Jan. 21, 1958 R. H. WILLIAMS 2,820,408

ENVELOPE ADDRESSER

Filed Aug. 16, 1954 4 Sheets-Sheet 1

FIG. 1.

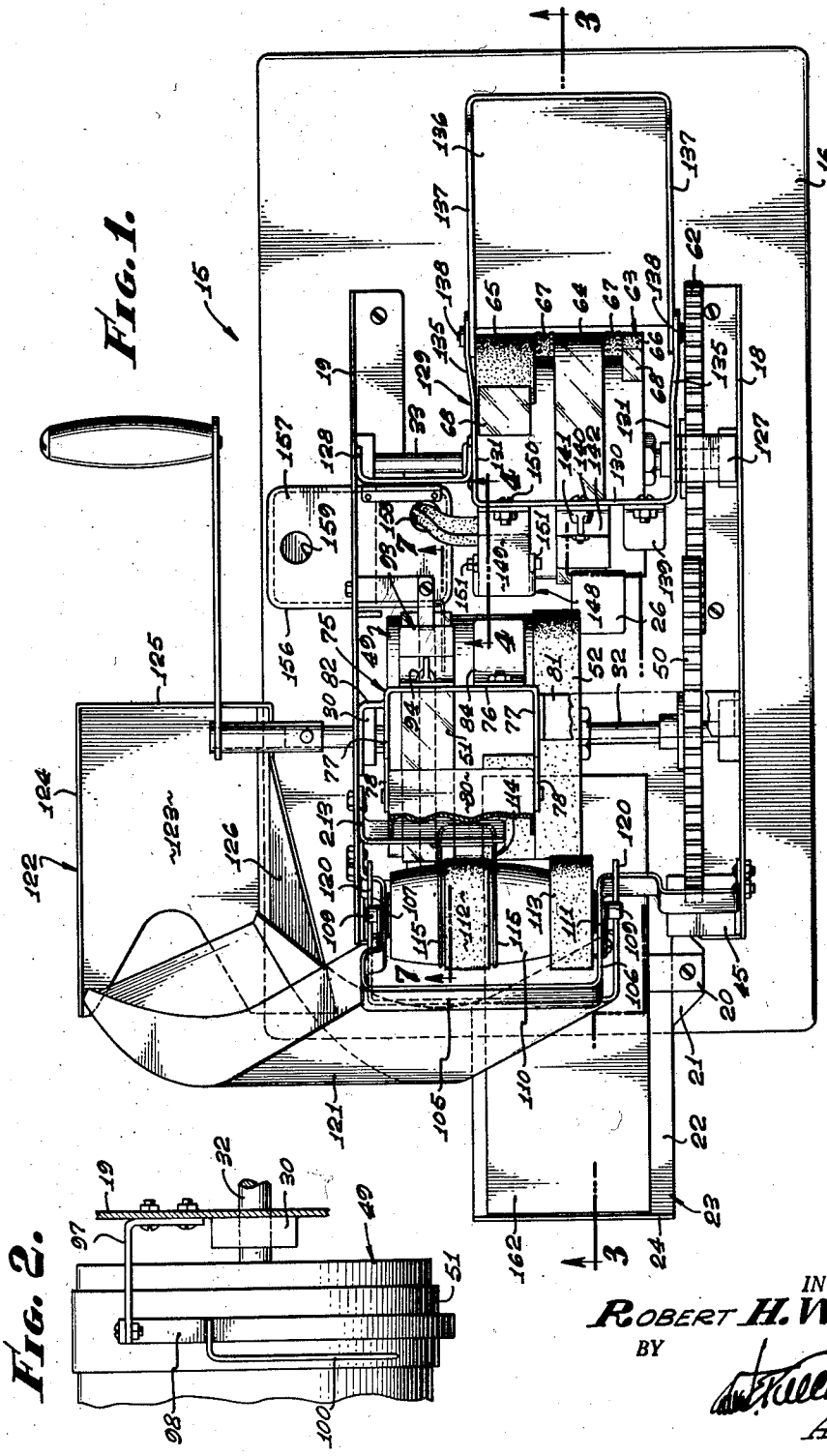


FIG. 2.

