

June 7, 1955

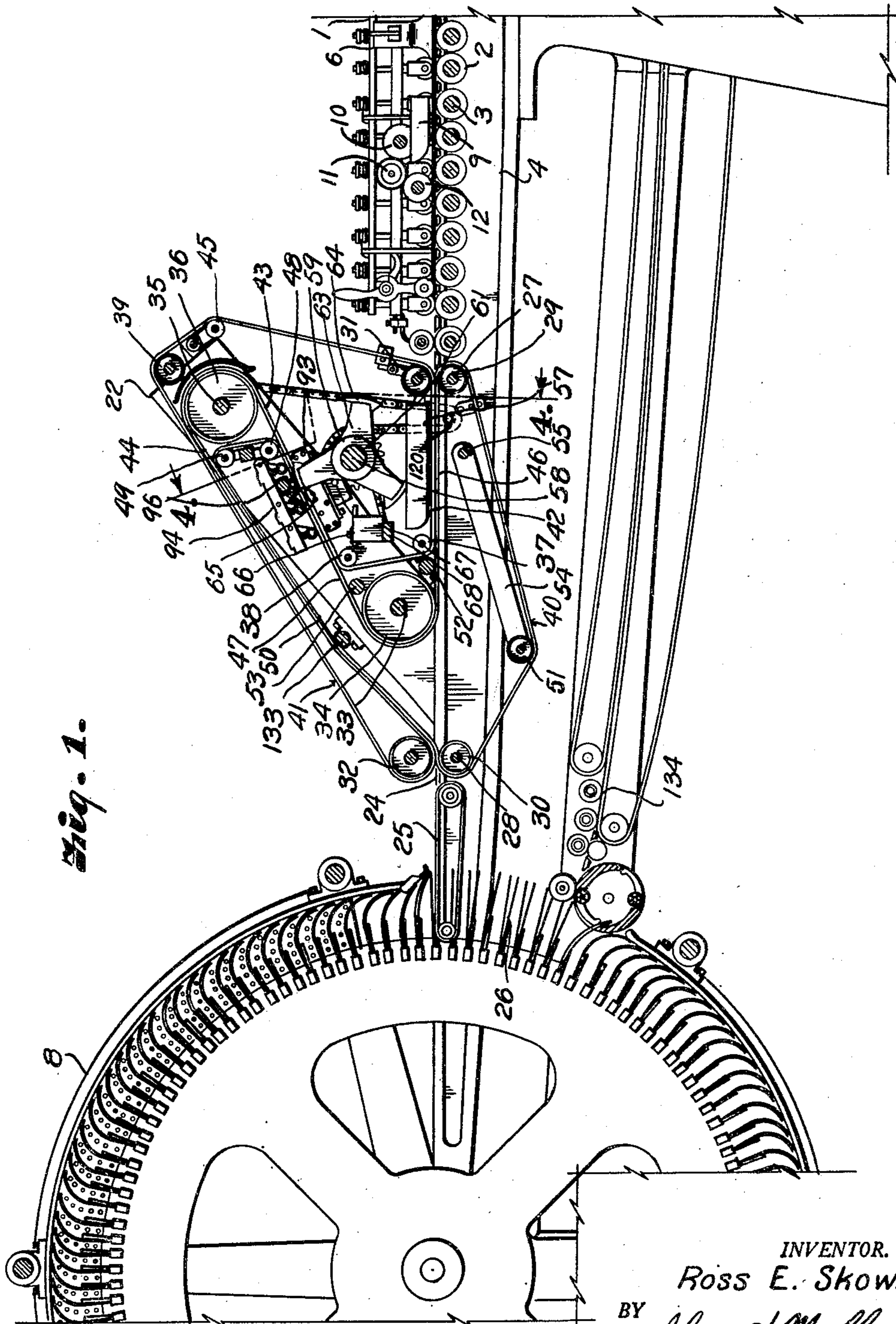
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2,709,951

APPLICATOR FOR APPLYING PRESSURE-SEALING MATERIAL  
IN A ROTARY ENVELOPE MAKING MACHINE

Filed Sept. 22, 1952

4 Sheets-Sheet 1



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4 Sheets-Sheet 2

Fig. 4.

