June 15, 1943. H. P. ELLIOTT 2,322,119

ADDRESSING MACHINE

Filed Feb. 13, 1940 5 Sheets-Sheet 1

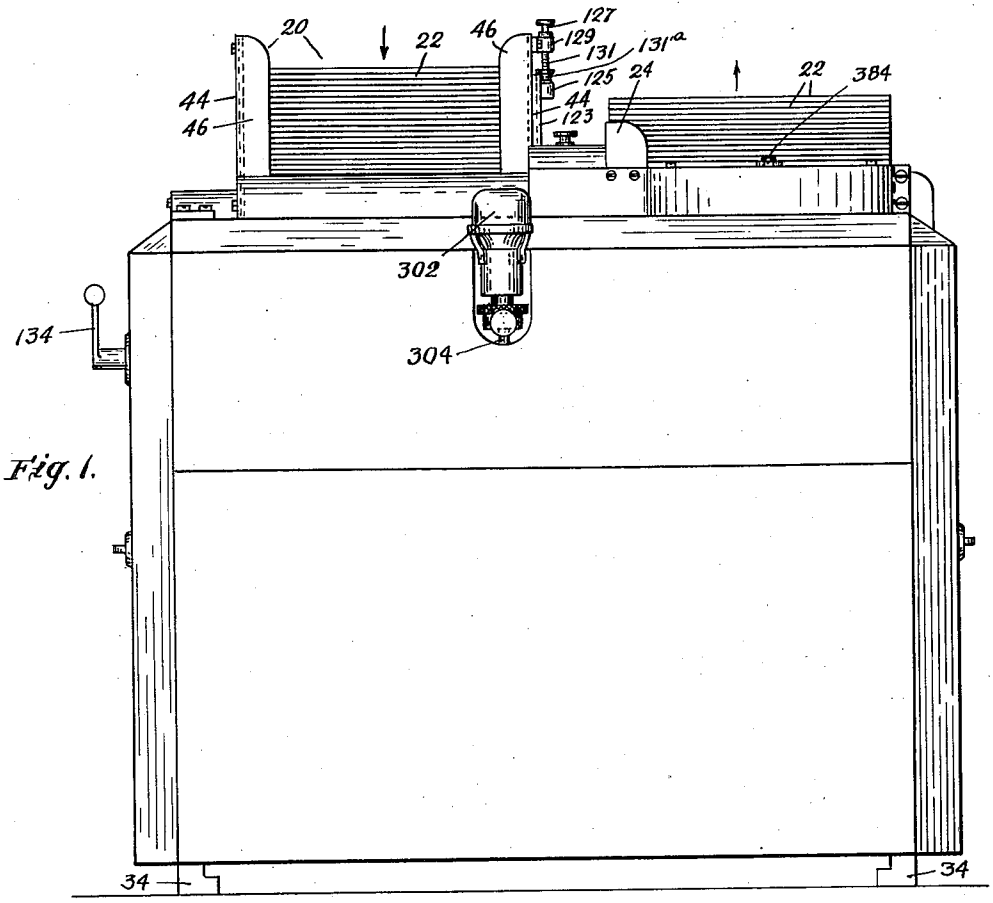


Fig. 1.

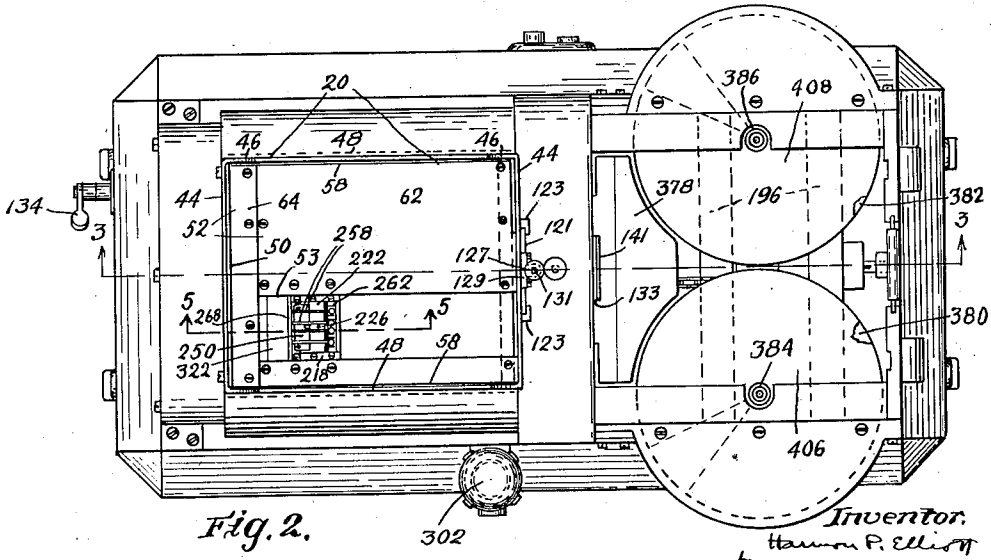


Fig. 2.

Inventor.
Harmon P. Elliott
by

June 15, 1943. H. P. ELLIOTT 2,322,119

ADDRESSING MACHINE

Filed Feb. 13, 1940 5 Sheets-Sheet 2

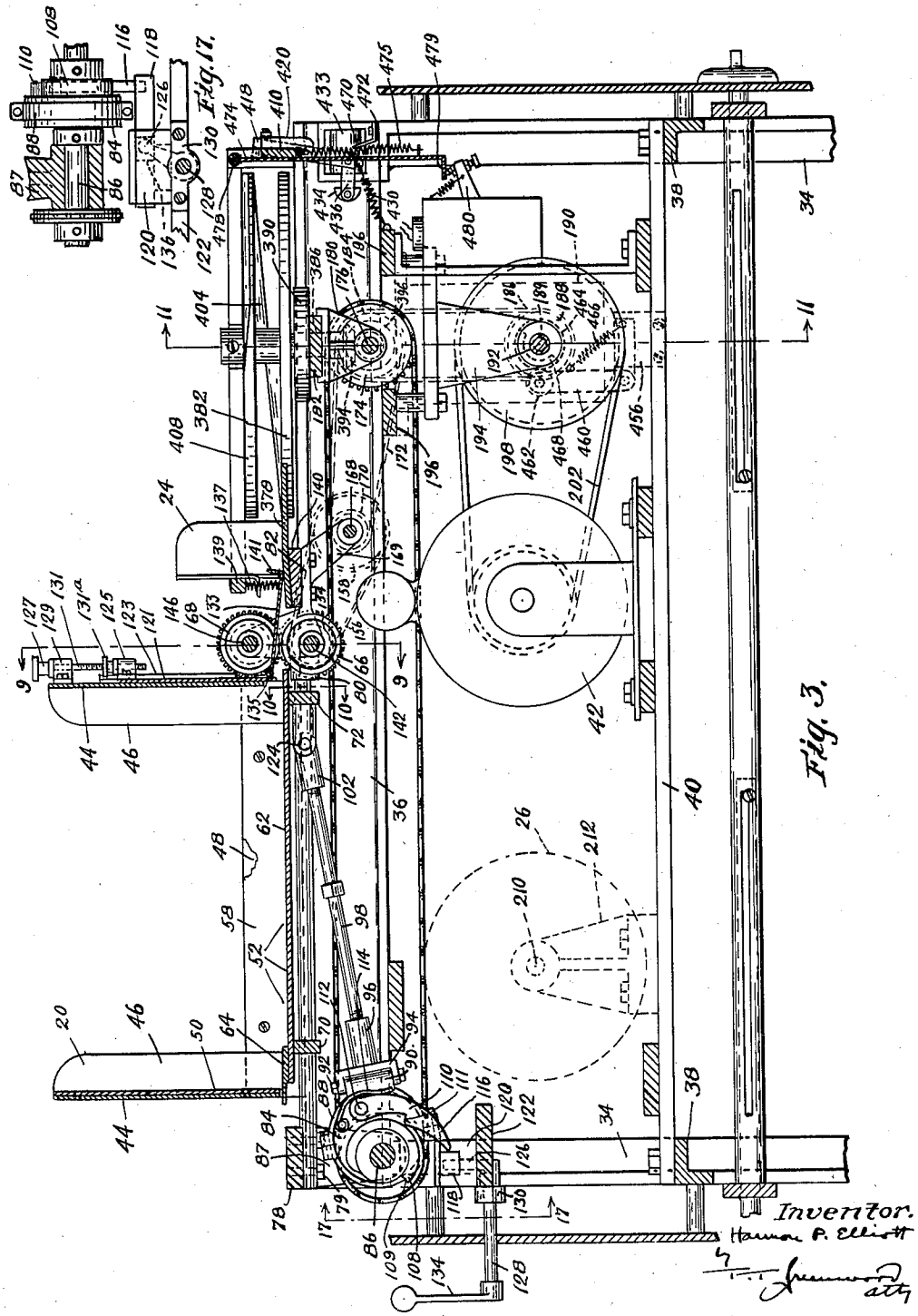


Fig. 3.