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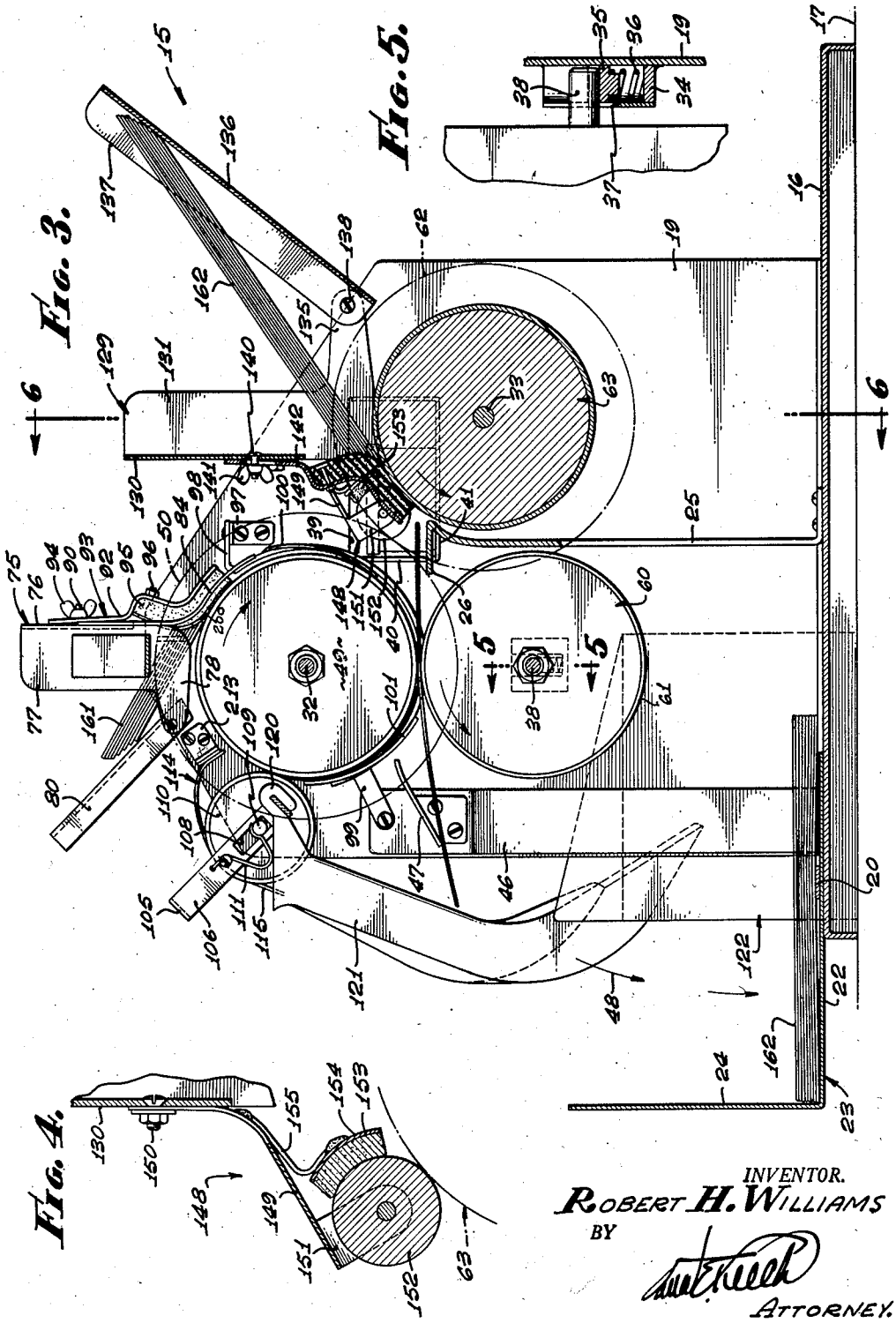


Fig. 3.

Fig. 5.

Fig. 4.

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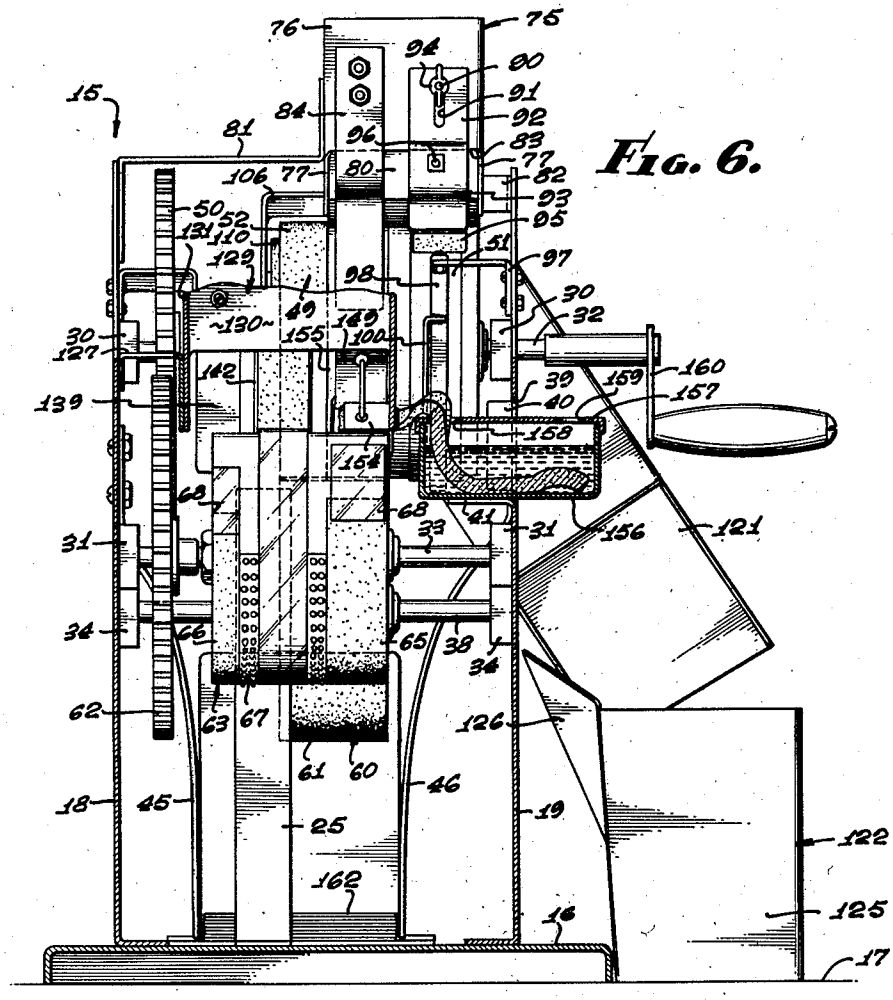


FIG. 6.