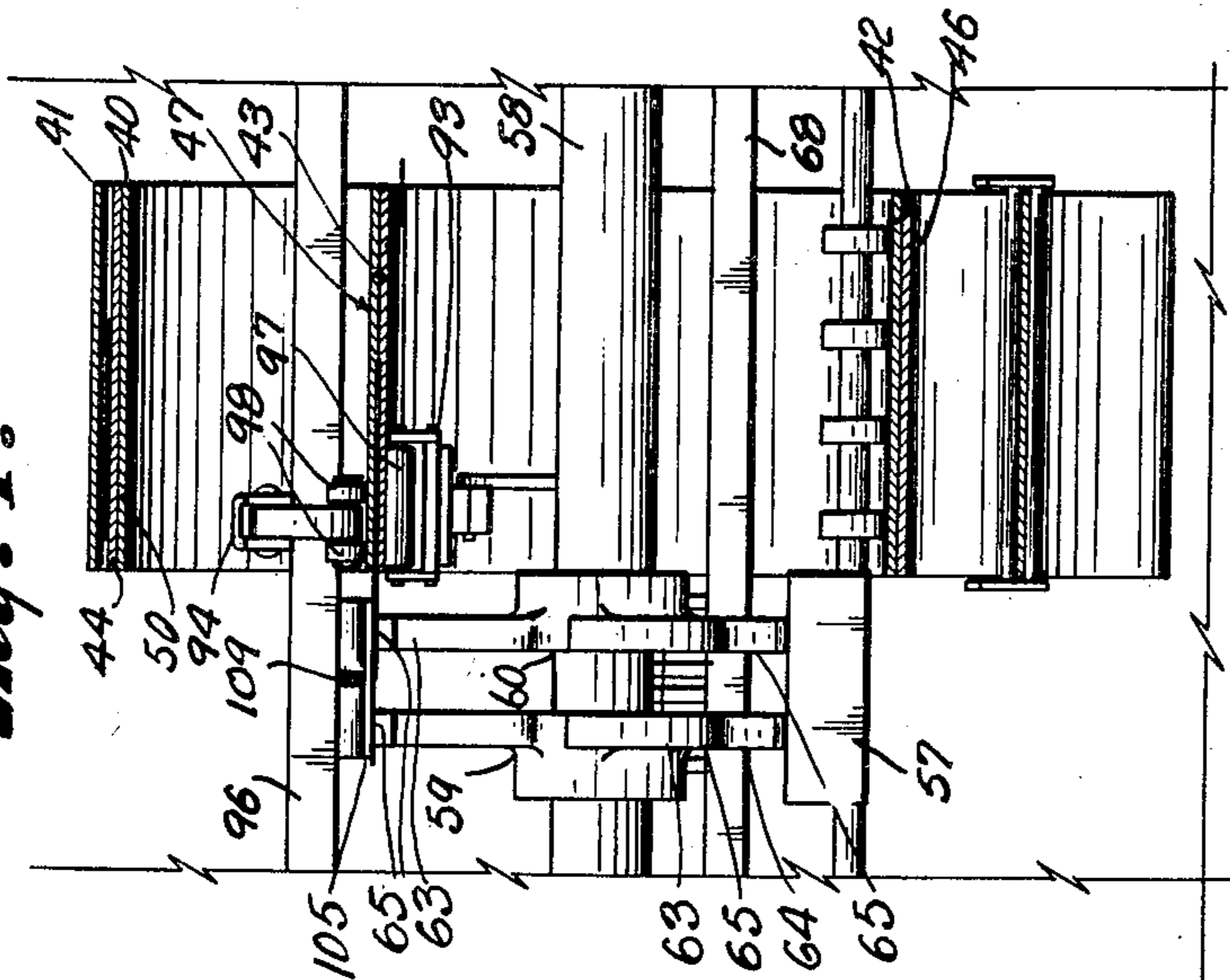


Fig. 2.

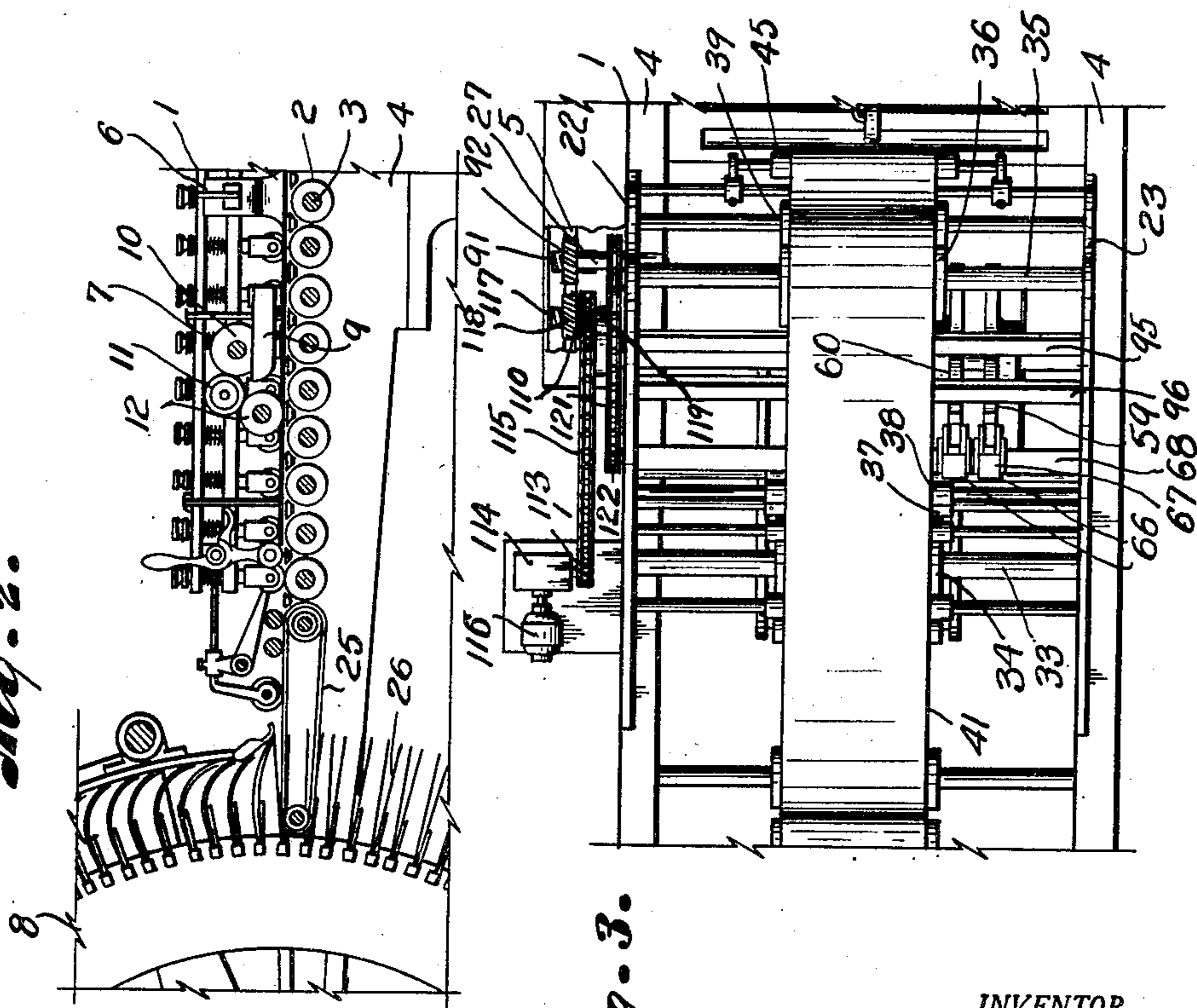
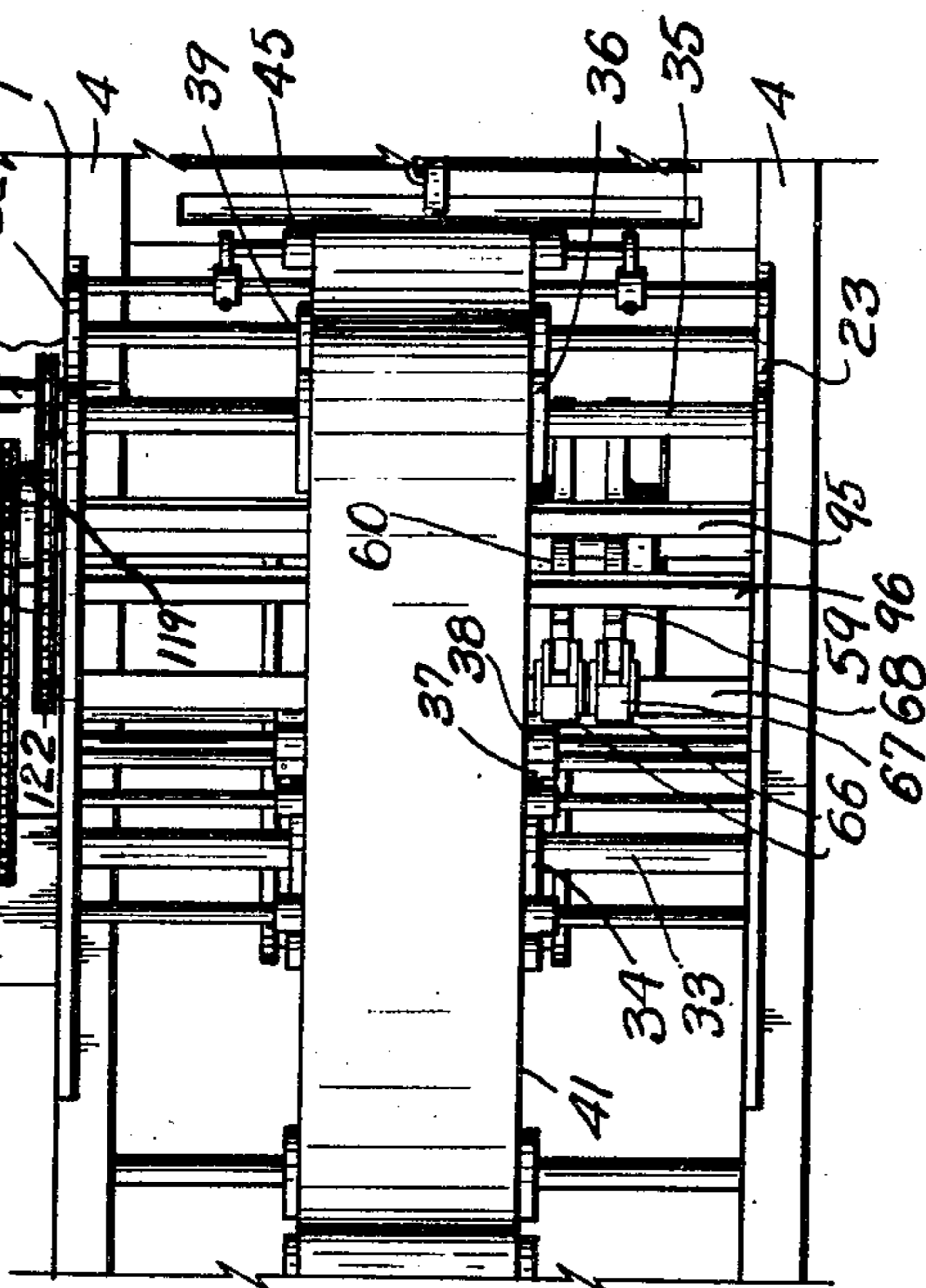