Inventor.
Harmon P. Elliott
by [illegible] atty

June 15, 1943. H. P. ELLIOTT 2,322,119

ADDRESSING MACHINE

Filed Feb. 13, 1940 5 Sheets-Sheet 3

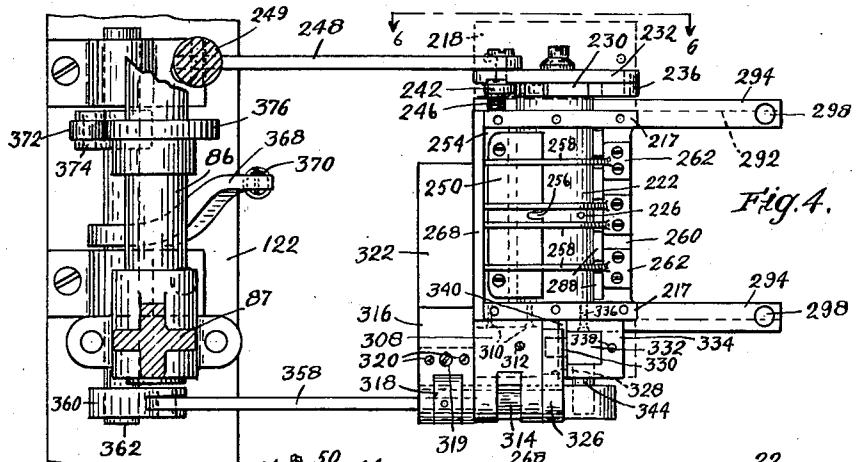


Fig. 4.

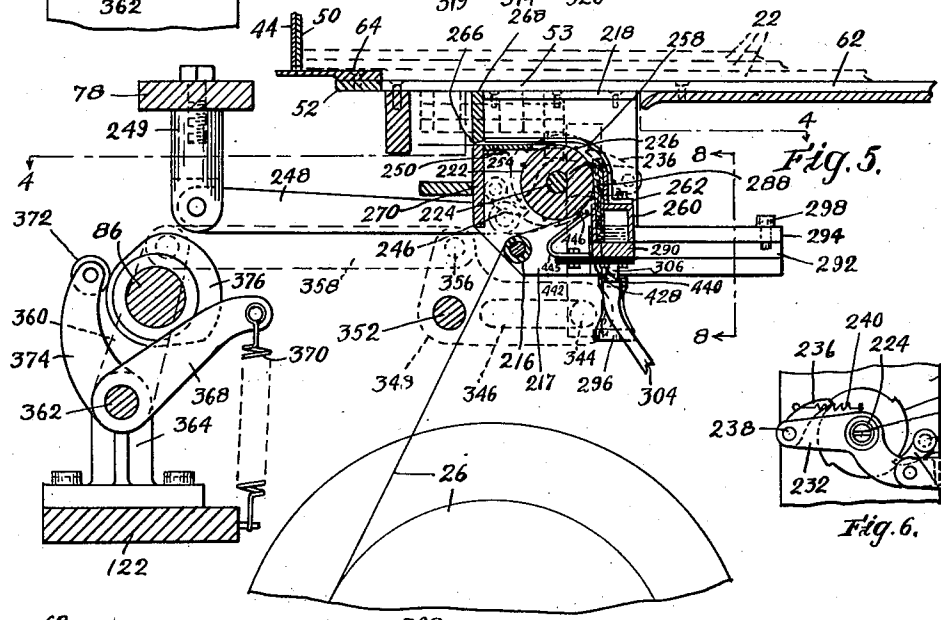


Fig. 5.

Fig. 6.

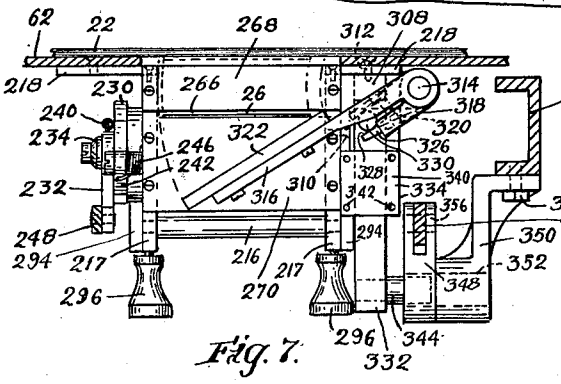


Fig. 7.

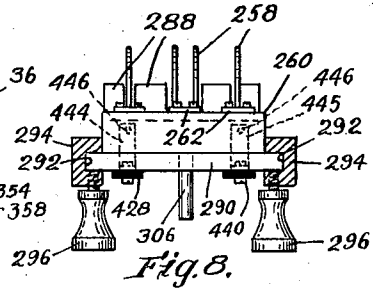


Fig. 8.

Inventor:
Harmon P. Elliott
by Fremmond atty

June 15, 1943. H. P. ELLIOTT 2,322,119

ADDRESSING MACHINE

Filed Feb. 13, 1940 5 Sheets-Sheet 4

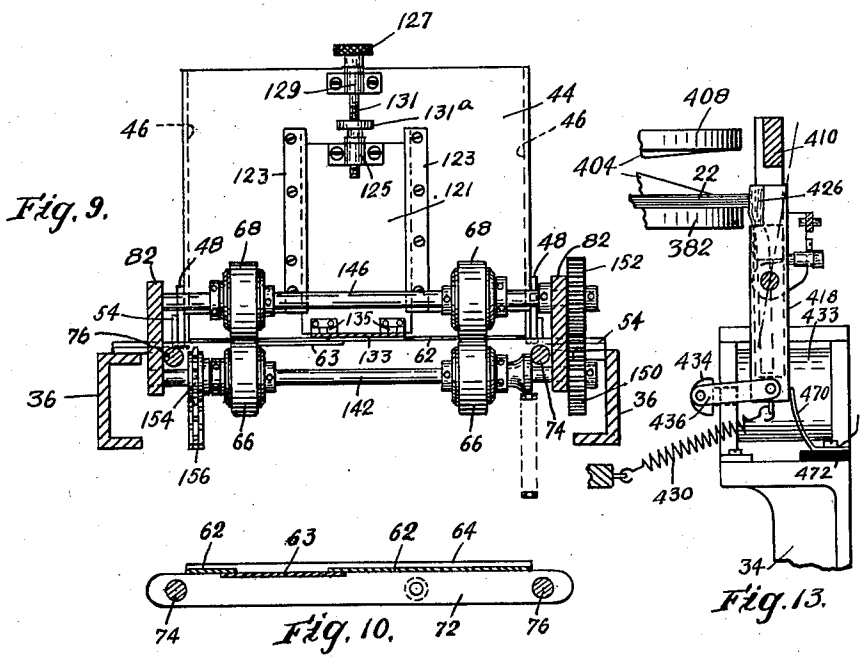


Fig. 9.

Fig. 13.

Fig. 10.

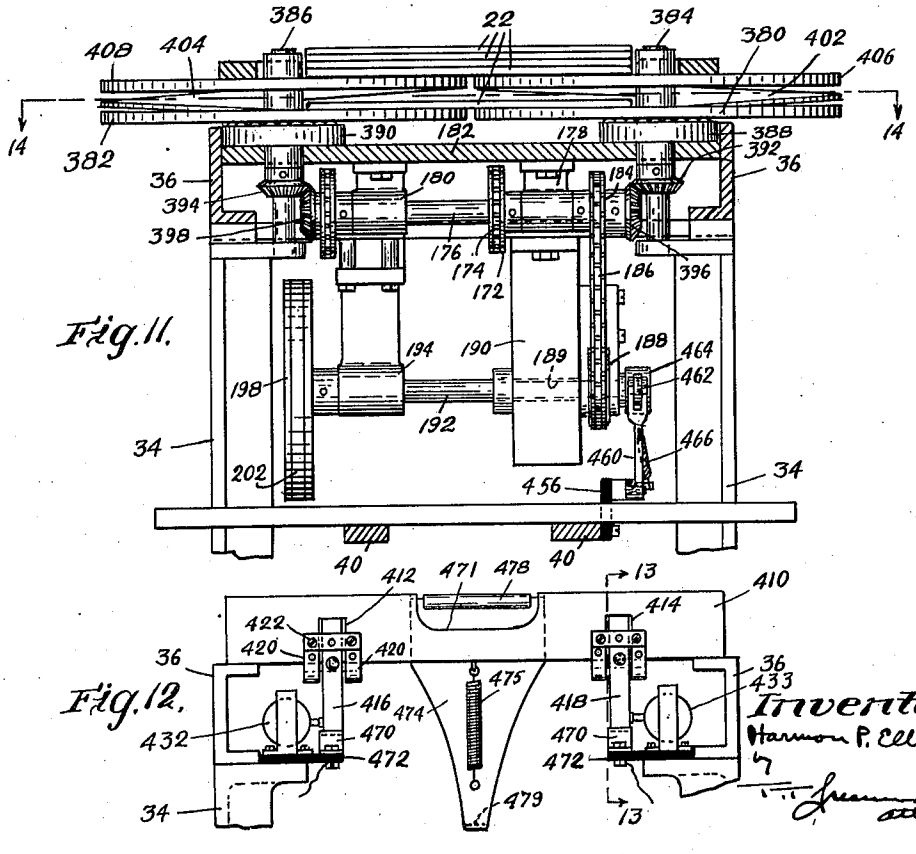


Fig. 11.

Fig. 12.