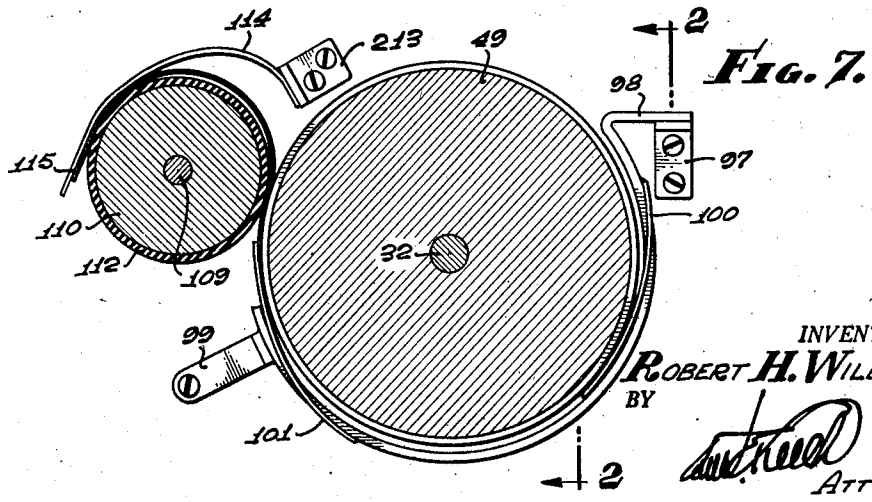


FIG. 7.

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ENVELOPE ADDRESSER

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FIG. 8.

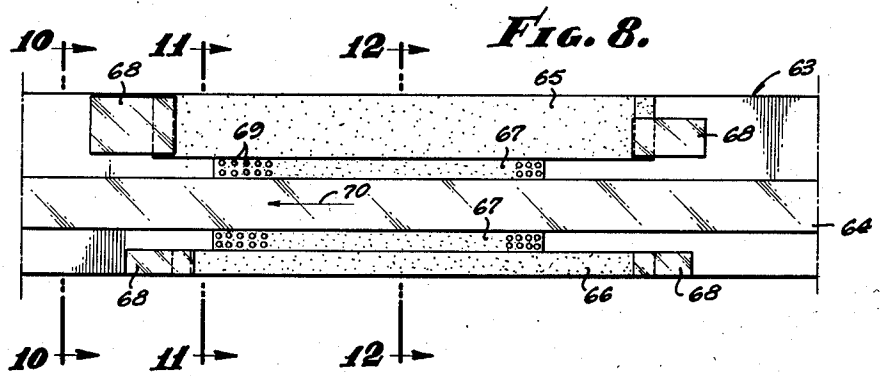


FIG. 9.

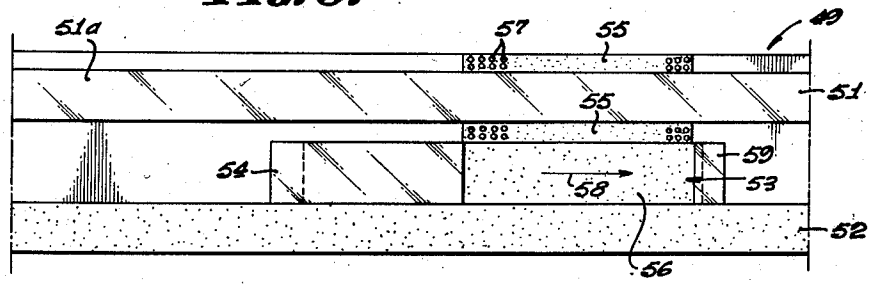


FIG. 10.

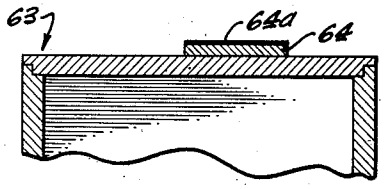


FIG. 11.

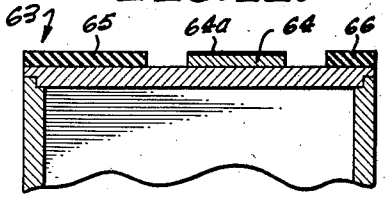
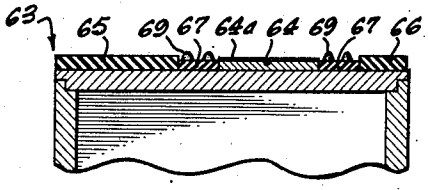


FIG. 12.



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United States Patent Office 2,820,408 Patented Jan. 21, 1958

2,820,408

ENVELOPE ADDRESSER

Robert H. Williams, Santa Ana, Calif.