Fig. 3.



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4 Sheets-Sheet 3

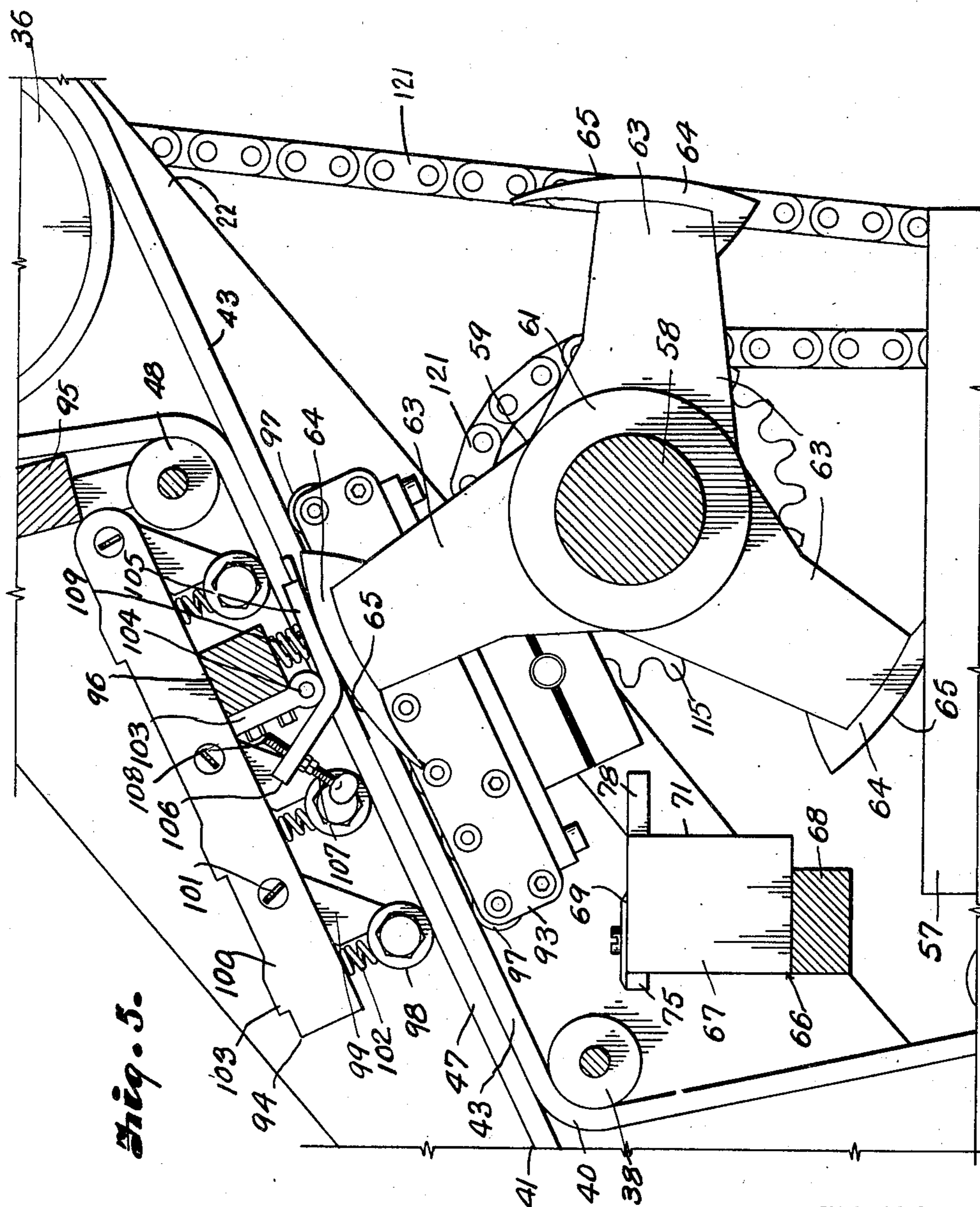


Fig. 5.

