 is a plan detail and Fig. 34 is a side elevation of the contact receiving and selector pin guide plate of the selector circuit controller of Fig. 28.

Fig. 35 is a plan view of a stencil adapted for use with the present invention.

Fig. 36 is a perspective detail of the selector mechanism of Figs. 1, 2 and 28.

Fig. 37 is a circuit diagram of the selector mechanism, the various electromagnets actuated thereby and the switch board for enabling changes in the control of the various elements controlled by the selector mechanism to be made at will.

Fig. 38 is a detail of the pusher operating mechanism.

The product of the present machine comprises a wrapper 40, see Fig. 4, consisting of a sheet of 20 paper of suitable length and width containing adjacent one side edge printed matter 42 such as the sender's address and postmaster's information and adjacent the other side edge the postage permit 44 and between the aforesaid 25 printed matter the address 46 which is spaced from the printed matter 42 and 44 by a sufficient distance to permit engagement of the wrapper sheet by sheet driving rolls. The address 46 is applied by a stencil printing mechanism while the 30 printed matter 42 and 44 are applied by separate printing segments of the wrapper printing mechanism. In addition to the aforesaid printed matter the wrapper may have a transverse line or lines 48 applied by the wrapper printing mechanism to indicate the amount of permitted overlap of the wrapper around the enclosed catalogue. The wrapper may also have a printed mark or character 50 adjacent one marginal edge thereof and another printed character 52 adjacent the other marginal edge thereof. Some 40 wrappers may have both marks, some but one, and others no mark at all. The presence, absence and position of these marks is an indication of the type of catalogue to be enclosed with 45 in the wrapper.

The machine embodying the present invention comprises mechanism for making a succession of differently addressed and marked wrappers as above described, the printing, the marking 50 and the addressing being controlled by the successive stencils or printing devices of a collection thereof.

The machine embodying the present invention includes a generally flat horizontal table 54 supported at the top of a suitable frame 56, see Figs. 1 and 3. The addressing mechanism includes a stencil track having a pair of spaced rails 58 that extend transversely across the table and are spaced somewhat thereabove so that there is 60 clearance between the top of the table and under the tracks for the passage of the wrapper sheet. A stencil holder 60 is located above and at one end of the track and is adapted to hold a vertical stack of stencils 62 of which the lowermost 65 stencils are moved in successive order from the stack into and along the track by a pusher 64 which pusher is reciprocated in the line of the track by means including a reciprocating arm 66, see Figs. 3 and 38, actuated by the power 70 mechanism 68 that is driven by an electric motor 70. The arm 66 is reciprocated continuously while the power mechanism 68 is in operation and feeds a stencil from the stack into the track at each forward stroke thereof. The precise 75

construction of the arm 66 and the power mechanism is not herein of importance and need not be illustrated and described in detail. The stencils are advanced in succession to an address printing position that is defined, see Fig. 3, by a printing roll 72 that is located above the stencil tracks and within the rails thereof and a platen 74 that is located below the stencil track. The printing roll 72 is rotatably secured between forwardly extending arms 76 of a yoke 78 pivoted at 80 to the frame of the machine and having a horizontally elongated passage 82 therein through which the wrapper sheet or web is advanced. The printing roll 72 is supplied with ink through an idler roll 84 from an ink carrying roll 86, said idler roll being in constant engagement with both the printing and ink rolls 72 and 86. The ink roll 86 is supplied with ink from inking mechanism 88, see Figs. 1 and 3, not necessary to describe in greater detail since it may be anything suitable or common in the art. The yoke has a depending arm 90 that is reciprocated to move the printing roll 72 into and out of engagement with the stencils in the stencil track by an operating arm 92 that is fixed to a horizontal shaft 94 journaled in a bracket 96 and located beneath the table 54, the actuating arm 92 being connected with the arm 90 through a toggle link 98. The platen 74 is carried by a pair of pivoted arms 100 and is reciprocated vertically to hold the wrapper sheet in position under the stencil at the time of printing and also to move downwardly away from the stencil to permit the sheet to be advanced. The reciprocatory movements of the platen are controlled by a cam arm 102 fixed to the shaft 94 and thus oscillated by the operating arm 92. Said arm 92 is reciprocated by an actuating arm 104 which is journaled on the shaft 94 and is reciprocated continuously from the power mechanism 68 by the connecting rod 106 so that the actuating arm 104 is reciprocated in timed relation with the advance of the stencils and effects a printing operation upon the successive stencils at the time they are stationary in printing position. Since it is desirable to pass selected stencils through the printing position without printing from them, the operating arm 92 has a disconnectible connection with the actuating arm 104 so that the power mechanism can operate to advance the successive stencils without operating the printing mechanism. Said disconnectible connection, see Figs. 8 and 36 comprises a latch 108 that is pivotally mounted at 110 to the end of the operating lever 92 and has a detent 112 that is adapted to be located within a notch 114 of the actuating arm to connect the two arms for conjoint movement. A spring 116 acts upon the latch 108 to normally urge the latch for interlocking connection with the actuating arm 104. Selector operating mechanism controlled by the successive stencils is provided to effect the disconnection of the latch from the actuating arm thereby to disable the printing mechanism when it is not desired to address a wrapper by a selected stencil. Said mechanism includes a vertically extended lever 118, see Figs. 3 and 8 and 9, that is pivotally mounted on a bracket 120 fixed to and depending below the rear edge of the table 54. Said lever 118 has an offset cam extension 122 that confronts a cam roller 124 journaled at the end of the latch 108 and so disposed that it can engage said roller and hold the latch detent 112 out of the notch 114 of the actuating arm in