Application August 16, 1954, Serial No. 450,142

5 Claims. (Cl. 101—132.5)

This invention relates to addressing machines in which a card carries a master address, formed in reverse with suitable copying ink, and the mail matter to be printed upon is moistened with a quick-deflusing and quick-drying spirit and said cards and said mail matter are then pressed together face-to-face to transfer to the mail matter a positive image of the address on the master card.

In my copending application, Serial No. 423,117, for U. S. Letters Patent on an addressing machine, I have disclosed a floor model of such a machine in which the machine is mounted on a stand resting on the floor and the receptacles for receiving the cards and envelopes after the latter pass through said machine are embodied with said stand and are disposed close to the floor.

It is an object of the present invention to provide an improved addressing machine which performs the same function as the machine shown in said copending application but which is adapted to rest upon a table and be actuated while so positioned.

It is another object of the invention to provide such a table model in which the cards and envelopes passing through said machine are deposited in receptacles provided on the machine above the top of the table on which it rests within easy reach of the operator from a standing position and with the address-carrying faces of said cards and envelopes turned upwardly. This is of great importance in permitting the operator to keep track of the operation of the machine and to detect immediately when a blank card goes through the machine, such as is used for marking a division point between successive groups of cards relating to different postal areas.

In the addressing machine shown in said copending application the envelopes and cards are fed from hoppers by rollers rotating respectively therebeneath, said rollers being in rolling contact so as to press each envelope fed from the envelope hopper against the corresponding card being fed from the card hopper when these two travel together between said two rollers. In that machine the spirit is applied to the envelope before it passes between said rollers. When that machine is run without envelopes, therefore, the spirit is applied to the enveolpe-feeding roller and tends to be transmitted from this to the card-feeding roller and from the latter to the cards so that when the latter are thereafter stacked, the spirit on the cards thus wetted, tends to dissolve the copying ink on adjacent cards and cause this to smear.

It is, therefore, a further object of the invention to provide an addressing machine of the general type above mentioned in which there is no opportunity for the spirit used in moistening the envelope to be transferred from the envelope feeding roller onto the card feeding roller.

The manner of accomplishing the above objects, as well as further objects and advantages, will be made manifest in the following description taken in connection with the accompanying drawings in which

Fig. 1 is a diagrammatic plan view of a preferred embodiment of the invention.

Fig. 2 is a fragmentary detail view taken on line 2—2 of Fig. 7.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1 and illustrates the manner of operation of the invention.

Fig. 4 is an enlarged detail sectional view taken on the line 4—4 of Fig. 1 and illustrates the structure of the envelope moistener of the invention.

Fig. 5 is an enlarged fragmentary detail view taken on the line 5—5 of Fig. 3 and illustrates the spring-mounting of the printing roller of the invention.

Fig. 6 is a vertical sectional view taken on the line 6—6 of Fig. 3.

Fig. 7 is an enlarged detail sectional view taken on the line 7—7 of Fig. 1 and illustrates the manner of reinverting a card from which an address has been printed so that said card will be delivered to its receptacle, printed face up.

Fig. 8 is a diagrammatic plan development of the peripheral surface of the envelope feed roller.

Fig. 9 is a diagrammatic plan development of the peripheral surface of the card feed roller.

Fig. 10 is a fragmentary enlarged sectional view taken on the line 10—10 of Fig. 8 and illustrates that portion of the periphery of the feed roller where this is occupied solely by the endless slick surfaced envelope supporting band of said roller.

Fig. 11 is a view similar to Fig. 10 and is taken on the line 11—11 of Fig. 8 and shows a portion of the peripheral surface of the enveolpe feed roller which is occupied not only by said slick surfaced band but by smooth rubber friction pads of substantially the same maximum diameter as said slick band.

Fig. 12 is a view similar to Fig. 11 and is taken on the 12—12 of Fig. 8 and illustrates a portion of the periphery of the envelope feed roller which is occupied not only by the slick band and friction pads aforesaid but also by balanced rubber friction strips having a series of flexible rubber teeth which extend radially outward beyond said slick band and said rubber pads to engage an envelope and cause the same to be fed from the envelope hopper.

While the invention is adapted for use in a wide variety of printing operations it is particularly useful in addressing articles to be mailed and is disclosed herein as embodied in an envelope addresser **15**.

The addresser **15** comprises a table model and has a flat base **16** preferably formed of sheet metal and adapted to rest directly upon a table **17**. If desired, the base **16** may be provided with rubber suction cups which face downwardly and grip the table **17** so as to both constitute a cushion support for the addresser and hold the same removably fastened to the table.

Secured on the base **16** and extending upwardly therefrom is a pair of parallel frame walls **18** and **19**. Fixed by its opposite ends on the base **16** is a metal strip **20** (Figs. 1 and 3) said opposite ends being spaced from the base by sheet metal spacers **21** so as to provide a guideway beneath strap **20** for a bottom plate **22** of an envelope receptacle **23**, the outer end of the plate **22** being bent upwardly to form an end wall **24** of said receptacle. Mounted on its lower end on the base **16** is a sheet metal post **25**, the upper end of which is bent to form a horizontal guide flange **26**.