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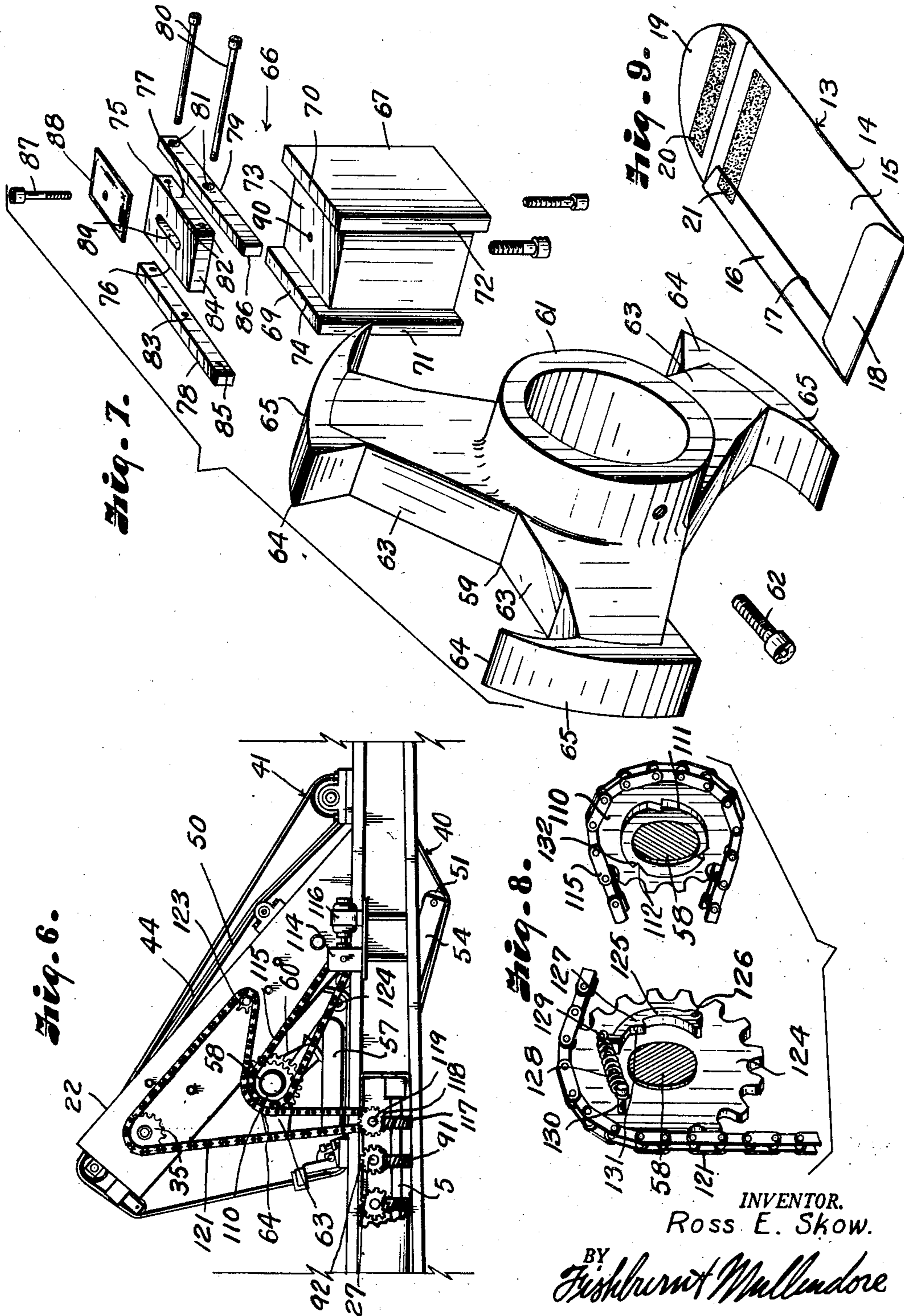
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4 Sheets-Sheet 4



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## APPLICATOR FOR APPLYING PRESSURE-SEALING MATERIAL IN A ROTARY ENVELOPE MAKING MACHINE

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Application September 22, 1952, Serial No. 310,875

10 Claims. (Cl. 93—62)

This invention relates to an apparatus for applying viscous sealing material such as latex or a latex composition to envelopes in a rotary type envelope making machine.

Machines of this character are especially adapted for high-speed production and therefore the blanks are kept in substantially continuous movement through a fixed path while being operated upon by the various gumming, folding and drying mechanisms required to complete finished envelopes. It is therefore necessary that the gum be applied by rotary means operating in timed relation with the movement of the blanks. Such gumming mechanisms usually comprise a rotary applicator which receives gum from a transfer roller, which in turn receives gum from a pickup roller mounted within a gum retaining pan. In this manner the pickup roller becomes coated with gum, and the gum is carried above the wall of the pan, deposited onto the transfer roller and then onto the applicator which applies the gum to the envelope blanks while they are being advanced to the dryer.

While such gumming mechanisms operate satisfactorily with conventional gums as used in ordinary envelope manufacture, they cannot operate to apply sealing materials such as latex when manufacturing the pressure-sealing type of envelopes. This is because latex disintegrates when pressed between rolling surfaces. It is therefore the principal object of the present invention to provide a rotary mechanism for applying pressure-sealing material as latex or latex compositions in the rotary type envelope making machine.

Other objects of the invention are to provide an applicator having arcuate applying faces corresponding in length and width to the latex areas applied to the envelopes and which are kept clear of excess material; to provide gauge means operating in conjunction with the applying faces to assure application of a constantly uniform thickness of latex; to provide a rotary type envelope making machine with mechanism for inverting the envelope and carrying the envelopes in inverted position over the latex applicator, the applicator operating directly within the supply of latex; and to provide a carrier for the envelope which maintains movement of the envelopes in timed relation with movement of the applying faces of the rotary applicator.

It is also an object of the invention to cure or dry the latex simultaneously with setting of the conventional gum which secures the side and bottom flaps of a pressure-sealing type of envelope.

A further object of the invention is to maintain the latex applicator in operation, when the envelope machine is stopped, to maintain mixture of the latex within the latex receptacle.