Inventor.
Harmon P. Elliott
by
Attorney

June 15, 1943. H. P. ELLIOTT 2,322,119

ADDRESSING MACHINE

Filed Feb. 13, 1940 5 Sheets-Sheet 5

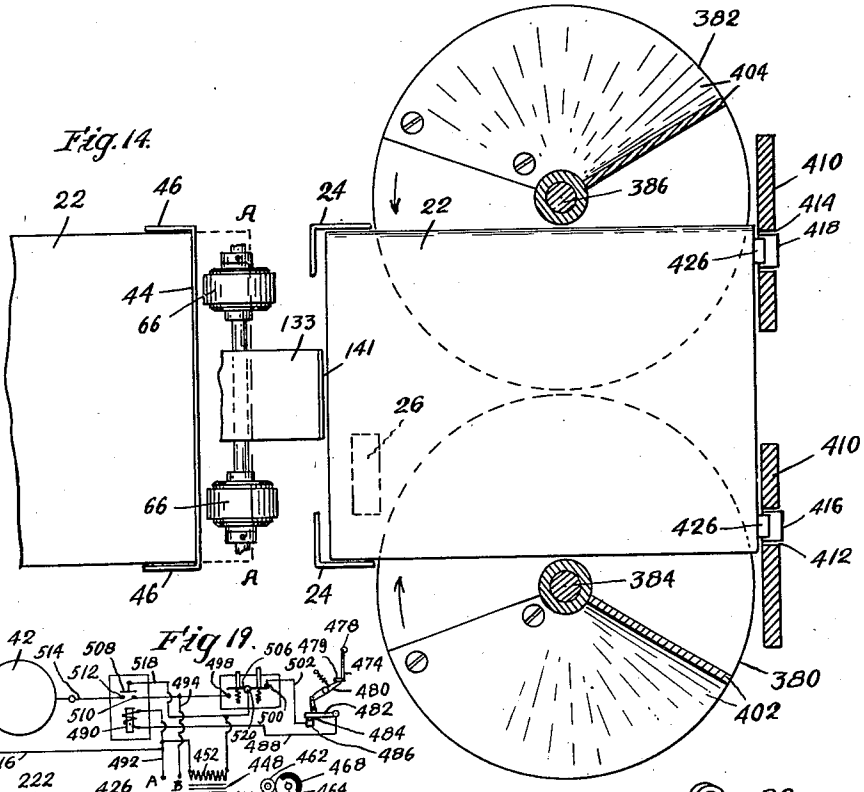


Fig. 14.

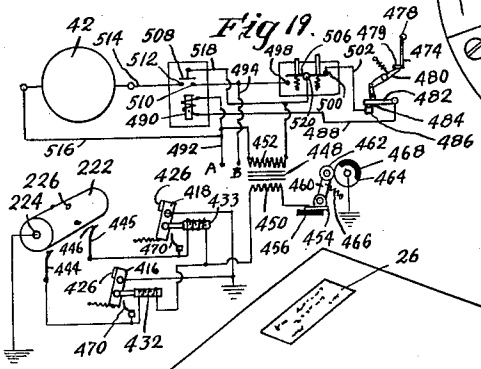


Fig. 19.

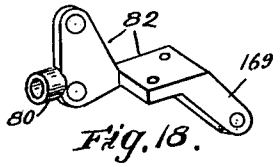


Fig. 18.

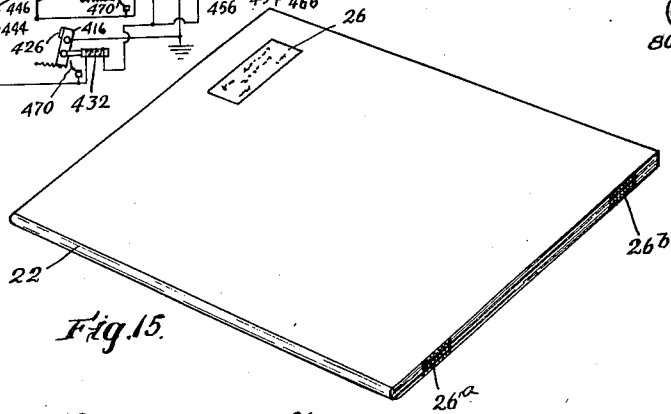


Fig. 15.

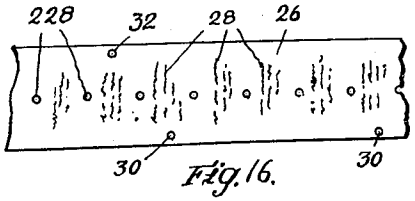


Fig. 16.

Inventor.
Harmon P. Elliott
by
atty

Patented June 15, 1943 2,322,119

UNITED STATES PATENT OFFICE

2,322,119

ADDRESSING MACHINE

Harmon P. Elliott, Watertown, Mass.

Application February 13, 1940, Serial No. 318,656

24 Claims. (Cl. 216—30)

The present invention relates to addressing machines, and as illustrated herein, and relates more particularly to machines for applying addressed labels to a surface of each of a succession of articles such as magazines, catalogs, folders or like publications.

A common way of addressing magazines and the like is to feed the magazines in successive edgewise order through an addressing position where the addresses are applied and thereafter to collect the addressed magazines in face to face order in a stack. A machine for performing such addressing occupies considerable floor space, is quite complicated, and its output may be low.

One of the objects of the present invention is the provision of a magazine addressing machine that occupies but a small amount of floor space, is rapid and practically silent in operation, and is simple in construction.

A further object of the invention is the provision of a magazine addresser having provision for supporting an unaddressed and an addressed stack of magazines in closely adjacent order with mechanisms for feeding successive magazines off the bottom of one stack into the bottom of the other stack and addressing the bottom magazine of the unaddressed stack before it leaves such stack.

A yet further object of the invention is the provision of a magazine addresser which takes the successive endmost magazines from an unaddressed stack of magazines and applies an address thereto and delivers the addressed magazine into another stack in which the magazines are located in inverse order relative to the unaddressed stack.

An additional object of the invention is the provision of a magazine addresser arranged to support a vertical stack of addressed magazines, the successive addressed magazines being fed into the bottom of the stack by cooperating elevator screws or members having vertically spiralled magazine elevating surfaces, the screws or members cooperating to provide an underlying support for substantially the entire bottom area of the magazine at the time it is being elevated into the stack and the screws also supporting the stack of magazines.

Another object of the invention is the provision of means to address the successive endmost magazines of a vertical stack prior to the complete removal of the magazines from the stack so that the unaddressed and addressed magazines can be arranged in vertical stacks spaced closer together than the length of the magazine and the magazine feeding mechanism can be under and concealed by the stacks, thereby providing an addresser of small floor space and freely exposed stacks from which magazines can be added to and removed from without hindrance from machine parts.

Another object of the invention is the provision of a magazine addresser having means for supporting a vertical stack of unaddressed magazines from which the successive bottom-most magazines are advanced, with means for applying addresses to the successive bottom-most magazines at the time of their movement out of the stack.

Another object of the invention is the provision of a magazine addresser adapted to support a vertical stack of unaddressed magazines and means including a pusher to remove the successive endmost magazines from the stack and addressing mechanism carried by and movable with the pusher for applying successive address bearing labels to the successive bottom-most magazines.

A yet further object of the invention is the provision of a magazine addresser adapted to contain a vertical stack of unaddressed magazines with a pusher for advancing the successive bottom-most magazines from the stack, the pusher having label applying mechanism movable therewith and the movements of the pusher with respect to the stationary frame of the addresser in large part being utilized to operate the label applying mechanism.

In mercantile establishments, publishing houses and the like, articles are commonly addressed by applying preaddressed labels to successive articles or by applying the addresses directly to one surface of the successive articles as they pass through the addressing machine. In order to facilitate mailing or shipping, the addresses are classified by towns or post offices. For example, if preaddressed labels are used, the names and addresses of the recipients located in the same town are printed successively on a continuous strip of paper. Addresses of recipients located in other towns are then successively printed on the strip. Thus, the shipper does not need to examine the address on each article but needs only to locate the first or last addresses of the recipients located in a particular town. This method of classifying addresses saves considerable time and insures that the articles or publications will not be accidentally shipped or mailed to the wrong town, but the shipper must still examine the addresses of a relatively large number of successive articles to locate the first or last article to be shipped or mailed to a particular town. This operation consumes a considerable amount of time particularly when the addresses are applied to the lower surface of the articles.

One object of the present invention, accordingly, is to provide an improved addressing machine by the use of which the location of the first or last addressed article of a publication of a collec-

tion to be shipped or mailed to a town or post office may be quickly or easily located. To this end one feature of the invention resides in an improved addressing machine having means for applying a mark or other indicating device automatically to one edge of the first or last article in a series as the articles are passed through the machine.

In publishing houses, it is common practice to insert an expiration notice in the publication to advise the subscriber that his subscription will expire after the next month's publication has been mailed. The expiration date is ordinarily printed with the address either directly on the publication or on the label. This, however, necessitates examination of the address on each successive publication to ascertain whether or not it is necessary to insert an expiration notice in the publication. This procedure is time consuming and slows up considerably the mailing or shipping of the publications or other articles.

Another object of the invention is to provide improved means for applying identifying marks, or the like, to a publication to indicate to the shipper that additional printed matter such, for example, as an expiration notice should be inserted in the publication.

A still further object of the invention is to improve generally upon the construction and operation of addressing machines.