Provided on the inner faces of the frame walls **18** and **19**, at corresponding opposite points, are pairs of aligned bearings **30** and **31** in which shafts **32** and **33** journal respectively. Also provided on the inner faces of said walls at corresponding points directly beneath the bearings **30** are slide pockets **34** in which bearings **35** are vertically slideable and are yieldably supported by springs

36. Extending through slots 37 formed in pockets 34 and journalling in bearings 35 is a shaft 38.

Formed in the wall 19 is a spirit reservoir aperture 39 from the inner side edge of which a flange 40 is bent inwardly and from the bottom edge of which a wide flange 41 is bent inwardly. Secured on the inner faces of the frame walls 18 and 19 and curved inwardly and steeply downwardly, to form side guides for envelopes being deposited in the envelope receptacle 23, are sheet metal guides 45 and 46. Fixed with the upper end of the guide 46 to the wall 19 is an overhead envelope guide 47 for directing envelopes downwardly into the receptacle 23 in the direction indicated by the arrow 48 (Fig. 3).

Fixed on the shaft 32 is a card feed roller 49 and a fiber gear 50. The roller 49 is preferably of a hollow metallic structure and has affixed to its periphery, as shown in development in Fig. 9, a continuous endless slick surfaced card supporting rubber band 51 which is closely spaced from one end of said roller. The slick surface of said band is provided by a polyester adhesive tape 51*a* applied to said band. An endless bare rubber band 52 is also provided on roller 49 flush with the opposite end of said roller. Fixed to the periphery of the roller between said endless bands so as to abut against the band 52 and be spaced from the band 51 is a soft rubber printing pad 53. Slightly less than one-half of the trailing portion of pad 53 is rendered slick as by the application of a strip of polyester adhesive tape 54 to the external surface of said pad. Also mounted on said roller between the band 51 and the pad 53, and between the band 51 and the adjacent end of the roller 49 are rubber frictional card feed strips 55 which are coextensive in length with and correspondingly positioned on the roller to the unslicked bare portion 56 of the printing pad 53. The strips 55 have rubber teeth 57 extending radially therefrom to a radius substantially greater than that of the peripheral surfaces of the bands 51 and 52 and the printing pad 53. Rubber strips 55 are removably hooked at their opposite ends on studs (not shown) which are provided on the roller 49 and extend outward therefrom, so that said strips are stretched tightly between said studs.

The direction of travel of the periphery of the roller 49 is indicated by the arrow 58 (Fig. 9). The leading end of the printing pad 53 tapers toward the peripheral surface of roller 49 and is covered by a slick piece of plastic adhesive tape 59. The radial thickness of the bands 51 and 52, and the pad 53 are substantially equal.

Mounted on the shaft 38 is a printing roller 60 which is of substantially the same construction as the roller 49 except that it is shorter in length and is provided with a single rubber pressure band 61 which covers the entire peripheral surface of the roller 60. The diameter of the roller 60 is substantially equal to the diameter of the roller 49 and the roller 60 is constantly pressed against roller 49 by the springs 36 supporting the bearings 35. The roller 60 is positioned with one end thereof flush with the outer edge of rubber band 52 on roller 49 and with the inner end of roller 60 flush with the inner edge of the printing pad 53.

Fixed on the shaft 33 is a fiber gear 62 which is of the same pitch diameter as the gear 50, this diameter being such that these gears mesh in one-to-one driving relation. Also fixed on shaft 33 is an envelope feed roller 63 which is of substantially the same diameter as the rollers 49 and 60 and is positioned on shaft 33 so that the opposite end thereof from the gear 62 lies in the same plane as the corresponding end of roller 60.

The periphery of envelope feed roller 63 is provided with an endless envelope supporting rubber band 64, to which is applied a polyester adhesive tape 64*a* giving this a slick surface, and bare rubber frictional pads 65 and 66. These pads are substantially equal in outside diameter with the band 64 and are spaced slight distances from opposite edges of the latter to provide room for mounting, in said spaces on said periphery, two rubber envelope feed strips 67 which are coextensive in length. Strips 67 are of the same character as strips 55 of roller 49 although somewhat longer than strips 55 because of the fact that envelopes are fed by strips 67 while cards, somewhat shorter in length, are fed by strips 55. Opposite ends of the pads 65 and 66 are tapered toward the periphery of the roller 63 and are covered by slick surfaced plastic adhesive tape. Strips 67 have rubber teeth 69 which extend radially outwardly beyond the outer surfaces of the pads 65 and 66 and the endless slick band 44. The direction of travel of the periphery of envelope feed roller 63 is indicated by arrow 70 (Fig. 8).

Mounted above the roller 49 is a sheet metal card hopper 75 including an end wall 76 from opposite side edges of which side walls 77 are bent. Backrest supporting arms 78 are formed to extend from lower ends of walls 77. Pivotally mounted between ends of arms 78 is a card backrest 80. The hopper 75 is supported on brackets 81 and 82 which are fixed on upper ends of the frame side walls 18 and 19. The hopper end wall 76 has a card discharge opening 82. Fixed to said end wall is a rigid card guide strap 84 which extends downward close to card feed roller 49. Also provided on said end wall is a bolt 90 which extends through a slot 91 in a a metal backing member 92 of a card separator 93 and receives a wing nut 94 to secure said separator to end wall 76. The member 92 is shaped as shown in Fig. 3, to provide a support for a rubber friction member 95 which is preferably formed of soft sponge rubber. The upper end of rubber member 95 is secured to the member 92 by a bolt 96 and is held by member 92 under restraint and in concentric conformation with the roller 49, as shown in Fig. 3.

