July 15, 1952 J. VAN BUREN 2,603,181

MACHINE FOR APPLYING ADHESIVE TO CARTON FLAPS

Filed Dec. 4, 1948 5 Sheets-Sheet 1

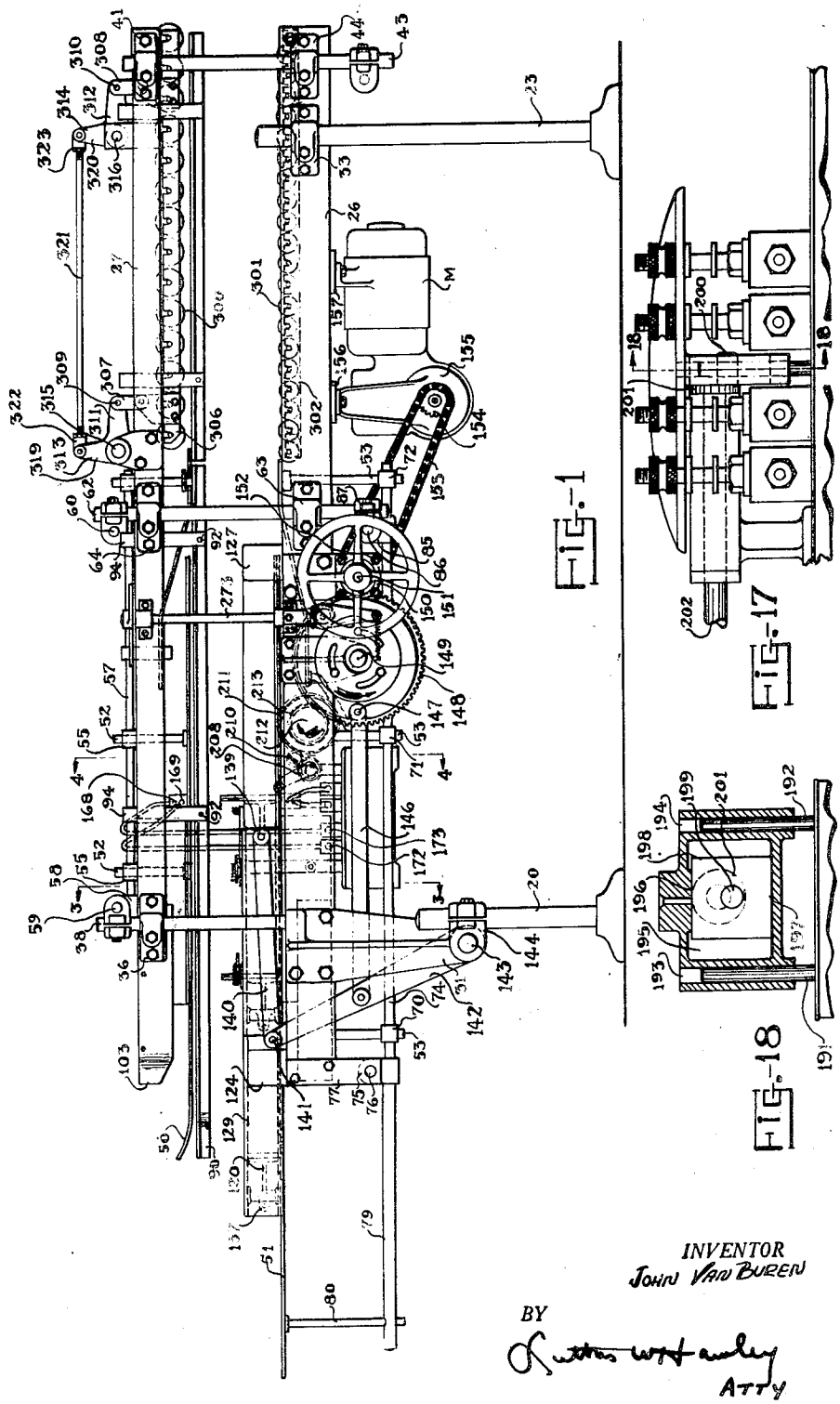


FIG.-1

FIG.-17

FIG.-18

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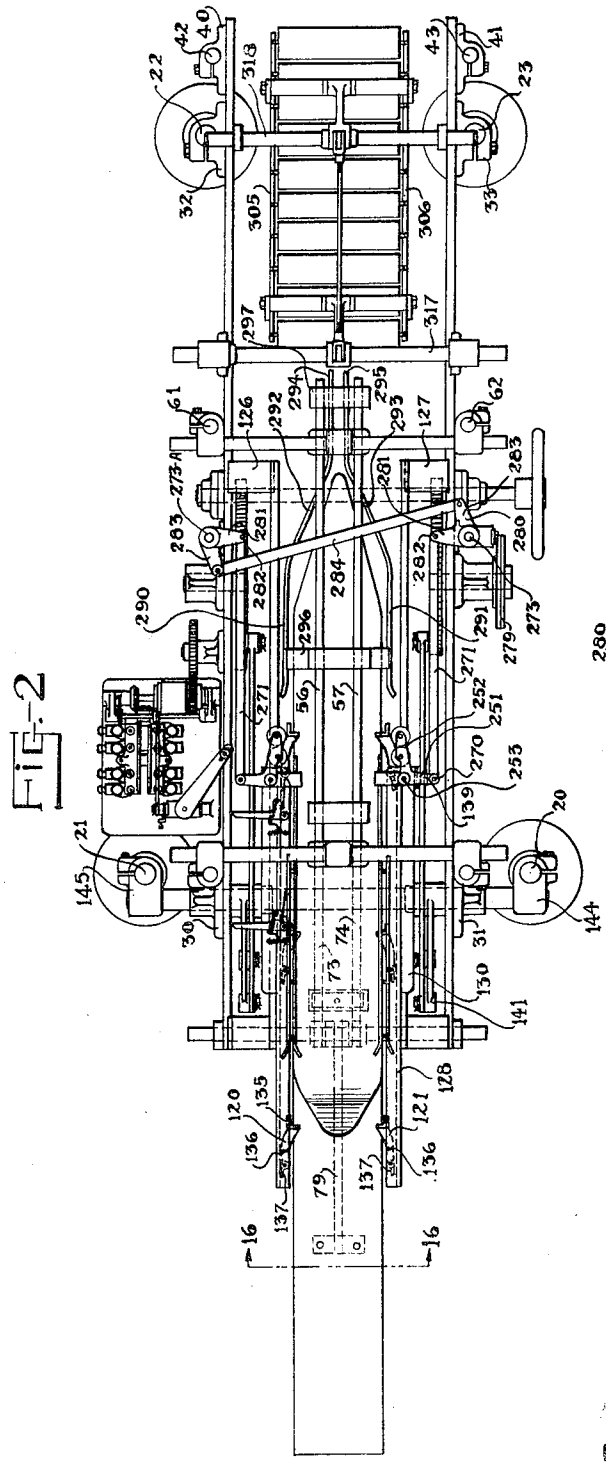