With the above and other objects and features in view, the invention will now be described with reference to the accompanying drawings in which:

Fig. 1 is a view in front elevation of a machine illustrating a preferred embodiment of the invention;

Fig. 2 is a plan view of the machine shown in Fig. 1;

Fig. 3 is a view in longitudinal section taken along the line 3—3 of Fig. 2;

Fig. 4 is a plan view on a somewhat enlarged scale showing the construction of the label feeding and applying mechanism taken along line 4—4 of Fig. 5;

Fig. 5 is a cross sectional view of the mechanism shown in Fig. 4 and taken along the line 5—5 of Fig. 2;

Fig. 6 is a detailed view in end elevation of the pawl mechanism for rotating the feed rolls, looking in the direction of the arrows 6—6 of Fig. 4.

Fig. 7 is a view in end elevation partly in section of the label strip severing and applying mechanism looking toward the right, Fig. 4;

Fig. 8 is a detailed view in end elevation of the moisture reservoir taken along line 8—8, Fig. 5;

Fig. 9 is a view partly in section taken along the line 9—9 of Fig. 3 and illustrating the feed rolls between the two magazine stacks;

Fig. 10 is a sectional view taken along the line 10—10 of Fig. 3 and showing the article feeding mechanism in end elevation;

Fig. 11 is a view partly in section illustrating the receiving stack mechanism taken along line 11—11 of Fig. 3.

Fig. 12 is a fragmentary view in elevation of the right hand end of the machine and illustrating the location of the edge-marking mechanism and the safety mechanism;

Fig. 13 is a detailed view on a somewhat enlarged scale of one of the two mechanisms for applying identifying edge marks to the magazine or other publication, taken along line 13—13 of Fig. 12;

Fig. 14 is a somewhat diagrammatic plan view of the right hand end of the machine taken along line 14—14 of Fig. 11 showing the relation of the article feed roll to the delivering and receiving stacks;

Fig. 15 is a perspective view of a magazine or article to which an addressed label and identifying marks have been applied;

Fig. 16 is a view of a portion of a pre-addressed label particularly adapted for use with the present machine;

Fig. 17 is a detailed view partly in section showing the construction of mechanism for disabling the article feeding mechanism taken along line 17—17 of Fig. 3;

Fig. 18 is a perspective view of a bracket for supporting the feed roll shafts, the front end of a pusher guide rod and a sprocket drive shaft; and

Fig. 19 is a wiring diagram of the electrical components of the present machine.

Referring now to the drawings, the present invention is illustrated as embodied in a machine having an article receiving holder 20 arranged to receive a vertical stack of magazines 22. The magazines 22 are delivered from the bottom of the stack and are fed toward the right, as shown in Figs. 1, 2, and 3 to a delivery holder 24 to form a vertical stack therein and into the bottom of which magazines 22 are positioned after address-carrying labels have been applied thereto. As shown most clearly in Fig. 16, a long label strip 26 is provided having an adhesive coating or coatings on one surface thereof and successive addresses 28 arranged in successive order on the other surface thereof. These successive individually addressed labels are severed from the strip by paper feeding and severing mechanism, which will hereinafter be described in detail, and are fixed to the lower surface of the lowermost article in the stack 20 and prior to the complete removal of the article from the stack. Selected articles also are provided with a town mark 26*a* and an expiration mark 26*b*, or both if the need for such marks arises, on the leading edges of the articles and preferably of readily distinguishable colors, as blue and red, respectively these identifying marks, as will be explained hereinafter, being controlled by perforations 30 and 32 formed on the opposite edges of the long label strip 26, a perforation 30 controlling the expiration mark 26*b* and a perforation 32 controlling the town mark 26*a*.

The illustrated machine is provided with a frame having vertical legs 34 connected at their upper end by horizontally extending members 36. The lower portions of the legs are connected together by angle iron members 38 which serve also as supporting means for a horizontally extending supporting shelf 40 which supports the machine driving electric motor 42.

The hopper or holder 20 comprises two end portions 44 formed of sheet metal or other suitable material and having portions 46 turned inwardly toward each other at the front and rear ends thereof. The two members 44 are connected together adjacent to their lower end portions by front and rear sheet metal members 48 which may be fixed to the lower end portions of the inturned members 46 by spot welding or other suitable means. The end members 44 are provided with metallic liners 50 which are provided with smoother inner surfaces to permit the magazines or publications contained in the hopper 20 to slide freely downwardly into position to rest

upon and be engaged by the pusher member 52. The hopper 20 is secured to the top surface of the horizontally extending top rails 36 by brackets 54, as is shown most clearly in Fig. 9. The inner surface of the connecting pieces of sheet metal 48 are provided with liner members 58, the inner surfaces of which are smooth and permit the article to slide downwardly into position to be engaged by the pusher member 52. The liner members 58 are secured to the connecting members 48 by screws or other suitable means.

The pusher member 52 is located below the receiving hopper 20 and includes a flat metal plate 62 which is located at all times to provide the bottom support for the stack of magazines 24 in the hopper 20. The left hand edge portion of the upper surface of the plate 62 is provided with a metallic strip 64 which is secured to the plate 62 by any suitable means. The forward or right hand edge of the strip 64 forms a ledge which is arranged upon movement of the pusher member 52 to engage the rear edge of the lowermost magazine in the stack 20 and thus move the magazine partly out of the stack toward the right sufficiently to enter the nip of a pair of normally continuously rotating feed rolls 66, 68. The plate 62 is mounted on parallel supporting bars 70, 72 which are secured to the plate 52 cross-wise thereof by screws or other suitable fastenings. The supporting bars 70 and 72 are provided with aligned pairs of openings in which are located front and rear horizontal guide rods 74 and 76 on which the feed member 52 is arranged for sliding movement. The rods 74 and 76 are cut away at their left hand end portions to form bearing surfaces for engaging the lower surface of a forwardly extending connecting bar 78 fixed to the top surface of the horizontal front and rear frame connecting members 36. The rods 74, 76 are secured to the bar 78 by suitable screws 79. The left hand end portions of the rods 74 and 76 are secured in bosses 80 fixed to or formed as a part of the left hand end of front and rear brackets 82, see Figs. 3 and 18, carrying the feed rolls 66 and 68. It is apparent, that the pusher member 52 is thus mounted for sliding movement on the rods 74 and 76 below the receiving hopper 20 during operation of the machine.

In Fig. 3, the pusher 52 is shown as being in its extreme right hand position or in other words, it is shown as being located at the end of its feeding stroke. Movement is imparted to the pusher 52 by an eccentric 84 loosely mounted on a forwardly extending horizontal shaft 86 which is rotatably mounted in suitable bearings formed in downwardly extending brackets 87, Fig. 4, secured to the lower surface of the connecting bar 78. An eccentric strap 88 surrounds the eccentric 84 and terminates in a boss or connecting member 90 having an opening therethrough to receive a bolt 92 which serves to connect the eccentric strap in hinge fashion to the left hand end of a yoke 94. The yoke 94 is provided with an internally threaded extension 96 which receives the threaded end of a link rod 98. The other end of the link rod 98 is threaded into a yoke member 102 which is similar in construction to the yoke member 96. The yoke member 102 is pivotally connected by a bolt 104 to a laterally extending boss secured to the middle portion of the supporting bar 72. Thus when the eccentric 84 is rotated, as will later be described, the pusher member 52 is reciprocated to feed the successive lowermost magazines in the stack 20 into the nip of the feed rolls 66 and 68.

The shaft 86 has fixed thereto a one toothed ratchet member 108. The eccentric 84 is provided, as shown in Fig. 3, with a pawl 110 which is pivoted to the rear radial face of the eccentric by a pin 112. The pawl 110 is normally urged in a direction toward the shaft 86 by a leaf spring 114 fixed to the eccentric 84. Thus when the shaft 86 is rotated in a clockwise direction, as viewed in Fig. 3, the tooth 109 on the ratchet 108 will engage a detent 111 on the pawl 110 and will cause the eccentric 84 to rotate therewith. The pawl 110 is provided with a depending nose portion 116 which is arranged to be engaged by an abutment member 118 when it is desired for any reason to interrupt or disable the feed of the machine.

The mechanism for disabling the pusher mechanism 52, as above stated, includes the abutment member 118 which is slidable forwardly and rearwardly of the machine into and out of the path of rotation of the nose of the pawl. The abutment member 118 is mounted for sliding movement in a bracket 120 fixed to a forwardly and rearwardly extending shelf 122 fixed to the front and rear vertical frame members 34. The abutment member 118 is moved into and out of the path of movement of the pawl by means including an upwardly extended finger 126 working in an opening in the bracket 120 and located in a slot 136 in the under face of the abutment member, said finger is fixed to a shaft 128 journalled in a suitable bracket 130 and terminated in a control handle 134 located at the side of the machine in convenient reach of an operative. Movement of the handle into its two alternate positions starts and stops the operation of the pusher.

In order to insure that only the lowermost magazine will be removed from the bottom of the stack 20, the right hand end portion 44 is provided with an adjustable end gate 121 (Figs. 1, 2, and 3). As shown most clearly in Fig. 3, the right hand portion 44 of the hopper terminates a substantial distance above the pusher plate 62, a distance which is substantially greater than the thickness of any magazine or any other article which is likely to be fed by the machine. The end gate 121 is mounted for vertical sliding movement in ways 123 fixed to the right hand surface of the portion 44. The upper end portion of the end gate 121 is provided with an internally screw-threaded outstanding boss 125. The upper end portion of the right hand end wall 44 is provided with a boss 129 through which an adjusting screw 131 passes, said screw being screw-threaded into the boss 125 and having a knob 127 bearing on the boss 129. The gate is locked releasably in set position by a check nut 131*a* screw-threaded on the screw and bearing on the boss 125. Thus, by turning the adjusting screw 131, the end gate may be raised or lowered as desired to accommodate articles of different thicknesses.