any position in which the latch may be carried by the reciprocation of said actuating arm. Said lever 118 is connected with a tension spring 126 that normally urges the lever for movement in a clockwise direction, see Fig. 8, or into a position removed from the latch 108 so that the latch can remain engaged with the actuating arm during the reciprocatory movements thereof. The lever 118, however, can be held normally in a latch disengaging position and thereby in a printing mechanism disabling position. For this purpose the lever 118 at the upper end thereof is provided with a pair of vertically spaced laterally extended detents 128 and 130, a selected one of which can be arranged to cooperate with a hook 132 releasably carried by a hook holder 134 loosely pivoted on a horizontal shaft 136. In the position of the hook shown, the hook releasably engages the lower detent 130 thereby holding the cam projection 122 of the lever 118 in latch engaging position so that the printing mechanism is disabled. The hook 132 can be elevated and thus moved away from engagement with the detent 130 to release the lever and permit it to move in a clockwise direction by the spring 126 thereby to permit the latching of the operating and actuating arms 92 and 104 and the operation of the printing mechanism. The raising of the hook 132 is effected by a pivoted lever 138 having an armature 140 at the end thereof remote from the hook, which armature is associated with the electromagnet 142. When the magnet is energized the armature is drawn down and the other end of the lever is raised to elevate the hook from engagement with the lever detent 130. The energization of the electromagnet is controlled by selector mechanism through the control of the stencils. The electromagnet is adapted to be momentarily energized so that the hook after releasing the lever 118 is free to fall and subsequently engage and again hold the lever when it is reset. The lever is reset at each stroke of the actuating arm 104 by means of a cam block 144 carried by the actuating arm and having a cam face 146 at its upper end that is adapted to engage a cam roller 148 carried by the arm 150 of the lever 118. At each upward stroke of the actuating arm the cam block engages the roller 148 and thereby moves the lever 118 in a counterclockwise direction and into the re-engagement of the hook 132. With the hook as thus described and arranged a printing operation is effected upon each stencil that permits the circuit of the electromagnet 142 to be energized. When the hook is reversed in position in the holder 134 so that it engages the upper detent 128 the arrangement is such that a printing operation is effected on each stencil that does not permit the completion of the circuit of the electromagnet 142. With this arrangement the hook can engage the upper detent 128 by the energization of the electromagnet 142 during the time that the lever is held in some position as illustrated in Fig. 8 by engagement of the cam block 144 with the holder 148. On the next upward movement of the actuating arm, providing the electromagnet is not energized, the hook will be disengaged from the lever by the movement of the lever in a counterclockwise direction by the cam block 144, this movement being sufficient to release the hook and permit it to drop whereupon the lever 118 will move in a clockwise direction when the actuating arm descends. The manner in which the

electromagnet 140 is controlled will be explained hereinafter.

The stencils pass through the printing position and thence along the track and are arranged to be deposited in a stencil receiver 152, Fig. 1, if the stencil is to be discarded from the collection, or moved further along the track and thence into a second stencil receiver 154 if the stencil is to be retained in the collection. The stencil receiver 152 includes horizontal corner tracks 156 that extend forwardly of the machine under the stencil track 58 and are adapted to support a series of stencils standing on edge as illustrated in Fig. 11. A bridge member 158 spans the stencil track and has a spring finger 160 which presses downwardly against the successive stencils when they are in position to be discarded into the stencil receiver 152 so that when the stencils are released for movement downward and out of the track they are given a slight but positive impulse by said spring. A guide plate 162 is located beneath the stencil track and cooperates with another guide plate 164 to insure the delivery of the stencils edgewise into the stencil holder. One of the stencil tracks is cut away beneath the stencil position therein and a slide 166 is positioned beneath the track and is adapted to support the marginal edge of the stencil so that if the stencil is to be retained in the collection it can pass further along the track and into the stencil receiver 154. If the stencil is to be removed from the collection the plate 166 is adapted to be withdrawn from its stencil holding position so that one edge of the stencil is thus free from support and is caused to fall by gravity assisted by the spring 160 into the stencil receiver 152. The operation of the slide 166 is controlled by a bell crank lever 168 one arm of which is pivotally connected to the slide and the other arm of which comprises the armature 170 of an electromagnet 172. The bell crank lever is held by a spring 174 with the armature away from the electromagnet and with the slide located inwardly of the track so that the stencils can pass over the entrance of the first stencil holder and thus move to the entrance of the second stencil holder 154. When, however, the armature 172 is energized the slide 166 is removed from stencil holding position and the stencil is thus caused to be deposited into the first stencil receiver. The electromagnet 172 is energized in response to the characteristics of the stencils as will be explained later on. The stencils in the stencil receiver 152 are stacked one against another by a stacking plate 176, see especially Fig. 11, fixed to and reciprocated by a shaft 178 having an arm 180 connected by a link 182 to an arm 184 of the main operating shaft 94 so that said stacking plate 176 is reciprocated with the shaft 94. The stencils in the stack are held against return movement by detents 186, see Fig. 12, slidable in and projecting inwardly of the tracks 156 and having projections 188 across which the stencils can move in one direction but are prevented from movement in the opposite direction. The detents 186 are pressed inwardly of the track by a leaf spring 190 which permits them to move outwardly as the stencil is moved thereover and to return them into position with the projections 188 behind the stencil. The receiver 154 is constructed generally similar to the receiver 152 except that there is no necessity for the equivalent of the slide 166.

The successive wrappers 40 are formed from

a long sheet or web 192 of paper contained on a roll 194 journaled rotatably upon the frame behind the table. The sheet is advanced over and between three feeding rolls 196, see Figs. 1 and 3, that are closely spaced apart and are relatively small in diameter so that the paper makes sharp bends between them. The rolls are geared together and one of the rolls, as the lower roll, has a positive driving connection through a driving chain 198 with the continuously rotating drive shaft 200 of the power mechanism 68. The rolls are so arranged that they do not engage the paper sheet sufficiently strongly to advance it when there is no tension on the sheet ahead of the rolls but when there is such tension the frictional engagement between the rolls and the sheet is so increased that the rolls can advance the sheet. The sheet passes from the rolls 196 downwardly in a loop 202 and about a tension rod 204 that is normally supported by the loop and is freely rotatable and is guided for vertical movement between pairs of spaced vertical rods 206 so that the rod 204 is free to move vertically without becoming displaced horizontally. The pairs of rods 206 are provided at their lower ends with stop members 208 which support the tension rod 204 in its lowermost position. With this arrangement, when the paper loop 202 is short enough to hold the tension rod 204 above the supports 208 the weight of the rod puts enough tension on the paper sheet to wrap the sheet about the rolls 196 sufficiently to enable the rolls to drive the sheet and wind paper off the roll 194. When, however, the loop is long enough so that the tension rod 204 is held by the supports 208 the paper loop is relieved from the weight of the rod and hence the frictional engagement between the sheet and the rolls 196 is reduced and the sheet advance ceases. The paper sheet passes upwardly from the forward side of the loop and thence horizontally over an idler roll 210 onto a downwardly inclined guide plate 212 and under spring fingers 214 thereof which engage the sheet sufficiently firmly to hold the sheet stationary against backward movement when the wrapper printing mechanism is idle and the sheet consequently is not advanced thereby. The paper sheet passes from the forward edge of said supporting plate 212 through the opening 82 of the printing yoke 78 and under the stencil tracks 58 and thus through the printing position and thence forwardly to a web registering mechanism. Said mechanism includes a pair of horizontal rods 216 and 218 and an intermediate roller 220 which is supported in standards 222 that are vertically adjustable as to height. The web passes under the first rod 216 and thence over the roll 220 and thence under the rod 218 and thence to the wrapper printing mechanism. By adjusting the height of the roller 220 the length of paper between the addresser and the printer can be changed and hence the relation between the address 46 and the printed matter on the successive wrappers can be adjusted.