FIG.-2

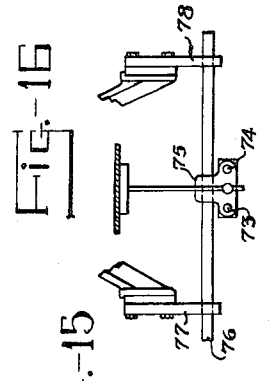


FIG.-16

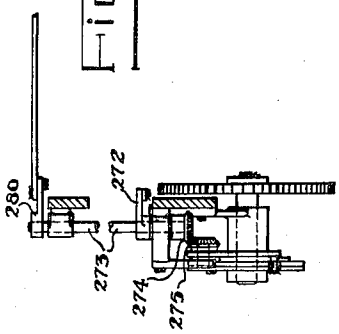


FIG.-15

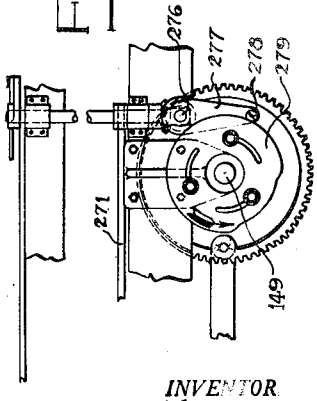


FIG.-14

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MACHINE FOR APPLYING ADHESIVE TO CARTON FLAPS

Filed Dec. 4, 1948 5 Sheets-Sheet 3

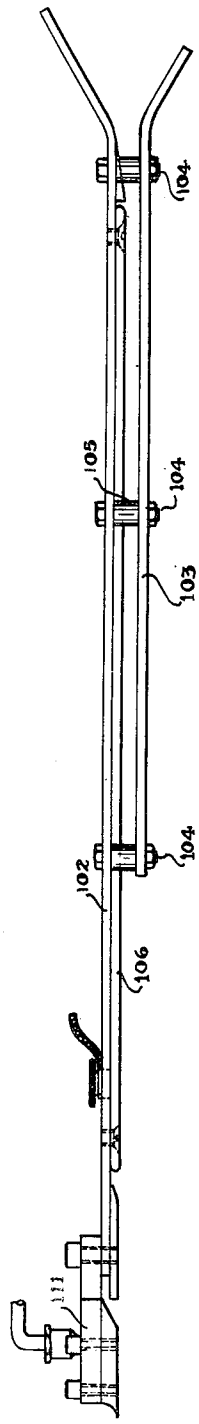