The upper portion of the member 92 having the slot 91 may be adjusted vertically to bring this into an inclined relation with the end wall 76 of the hopper 75 so that by manipulation of wing nut 94 the pressure with which the member 95 is applied to the roller 49 may be adjustably determined.

The card separator 93 is substantially coextensive axially with the slick endless band 51 of roller 49 and bears directly on said band.

Fixed to the wall 19 is a bracket 97, the inner end of which supports the upper end of a card guide bar 98 which is shaped concentrically with, centrally located relative to, and closely spaced from the slick surfaced band 51 of the roller 49, the opposite end of bar 98 being supported on a bracket 99 secured to the wall 19. Secured as by brazing to the bar 98 are piano wire springs 100 and 101 which yieldably press against the slick band 51 to hold cards in contact with the latter during the operation of the machine 15.

Fixed at its opposite ends to the side walls 18 and 19 is a U-shaped bracket 105 formed of strap material and including a pair of parallel sections 106 and 107 in which slots 108 are formed to shiftably receive trunnions 109 of a card inverting roller 110. Mounted on each of the bracket sections 106 is a wire spring 111, each of which bears against one of the trunnions 109 so that their combined action yieldably holds the roller 110 in rolling contact with the roller 49.

The roller 110 is preferably barrel shaped and has stretched thereabout a rubber band 112 centrally located thereon and a rubber band 113 located at one end thereof, these bands having substantially equal external diameters and being constantly pressed by the springs 111 in rolling contact with the roller 49. The band 113 is disposed in matching relation with and is held in constant contact with the endless drive band 52 of roller 49.

Mounted on frame wall 19 and extending inwardly therefrom is a bracket 113 on which is fixed a U-shaped wire card guide 114, parallel legs 115 of which are curved

and extend over and slightly down around the roller **110** close to and on opposite sides of the rubber band **112**.

Supported at its upper end on the bracket **105**, as by hooks **120**, is a card chute **121** which is twisted so that a card delivered into the upper end of the chute is transmitted to a position on the opposite side of the frame wall **19** as clearly shown in Figs. 1, 3 and 6. Provided to be supported on the table **17**, or on the base **16** if desired, is a card receptacle **122** having a bottom **123**, an outer side wall **124**, an end wall **125**, and an inner side wall **126**, the latter being flared (Figs. 1 and 6) to extend beneath the chute **121** and guide cards passing from said chute into said receptacle.

Supported above the roller **63** on brackets **127** and **128**, fixed respectively on side walls **18** and **19** is an envelope hopper **129** which includes a sheet metal front wall **130** from which side walls **131** are bent. Formed rearwardly from lower portions of the side walls **131** are arms **125**. The lower end of a backrest **136** having upturned side flanges **137**, lies between the arms **135** and is pivoted thereto by bolts **138** extending through said arms and said flanges. These bolts are kept snug so as to hold the backrest **136** in any adjusted position to which it may be turned about said bolts. Fixed on the end wall **125** is an envelope guide **139**, the lower end of which lies in spaced relation with but close to the roller **63**, the purpose of which will be made clear hereinafter.

The hopper end wall **125** is also provided with a bolt **140** and wing nut **141** which serves to adjustably mount on said end wall an envelope separator **142** which is substantially identical in construction with the card separator **93** and is held pressurably against the endless slick band **64** of envelope feed roller **63** by the bolt **140** and wing nut **141** in the same manner that the card separator **93** is held against the endless slick band **51** of the card feed roller **49** by bolt **90** and wing nut **94**. The degree of pressure with which the separator **142** is thus applied to the slick band **64** is readily adjustable by manipulation of the wing nut **141**.

Attention is called to the fact that the bare friction pad **65** on the roller **63** and the half slick and half bare printing pad **53** on the roller **49** are in substantial radial alignment, which fact is important although these pads do not come into contact with each other in the operation of the addresser **15**. Also disposed in radial alignment with these pads is an envelope spirit moistener **148** having a thin arm **149** of spring metal, the upper end of which is secured to the hopper end wall **125** by a bolt **15**. Bent downwardly from a lower end portion of arm **149** are wings **151** between which a trunnioned moistener roller **152** is pivotally mounted. The spring arm **149** is so bent as to hold the roller **152** out of contact with the roller **63** but in the path of rubber friction pad **65** so that the roller **152** is pressed against said pad in rolling contact therewith when rotation of the roller **63** causes pad **65** to travel beneath the moistener roller **152**. The inner end portion of a felt wick **153** is yieldably held against roller **152** by a spring cap **154** which is secured, as by soldering, with the lower end of a spring wire **155**, the upper end of which is secured, as by soldering, to the moistener arm **149** (Figs. 4 and 6).

Extending into the opening **39** and resting on the flange **41** is a spirit reservoir **156** having a cover **157** provided with two holes **158** and **159**. The first of these holes is available for delivering a supply of spirit to said reservoir. The other hole receives the wick **153** so that the outer end portion of this may be immersed in said spirit and the latter transmitted through said wick to the roller **152**.