In order to insure that the top cover and the top pages of the magazines or other articles fed by the machine will not be disarranged, a pressure plate 133 is provided which is pivotally secured at 135 to the lower end of the end gate 121. The right hand end of the plate or member 133 is urged downwardly by a spring 137 which bears against the top surface of the plate 133 at its lower end and against the under surface of a forwardly and rearwardly extending bar 139 fixed in any suitable manner to the left hand portion of the delivery hopper or holder

24. The extreme end portion of the plate 133 is bent upwardly at 141 and serves as a stop to prevent undesired rebound of the magazine or other article after it has been delivered in the holder 24 by the feed rolls 66 and 68.

The feed rolls 66 and 68, as previously stated, are journalled in bearings formed in the right hand end of the brackets 82 which are secured by screws or other suitable means (not shown) to the lower surface of a supporting bar 140 fixed to the upper surface of the horizontal connecting rails or beams 36. The rolls 66 and 68 are formed mainly of metal and are provided with soft rubber contacting surfaces. The lower feed rolls 66 are fixed on a horizontal shaft 142, as shown most clearly in Fig. 9. The upper feed rolls 68 are similarly made fast to a parallel horizontal shaft 146. The rear end portions of the shafts 142 and 146 are extended rearwardly beyond the rear bearing 82 to receive pinion gears 150 and 152 of equal number of teeth so that both sets of feed rolls rotate at the same peripheral speed.

The forward end of the shaft 142 has secured thereto a sprocket wheel 154 which is driven by a chain 156, Figs. 3 and 9, from a sprocket wheel 158 fixed to a horizontal cross shaft 160 which is journalled in suitable bearings formed in a downward extension 169 at the right hand ends of the brackets 82. The shaft 168 has a second sprocket wheel 170 fixed thereto and which is driven by a chain 172 from a sprocket 174 fixed to a shaft 176 located under the holder for the addressed magazines. The shaft 176 is journalled in front and rear bearings 178 and 180, Figs. 3 and 11, fixed to the under surface of a supporting bar 182 which extends forwardly and rearwardly of the machine. The supporting bar 182 is secured by machine screws or other suitable means to the under surface of the inwardly extending flange of the front and rear top rails 36. The shaft 176 is also provided with a sprocket 184 at its forward end which is driven by a chain 186 from a sprocket 188 which is fixed to a shaft 189 extending forwardly from a reduction gear box 190 and to which shaft is operatively connected a drive shaft 192. Said shaft 192 is mounted in a bearing 194 secured to cross bars 196 fixed to the under side of the front and rear rails 36 and having a pulley 198 which is driven by a V-belt 202 or other suitable means from the driving motor 42 hereinbefore referred to.

It is to be noted that the article feed rolls 66 and 68 are continuously operated during operation of the machine through the above described driving means. The feed rolls 66 and 68 drive the magazines faster than the pusher and into the delivery hopper in a half stroke of the pusher. It is to be further noted that the pusher member 52 operates only to separate and move the lowermost magazines contained in the hopper 20 into a partially projected position indicated by the dotted lines A—A in Fig. 14. That is to say, the pusher member 52 operates only a distance sufficient to bring the leading edge portion of the magazine or publication 22 between the article feed rolls 66 and 68.

During the article feeding operation, an addressed label is adhesively secured to the lower surface of the magazine by mechanism which will now be described. As previously stated, the addresses are applied by any suitable means to a continuous paper address strip 26. This paper strip is wound into the form of a roll and is mounted on a shaft 210, Figs. 3 and 5, freely journalled removably in suitable bearings formed in the upper end portions of a pair of upwardly extending brackets 212 fixed to the supporting bars or shelves 40. The end of the paper strip is fed upwardly over a guide or idler roll 216, Figs. 4 through 8, located between and carried by depending parallel spaced plates 217 fixed at their upper ends to oppositely projecting plates 218 which latter are attached by screws to the under face of the pusher plate 52 on opposite sides of an elongated opening 53 therethrough. The paper label strip 26 then passes upwardly and toward the right around a paper feed roll 222 fixed on a shaft 224 which is journalled in the bracket members 217. The middle of the paper feed roll 222 is provided with a plurality of radially projecting strip-feeding pins 226 which are arranged to register with openings 228 formed in the median line of the label strip 26 between the successive addresses thereof to insure that there will be no slippage between the roll and the paper strip 26 as the paper web is being fed.

The shaft 224 is advanced by the width of an address label at each stroke of the pusher by means including a ratchet wheel 230 fixed to the end of the shaft, see especially Fig. 6. A pawl carrying arm 232 is loosely mounted on the extreme rear end portion of the shaft 224 by a suitable cap screw 234. Said arm 232 is provided adjacent to its left hand end, Fig. 6, with a pawl 236 which is arranged to engage successive teeth on the ratchet wheel 230, thereby to rotate the feed roll by the angular distance between successive teeth upon oscillation of the pawl carrying arm 232. The pawl 236 is pivotally secured to the end of the pawl carrying arm by a pivot pin 238 and is normally urged in a direction toward the ratchet wheel 230 by a coil spring 240 fixed at one end to the pawl 236 and at its other end to the pawl carrying arm 232 at a point adjacent to the shaft 224. A stop pawl 242 is also provided to hold the paper against backward movement, said stop pawl being pivotally secured to the rear bracket 217 by a pivot screw 244. The stop pawl is normally urged into engagement with the ratchet 230 by a coil spring 246 fastened at one end to the bracket 218 and at its other end bearing against the outer surface of the pawl 242.

The pawl carrying arm 232 at a part thereof located below the pivot screw 234 thereof is pivotally connected to one end of a link 248 the other end of which is pivotally connected to a stud 249 fixed to and depending from the stationary frame bar 78. Thus, as the pusher is advanced on a magazine feeding stroke, the pawl 236 is retracted over the strip-feeding ratchet 230 and when the pusher is retracted, the pawl is advanced in engagement with the ratchet, thereby advancing the strip by the width of an address-label. The paper web 26 passes from the feed roll 222 over a guide plate or shelf 250 secured to a bar 254 located between and fixed to the supporting brackets 217. As shown most clearly in Fig. 4, the supporting or guide plate 250 is provided at about its middle portion with a slot 256 which permits the projections 226 of the paper feed roll 222 to clear the plate 250. The paper web 26 is held sufficiently firmly for the purpose against the feed roll 226 and against the supporting or guide plate 250 by a plurality of wire fingers 258 having free portions located close to the plate 250 and the periphery of the paper feed roll 222. The right

hand ends of the fingers 258 are curved downwardly and are provided with horizontal feet 262 fixed to the top face of a liquid-containing reservoir 260. The fingers 258 serve to direct the paper web 26 into a horizontal slot 266 formed between upper and lower plates 268 and 270 secured to the edge parts of the plates 217. The plate 268 forms a stationary shear member for severing an addressed label from the paper web 26 as will be seen hereinafter.

The address strip has a dry adhesive on the face opposite the address-bearing face and is positioned on the feed roll with the address-face confronting the face of the roll and the adhesive face outermost.

In order to cause the severed addressed label to adhere to the bottom surface of the lowermost article in the holder 20, the outer face of the strip is moistened or otherwise rendered adhesive. As illustrated herein, the fluid reservoir 260 contains water and is provided with a plurality of vertically extending wick members 288 which have their lower ends projecting into water and which have their upper ends positioned to bear against the strip on the feed roll 222. As most clearly shown in Fig. 8, the wick members 288 are separated from each other so that there are longitudinal strips, or zones formed on the adhesive coated surface under the guide fingers 258 which are not treated with fluid. By this arrangement of moistened and unmoistened zones, the paper web 26 retains sufficient longitudinal rigidity to enable the leading part ahead of the feed roll to be pushed forwardly and accurately through the horizontal opening or slot 266. Also, the guide fingers are kept clean. The liquid reservoir 260 comprises an inverted V-shaped container formed of metal or other suitable material suitably fixed to a horizontal supporting bar 290 which projects beyond the opposite end portions of the reservoir 260 and is received slidably in horizontal confronting slots 292 formed in the front and rear horizontal supporting bars 294 fixed to the plates 217. The slots 292 are provided to enable the operator to move the fluid reservoir 260 and the wicks mounted therein out of engagement with the paper web 226 when the machine is stopped for any reason. In order to maintain the fluid reservoir in the position shown in Fig. 5, locking screws are provided which are threaded into the lower portion of the horizontal supporting bars 294 and extend into the slots 292 and bear against the extensions of the horizontal bar 290. The securing or locking screws 296 are so located that the lower portions of the extensions of the bar 290 will be engaged thereby when the liquid reservoir is in the proper operative position shown in Fig. 5. In order to prevent the liquid reservoir from being accidentally removed from the supporting bars 217, stop screws 298 are provided which project into the slots adjacent to the right hand portions thereof. Said screws 298 are removable so that, when desired, the reservoir can be removed from the machine.

The fluid reservoir 260 is provided with water from a container 302 of the constant-level fountain type mounted at the front of the machine, as shown in Fig. 1, through a flexible pipe connection 304 leading to a tube 306 threaded or otherwise suitably secured in a hole formed in a horizontal bar 290. By the use of this construction, water or other suitable fluid is supplied to the reservoir 260 at all times and since the water container or fountain 302 is mounted at the front of the machine the operator may readily ascertain whether or not there is sufficient water in the container 302 which insures that the reservoir 260 will at all times be provided with sufficient water to moisten the wicks 288.