FIG. 5

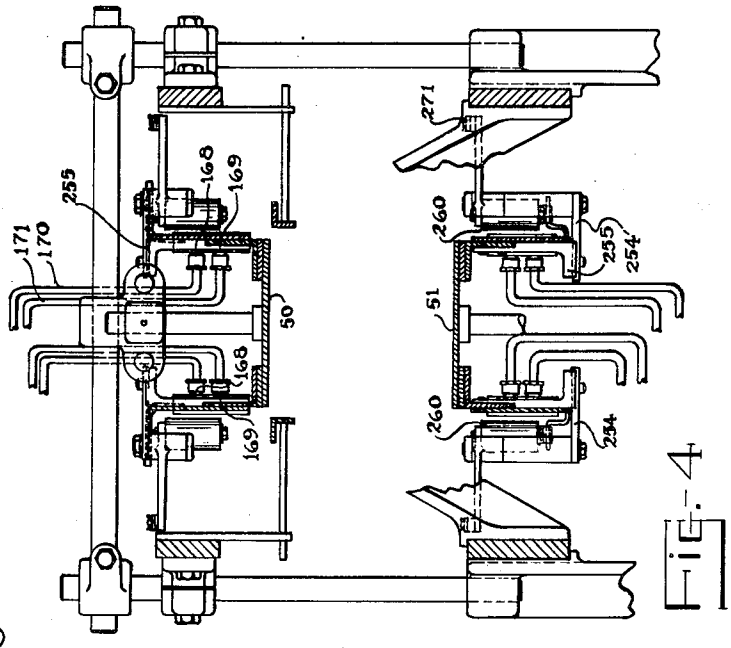


FIG. 4

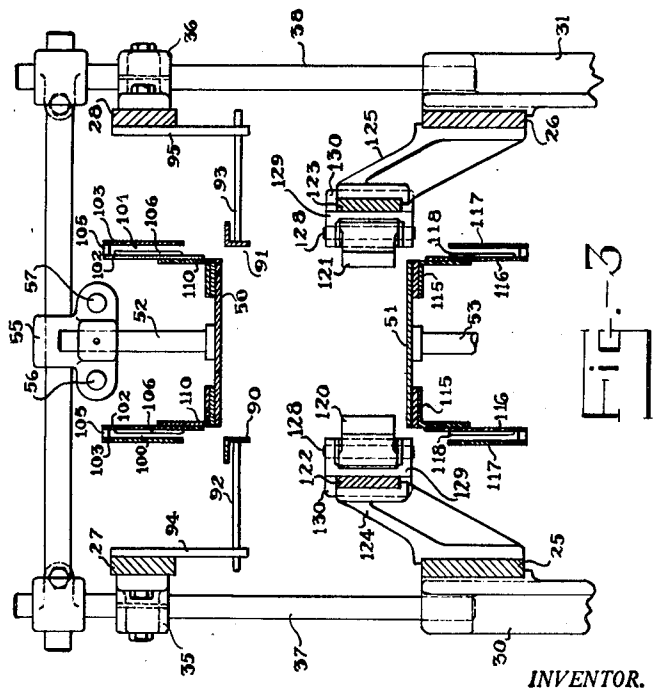


FIG. 3

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MACHINE FOR APPLYING ADHESIVE TO CARTON FLAPS

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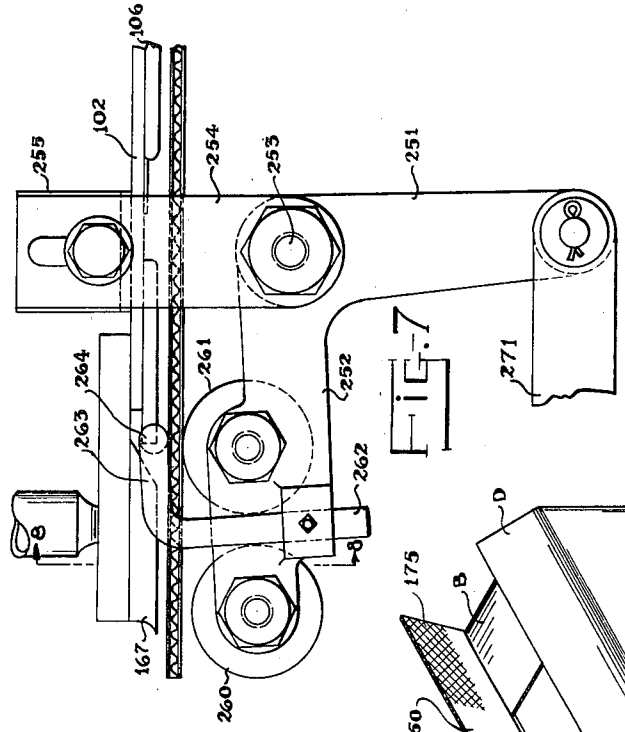