One end of the shaft **32** extends through the wall **19** and this shaft end has a crank **160** by which the addresser **15** may be manually driven.

Operation

With a supply of spirit in the reservoir **156** and with supplies of master address cards **161** in hopper **75** and envelopes **162**, in hopper **129**, the addresser **15** is actuated by manually rotating the crank **160**. This directly rotates the card feed roller **49**, and, through the gears **50** and **62**, rotates the envelope feed roller **63** in timed relation therewith. A single card and a single envelope are thus fed from said hoppers conjointly and in successive pairs so that the card of each pair overlies the envelope of that pair when the two pass together between rollers **49** and **60**, as shown in Fig. 3. This timed feeding of the cards and envelopes results from the one-to-one drive connection between rollers **49** and **63** and the positioning on these rollers of the rubber-toothed feeding strips **55** and **67** (Figs. 8 and 9). The cards **161** and envelopes **162** are placed in their respective hoppers in fanned relation, with the lowermost element of each stack advanced the farthest in the direction of rotation of the adjacent surface of the supporting feed roller. The separators **93** and **142** prevent the feeding of cards or envelopes from their respective hoppers except when the strips **55** and **67** come into engagement with the lowermost card and envelope. When this occurs the friction between the strips **55** and **67** and said lowermost card and envelope is so great as to overcome resistance of the separators **93** and **142** and thereby cause the feeding of the lowermost card and envelope respectively past the separators **93** and **142**.

Each card thus fed is guided by the fixed card guide **84** and the card guiding bar **98** and its spring fingers **100** and **101** so as to cause said card to remain in frictional engagement with the feed strips **55** and printing pad **53** as the roller **49** rotates thus carrying the card with the roller and in close conformity therewith until this card is discharged upwardly past the upper end of the guide finger **101** (Figs. 3 and 7). There, this card is drawn between the roller **49** and the card inverting roller **100**, the card being deflected by the U-shaped wire guide **114** to pass upwardly and outwardly about the roller **100** and between this and said guide, so as to be delivered downwardly into chute **121** through which said card gravitates into the card receptacle **122** with the addressed side of the card facing upwardly.

Each envelope which is fed from the envelope hopper is carried beneath envelope separator **142** by the frictional engagement of feed strips **67** with said envelope. These feed strips remain in contact with said envelope as it is fed downwardly until the envelope is guided by guide flange **26** (Fig. 3) toward the line of contact between rollers **49** and **60** and until the leading end of the envelope is gripped by and drawn between said rollers.

Just before the feeding of each lowermost envelope is started by contact with the envelope of strips **67** (Fig. 8) the bare rubber pad **65** comes in contact with the moistening roller **152** so as to lift this roller and start it rotating in rolling relation with said pad. Spirit is thus transferred from the wick **155** to the roller **152** and from this roller onto the envelope immediately the latter starts to be fed by the engagement of the feed strips **67** therewith. An area extending lengthwise of the envelope and of a width equal to the length of the roller **152** is thus wetted with spirit as said envelope is being fed past the moistener. By virtue of the radial alignment of the band **65**, the envelope's moistener **148** and the printing pad **56**, the moistened area on the envelope is disposed in superimposed relation with the printing pad **56** as the envelope passes between the roller **49** and printing roller **60** with the corresponding card **161** overlying said envelope and pressed thereagainst. The addresses provided in reverse in copying ink on the master address cards **161** are located in the areas on said cards which are coextensive with the moistened area on the envelopes. Thus the copy ink of the addresses on the address cards **161**

is transferred to the spirit wet areas on the envelopes as the cards and envelopes pass between rollers 49 and 60.

Deflecting envelope guide 47 is positioned so as to be engaged by each envelope as it is discharged from between the rollers 49 and 60 to cause the envelope to gravitate downwardly substantially along the patch indicated by the arrow 48, thereby causing this to be deposited in the envelope receptacle 23 with the addressed face of the envelope turned upward.

It is believed clear from the above description that the addresser 15 may be readily operated while this rests on a table 17 with the operator standing alongside and turning the crank 160. With the operator thus positioned, he is able to easily observe the upturned face of each of the cards and envelopes as they are stacked in their respective receptacles and see whether or not the address is properly printed on the envelope. As blank cards are customarily used to indicate division points between groups of cards stacked together and the addresses on which relate to different postal areas, the operator is thus able to notice when a blank card comes through into the card receptacle 122 whereupon he will stop operating the addresser and remove the envelopes and cards from their receptacles 123 and 122, so as to keep these separate, for the time being, from the other cards and envelopes going through the machine.

While the present invention is designed primarily for hand operation on a table, it is capable of adaptation to various other uses. For instance, the invention is adapted to be provided with a power drive as it is able to print addresses satisfactorily at much higher speeds than are practical when manually actuating the machine.

It is also to be noted that in case the addresser 15 is run for a while without any envelopes in the envelope hopper 129 the spirit ordinarily transmitted from roller 152 to the envelopes is instead transmitted to the pad 65 on which the moistening roller now travels in direct contact. The pad 65, however, tends to dissipate the spirit thus transferred thereto so that this does not accumulate, and due to the envelope feed roller 63 not coming into engagement with the card feed roller 49 or the pressure roller 60, no spirit reaches the cards 161 which may, at this time, be travelling about the roller 49 and which spirit might otherwise moisten these cards and cause them to smear.