The web advances from the registering mechanism to the printing mechanism. Said wrapper printing mechanism, see especially Figs. 1, 3, 5, 6, 7, 21, 22 and 23, comprises upper and lower horizontal shafts 224 and 226 which are extended transversely of the table respectively thereabove and therebelow and are journaled in brackets 228 and 230 that are extended through a transverse slot in and are secured to the table. Con-

stantly intermeshing gears 232 and 234 are fixed to said shafts so that both are driven at the same angular speed. The upper shaft 224 is positively driven through a driving chain 236 by the continuously rotating shaft 200 of the power mechanism 68. The gears 232 and 234 have such deep mesh that the shaft 226 can be lowered a substantial amount below its normal printing and sheet feeding position to effect the disabling of the wrapper printing and feeding mechanism without disengaging said gears. The upper shaft 226 carries a printing sector 238 that is both angularly and axially adjustable on the shaft and can be clamped in any set position and carries the type for printing the printed matter 42 of the wrapper. The shaft also has a similar printing sector 240 for printing the printed matter 44. The shaft 226 has platens 242 and 244 that are similar in construction and adjustment to the printing sectors 238 and 240 and cooperate therewith to support the web during the printing operation. The lower shaft 226 is provided with two sheet driving discs 246 and 248 that cooperate with sheet driving discs 250 and 252 fixed to the upper shaft 224. The discs 250 and 252 are similar. Each is generally circular and has a raised circular portion 254 of a predetermined circumferential extent that is adapted to engage and drive the paper sheet. A segment 256 is secured to a radial face of the disc 250 and has a circumferential portion 258 that has the same radius as the part 254 and forms an extension thereof for the purpose of driving the sheet. The segment 256 can be angularly shifted with respect to the disc 250 to occupy either one of two positions that overlap to a greater or less extent the raised peripheral portion 254 of the disc thereby to vary the length of the sheet driving portion of the disc and segment for the purpose of advancing the sheet by steps of different length for the purpose of forming wrappers of different lengths. It is obvious, however, that the amount of overlap can be varied as desired for printing a wrapper of any desired length. The printing sectors are so set with relation to the driving sections of the disc 250 and 252 that they print on the advancing sheet. The type characters on the printing sectors are inked at each revolution by engagement with the ink roll 260, see especially Fig. 6, of an inking mechanism 262 not necessary to be described in greater detail.

Mechanism is provided to disable the wrapper printing mechanism at the time the stencil printing mechanism is disabled so that no wrapper will be printed and advanced when a stencil is passed through the printing mechanism without being operated upon for if the sheet were advanced at this time a wrapper would ultimately be printed that had no address. The disabling of the wrapper printing mechanism is accomplished by lowering the shaft 226 below its normal cooperating relation with the shaft 224 so that the paper feed rolls do not pinch the sheet between them as they rotate. For this purpose the shaft 224 at each end thereof has fixed thereto a disc 264, see Figs. 5, 22 and 23. The disc 264 has a peripherally complete circular portion 266 at one side and at the other side an elevated circular portion 268 that is not entirely circumferentially continuous. The discs 264 cooperate with cylindrical discs 270 carried by and axially movable on the lower shaft 226. For the normal operating position of the wrapper printing mechanism the discs 270 are so positioned on the shaft 226 that they confront the peripherally continuous

portions 266 of the disc 264 of the upper shaft and are out of engagement therewith by a small amount. When the printing mechanism is to be disabled, however, the discs 270 are moved axially toward the left, Fig. 5, and into line with the elevated portions 268 of the discs 264 so that as the discs rotate the elevated portions 268 engage and bear upon the discs 270 and depress them and the shaft 226 so as to move the sheet driving discs 250, 264 and 252, 248 out of driving engagement with the web. The shaft 226 is supported in bearings 272, see Fig. 6, that are vertically slidable in brackets 228 and 230 and are normally supported in elevated position by springs 274. The mechanism for shifting the discs 270 axially includes a bar 276 that is longitudinally slidable in slots in the cover plates 278 of the brackets 228 and 230. Said plate has upstanding arms 280 that are loosely connected with yokes 282 that engage the hubs of the discs 270. The bar and the associated discs are retained in normal position by a retractile spring 284 the tension of which can be adjusted. The bar 276 is reciprocated by a bell crank lever construction comprising a shaft 286 journaled in a bracket 188 fixed to the bearing bracket 228 and having a vertical arm 290 provided with a pin and slot connection with the bar 276. A horizontal arm 292 is fixed to the shaft 286 and is operated by a vertically extended push rod 294, see Figs. 30 and 21. The push rod 294 is reciprocated vertically by mechanism forming a part of the power mechanism 68. The continuously rotating shaft 200 of the power mechanism is provided with a cam 296 that engages a cam roller 298 pivoted in the middle of a lever or beam 300. Said beam at one end bears upon the lower face of a vertical push rod lifter 302 which is slidable in the casing of the power mechanism and is urged for movement in a downward direction by a coil spring 304. Said beam 300 at the other end bears against the lower end of a vertically movable latch pin 306 which is urged for downward movement by a spring 308, the spring 308 being lighter in tension than the spring 304. When the latch pin 306 is free for vertical movement the beam 300 is reciprocated by the cam 296 without elevating the push rod 294, due to the strong action of the spring 304. When, however, the latch pin 306 is held in a depressed position, so that it can not be moved upwardly, the beam 300 then fulcrums upon the lower end of the latch pin and hence vertically reciprocates the push rod 294 and thus effects the lowering of the lower shaft 226 of the sheet feeding mechanism and permits the subsequent elevation of the shaft by its supporting springs 274, see Fig. 6. The latch pin 306 is permitted to reciprocate vertically and also is restrained from such movement by a latch 310 the upper end of which is pivoted at 312 to a standard elevated above the top of the latch pin. When the latch is in the position illustrated in Fig. 21, or is out of line with the latch pin, said pin can move vertically and the push rod 294 is stationary, but when the latch is disposed in vertical alignment with the latch pin and with its lower end bearing upon the latch pin and holding it in depressed position, movement of the latch pin is prevented and hence the push rod is reciprocated. The latch 310 is controlled by a rod 314 which is slidable in a supporting standard 316 and urged by a spring 318 in a direction to maintain the latch 310 out of holding relation with the latch pin 306. The upper end of the rod 314 is disposed in the path of movement of

the operating arm 92 of the stencil printing mechanism in such position that when the operating arm is released from the actuating arm 104 and is in its lowermost position it moves and holds the rod 314 in position to hold the latch above and in line with the depressed latch pin. Thus when the printing mechanism is disabled so that a stencil can be passed through the printing position without being printed from, the feeding rolls of the web printing and feeding mechanism are separated to prevent the feeding and printing of the sheet.