In accomplishing these and other objects of the invention hereinafter pointed out, I have provided improved structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a longitudinal section through a portion of a continuous rotary type envelope making machine

2

equipped with a mechanism for applying pressure-sealing material such as latex in accordance with the present invention.

Fig. 2 is a similar fragmentary section showing a machine having a conventional gum applicator in order to give a better comparison of the present invention.

Fig. 3 is a plan view of the latex applying mechanism.

Fig. 4 is a cross section through the latex applying mechanism on the line 4—4 of Fig. 1.

Fig. 5 is an enlarged fragmentary section through the latex applying mechanism particularly illustrating the latex applicators and the platen which backs and supports the envelopes in contact with the applying surfaces of the applicators.

Fig. 6 is a side elevational view of the latex applying mechanism showing the machine and motor drives of the applicator whereby the applicator is driven in timed relation with the machine drive and kept in continuous movement when the envelope making machine is stopped.

Fig. 7 is an enlarged perspective view of the applicator and parts of the film gauge shown in spaced relation to better illustrate the construction.

Fig. 8 is a detail view of the motor and machine driven sprockets shown in spaced relation to better illustrate the driving connection therebetween.

Fig. 9 is a perspective view of a pressure-sealing type of envelope showing the latex or pressure-sealing material applied thereto.

Referring more in detail to the drawings:

1 designates a rotary envelope making machine of the type disclosed in United States Letters Patent No. 1,774,536 issued September 2, 1930, and wherein the envelopes are advanced in continuous movement by means of a series of rollers 2 that are carried on shafts 3 that have their ends journaled in side members 4 of the frame. The shafts are connected in driving relation with a longitudinal countershaft 5 through spiral gears as shown in the patent.

Supported above the series of rollers 2 are the gumming and folding mechanisms 6 including a gumming mechanism 7 for applying gum to the sealing flaps of the envelopes prior to their delivery into a drying wheel 8. The drying wheel 8 may be of the type illustrated in United States Patent No. 1,834,567, issued December 1, 1931.

As above stated the conventional gumming mechanism (see Fig. 2 of the drawings) includes a gum pan 9 carried above the path of the envelopes. Rotatable in the pan is a pickup roller 10 which picks up and carries the gum to a transfer roller 11 that transfers the gum onto an applicator roller 12 which applies the gum to the flaps of the envelopes as they are moved along by the rollers 2.

Gum applicators of the above described type are adapted for applying ordinary gums to the sealing flaps of common type envelopes but they will not operate to apply sealing material to the pressure-sealing type envelope as illustrated in Fig. 9. This is because pressure-sealing materials such as latex disintegrate when acted upon by pressure of the rollers.

It is to be understood that pressure-sealing envelopes may be constructed with various folds and be of various shapes. However, an open end envelope 13 is shown in Fig. 9. The envelope is formed of a blank having a substantially rectangular front face side 14 provided with side flaps 15 and 16 folded over the front face side and sealed together to provide a side seam 17. The front face side 14 also has a bottom flap 18 that is folded over and sealed to the side flaps 15 and 16 as in conventional open end envelope construction. The front face side has a closure flap 19 that is adapted to be folded over the back face side and is provided with a strip of pressure-sealing material such as latex 20 that registers with a correspond-

3

ing strip of latex 21 on the back face side so that when the envelope is to be sealed the sealing flap 19 is turned over the back face side to bring the latex strips into coalescence and effect an autogenous connection therebetween.

Mounted on the side frames 4 are brackets 22 and 23 that are positioned in side registry with the space 24 that is provided between the last of the rollers 2 and a delivery belt 25 that effects delivery of the envelopes into the gripping fingers 26 of the drier 8. Rotatably mounted between the side frames 4, adjacent the last of the rollers 2 and the belt 25, are shafts 27 and 28 carrying pulleys 29 and 30 located in the path of travel of the envelopes delivered by the series of rollers 2. Mounted above the pulleys 29 and 30 are pulleys 31 and 32 and carried between the brackets 22 and 23, at a point intermediate the rollers 31 and 32, is a shaft 33 carrying a relatively larger roller 34 having its lower periphery substantially in plane with the lower peripheries of the pulleys 31 and 32 as best shown in Fig. 1. Also mounted between the brackets 22 and 23 and above the roller 31 is a shaft 35 carrying a roller 36 substantially conforming in diameter to the roller 34. Also carried between the brackets in front of the roller 34 are vertically spaced guide pulleys 37 and 38. Also mounted on the brackets, but at a point above and forwardly of the pulley 36, is an idler pulley 39.

The pulleys above described are all mounted with their axes extending parallel with the axes of the rollers 2 and cooperate with each other in mounting endless belts 40 and 41. The belts are reeved around the respective pulleys so that the belt 41 has a run 42 extending horizontally between the pulley 31 and pulley 37 substantially in plane with the path of travel of the envelopes that are advanced by the rollers 2. At the end of the run 42 the belt 41 extends over the pulleys 37 and 38 and then in an upwardly inclined run 43 over the large pulley 36, then downwardly in a run 44, around the pulley 32, again upwardly over the guide pulley 39 and downwardly over a tensioning pulley 45 to the pulley 31. The belt 40 has a horizontal run 46 in parallel contact with the run 42 and operates over the large pulley 34 through a run 47 in parallel contact with the run 43 of the belt 41 over pulleys 48 and 49, through a run 50 in contact with the run 44, around the pulley 30, under a belt tensioning pulley 51 to the pulley 29. The endless belts 40 and 41 thus provide parallel runs 42—46 in registry with the path of the envelopes to grip the envelopes therebetween and effect their feed between the belt 40 and periphery of the roller 34 to carry the envelopes between the upwardly inclined runs 43—47 of the respective belts, around the roller 36 and between the runs 44 and 50 of the belts 40 and 41 which feed the blanks onto the belts 25 into the grippers 26 of the drier 8. Guide rollers 52 and 53 are provided to guide envelopes around the periphery of the pulley 34 and between the contacting runs 43—47 of the belts. The tensioning pulley 51 for the belt 41 is carried on arms 54 that are pivotally carried on a cross rod 55 having its ends pivotally mounted in the side frames 4.