Attention is also called to the extreme simplicity of the moistener 148 of the invention (Fig. 4). The spring pressed plate 154 holds the wick 155 in contact with the roller 152 so as to accomplish a uniform feeding of spirit to this roller when the latter rotates but fails to feed any spirit to the roller when the latter is not rotating. Another advantage of the moistener 148 is that the wick 155 is a straight strip of felt material of uniform thickness and width, and thus cheap to make.

While not essential to the operation of the invention for its intended purpose, it has been discovered that the wearing of the sponge rubber friction members 95 of the separators 93 and 142 is greatly reduced, without in any way impairing the action of these separators, by cementing a cover 200 of horse hide, or other leather of like character, on the friction faces of the members 95. The member 95 of the separator 93 is shown in Fig. 3 as having such a cover.

Although only a single embodiment of the invention has been disclosed herein, it is to be understood that this is susceptible of various modifications and changes without departing from the spirit of the invention or the scope of the appended claims.

The claims are:

1. In an addressing machine the combination of: a cylindrical roller for feeding master address cards; a hopper disposed above said roller for containing said cards; friction means on said roller for feeding said cards one at a time from said hopper; frictional separating means mounted on said hopper and frictionally engaging said roller to prevent more than one of said cards to be fed from said hopper at a time; a yieldable pressure roller mounted beneath said card roller in offset relation therewith and pressing upwardly thereagainst; guide means for guiding cards fed from said hopper about said card roller and between the latter and said pressure roller, said guide means lying opposite said card feeding roller but being offset from said pressure roller; a receptacle for said cards; means for inverting cards, discharged from between said card feed roller and said guide means, and delivering the same to said receptacle; a cylindrical roller for feeding flat articles to be addressed, said roller being positioned to feed said articles directly therefrom to the line of contact between the two aforesaid rollers; an article hopper disposed above said article feed roller for containing said articles; friction means on said article feed roller for feeding said articles, one at a time, from said article hopper; frictional separating means mounted on said article hopper and frictionally engaging said article roller to prevent more than one of said articles to be fed from said article hopper at a time; drive means for driving said feed rollers in synchronous relation so that said cards and articles pass between said card feed roller and said pressure roller with each card in a given overlapping relation with one of said articles; moistening means for moistening each article with a quick-drying spirit as said article is fed from said article hopper; and a receptacle disposed to receive said articles as they are delivered from between said card feed roller and said pressure roller.

2. A combination as in claim 1, in which said card inverting means includes a card reversing roller pressurably engaging said card feed roller just beyond the end of said card guide means whereby said reversing roller is rotated by said engagement; an auxiliary guide for guiding a card passing between said card feed roller and said reversing roller so that said card passes around said reversing roller and is discharged downwardly therefrom; and a chute positioned to receive said card and deliver the same to said card receptacle, said chute being laterally inclined to permit said card receptacle to be positioned away from beneath said pressure roller.

3. In an addressing machine the combination of: a roller for feeding articles to be addressed; a hopper for supporting a stack of said articles above said roller; a rubber article separator mounted on said hopper and frictionally engaging said roller to retard the feeding of said articles; frictional means on said feed roller for feeding said articles one at a time from said article hopper and between said roller and said separator; article moistening means including a moistening roller mounted on said hopper with said moistening roller in rolling contact with said feed roller so as to moisten each article fed from said hopper; a card hopper; and means out of contact with said article feed roller for feeding cards from said card hopper in timed relation with the feeding of the articles from said article hopper and pressing each card against a corresponding article fed from said article hopper and against the moistened surface of said article to print an address from said card onto said article.

4. In an addressing machine the combination of: an article feed roller; an article hopper disposed thereabove for confining a stack of articles with one of said stack resting on said roller; frictional separating means including a stiff backing member and a yieldable soft rubber friction member fixed at its upper end on said backing member so as to be engaged by said stack end and extend from this point along and in concentric engagement with the periphery of said roller for a short distance, an upper portion of said stiff backing member having an aperture; and a bolt having a wing nut and extending through a wall of said hopper and said aperture whereby the pressure with which said backing member presses said rubber friction member against said roller may be

adjusted by manipulation of said wing nut; and frictional means on the periphery of said feed roller for engaging and feeding the lowermost article from said stack between said roller and said separating means.

5. In an article addressing machine the combination of: an article hopper; an article feed roller disposed therebeneath for feeding articles from said hopper; frictional means on said hopper for retarding the feeding of more than one article at a time from said hopper; friction feed means on said roller for engaging and feeding articles from said hopper one at a time as said roller is rotated; and an article moistener including a spirit reservoir mounted close to said roller, a moistening roller, a flexible arm secured at its upper end on said hopper and with said moistening roller pivotally mounted on the lower end of said arm so as to be yieldably pressed against said article feed roller, a wick extending from said reservoir into a position overlying and contacting

the periphery of said moistening roller, a concave pressure plate spaced from said moistening roller and yieldably mounted on said flexible arm to yieldably press said wick against said moistening roller to cause spirit to be delivered from said reservoir through said wick to said moistening roller and from the latter to each article fed from said hopper.

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