After the paper web feeding operation has been completed as above described, a label is severed from the paper web 26 by mechanism which will now be described. As shown most clearly in Figs. 4 and 7, a bracket member 308 is secured to the front left hand face of the front bracket member 217 by machine screws 310. The bracket member 308 is also secured by a machine screw 312 to the lower surface of the pusher plate 62. The forward end of the bracket 308 is provided with aligned openings to receive a horizontal shaft or pin 314, to the left end hand end of which is secured an arm 316. The forward end of the arm 316 is provided with a slot into which fits a member 318 fixed to the shaft 314. The arm 316 is clamped to the member 318 by machine screws 320 which extend through the holes formed in the arm and are threaded into openings formed in the member 318. Thus when the screws 320 are tightened, the arm 316 will be adjustably secured to the member 318. By the use of the construction, the arm 316 may be quickly and easily fixed in its proper adjusted position on the shaft 314. The rear end of the arm 316 carries thereon a movable shear blade 322 which is secured in position by machine screws 324. The movable shear blade 322, as shown best in Figs. 4 and 5, is relatively wide and serves as a support for the severed addressed label and also as an affixing member for securing the adhesive addressed label to the lower surface of an article in the stack 20.

The shear blade 322 is reciprocated during feeding movement of the pusher member 52. The right hand end of the shaft 314 has fixed thereto a downwardly and rearwardly extending arm 326. The arm 326 at its rear portion is provided with a longitudinally extending slot 328 which is arranged to receive a pin 330 secured to the upper end of a vertically moving slide 332. The slide 332 is arranged for vertical sliding movement in a guideway 334 fixed to the right hand end of the forward bracket 217 by suitable machine screws 336 and to the lower surface of the pusher supporting plate 62 by a machine screw 338. The slide 332 is prevented from moving out of the guideway 334 by a plate 340 which is secured to the lower portion of the guideway 334 by machine screws 342. The lower end of the slide 332 is provided with a forwardly projecting horizontal pin 344 which is located in a substantially horizontal slot 346 formed in one arm of a bell crank lever 348. The bell crank lever is pivoted in a bracket 350 by a pin or shaft 352. The bracket 350 is secured to the lower edge portion of the forward horizontally extending frame member 36 by bolts 354 or by any other suitable means. The other or substantially vertically extending arm of the bell crank lever 348 is pivotally connected at 356 to a substantially horizontally extending link 358. The left hand end of the link 358 is pivotally secured to one end of an upstanding arm 360 which is made fast to the forward end of a short horizontal shaft 362 located under the pusher reciprocating shaft 86 and journalled in upstanding brackets 364 which are carried by the shelf 122. The shaft 362, at about its middle portion, has fixed thereto an arm 368 which extends upwardly and toward the right. As shown in Fig. 6, the free end of this arm is secured to the upper end of a substantially ver-

tical spiral spring 379 which is secured at its other end to the right hand edge of the shelf or support 122. The spring 379 normally urges the arm 368 and the shaft 362 fixed thereto in a clockwise direction, Fig. 5, to hold the cam roll 372 of an arm 374 fixed to said shaft 362 into engagement with an edge cam 376 fixed to the horizontal shaft 86.

The shaft 86 carries thereon, as previously described, the mechanism for reciprocating the article pusher 52. The cam 376 is so positioned on the shaft that the cam carrying arm 374 is not operated until after the pusher member 52 begins its feeding movement toward the right. The cam roll 372 then engages the high part of the cam 376 to swing the arm 370 in a counter-clockwise direction, thereby moving the link 358 toward the left and swinging the bell crank lever 358 in a counterclockwise direction as viewed in Fig. 5. It is to be noted at this point that the pin 344 which is secured to the bottom part of the slide 332 is reciprocated in the slot 346 formed in the substantially horizontal arm of the bell crank lever 348 and when the pusher member 52 is in its extreme left hand or retracted position, the pin 344 is located at substantially the left hand end of the slot 346. The movement of the link 358 toward the left, however, does not begin to take place until after the article pusher member 52 begins its movement toward the right to feed a magazine or other article from the bottom of the stack so that the throw of the horizontal arm of the bell crank 348 increases as the pin 344 moves from the left hand end of the slot toward the right hand end thereof. This construction permits the movable shear member 322 to move slowly at the beginning of its severing stroke and to move progressively faster until the adhesive label has been pressed by the shear blade against the lower surface of the magazine or other article to which it is being applied. Since the movable shear blade together with the paper web feed roll 222 are secured to and are moved with the pusher member, it is apparent that the label is easily affixed during the feeding operation. The label affixing operation is completed before the leading edge of the magazine or other article passes between the bite of the article feed rolls 66 and 68 which prevents the label from being displaced or otherwise damaged by the relative movement between the movable shear blade 322 and the article to which the label has been or is being affixed.

While the pusher and the label applying mechanism are moving at the time the label is applied to the magazine, there is at this time no relative movement between the magazine and the mechanism. The feeding stroke of the pusher also draws paper off the address strip roll since the strip feed roll is held stationary at such time by the stop-pawl 242.

When the magazine passes from the feed rolls 66—68 it continues its movement over a plate 378 fixed to the horizontal supporting bar 140. The leading or left hand edge of the plate 378 is inclined upwardly at its left hand end and then continues toward the left in a substantially horizontal plane. The plate 378, as best shown in Fig. 2, is cut away at its front and rear right hand side portions to receive a pair of rotatable front and rear horizontally disposed discs 380, 382, over the upper surface of which the magazine is fed. The discs 380, 382 are fixed to parallel vertical shafts 384 and 386 which extend through bearings 388, 390 fixed in the horizontal supporting member 182. The bearing members 388 and 390 are provided with ball bearings which engage the lower surface of each of the discs to permit these discs to be easily rotated. The lower ends of the shafts 384 and 386 pass through the frame bar 182 and have fixed to their lower ends bevel gears 392 and 394 respectively. The bevel gear 392 meshes with a bevel gear 396 fixed to the forward end of the horizontal shaft 176. The bevel gear 394 meshes with a bevel gear 398 fixed to the rear end of the horizontal shaft 176. As previously described, the shaft 176 is continuously rotated through a reducing gear mechanism by the electric motor 42. Since the shaft 176 is continuously rotated during the operation of the machine, it is evident that the discs 380 and 382, which are rotated thereby, must also rotate continuously during the operation of the machine. Each of the bottom discs 380 and 382 has secured thereto a sheet of metal 402 and 404, respectively, which are shaped in the form of a spiral. The lower edge of these spiral sheets or members 402, 404 are fixed suitably to the top surfaces of their respective discs as by means of welding and are so shaped that the leading edge of each sheet is flush with the top surfaces of its associated disc. The other ends of the spiral sheets 402, 404 are fixed to upper discs 406 and 408, respectively, which are also fixed to the shafts 384, 386. As best shown in Fig. 14, the top discs 406, 408 each have a segmental portion removed which is approximately equal to one-third of the area of each disc. This segmental portion is cut away to permit the magazine or other article to be lifted from the top surface of the bottom discs 380 and 382 to the top surfaces of the top discs 406 and 408. The upper ends of the sheets 402 and 404 are secured to the leading edges of the remaining portion of their respective discs.

The cooperating disc and the interposed spiral member thus form a worm or screw, the spiral passage between the pair of discs being open in the top face of the upper disc. The feed rolls 66, 68 advance the magazine rapidly onto the faces of the two lower discs so that the magazine is supported by said discs before the discs have rotated to bring the spiral members under the magazines and start the elevating process. The rate of advance of the magazine by the feed rolls is sufficiently rapid to move the magazine forwardly into the screws by its own momentum after it has left the rolls. The magazine is stopped moving by engagement with a stop plate 410, Figs. 3, 12 and 14 fixed to the right hand end portion of the machine. Thus, when the front disc is rotated in a clockwise direction and the rear disc is rotated in a counterclockwise direction, as is the case herein, the front and rear edges of the magazine will be progressively engaged by the sheets 402 and 404 and, as the discs rotate, the magazine will be raised to the upper surfaces of the discs and will rest thereon. By the use of this construction, the delivery stack 24 will be raised as each successive magazine is addressed and delivered to the top surfaces of the discs 406 and 408.

Said plate 410 is provided with a pair of spaced openings 412 and 414 which are arranged to receive marking members 416 and 418 respectively. As best shown in Figs. 12 and 13, the marking members 412 and 414 are formed of metal or other suitable material and are hollow to form reservoirs for the ink or other marking fluid. Since both of these members are identical in construction, it will be necessary to describe only one

of these members in detail. The reservoir 416 is pivoted adjacent to its upper end portion to downwardly extending brackets 420 which are secured to the stop plate 410 by machine screws 422. A belt marking member or wick 426 projects through an opening formed in the top portion of the reservoir 44 and extends downwardly into the marking fluid contained therein. The marking member 416 is normally held in inoperative position, that is, in the position indicated by the dot-dash line in Fig. 14, with its face beyond the magazine space by a tension spring 430 connected at one end to the lower end of the marking member 416 and at its other end to a convenient part of the machine frame. The marking member, therefore, is normally urged by the spring into inoperative position. The marking members 416, 418 are operated by an electromagnet 432, 433 respectively carried by the machine frame. Each magnet has an armature 434 connected by a link 436 to the lower end of the associated marking member. Energization of the electro-magnet causes the wick-end of the marking member to be moved inwardly of the magazine space and into engagement with the leading edge of a magazine therein as illustrated in Fig. 13. The marking member 418 applies the expiration mark 26*b*, Fig. 15 and the other marking member applies the town mark 26*a*.