The sheet advances from the web printing and feeding mechanism and passes over a pair of narrow faced rolls 320 fixed to a shaft 322 and disposed under the sheet. A corresponding pair of idler rolls 324 journaled on the ends of pivoted arms 326 serve to press the paper lightly upon the rolls 320. The roll shaft 322 is driven from the lower shaft 226 by a belt 328 which passes about a pulley 330 on the roll shaft and a larger pulley 332 on the shaft 226. The driving engagement between the rolls 320 and the sheet is adapted to be relatively feeble and is sufficient to keep the paper flat between the sheet feeding discs and the severing knife. Said rolls do not advance the stationary sheet by their own action.

The severing knife is located at the edge of the table, see Figs. 1, 2, 6, 24 and 25, and comprises a stationary knife blade 334 and a movable knife blade 336 carried by a frame 338 pivoted at one end to a bracket carried by the table. The web passes between the knife blades and under a plate 342 which holds the paper down upon the stationary blade. The movable knife blade is reciprocated by a lever 344 which is pivoted intermediate its ends to a fixed bracket 346 and has at one end a universal joint connection 348 with the free end of the knife blade and at its other end having a laterally extending cam roll 350 which is located in a cam groove 352 in the side face of a cam disc 354 fixed to and rotatable with the upper shaft 224 of the sheet feeding and printing mechanism. The shape and relative position of the cam groove 352 is such as to effect a severing operation of the knife rapidly between successive wrapper sections of the web whereby to sever the completed wrappers from the web even though the web may be in motion.

The successive independent wrappers fall into a tray 356 pivoted at one end to the frame of the machine and held releasably in wrapper receiving position by a strut rod 358. A lightly weighted bar 360 is pivoted to the knife blade and extends forwardly into the tray and is adapted to guide the front edge of the successive wrappers downwardly into the tray and also to hold them against unintentional displacement therefrom.

It is desirable to print some identifying mark upon each stencil at the time it is printed therefrom for the purpose of indicating that a catalogue or other printed matter was mailed to the address borne by the stencil at the last printing operation. Such printing mechanism is illustrated in Figs. 1, 13, 14 and 15, and includes a bracket 362 that is secured to and upstands above a rail 364 that is disposed above and transversely of the web of paper. The rail 364 is provided with a series of pin openings 366 which are arranged lengthwise of the rail and the bracket 362 is provided with a locking pin 368 that can enter any selected one of the aforesaid locking openings so as to hold the bracket in different positions with respect to the stencil at the time it is stationary in the printing position, and thereby print an

identifying character in different positions on the stencil. The bracket, however, is not intended to be shifted in position during the run of the stencil collection but may be shifted between successive runs so that an identifying character will appear in a different position on each stencil that is printed from at each run. Said bracket 362 carries a generally semi-circular type arm 370 having a type character 372 on one end face thereof and having the other end pivoted on a stud 374 carried by the aforesaid bracket. The type arm intermediate its ends is pivotally connected to a link 376 that in turn is pivoted to the lower end of a cam lever 378 that is pivoted at 380 to the bracket above its pivotal support and has a cam roll 382 that bears against the peripheral portion of a cam disc 384 having a series of notches 386 therein. Said cam disc is secured to and rotatable with a shaft 388 journaled at one end in the bracket 362 and at the opposite end 20 in a bracket 390 carried by the rail 364. A tensile spring 392 serves to maintain the cam roll 382 in engagement with the periphery of the cam disc and to move the cam roller into the notches 386 when they successively confront the roller. 25 The movement of the cam roller into a notch causes the type arm 370 to be rotated in a counterclockwise direction to bring the type character 372 against the marginal portion of the stencil, as is illustrated in the dotted line Fig. 14, 30 the upper portion of one of the stencil rails 58 being cut away for this purpose. The type character is inked by an ink roll 394 which is journaled between depending arms of a frame 396 that is pivoted at its upper end to a stud 398 35 and urged in a counterclockwise direction by a coil spring 400. The arrangement of the ink roll is such that the spring 400 maintains the ink roll normally against a part of the type character 372 or against the printing face of the type arm 320. 40 When the type arm is rotated in a printing direction the type character is caused to roll over the inked face of the ink roll and thereby receive ink, the roll and its frame moving outwardly and rolling upon the arcuate back edge of the type 45 arm 370 during movement of the type character between the roll and the stencil.

The operating cam 384 of the type arm is advanced in a step by step manner by means including a ratchet disc 402 fixed to said shaft 50 at the supporting bracket 390. Said ratchet disc has as many teeth 404 as there are notches 386 in the cam disc 384. An arm 406 is loosely pivoted on the shaft 388 and carries a spring urged pawl 408 that is adapted to engage the successive ratchet disc teeth and advance the ratchet. The arm 406 is pivotally connected to a connecting rod 410 that is pivotally connected, see Fig. 1, to an upstanding bracket 412 of the printing yoke 78. Thus when said printing yoke reciprocates during a printing operation it is caused to advance the shaft 388 and effect a printing operation on the stencil.

As has been stated before it is desirable to impress certain identifying marks 50 and 52 upon 65 selected wrappers for the purpose of indicating the nature of the catalogue or other printed matter to be sent to the address borne by the wrapper. These marks are applied to the wrapper by the printing mechanisms 414, 416 disposed on opposite sides of the path of movement of the wrapper and between the addressing mechanism and the wrapper printing mechanism. Said printing mechanisms are or can be identical and but one need be described. The printing mechanism 75

416, see especially Figs. 26 and 27, comprises a supporting frame 418 carried by the table 54 and having a foot or bracket 420 over which the marginal portion of the wrapper web passes and which constitutes a platen for the printing mechanism. The bracket 418 supports a solenoid coil 422 having an armature or plunger 424 therein that is maintained normally in elevated position and partly out of the solenoid by a compression spring 426, the lower end of which is engaged with and supported by a bracket 428. A printing rod 430 is fixed to the plunger and carries at its lower end a printing head 432 disposed under said bracket 428 and having a printing character 434 on its lower face. When the solenoid is energized the plunger is drawn downwardly thereinto and causes the printing character to be moved downwardly and pressed upon the wrapper sheet located upon the platen 420 thereby to make a mark 52 upon the wrapper. The printing character 434 is inked by an inking mechanism constructed essentially like the inking mechanism for the type character for printing upon the stencil and includes a frame 436 pivoted at its upper end to a supporting bracket 438 and having between the arms of its lower end a rotatably mounted inking roll 440 which is held yieldingly by a spring 444 in contact with the printing character and is so arranged that it rolls over the face of the printing character and swings away therefrom in the printing stroke thereof. The marks 50 and 52 applied by the printing mechanisms 414 and 416 can be the same or different. As here shown the marks are small circular dots or areas. They can be the same or different colors, it being preferred that the mark 50 be green and the mark 52 be red in color. The marks can be combined in preconceived ways to denote the character of the catalogue or printed matter. A wrapper bearing no mark may indicate a catalogue of one type. A wrapper bearing one mark may indicate another kind of catalogue. A wrapper bearing the other mark may indicate a third catalogue and both marks together may indicate a fourth catalogue.