Carried between the side brackets, above and laterally of the horizontal runs 42 and 46 of the belts 40 and 41 as shown in Fig. 4, is a pan-shaped receptacle 57 which carries a supply of latex to be applied to the envelopes as they are carried between the inclined runs 43 and 47 of the belts 40 and 41 as later described. Extending transversely between the brackets 22 and 23, at a point between the latex receptacle 57 and the inclined runs 43 and 47 of the respective belts, is a transverse shaft 58 carrying applicators 59 and 60 which are properly spaced thereon for applying the stripes of latex 20 and 21 to the envelopes as later described.

The applicators 59 and 60 are of the same construction and each includes a hub 61 adjustable longitudinally on the shaft 58 by a setscrew 62. Extending radially from the periphery of the hub are legs 63 and carrying substantially arcuate-shaped shoes 64 having applying faces 65 conforming with the stripes of latex to be applied to the

4

envelopes. The legs of the applicators are of sufficient length so that when the shaft 58 is rotated the faces 65 of the shoes move through the body of latex contained in the receptacle 57 to receive a film of latex thereon and carry it into contact with a scraper and film gauging mechanism 66.

Each scraper and gauging mechanism includes a block 67 carried on a transverse bar 68 in registry with an applicator. Each block is provided with horizontal side flanges 69 and 70 and vertical side flanges 71 and 72. The flanges 71 and 72 cooperate with the upper face 73 of the respective blocks to provide guideways 74 for a scraper assembly including a plate 75 having side faces 76 and 77 to which are secured side scrapers 78 and 79 by bolts 80 that extend through openings 81 in the side scraper 79, registering openings 82 in the scraper plate 75 and into threaded openings 83 in the other side scraper 78 as best shown in Fig. 7. The scraper assembly is slidably mounted in the guideway 74 of the respective blocks whereby the forward edges 84 of the scraper blade are positioned relatively to the applicator faces 65 of the respective shoes to pass a thickness of latex sufficient to apply the stripes of latex to the envelopes. The side scrapers extend forwardly and have faces 85 and 86 contacting the sides of the shoes 64 to scrape off any latex adhering thereto.

The scraper assembly is adjustably retained in the guideways 74 by fastening devices 87 that extend through plates 88 and slots 89 of the scraper plates 75 into threaded openings 90 of the blocks 67 (Fig. 7). The envelope carrier belts are driven together with the applicator mechanism in timed relation with the forwarding rollers 2 as now to be described. The longitudinal countershaft 5 for driving the rollers 2 extends alongside the space 24 between the side frames 4 and mounts a spiral toothed gear 91 that meshes with a similar gear 92 on the shaft 27 of the roller 29 (Fig. 6).

The inclined runs 43 and 47 are retained in gripping contact with the envelopes by means of upper and lower pressure exerting devices 93 and 94 that are adjustably mounted on cross bars 95 and 96 having their ends supported by the side brackets 22 and 23. The pressure device 93 includes a series of rollers 97 operating in contact with the run 43 of the belt 40, as best shown in Fig. 5. The pressure device 94 includes a series of rollers 98 carried on arms 99 that are pivoted to a frame 100 by screws 101. The rollers are retained in yielding contact with the run 47 of the belt 41 by coil springs 102 that engage seats in the arms 99 and seats 103 on the frame 100.

Fixed to the cross bar 96, in substantial registry with the applicators, are brackets 103 and pivoted thereon by means of pins 104 are platens 105 which support the portions of the envelopes to which the latex is applied by contact of the applicators. The platens 105 have tail portions 106 that carry setscrews 107 which form adjustable stops 108 to limit downward movement of the platen under pressure of coil springs 109.

The applicator shaft 58 carries a sprocket 110 that is suitably secured thereto and which has a hub 111 provided with ratchet engaging notches 112 as best shown in Fig. 8. Operating over the sprocket 110 and over a sprocket 113 of a speed reduction gearing 114 is a chain 115 (Fig. 6) whereby the applicators may be kept in continuous slow speed operation whenever the envelope machine is stopped for any purpose thereby keeping the shoes of the applicators in constant movement through the body of latex.

The speed reduction unit is operated by a motor 116 that is energized whenever the envelope machine is stopped. When the envelope machine is in operation the applicator shaft 58 is driven in timed relation with the advancing rollers 2. This is effected by providing the longitudinal shaft 5 with a spiral gear 117, which meshes with a similar gear 118 on a stub shaft 119 that is carried by the side member of the machine frame.

5

Also mounted on the stub shaft in driven relation with the gear 118 is a sprocket 120. Operating over the sprocket 120 (Fig. 1) is a chain 121 that extends over sprockets 122 and 123 and over a sprocket 124 loosely mounted on the applicator shaft but which is automatically connected in driving relation with the sprocket 110 by means of a ratchet 125. The ratchet 125 is pivoted as at 126 on the side of the sprocket 124 adjacent the sprocket 110 and has a tooth 127 adapted to engage the notches 112 of the hub 111 of the sprocket 110. The tooth 127 of the ratchet 125 is resiliently retained in engagement with the hub 111 by a coil spring 128 having one end fixed to the free end of the ratchet as indicated at 129 and the other end secured to a pin 130 projecting from the face of the sprocket 124. It is thus obvious that whenever the sprocket 124 is in motion the face 131 of the tooth 127 engages the face 132 of the notches to provide an overrunning driving connection and effect operation of the applicator in timed relation with the operating mechanism of the envelope making machine. When the machine is stopped and the sprocket 124 is idle and the motor 116 is energized, the chain 115 will drive the sprocket 110 to continue rotation of the applicator mechanism as long as the machine has been stopped for ordinary reasons as when adjusting the various mechanisms, clearing of the machine of stoppages or for other reasons.

The sprocket 122 is mounted on the shaft 35 of the roller 36 and thereby drives the conveyor 41. The runs 44 and 50 of the respective conveyors are supported between the pulleys 32 and 49 by a guide roller 133 which tends to tighten the runs of the belts and better grip the envelopes as they are delivered between the runs of the conveyors onto the conveyor 25.

The machine as described may be used for making standard envelopes or envelopes of the pressure-sealing type. If the standard type envelope is to be made the usual sealing gum is placed in the pan 9 and the pressure-sealing material is omitted from the pan 57 and if the pressure-sealing type of envelopes are to be made the gum is omitted or emptied from the pan 9 and the pan 57 is filled with pressure-sealing material. No other changes are required except to adjust the machine to the size and shape of the envelope to be produced.