Operation of the marking members is effected automatically by the perforations 30, 32, Fig. 16, of the address strip. Referring now to Fig. 5 of the drawings, it will be noted that the fluid reservoir 260 is provided at its lower surface with an insulating strip 428 which is secured in position by suitable machine screws 440. The left hand end of the insulating strip 428 has secured thereto, by means of suitable bolts and nuts 442, a pair of resilient contact strips 444 and 445, see also Fig. 19. Said strips are arranged near the marginal portion of the address strip and each has a contact projection 446 thereon adapted to enter a perforation 30 or 32 of the address strip when a perforation is thereunder by the inherent resiliency of the contact strip, thereby electrically to engage the metal feed roll 222. When, however, the paper strip is imperforate under the projection, the latter is electrically insulated from the feed roll.

The perforations 30, 32 are formed in the address strip in a manner not necessary to explain herein except to state that the addresses are grouped in towns or cities and that a town perforation 32 is formed in the address strip at such a point with respect to the first address of a new town that a mark 26*a* will be formed on the edge of the magazine bearing the address. Thus when the addressed magazines are in a stack on the elevating screws, the machine attendant can group together all magazines between consecutive town marks, without having to study the addresses.

Similarly the expiration perforations 30 are so positioned with respect to the associated address that an expiration mark 26*b* will be made on the edge of the magazine bearing the address, the mark indicating the expiration of the subscription with the succeeding issue so that the attendant can insert a suitable notice within the magazine. The town and expiration marks are of different colors preferably as blue and red, for prompt identification.

The electrical circuit for energizing the magnet 432 includes a transformer 448 having a secondary winding 450 and a primary winding 452. The primary winding 452 is connected to the motor circuit of the machine. The secondary winding 450 at one end is connected to the electromagnet 432 which in turn is electrically connected to the contact member 444 and, when the projection 446 on the contact member 444 engages the metal surface of the paper feed roll 222, this end of the circuit is grounded to the frame of the machine. The other end of the secondary winding 450 is connected to a plate 454 which is mounted upon an insulating plate 456 and secured by suitable fastenings to the longitudinally extending horizontal shelf 40. The plate 454 has pivotally secured thereto an arm 460 carrying at its upper end a roll 462 which is arranged to be urged toward a rotating commutator 464 by a spring 466 secured at one end to the arm 460 and at its other end to the plate 454. The commutator 464 is provided with an insulating portion 468 which prevents completion of the circuit through the frame of the machine. However, when the metallic portion of the commutator 464 is in engagement with the roll 462, the circuit will be completed when the projection 446 is in engagement with the metal paper feed roll 222. It is to be noted, however, that the circuit is completed through the projection 446 only momentarily during the feeding of the paper. It is necessary, therefore, to provide additional means for holding the marking member 416 or 418, in marking position. Thus, when the marking member is swung in a counter-clockwise direction, as viewed in Fig. 13, the lower end of the marking member 416 engages a spring contact strip 470 which is secured to an insulating strip 472, thus insulating the contact strip from the bed of the machine. The spring contact member 470 is connected to the line connecting the end of the associated magnet to the contact member 444 so that, when the lower end of the marking member 416 contacts the resilient metal strip 470, the magnet circuit will be grounded on the machine thus shunting the contact 444 and maintaining the circuit closed after the contact between the contact 444 and the metal feed roll 222 has been broken. This circuit will not be broken until the insulating portion 468 on the rotating commutator 464 engages the roll 462. The rotation of the commutator 464 is so related to the pusher feed mechanism that the circuit will not be broken until after the labeled magazine has been moved into position on the lower rotating discs 380 and 382 and confronting the marking member 416 or 418 as the case may be.

As shown most clearly in Fig. 3, the discs 380 and 382 are so located that there is relatively little space between them. Thus, when the discs are rotated, it would be possible for an operator to get his fingers caught therebetween, particularly when arranging or straightening a magazine which has not been properly projected or fed against the stop plate 410. The operator, in order properly to position such a magazine, would have to reach in from the right hand end of the machine below the stack of articles in the delivery hopper 24. To this end, there is provided a safety member 474, see Figs. 3 and 12, which is slidably mounted in the stop plate 410 and which is normally maintained in its upper position by a spring 475 secured at its lower end to the lower end of the member 474 and at its upper end to the frame of the machine. To permit downward movement of the member 474,

the abutment plate 410 is cut out at 471. The upper end of the safety member 474 is provided with a roll 478 which is rotatably mounted in the upper end thereof.

Thus, when the operator inserts his hand below the stack, he must engage the roll 478 with the back of his hand and depress the safety member. This downward movement of the safety member 474 moves an inturned lower end portion 479 thereof into engagement with a switch arm 480 and moves the switch arm downwardly, thus opening the motor circuit of the machine. Hence the machine is idle when the safety member is depressed.

The motor circuit of the machine includes a movable switch member 482 with which the movable switch arm 480 is operatively engaged. When the arm 480 moves downwardly, a contact member 484 is moved away from a stationary terminal 486 thus opening the circuit. The contact member 484 is connected by a wire 488 to one end of an electromagnet winding 490. The other end of the winding 490 is connected by a line 492 to one side A of the power line. The other side B of the power line is connected by line 494 to a push button switch 496 having stationary contacts 498 and 500. The stationary contact 500 is connected by a line 502 to the contact member 482. The circuit between the contacts 498 and 500 is completed by a movable contact member 506 which completes the circuit from the side B of the power line through the switch member 482 and through the electromagnet to the side A of the power line. When the electro-magnet 490 is energized, a movable armature having a contact plate 508 thereon is urged toward the electro-magnet 490 and into engagement with the contact members 510, 512, thus closing the circuit between the line 494 and a line 514 which is connected to one side of the motor 42. The other side of the motor 42 is connected by a line 516 to one side A of the power line. The armature 508 is connected by a line 518 to a contact member 520 formed on the movable contact strip 506. Thus, when the switch 482 is closed and movable contact arm 520 engages the contact 498 of the push button switch 496, the motor circuit is closed by the electromagnet 490 and will remain closed until the switch 482 is opened by connections to the safety plate 474. When, however, the switch 482 is opened, it is not possible to again close the motor circuit until after the push button switch 496 has been operated to close the circuit between the contact members 498 and 500. The switches and circuits above described are effective to prevent injury to the operator and further insure that the machine cannot again be started until the operator has walked to the back of the machine and has depressed the push button switch 496.

Although the machine has been described in detail it may be well, for a more clear understanding of the invention, to review briefly the operation of the machine. The lowermost magazine or other article in the holder 20 is moved toward the right, as viewed in Figs. 1, 2, and 3, by the pusher member 52. During this movement toward the right, a moistened addressed label is severed from the paper web 26 and moved upwardly by the broad movable shear blade 322 and is pressed against the bottom surface of the magazine and adheres thereto. After the pusher member has been moved into the position shown in Fig. 3, which is the end of its feeding movement, the leading edge portion of the magazine is located between the feed rolls 66 and 68 and is moved toward the right into the holder 24 at a relatively great rate of speed so that the leading edge of the magazine or other article strikes the end of abutment plate 410 with substantial force. If the severed label has an aperture 32 therein, the marking member 416 is actuated during the feeding movement of the paper web 26 to move the marking member 416 into marking position. The member 416 is held in marking position until shortly after the magazine or other article has been fed into engagement with the end plate 410. If the applied label also has a perforation 30 thereon, the marking member 418 will be likewise moved into operating position so that another marking will be placed on the leading edge of the magazine adjacent to the other edge thereof. The marking operation performed by the member 416 is in red ink, as above stated, indicated to the shipper that the subscription of the subscriber will expire after the next issue is mailed and thus enables the shipper to insert an expiration notice in the magazine. The member 418 forms a blue mark which indicates to the shipper that the magazine is the first of a series which is to be mailed or shipped to a particular town, thus saving the shipper's time in that he does not need to inspect a relatively large number of magazines to determine when the particular series to be delivered to a particular town has ended.

After the magazines have been addressed, the magazines are engaged by the spiral sheets on the respective discs 380 and 382 which are rotated to raise the magazines 24 to the upper surface of the discs 406, 408. As shown most clearly in Fig. 11, the addressed magazines are removed from the holder 24 and are shipped or mailed as indicated.

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

1. In a machine for addressing articles such as magazines, the combination of means for supporting two vertical stacks of such articles, means for feeding the successive endmost articles from the bottom of one stack and into the bottom of the other stack while maintaining the same face of the article uppermost in both stacks, and means for applying differently addressed labels to each said article after it becomes the endmost article at the bottom of said one stack and prior to the arrival of the next succeeding article at the bottom of the other stack.

2. In a machine for addressing articles such as magazines, the combination of means for supporting two vertical stacks of such articles, means for feeding the successive endmost articles from the bottom of one stack and into the bottom of the other stack, and means for applying addressed labels to the successive endmost articles as they are being removed from the bottom of said one stack.