The control of the mark printing mechanisms 414 and 416, the stencil printing mechanism and the discard mechanism for unwanted stencils is controlled by a selector mechanism which in turn is governed by the individual stencils. The stencil 62, see especially Fig. 35, has a frame that carries the usual address bearing stencil sheet and also has a portion 62a at one side of the stencil sheet that has provision for two spaced longitudinal rows of perforations or openings 446. Said perforations are disposed in selected locations in the stencil frame for the purpose of controlling the operation of the stencil addressing machine through selector mechanism. The selector mechanism, see Figs. 1, 29 through 34 and 36, comprises a horizontal plate 448 that is located above the stencil track and the stencil therein that is next to be moved into printing position. Said plate is provided with two spaced longitudinal rows of closely spaced rectangular slots 450 therein, each slot corresponding in position to the position of a different perforation 446 in the stencil therebeneath. Vertically disposed rectangular selector bars 452 are vertically movably located in said slots. Said bars have heads 454 that over-lie the top face of the plate to limit the downward movement of the bars and have notches 456 therein in which the nail of a finger can be inserted for the purpose of removing a bar from a corresponding slot. The selector bars

are held yieldingly in depressed position by independent spring mechanisms carried by an open rectangular frame 458 pivoted at 460 to ears 462 projecting from the forward edge of the plate 448 and capable of being swung about its pivots to remove the spring actuated mechanisms from engagement with said selector bars to permit said bars to be removed from position. The frame 458 is held releasably in operative position by a spring catch 463 carried by the plate 448. A pair of shafts 464 are carried by and extend through the opening in the frame 458 and support a series of bell crank levers 466, each bell crank lever having a generally horizontal arm that is disposed above and in engagement with a separate one of said selector bars. Independent springs 468 are connected with the vertical arms of said levers and tend to rotate them in such manner as to maintain the selector bars yieldingly depressed. With this arrangement each bar can be raised and lowered independently of the other bars. The selector plate 448 is reciprocated toward and away from the stencil track at times when the stencils are stationary therein. The lower ends of the selector bars are provided with cylindrical pins 470 which extend slidably through apertures 472 in an insulating guide plate 474 secured to the rear stencil rail above the stencils. When the selector plate 448 is moved downwardly the pins 470 are brought into engagement with the frame of the stencil therebeneath. If there is no perforation 446 beneath the selector bar the selector bar is restrained from further movement while the plate 448 continues its downward movement. If, however, there is a perforation 446 beneath a pin 470 of a selector bar the pin passes into said perforation. The plate 474 has a cover 476 composed of insulating material having a series of contact bars 478 that are electrically connected with individual conductors 480 and are received in grooves 482 of the plate 474 and thus are positioned in line with the selector pin openings 472, there being a separate contact plate 478 for each selector bar 452. The contact plates 478 are disposed beneath the ends of the selector bars and the selector bars are normally in elevated position and hence out of electrical engagement therewith. When the selector frame is lowered the ends of the selector bars are moved toward the contact members. If there is no perforation in the stencil frame beneath a selector bar the stencil frame holds the bar from movement into engagement with its corresponding contact member. If, however, there is such a perforation the selector bar pin passes into the perforation and thereby permits the selector bar to move into engagement with its corresponding contact member thereby to complete an electric circuit for effecting control of the printing mechanism and such other elements of the machine as it may be desired to control. The selector plate 448 is secured to the lower end of a vertically reciprocable slide 484 the plate, however, being insulated from said slide by insulating means 486 and being connected to a terminal conductor 488. The slide 484 is guided for vertical movement in a guide 490 carried by a bracket 492 secured to the table 54. The slide 484 is provided with ratchet teeth 494 which are engaged by a gear sector 496 fixed to a shaft 498 journaled in bearings in the guide and the aforesaid bracket so that the oscillating movements of said shaft cause a reciprocating movement of said guide 484 and the selector bars. The shaft 498 is oscillated, see especially Figs. 36 and 28, by 75

means of an arm 500 that is fixed to said shaft and is pivoted to one end of a connecting rod 502 the other end of which is pivoted to an arm 504 fixed to the shaft 136 on which the aforesaid hook 132 of the latching mechanism for the printing mechanism is journaled. A depending arm 506 is fixed to said shaft 136 and at its lower end carries a cam roller 508 that cooperates with a cam 510 fixed to the actuating arm 104. Said cam 510 is so arranged that it causes the reciprocation of said arm 506 at each stroke of said actuating arm and thus causes the selector mechanism to feel each stencil.

The selector controlling perforations 446 of the various stencils can be so differently located that one or more of them can effect the disabling of the printing mechanism so that no address and wrapper will be printed when they are passed through the printing position and others can be arranged to control the operation of the various stencil controlled elements of the machine in various selected ways. Due to the fact that the printing mechanisms 414 and 416 are located one wrapper length ahead of the stencil addressing position and are two operations ahead of the selector operation the closing of the contacts of the selector mechanism can not be utilized directly to energize the electromagnets for said printing mechanisms. Since also the discharge position of an unwanted stencil is five operations removed from the selector operation the electromagnet 172 that controls the discharge of the unwanted stencil can not be energized directly by the closing of the selector mechanism contacts. Hence an accumulator mechanism is provided for delaying the control of the aforesaid printing mechanisms and discard mechanism until the appropriate wrapper and the stencil arrive in proper position.

The accumulator mechanism 512, see especially Figs. 3 and 16 through 20, is carried by the base of the machine adjacent the power mechanism 68 and has an operating shaft 514 that is positively driven from the continuously rotating shaft 200 of the power mechanism and at equal speed therewith through a chain 516. Said accumulator mechanism includes end plates 518 and 520 in which an accumulator shaft 522 is journaled. Said shaft at one end thereof has a ratchet 524 fixed thereto that has a number of equally peripherally spaced teeth 526, there being at least as many teeth as there are operations intervening between the selector operation and the last mechanism to be controlled by the selector. An arm 528 is journaled freely on said shaft and has a spring urged pawl 530 that is adapted to engage the successive teeth of said ratchet and advance said ratchet one tooth at each stroke. Said arm is reciprocated by a connecting rod 532 that is pivotally connected to a crank arm 534 of the aforesaid continuously rotating shaft 514. The arrangement is such that the ratchet and the shaft 522 is advanced one tooth for each complete revolution of the shaft 514. A pawl 536 engages the successive ratchet teeth to prevent back motion of the ratchet and a brake mechanism 538 engages the hub of the ratchet to hold it against excessive over-travel. The shaft 522 is provided with three discs 540, 542, and 544 of which the disc 540 controls the operation of the stencil discharge magnet 172, the disc 542 controls the energization of the red marker printing mechanism 414, and the disc 544 controls the energization of the green marker printing mechanism 516. Each of said discs carries a plurality of