FIG. 7

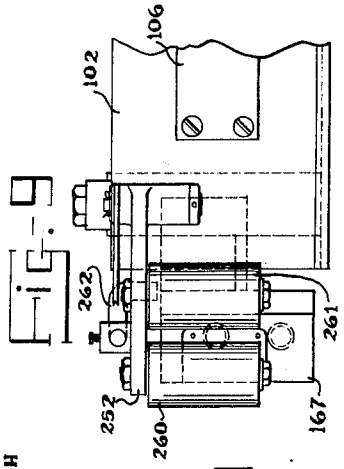


FIG. 9

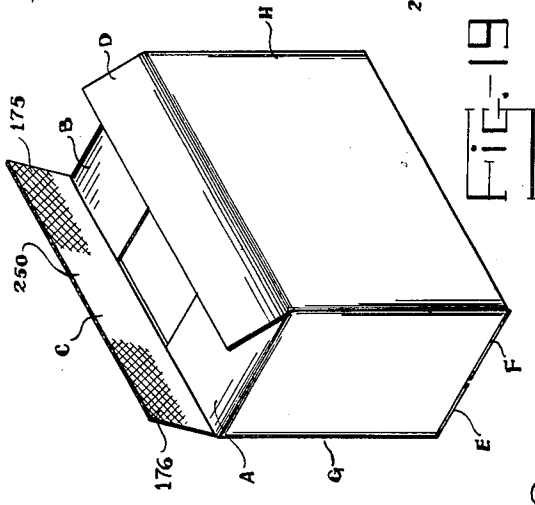


FIG. 10

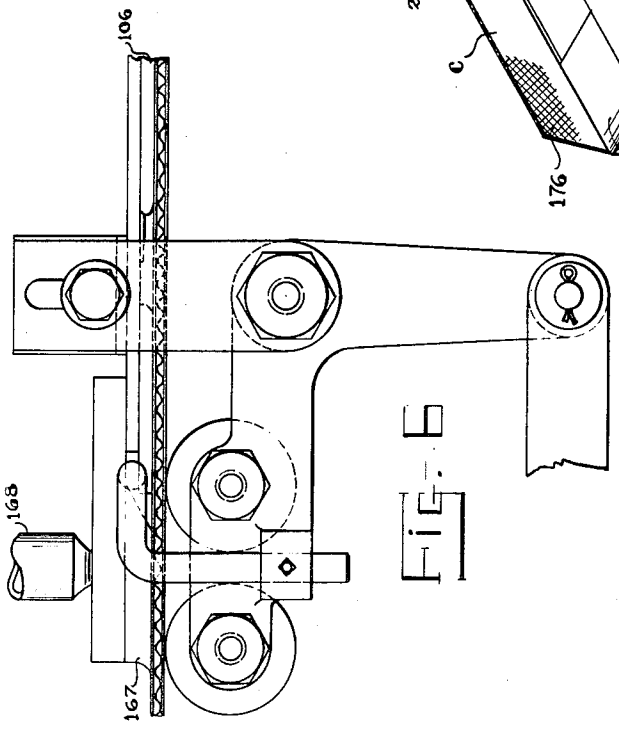


FIG. 6

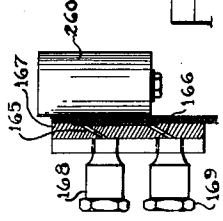


FIG. 8

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MACHINE FOR APPLYING ADHESIVE TO CARTON FLAPS

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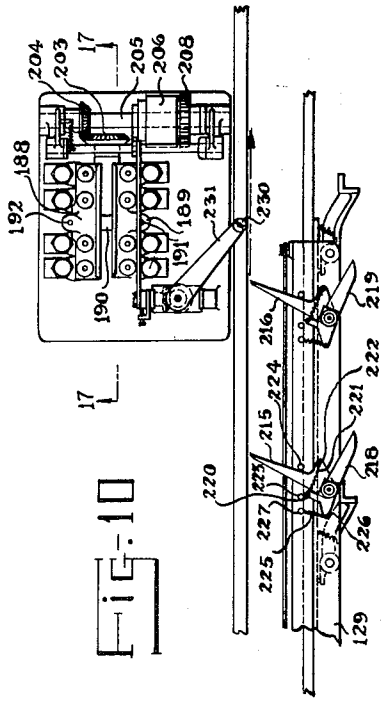


FIG. 10

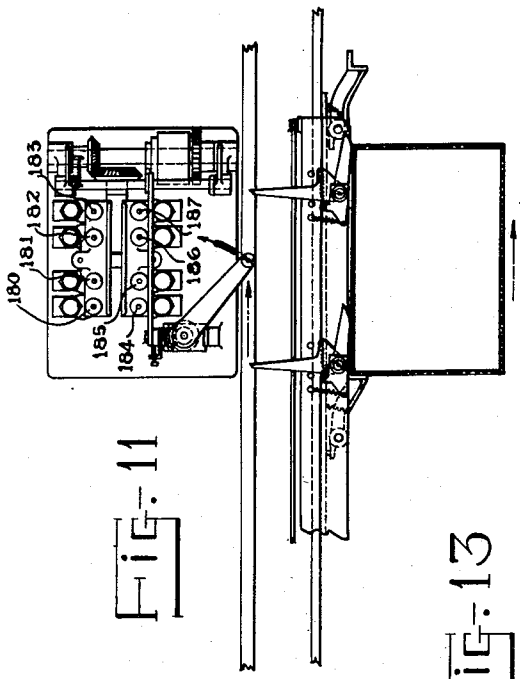


FIG. 11

FIG. 13

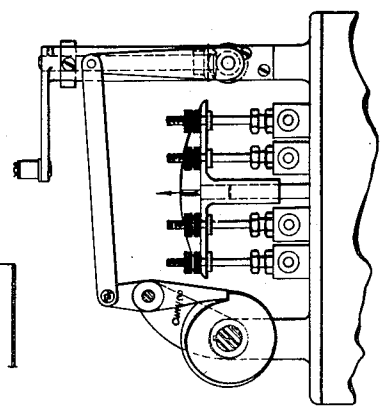
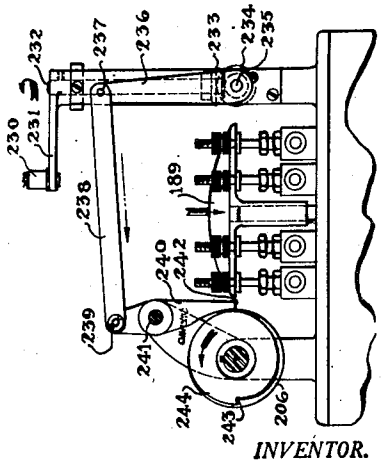


FIG. 12



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Patented July 15, 1952

2,603,181

UNITED STATES PATENT OFFICE

2,603,181

MACHINE FOR APPLYING ADHESIVE TO CARTON FLAPS

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Application December 4, 1948, Serial No. 63,511

4 Claims. (Cl. 118—253)

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This invention relates to a machine for applying adhesive to carton flaps.