In operation of the machine when making pressure-sealing envelopes, the blanks are advanced through the machine and formed into envelopes as shown in Fig. 9, the envelopes being carried through the machine on the rollers 2. The applicator mechanism and relative path of travel of the envelopes are such that the body portions of the envelopes pass between the runs 42 and 46 of the respective conveyors with the closure flap and portion of the envelope to be gummed projecting from the side of the conveyors and in registry with the applicators 59 and 60. The envelopes are carried by the conveyors at the same speed as the rollers 2 and pass from under the run 42 of the belt 41 and under the roller 52 which guides the envelopes for movement between the belt and periphery of the roller 34. The envelopes on being carried around the roller 34 are inverted, that is the back side now faces downwardly to pass over the guide roller 53 and be engaged by and carried upwardly between the inclined runs 43 and 47.

With the machine in operation the applicator shaft 58 is being rotated by the sprocket 124 to move the applicator shoes through the body of latex contained in the pan-like receptacle 57 to pick up a portion of the latex and carry it toward the station of the platen 105. As the shoes move between the scrapers 85 and 86, latex is removed from the side of the shoes and the face 84 removes all but a film of latex required to be transferred onto the envelope as the envelopes are carried in timed relation with the applicators under the platen 105. Attention is directed to the fact that the arcuate-shaped faces of the applicators roll upon the

6

under side of the flap and upper body portion of the envelopes to apply the latex stripes. In this manner, the application of the latex in no way interferes with movement or timing of the envelopes as they are carried between the runs of the respective conveyors. Thus the latex is applied exactly to the desired areas on the envelopes.

After the latex has been applied the envelopes are carried around the roller 36, and face side up, between the runs 47 and 44 of the conveyor belts. When the envelopes reach the conveyor 25 they are fed into the grippers of the drying cylinder. The envelopes are thus individually gripped and held one from the other to avoid contact of the latex on one envelope with the latex on another envelope. Curving of the envelopes in the grippers also results in proper shaping of the finished envelopes. The drying cylinder carries the envelopes a sufficient length of time to assure drying of the gum before the envelopes are delivered from the grippers onto an offtake conveyor mechanism 134.

It is pointed out that the arrangement of the various runs of the conveyor belts is important to assure inversion of the envelopes without getting them out of alignment as they move about the peripheries of the pulleys 34 and 36. It is for this reason that the inside runs of the respective conveyors are bypassed ahead of the respective pulleys 34 and 36.

If for any reason it should become necessary to stop the envelope making machine, the motor 116 drives the applicator shaft at a slow speed by means of the chain 115. When the machine is again started the ratchet drive again becomes effective in driving the applicator at the same speed that the envelopes are advanced through the machine.

From the foregoing it is obvious that I have provided a rotary type envelope machine with an applicator which is especially adapted for the application of pressure-sealing materials such as latex and like compounds so that pressure-sealing envelopes are delivered from the machine in completed condition at the same high production rate that conventional envelopes are produced. It is also obvious that this invention promotes use of the same machine without change, removal, or addition of any parts, mechanism or devices to make either conventional seal flap gummed envelopes or the pressure type (latex) seal style envelopes.

What I claim and desire to secure by Letters Patent is:

1. In combination with a rotary type envelope making machine, a segmental applicator for applying pressure-sealing material to envelopes under manufacture in the machine, a receptacle for containing the pressure-sealing material, means for supporting the receptacle in position for the applicator to dip into said material, a driving connection between the applicator and the machine to maintain the applicator in timed relation with movement of the envelopes through the machine for applying the material to the envelopes, an auxiliary drive connected with the applicator to drive the applicator through the pressure-sealing material for preventing the material from drying on the applicator and for stirring the pressure-sealing material in the receptacle when the machine is stopped, and an overrunning connection between said drives whereby one of the drives is effective when the other is stopped.

2. An envelope making machine including, means for carrying envelopes through a fixed path, rotary segmental applicators in the path of the envelopes, a receptacle for containing a pressure-sealing material, means for supporting the receptacle in position for the applicators to dip into said material, a shaft carrying the applicators, a main driving member on the shaft, an auxiliary driving member on the shaft, a driving connection between the main driving member and the envelope carrying means to maintain said segmental applicators in timed relation with the envelope carrying means, a motor, a driving

7

connection between the motor and the auxiliary driving member, and an overrunning clutch connection between said driving members to render the auxiliary member effective in driving the applicator shaft when the main driving member is stopped.

3. An envelope making machine including, means for carrying envelopes through a fixed path, rotary segmental applicators in the path of the envelopes, a receptacle for containing a pressure-sealing material, means for supporting the receptacle in position for the applicators to dip into the material, a shaft carrying the applicators, a main driving member on the shaft, an auxiliary driving member on the shaft, a driving connection between the main driving member and the envelope carrying means to effect actuation of the applicators in timed relation with said envelope carrying means for applying said material to the envelopes when the envelope carrying means is in operation, a motor, a driving connection between the motor and the auxiliary driving member, and an overrunning clutch connection between said driving members to render the auxiliary member effective in driving the applicator shaft to move the applicators through the material in the receptacle for stirring the material in the receptacle and for preventing the material from drying on the applicators when the main driving member is stopped, said main driving member having a faster operating speed than the auxiliary driving member to render the overrunning clutch connection effective when the envelope carrying means is in operation.

4. An apparatus for making envelopes of the pressure-seal type including rotary means for forming blanks into envelopes, means for conveying the blanks along said rotary forming means and for advancing the formed envelopes in spaced apart relation with the back sides thereof uppermost and the closure flaps in open position, means for applying the pressure-sealing material to complementary areas on said back side and closure flaps of the formed envelopes including a receptacle for containing the pressure-sealing material, rotary applicators having arcuate applying faces corresponding in shape with the areas to which the material is to be applied and of less length than the transverse width of the envelopes, means rotatably supporting the applicators for rotation in the direction of movement of the conveying means, a driving connection between said conveying means and the applicators for effecting movement of the applying faces from a position for receiving material from the receptacle through an upwardly facing position for depositing the material onto said areas of the envelopes, means in receiving relation with said conveying means and having a driving connection therewith for inverting the envelopes and carrying the envelopes in said inverted position into contact with said arcuate applying faces when moving through said upwardly facing position for effecting direct transfer of said pressure-sealing material onto said areas, means for carrying the envelopes through a drying zone, and means for turning the envelopes to a position with the pressure-sealing material facing upwardly and for discharging the envelopes into said carrying means.