pins 546 which are equi-angularly disposed about the periphery of the discs with the same angular displacement between them as between the teeth of the ratchet 524. Said pins are disposed parallel to the axis of the shaft 522 and are axially slidable in the discs and have heads 548 on the ends thereof, one or another of which engages the disc to limit the axial movement of the pins. The pins are held movably in any axially displaced position in the disc by springs 550 which are carried by the discs and bear against the pins. Electromagnets 552, 554 and 556 are respectively associated with the discs 540, 542 and 544 and have armatures 558 that are normally held in unattracted position by springs 560 but are movable into attracted position to engage the ends of certain of the pins and to move them toward the left, Fig. 16. Contact operating fingers 562, 564 and 566 are associated with said discs and are loosely journaled on a supporting rod 568. Pairs of contact members 570, 572 and 574 are respectively associated with said fingers and are arranged to be engaged when said fingers are elevated. Said fingers are disposed in position to be engaged by the left hand ends of said pins 546 when they have been moved into their left hand positions by the associated electromagnets, and elevated to close the associated pair of contact members. As the accumulator shaft 522 continues its intermittent rotation the displaced pin is moved away from its associated finger and thus permits the contact members to separate thereby opening the associated circuit. The displaced pins are reset or moved toward the right by a resilient resetting member 576 one of which is associated with each disc and into the engagement of which the displaced pins are brought after passing through contact controlling position so that upon further rotation of the discs the displaced pins are reset into their right hand positions. All displaced pins are reset prior to passing in front of the electromagnet armatures. With this arrangement an electromagnet is adapted to be energized at the time a pin confronts its armature thereby displacing the pin. The disc with the displaced pin advances in an intermittent manner one step for each stencil feeding operation of the selector. After a certain number of such operations have been effected the displaced pin engages its associated contact controlling finger and thereby closes the contact and effects the operation of the mechanism associated with said contact members. For instance, the electromagnet 552 controls the operations of the electromagnet 172 that permits the discharge of an unwanted stencil. Since the discharge position of the stencils is five operating positions in advance of the selector position the electromagnet 552 is so positioned that it is five pins in advance of the contact control finger 562. Thus the contact control finger will be elevated by the displaced pin only after five intermittent advancing movements of the disc. Since the red and green marker mechanisms are only two operations away from the selector operation the electromagnets 554 and 556 associated therewith are so disposed that they displace a pin in such position that it requires two advancing movements of the associated discs to effect control of the contact members. It is obvious if the parts controlled by the accumulator mechanism were positioned a different number of operations away from the selector operation than has been described the electromagnets would be arranged to engage and displace appropriate pins.

The power for operating the selector control circuits is supplied by a dynamotor 578, see Fig. 3, which steps down the usual lighting voltage to a suitably low value, as from 110 or 220 volts to 24 volts. The selector control circuits are illustrated diagrammatically in Fig. 37. The individual conductors 480 from the selector contact members 478 terminate in a junction or switch board 580 as do also the circuit conductors from the selector magnet 142, the discharge magnet 172, and the various accumulator magnets and circuit controllers therein, so that by connecting the various circuit conductors in preconceived ways a large variety of different operations of the machine are effected. In order to prevent a sparking between the various contact members of the selector circuits a master circuit controller comprising an oscillable sector 582 and a cooperating contact roll 584 is provided, the sector being reciprocated, see Figs. 10 and 37, by an arm 586 secured to the actuating arm 104. The sector 582 has an insulating portion 588 which at times rides under the roll 584 and thereby breaks the circuit between the sector and roll. The arrangement is such that the roll and sector are moved into electrical engagement subsequent to the closing of any of the selector circuits and out of engagement prior to the opening of any selector circuit so that the arcing occurs between the roller and segment which are massive rather than elsewhere. The roller and segment are arranged in the main circuit conductor 488 between the power source 478 and the selector plate 448 so that they are included in the circuit of all the selector pins.

I claim:

1. A wrapper printing and addressing machine comprising means for advancing a web of paper, means for applying the same printed data and different addresses to successive wrapper blanks, adjustable means for changing the lengths of the printed and addressed wrappers, and means for changing the relation between the printed data and addresses on the wrappers.

2. A wrapper printing and addressing machine comprising means for applying different addresses to different sections of a web of paper, means for printing the same data on different sections of a web of paper, means for advancing the web intermittently through said addressing and said printing means by steps of equal length in each means, means for changing the relation between the printed data and the addresses on the web, and means for changing the length of said steps to provide printed and addressed wrappers of different lengths.

3. A wrapper printing and addressing machine comprising means for applying different addresses to successive wrapper blanks, means for applying the same printed data to successive wrapper blanks, means for advancing successive wrapper blanks by steps of equal length through said addressing and printing means, means for changing the length of said steps to provide wrappers of different lengths, and adjustable means to register the address with the printed matter on wrappers of different lengths.

4. A wrapper printing and addressing machine comprising means to apply different addresses to different sections of a web of paper, means to apply the same printed matter to said different sections of the paper web, means for advancing the paper web intermittently by steps of equal length through said addressing and said printing means, said advancing means having adjustable means

to change the lengths of said steps, and means providing different lengths of web between said addressing and said printing means for effecting registration between the printed matter and the addresses of the successive sections of the web for different lengths of advance of the web.

5. A wrapper printing and addressing machine comprising means for applying different addresses to different wrapper sections of a paper web, means for applying the same printed matter to the wrapper sections, means for advancing the web by steps of equal length through said addressing and said printing means, means for varying the lengths of advance of said web for providing wrappers of different lengths, and means for providing different definite lengths of web between said addressing and said printing means for effecting registration between the address and the printed matter of wrappers of different length.

6. A wrapper printing and addressing machine comprising means for applying different addresses to different wrapper blanks, means for applying the same printed matter to different wrapper blanks, means for advancing the blanks in succession through said addressing means and said printing means, address bearing devices associated with said addressing means, and means controlled by selected address bearing devices for preventing an addressing operation of said addressing means and also for arresting the operation of said wrapper advancing means.

7. A wrapper printing and addressing machine comprising means for passing a succession of address bearing devices intermittently through an addressing position, addressing means operable on said devices when they are in addressing position to apply the successive addresses on successive wrapper blanks, means for printing the same data on the successive wrapper blanks, means for advancing the successive wrapper blanks through said addressing means and said printing means, and means under control of said printing devices for disabling said addressing means and also said wrapper advancing means.

8. A wrapper printing and addressing machine comprising means for advancing a succession of address bearing devices through a printing position, means for applying the addresses thereof to successive wrapper blanks, means for printing the same data on successive wrapper blanks, means for advancing said wrapper blanks through said addressing means and said printing means, and means under control of said address bearing devices for disabling said addressing means and also for arresting the advance of wrapper blanks through said addressing means and through said printing means.