3. In a machine for addressing articles such as magazines, the combination of a holder for a vertical stack of unaddressed articles, a receiver beside said holder for a vertical stack of addressed articles, a pair of elevator discs constituting the bottom support of the stack of addressed articles and having means to elevate successive articles into the bottom of the addressed stack, means for moving the successive bottommost articles from the unaddressed stack into

the action of said elevator discs, and means controlled by the article moving means constructed and arranged to apply addressed labels to successive articles as they are being moved from said holder to said receiver.

4. In a machine for addressing articles such as magazines, the combination of means for holding a vertical stack of articles, means for moving successive endmost articles laterally of the stack, and means for addressing the moving articles, including an address-label support, means for moving said support with the article, and means for applying the moving addressed label to the moving article.

5. In a machine for addressing articles such as magazines, the combination of a holder for a vertical stack of articles, a reciprocable pusher at the bottom of the holder for moving the successive lowermost articles laterally of the holder, an address-strip feed roll carried by and movable with said pusher, and means for severing successive address-bearing labels from said strip and applying them to successive lowermost articles.

6. In a machine for addressing articles such as magazines, the combination of a holder for a vertical stack of articles, a reciprocable pusher at the bottom of the holder for moving the successive lowermost articles laterally of the holder, an address-strip feed roll carried by and movable with said pusher, means for severing successive address-bearing labels from said strip and applying them to successive lowermost articles, and means responsive to movements of said pusher for operating said feed roll and said severing and applying means.

7. In a machine for addressing articles such as magazines, a holder for a vertical stack of unaddressed magazines, a receiver for a vertical stack of address-bearing magazines having provision for exposing an edge portion of the magazines therein, means for transferring successive magazines from the holder to the receiver, means for applying addresses to the successive magazines as they are being transferred from the holder to the receiver, and means under the control of predetermined labels for applying an identification mark to an edge portion of a selected magazine that is visible in said holder.

8. In a machine for addressing articles such as magazines, a receiver for a stack of addressed magazines having provision for exposing an edge portion of the magazines therein, means for applying successive magazines to the end of the stack, means for addressing the successive magazines including a roll for feeding a strip of addresses, means for severing successive address-bearing labels from such strip and applying them to successive magazines, and means under control of the address strip for applying an identification mark to selected magazines on that edge portion thereof that is exposed in said receiver.

9. In an addressing machine, a holder for a stack of articles to be addressed, a holder for receiving successive articles after they have been addressed and for holding the addressed articles in a stack, means for feeding successive articles from the first mentioned holder into the bottom of the stack on the second mentioned holder, and means for severing successive addressed labels from a label strip and for affixing the severed labels to successive articles as they are being fed out of one holder and into the other.

10. In an addressing machine, a holder for a stack of articles to be addressed, a holder for receiving successive articles after they have been addressed and for holding the addressed articles in a stack, means for feeding successive articles from the first mentioned holder into the bottom of the stack on the second mentioned holder, and means carried by the article feeding means for severing successive addressed labels from the label strip and for applying the severed labels to successive articles as they are being fed out of one holder and into the other.

11. In an addressing machine, a holder for a stack of articles to be addressed, a holder for receiving the articles after they have been addressed, means for moving successive articles from the first mentioned holder to the second mentioned holder, means for feeding and severing successive addressed labels from a continuous strip bearing successive addresses and having control means on predetermined labels, means for applying the successive addressed severed labels to the successive articles, and means controlled by said control means on predetermined labels for applying identifying marks to predetermined articles.

12. In an addressing machine, a holder for a stack of articles to be addressed, a holder for receiving the articles after they have been addressed, means for feeding successive articles from the first mentioned holder, a second feed means operative to complete the feeding movement of the successive articles into the second mentioned holder, means carried by the first mentioned feeding means for applying successive address bearing labels to successive articles as they are being fed from one holder to the other, and means for applying identifying marks to predetermined articles as said articles are delivered into the second mentioned holder at the completion of the feeding movement imparted to the successive articles by the second mentioned feeding means.

13. In an addressing machine, a holder for a stack of articles to be addressed, a reciprocating pusher member arranged to engage the successive lowermost articles in the holder for removing said articles from the bottom of the stack, a holder to which successive addressed articles are delivered, address-label applying mechanism carried by the reciprocating pusher member for applying address-bearing labels to the lower surface of the successive articles, means for feeding successive addressed articles to said second mentioned holder, said means being arranged to engage the successive articles at the completion of the operation of said pusher member for feeding the successive articles into the second mentioned holder, and means for applying identifying marks to predetermined articles under control of predetermined labels.

14. In an addressing machine, a holder for a stack of articles to be addressed, a reciprocating pusher for removing the successive lowermost articles from the holder, means for advancing an addressed label strip a predetermined distance during one reciprocating movement of said pusher member, and means for severing the advanced label and for applying the label to the under surface of the lowermost article in the holder during movement of the pusher member in the other direction.

15. In an addressing machine, a holder for a stack of articles to be addressed, a reciprocating pusher for removing the successive lowermost articles from the bottom of the stack, means carried by the pusher member for advancing an ad-

dress-bearing label into severing position and for rendering the label adhesive, said label feeding operation taking place during return movement of the pusher member, and means for severing the label and for applying the severed label to the lowermost article in the stack during movement of the pusher member in a feeding direction.

16. In an addressing machine, a holder for a stack of articles to be addressed, a holder to which the addressed articles are delivered, means for feeding successive lowermost articles from the first mentioned holder to the bottom of the second mentioned holder, rotatable elevating discs associated with the second mentioned holder for raising the successive articles as they are received in the second mentioned holder to the bottom of a stack of articles in said second mentioned holder, and means for applying differently addressed labels to the bottom faces of the successive lowermost articles in the first holder.

17. In an addressing machine, a holder for a stack of articles to be addressed, a holder to which the addressed articles are delivered, means for applying addressed labels to successive articles as they are being fed from the first mentioned holder and prior to their delivery to said second mentioned holder, means for feeding articles from the first mentioned holder to the second mentioned holder, and a pair of rotatable discs having means thereon arranged to engage the edges of successive articles to raise said successive articles to the bottom of the stack of articles in said second mentioned holder.

18. In an addressing machine, a holder for a stack of articles to be addressed, a holder to which the addressed articles are delivered, means for feeding articles from the first mentioned holder to the second mentioned holder, means controlled by the article feeding means for applying addressed labels to successive articles of said first holder prior to their delivery to said second holder, a pair of rotating discs having elevating means thereon arranged to engage the edges of successive articles to elevate the articles, and a second pair of discs connected to the first mentioned pair of discs by said elevating means, the upper surfaces of said second pair of discs forming a support for the stack of articles in the second mentioned holder.

19. In an addressing machine, means for feeding an addressed label strip having successive addresses thereon into label affixing position, contact means normally in engagement with said label strip and arranged to enter perforations in predetermined addressed portions of the strip to engage said feeding means to complete an electrical circuit, magnetic means energized upon completion of the circuit by said contact means, and marking means actuated by said magnetic means for applying an identifying mark to predetermined articles.

20. In an addressing machine, means for feeding an addressed label strip having successive addresses thereon into label affixing position, contact means normally in engagement with said label strip and arranged to enter perforations in predetermined addressed portions of the strip to complete an electrical circuit, magnetic means energized upon completion of the circuit by said contact means, marking means actuated by said magnetic means for applying an identifying mark to a predetermined article, and means for opening the electrical circuit and de-energizing the magnetic means to permit said marking means to return to inoperative position.

21. In an addressing machine, means for feeding an addressed label strip having successive addresses thereon into label affixing position, contact means normally in engagement with said label strip and arranged to enter perforations in predetermined addressed portions of the strip momentarily to complete an electric circuit, magnetic means energized upon completion of the circuit by said contact means, marking means actuated by said magnetic means for applying an identifying mark to a predetermined article, and a second contact means arranged upon movement of the marking means into operative position to maintain the electrical circuit closed while the marking means remains in operative position.

22. In an addressing machine, means for feeding an addressed label strip having successive addresses thereon into label affixing position, contact means normally in engagement with said label strip and arranged to enter perforations in predetermined addressed portions of the strip momentarily to complete an electric circuit, magnetic means energized upon completion of the circuit by said contact means, marking means actuated by said magnetic means for applying an identifying mark to a predetermined article, a second contact means arranged upon movement of the marking means into operative position to maintain the electrical circuit closed while the marking means remains in operative position, and means for opening the electric circuit and de-energizing the magnetic means to permit said marking means to return to inoperative position.

23. In an addressing machine, means for feeding an addressed label strip having successive addresses thereon into label affixing position, means for applying identifying marks to predetermined articles, magnetic means arranged to be energized to move said marking means into an operative position, an electric circuit for said magnetic means, and a contact member in said electrical circuit arranged normally to be in engagement with said label strip but arranged to enter perforations in predetermined addressed portions of the label strip to engage said feeding means to complete the electrical circuit through the machine.

24. In an addressing machine, means for feeding an addressed label strip having successive addresses thereon into label affixing position, means for applying identifying marks to predetermined articles, magnetic means arranged to be energized to move said marking means into an operative position, an electric circuit for said magnetic means, a contact member in said electrical circuit arranged normally to be in engagement with said label strip but arranged to enter perforations in predetermined addressed portions of the label strip to engage said feeding means to complete the electrical circuit through the machine, a second contact means arranged upon movement of the marking means into operative position to maintain the electric circuit closed while the marking means remains in operating position, and a circuit breaking member for opening the electrical circuit and de-energizing the magnetic means to permit the marking means to return to inoperative position after the completion of said marking operation.

HARMON P. ELLIOTT.