5. An apparatus for making envelopes of the pressure-seal type as described in claim 4 wherein said envelope reversing and turning means comprises a pair of endless belts having parallel runs for receiving and engaging the envelopes therebetween, a roller for guiding one of the belts with the envelopes engaged between the periphery of the roller and the belt to effect inversion of the envelopes, rollers for guiding the other belt into parallel relation with the first belt to form an upwardly inclined run extending over the rotary applicators for engaging and conveying the inverted envelopes therebetween into contact with upwardly moving applying faces of the applicators to receive therefrom the pressure-sealing material, a second reversing pulley cooperating with the second belt to turn the envelopes to a position with the

8

sealing material facing upwardly, guide pulleys carrying said belts and forming downwardly extending runs for engaging the reinverted envelopes therebetween for discharging the envelopes into the carrying means which carries the envelopes through the drying zone.

6. An apparatus for forming envelopes of the pressure-seal type including rotary means for forming blanks into envelopes, means for conveying the blanks along said rotary forming means and for advancing the formed envelopes in spaced apart relation with the back sides thereof uppermost and the closure flaps in open position, means for applying the pressure-sealing material to complementary areas on said back side and closure flaps of the formed envelopes including a receptacle for containing the pressure-sealing material, separate rotary applicators for applying the pressure-sealing material to the respective areas and each having arcuate applying faces corresponding in shape with said areas and of less length than the transverse width of the envelopes, means rotatably supporting the applicators in side to side relation for rotation in the direction of movement of the conveying means, a driving connection between said conveying means and the applicators for effecting movement of the applying faces from a position for receiving material from the receptacle through an upwardly facing position for depositing the material onto said areas of the envelopes, means positioned laterally of the applicators and in receiving relation with said conveying means for inverting the envelopes and carrying the envelopes in said inverted position with said complementary areas projecting over said arcuate applying faces when said applying faces are moving through said upwardly facing position, means above the applicators for applying pressure downwardly on the projecting portions of the envelopes for effecting direct transfer of said pressure-sealing material onto said areas, means for carrying the envelopes through a drying zone, and means for turning the envelopes to a position with the pressure-sealing material facing upwardly and for discharging the envelopes into said last named carrying means.

7. An apparatus for forming envelopes of the pressure-seal type including rotary means for forming blanks into envelopes, means for conveying the blanks along said rotary forming means and for advancing the formed envelopes in spaced apart relation with the back sides thereof uppermost and the closure flaps in open position, means for applying the pressure-sealing material to complementary areas on said back side and closure flap of the formed envelopes including a receptacle for containing the pressure-sealing material, rotary applicators having arcuate applying faces corresponding in shape with the areas to which the material is to be applied and of less length than the transverse width of the envelopes, means rotatably supporting the applicators for rotation in the direction of movement of the conveying means, a main means for driving the applicators from said conveying means for effecting movement of the applying faces from a position for receiving material from the receptacle through an upwardly facing position for depositing the material onto said areas of the envelopes, means in receiving relation with said conveying means and having a driving connection therewith for inverting the envelopes and carrying the envelopes in said inverted position into contact with said arcuate applying faces when moving through said upwardly facing position for effecting direct transfer of said pressure-sealing material onto said areas, means for turning the envelopes to a position with the pressure-sealing material facing upwardly and for discharging the envelopes while in said upwardly facing position, an auxiliary driving means for the applicators to drive the applicators through the material in the receptacle when said conveying means is stopped for stirring said material and preventing the material from drying on the applicators, and a ratchet connection between the auxiliary driving means and the main driving means to

retain the applicators in timed relation with said conveying means.

8. An apparatus for making envelopes of the pressure-seal type as described in claim 4 wherein said envelope reversing and turning means is positioned laterally of the applicators and comprises a pair of endless belts having parallel runs for receiving and engaging the envelopes therebetween with said areas of the envelopes projecting laterally therefrom, a roller for guiding one of the belts with the envelopes engaged between the periphery of the roller and the belt to effect inversion of the envelopes, rollers for guiding the other belt into parallel relation with the first belt to form an upwardly inclined run extending over the rotary applicators for engaging and conveying the inverted envelopes therebetween with the projecting areas in position to contact with the upwardly moving applying faces of the applicators to receive therefrom the pressure-sealing material, means above the applicators for pressing the projecting areas into contact with the applying faces, a second reversing pulley cooperating with the second belt to turn the envelopes to a position with the sealing material facing upwardly, guide pulleys carrying said belts and forming downwardly extending runs for engaging the reinverted envelopes therebetween for discharging the envelopes into the carrying means which carries the envelopes through the drying zone.

9. An apparatus for making envelopes of the pressure-seal type including rotary means for forming blanks into envelopes, means for conveying the blanks along said rotary forming means and for advancing the formed envelopes in spaced apart relation with the back sides thereof uppermost and the closure flaps in open position, means for applying the pressure-sealing material to complementary areas on said back side and closure flaps of the formed envelopes including a receptacle for containing the pressure-sealing material, rotary applicators having arcuate applying faces corresponding in shape with the areas to which the material is to be applied and of less length than the transverse width of the envelopes, means rotatably supporting the applicators for rotation in the direction of movement of the conveying means, a driving connection between said conveying means and the applicators for effecting movement of the applying faces from a position for receiving material from the receptacle through an upwardly facing position for depositing the material onto said areas of the envelopes, means in receiving relation with said conveying means and having a driving connection therewith for inverting the envelopes and carrying the envelopes in said inverted position into contact

with said arcuate applying faces when moving through said upwardly facing position for effecting direct transfer of said pressure-sealing material onto said areas, and means for turning and discharging the envelopes with the pressure-sealing material facing upwardly.

10. An apparatus for making envelopes of the pressure-seal type including rotary means for forming blanks into envelopes, means for conveying the blanks along said rotary forming means and for advancing the formed envelopes in spaced apart relation with the back sides thereof uppermost and the closure flaps in open position, means for applying the pressure-sealing material to complementary areas on said back side and closure flaps of the formed envelopes including a receptacle for containing the pressure-sealing material, rotary applicators having arcuate applying faces corresponding in shape with the areas to which the material is to be applied and of less length than the transverse width of the envelopes, means rotatably supporting the applicators for rotation in the direction of movement of the conveying means, a driving connection between said conveying means and the applicators for effecting movement of the applying faces from a position for receiving material from the receptacle through an upwardly facing position for depositing the material onto said areas of the envelopes, and means in receiving relation with said conveying means and having a driving connection therewith for inverting the envelopes and carrying the envelopes in said inverted position into contact with said arcuate applying faces when moving through said upwardly facing position for effecting direct transfer of said pressure-sealing material onto said areas.

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