9. A wrapper printing and addressing machine comprising means for advancing a succession of address bearing devices through an addressing position, means for applying the addresses thereof to successive wrapper blanks, means for printing the same data on successive wrapper blanks, means for advancing the blanks through said addressing and said printing means, and means under control of said address bearing devices for controlling the operation of said addressing means and also said printing means and wrapper advancing means.

10. A wrapper printing and addressing machine comprising addressing mechanism including means for advancing a succession of address bearing devices through an addressing position, means for applying the addresses thereof to different

wrapper sections of a web of paper, printing mechanism for applying the same printed matter to the different wrapper sections of the web of paper and including cooperating feed rolls for advancing the paper web through said addressing and printing mechanism, means governed by selected address bearing devices for disabling said printing mechanism, and means also governed by the same selected address bearing devices for effecting the movement of said web feeding rolls out of cooperative relation, whereby to prevent the advance of the web through both printing and addressing mechanisms.

11. A wrapper printing and addressing machine comprising addressing mechanism including means for advancing a succession of address bearing devices through an addressing position, means for applying the successive addresses to successive wrapper sections of a web of paper, printing mechanism for applying the same printed data to the successive wrapper sections of the paper web including means for advancing the paper web intermittently through said addressing and said printing mechanisms, means controlled by selected address bearing devices for disabling said addressing mechanism, and means responsive to the disabling of said addressing mechanism for effecting the disabling of said web advancing means.

12. A wrapper printing and addressing machine comprising addressing mechanism including means for advancing a succession of address bearing devices through an addressing position, means for applying the successive addresses to said wrapper sections of a paper web, printing mechanism for applying the same printed data to the successive wrapper sections of the web, means for advancing the web intermittently through said addressing and said printing mechanisms, means responsive to selected address bearing devices for disabling said addressing mechanism, said addressing mechanism having a part which moves into a disabled position when disabled, and means responsive to the movement of said part into disabled position for effecting the disabling of said web advancing means.

13. A wrapper printing and addressing machine comprising addressing mechanism including means for advancing a succession of address bearing devices through an addressing position, means for applying the successive addresses to successive wrapper portions of a web of paper including a continuously reciprocating member, an arm having a latch connection with said member for normally reciprocating therewith, means responsive to selected address bearing devices for unlatching said arm with said reciprocating member for effecting the disabling of said addressing mechanism, printing mechanism for applying the same printed matter to the successive wrapper sections of the web including means for advancing the web intermittently through said addressing and said printing mechanisms, and means operated by said unlatched arm for effecting the disabling of said web advancing means.

14. A wrapper printing and addressing machine as defined in claim 13, the web advancing means having normally cooperating web advancing rolls, and means operated by said unlatched arm to effect the movement of said rolls out of cooperative relation.

15. A wrapper printing and addressing machine as defined in claim 13, the web advancing means having normally cooperating web advancing rolls, means for moving said rolls out of cooperative

relation including a continuously rotating cam, a roll-moving cam lever associated with said cam, and means operated by said unlatched arm for effecting the movement of said lever by said cam.

16. In a wrapper printing and addressing machine, wrapper printing mechanism comprising means for applying the same printed matter to successive wrappers, means for advancing the successive wrappers through said printing means including a pair of shafts one of which is movable toward and away from the other, normally cooperating feed rolls between which the wrapper is gripped rotatable with said shafts, and means for moving said movable shaft away from said other shaft to separate said feed rolls comprising notched discs carried by and rotatable with one of said shafts, shaft separating discs carried by and rotatable with said other shaft and axially slidable thereon from positions misaligned with said notched discs into said notches and into alignment with said notched discs whereby said notched discs are constrained to ride upon said axially movable discs and thus effect the separation of said shafts, and means to move said shaft separating discs axially.

17. In a wrapper printing and addressing machine, wrapper printing mechanism comprising means for applying the same printed matter to successive wrappers, means for advancing the successive wrappers through said printing means including a pair of shafts one of which is movable toward and away from the other, normally cooperating feed rolls between which the wrapper is gripped rotatable with said shafts, and means for moving said movable shaft away from said other shaft to separate said feed rolls comprising notched discs carried by and rotatable with one of said shafts, shaft separating discs carried by and rotatable with said other shaft and axially slidable thereon from positions misaligned with said notched discs into said notches and into alignment with said notched discs whereby said notched discs are constrained to ride upon said axially movable discs and thus effect the separation of said shafts, means to move said shaft separating discs axially including a reciprocating member connected with said shaft separating discs, a continuously reciprocating cam, a cam lever having a connection with said reciprocating member for moving it, and means for controlling the reciprocation of said cam lever by said cam.

18. In a wrapper printing and addressing machine, wrapper printing mechanism comprising means for applying the same printed matter to successive wrappers, means for advancing the successive wrappers through said printing means including a pair of shafts one of which is movable toward and away from the other, normally cooperating feed rolls between which the wrapper is gripped rotatable with said shafts, and means for moving said movable shaft away from said other shaft to separate said feed rolls comprising notched discs carried by and rotatable with said other shaft and axially slidable thereon from positions misaligned with said notched discs into said notches and into alignment with said notched discs whereby said notched discs are constrained to ride upon said axially movable discs and thus effect the separation of said shafts, and means to move said shaft separating discs axially, including a reciprocating member connected with said shaft separating discs, a continuously reciprocating cam, a cam lever having a connection with said reciprocating member for moving it, and means for controlling the reciprocation of said

cam lever by said cam, said cam lever having a connection with said reciprocating member at one end and having a depressible fulcrum at the other end, and means for depressing said fulcrum for effecting the reciprocation of said cam lever by said cam.

19. A wrapper printing and addressing machine as defined in claim 18 including addressing mechanism for applying the addresses of successive address bearing devices to the successive wrapper blanks, means responsive to selected address bearing devices for disabling said addressing mechanism, and means responsive to the disabling of said addressing mechanism for effecting the holding of said depressible fulcrum in depressed condition.

20. A wrapper printing and addressing machine comprising means for advancing a succession of address bearing devices through an addressing position, means for applying said addresses to a succession of wrapper blanks, printing mechanism for applying the same printed data to the successive wrapper blanks, means for advancing successive wrapper blanks through said addressing and printing means, means controlled by said address bearing devices for passing selected address bearing devices through the addressing position without the application of their addresses to the wrapper blanks, and means for applying a distinguishing mark upon such address bearing devices as are used for addressing and when they are in addressing position.

21. In an addressing machine means for moving a succession of address bearing devices through a printing position, printing means for printing from said devices, means operated by said printing means for applying a distinguishing mark to said devices, and means controlled by said devices for disabling at the same time both said printing means and said mark applying means to prevent the operation of both means on said selected devices.

22. In an addressing machine, a stencil track, means for advancing a succession of stencils along said track and through a printing position, printing means for printing from said stencils in said track, means for applying a distinguishing mark to said stencils when they are successively in printing position, and means for operating said printing means and said mark applying means concurrently on the same stencil.

23. In an addressing machine, a stencil track, means for advancing a succession of stencils along said track and through a printing position, printing means for printing from said stencils in said track, means for applying a distinguishing mark to said stencils when they are successively in printing position, means for operating said printing means and said mark applying means concurrently on the same stencil, and means controlled by selected stencils for concurrently disabling both said printing and said mark applying means.

24. In an addressing machine, means for advancing a succession of address bearing devices through a printing position, printing means including a reciprocating printing arm for effecting the printing from said devices, a reciprocating printing arm for applying an identifying mark to said devices, means responsive to the reciprocatory movements of and operated by said device printing arm for reciprocating said mark applying arm, and means controlled by selected stencils for disabling said printing means and

arresting the reciprocatory movement of said printing arm.

25. A wrapper printing and addressing machine, comprising means for applying different addresses to successive wrapper blanks, printing means for printing data on successive wrapper blanks, and means for applying different distinguishing marks in different distinguishing locations on selected wrapper blanks.

26. A wrapper printing and addressing machine, comprising means for applying different addresses to successive wrapper blanks, means for applying printed matter to the successive blanks, means for applying different distinguishing marks to said wrappers, and means for selecting the mark and the wrapper to receive the mark.

27. A wrapper printing and addressing machine comprising means for applying different addresses to successive wrapper blanks, means for applying printed matter to the successive blanks, means for applying different identifying marks on different locations of said blanks, and means for effecting the operation of a selected mark applying means upon a selected wrapper blank.

28. A wrapper addressing and printing machine comprising means for advancing a succession of address bearing devices through an addressing position, means for applying the addresses of said devices upon successive wrapper blanks, means for printing data upon the successive wrapper blanks, means for applying a distinguishing mark upon the blanks, and means controlled by said selected address bearing devices for effecting the application of said distinguishing mark upon selected wrapper blanks.

29. A wrapper printing and addressing machine comprising means for advancing successive address bearing devices through an addressing position, means for applying the addresses of different devices to successive wrapper blanks, means for printing data on the successive wrapper blanks, means for applying a distinguishing mark to said blanks, and means controlled by a selected address bearing device for effecting the application of said mark upon the wrapper blank bearing the address of said device.

30. A wrapper printing and addressing machine comprising means for advancing successive address bearing devices through an addressing position, means for applying the addresses of different devices to successive wrapper blanks, means for printing data on the successive wrapper blanks, means for applying a distinguishing mark to said blanks, and means controlled by a selected address bearing device for effecting the application of said mark upon the wrapper blank bearing the address of said device a number of addressing operations following the application of the address of the selected device on the wrapper.

31. A wrapper printing and addressing machine, comprising means for advancing a succession of address bearing devices, means for applying the addresses of different devices to successive wrapper blanks, means for printing data on the successive blanks, means for applying a plurality of different distinguishing marks to the wrapper blanks, and means responsive to selected devices for effecting the operation of selected mark applying devices.

32. A wrapper printing and addressing machine, comprising means for advancing successive wrapper blanks, means for advancing a succession of address bearing devices, means for applying addresses of different address bearing

devices to successive wrapper blanks, means for applying printed matter to successive wrapper blanks, means for applying different identifying marks to said wrapper blanks, and means controlled by selected address bearing devices for withholding the application of the addresses borne thereby on said wrapper blanks and also for effecting the application of selected identification marks on selected wrapper blanks.

33. A wrapper printing and addressing machine, comprising means for advancing a succession of address bearing devices, means for applying the addresses of said devices to successive wrapper blanks, printing means for applying printed matter to the successive blanks, means for advancing said blanks intermittently through said addressing means and said printing means, means located more than one wrapper blank away from said addressing means for applying a distinguishing mark to the wrapper blank registering therewith, and means governed by a selected stencil for effecting the operation of said mark applying means only when the wrapper blank bearing the address of said selected stencil is in register with said mark applying means.

34. A wrapper printing and addressing machine, comprising means for advancing a succession of address bearing devices, means for applying addresses of different devices upon successive wrapper blanks, printing means for applying printed matter to the successive blanks, means located in register with a different wrapper blank than the one that at any time is in addressing position for applying an identifying mark to a wrapper, and means controlled by a selected address bearing device for effecting the subsequent application of said mark upon the wrapper blank bearing the address of said device.

35. A wrapper printing and addressing machine, comprising means for advancing a succession of address bearing devices intermittently through an addressing position, means for advancing successive wrapper blanks intermittently through said addressing position, one wrapper blank for each addressing operation, means for applying the addresses of different devices to different wrapper blanks, means located at a predetermined number of wrapper positions away from addressing position for applying an identifying mark on selected wrapper blanks, selector means operable on the successive address bearing devices a predetermined number of addressing operations in advance of said addressing position, and means controlled by the operation of said selector means in response to a selected device to delay the operation of said mark applying means until the wrapper blank bearing the address of the selected device is in register with said mark applying means.

36. A wrapper printing and addressing machine, comprising means for advancing a succession of address bearing devices intermittently through an addressing position, means for advancing successive wrapper blanks intermittently through said addressing position, one wrapper blank for each addressing operation, means for applying the addresses of different devices to different wrapper blanks, means located a predetermined number of wrapper positions away from addressing position for applying an identifying mark on selected wrapper blanks, selector means operable on the successive address bearing devices a predetermined number of addressing operations in advance of said addressing position, and means controlled by the operation of said selector means in response to a selected device for effecting the operation of said mark applying device following the sum of the addressing operations that said mark applying means and said selected device are away from addressing position.

37. A wrapper printing and addressing machine, comprising means for advancing a succession of address bearing devices intermittently through an addressing position, means for advancing successive wrapper blanks intermittently through said addressing position, one wrapper blank for each addressing operation, means for applying the addresses of different devices to different wrapper blanks, means located a predetermined number of wrapper positions away from addressing position for applying an identifying mark on selected wrapper blanks, selector means operable on the successive address bearing devices a predetermined number of addressing operations in advance of said addressing position, means controlled by the operation of said selector means in response to a selected device for effecting the operation of said mark applying device following the sum of the addressing operations that said mark applying means and said selected device are away from addressing position, and means for printing on the successive wrapper blanks data common to all of them.

38. A wrapper printing and addressing machine, comprising means for applying different addresses to different wrapper blanks, means for applying printed data on the different blanks, means for applying an identifying mark on selected wrappers, means responsive to a selected address for effecting the ultimate application of said mark to the wrapper associated with said address, and means for delaying the operation of said mark applying means for a predetermined number of operations of said addressing means.

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