In machines of the character specified, after the cartons are filled, adhesive is usually applied to the carton flaps by glue rollers or brushes. When applied in this way, the glue is not always confined to the portion of the flaps which, when folded, overlap other flaps to which they are to be secured or sealed. Moreover, an excess amount of glue or an insufficient amount is often applied.

This invention has for its salient object to provide a carton closing and sealing machine so constructed and arranged that measured amounts of adhesive or glue will be accurately applied to the parts of the carton to be sealed.

Another object of the invention is to provide a machine of the character specified so constructed and arranged that the parts of the cartons to be sealed will be heated as the carton is fed through the machine, thus facilitating the drying and setting of the adhesive.

Further objects of the invention will appear from the following specification taken in connection with the drawings which form a part of this application, and in which

Fig. 1 is a side elevation of a machine constructed in accordance with the invention;

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

Fig. 3 is an enlarged vertical sectional elevation taken substantially on line 3—3 of Fig. 1, looking in the direction of the arrows;

Fig. 4 is an enlarged vertical sectional elevation taken substantially on line 4—4 of Fig. 1, looking in the direction of the arrows;

Fig. 5 is a top plan view of one of the guides for a flap to be sealed, this view showing the flap heating member and the discharge end of the adhesive applying means;

Fig. 6 is an enlarged top plan view illustrating the means for controlling the position of the flap, the flap being shown in this view as in contact with the discharge end of the adhesive applying means;

Fig. 7 is a view similar to Fig. 6 but illustrating the flap control means as holding the flap in spaced relation to the discharge end of the adhesive applying means;

Fig. 8 is a detail sectional elevation, on a reduced scale, taken substantially on line 8—8 of Fig. 7, looking in the direction of the arrows;

Fig. 9 is an elevational view of the flap control means shown in Figs. 6 and 7;

Fig. 10 is a top plan view, partly broken away, showing the control members for controlling the operation of the adhesive applying pump or ejecting means, the parts being shown in Fig. 10 in inoperative position or the position taken when a carton is not being fed through the machine;

Fig. 11 is a top plan view similar to Fig. 10 but

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showing the pump control means as held in operative position by a carton being fed through the machine;

Fig. 12 is an elevation view showing the adhesive applying pump mechanism and clutch control means therefor, the parts being shown in this figure in the position taken when the clutch is inoperative;

Fig. 13 is a view similar to Fig. 12 but showing the clutch control means in the position taken when the clutch is operating;

Fig. 14 is an elevational view showing the drive shaft and part driven thereby for controlling the carton feeding means and the flap positioning means;

Fig. 15 is a view, partly in section, taken at right angles to Fig. 14;

Fig. 16 is a sectional elevation taken substantially on line 16—16 of Fig. 2, looking in the direction of the arrows;

Fig. 17 is an elevational view, partly in section, of the driving connections for the adhesive pump or ejecting mechanism, this view being taken substantially on line 17—17 of Fig 10, looking in the direction of the arrows;

Fig. 18 is a sectional elevation taken substantially on line 18—18 of Fig. 17, looking in the direction of the arrows; and

Fig. 19 is a perspective elevation showing a carton of the type operated upon in the machine.

The invention, briefly described, consists of a machine having means for supporting and feeding a carton to predetermined positions, with the outer flaps held in outwardly extending relation to the carton body. Means is provided for heating the ouwardly extending flaps as the carton is fed through the machine and for applying to the inner surfaces of said outwardly extending flaps measured quantities of adhesive. Means is further provided for so positioning the flaps that when they reach the position in which adhesive is to be applied, the flaps will be held against the discharge ends of the adhesive applying means and, furthermore, so positioning the flaps that they will be held away from said adhesive applying means when adhesive is not to be applied thereto. The adhesive applying means is so controlled that it is set in operation when the cartons reach predetermined positions in the machine and is held inoperative when the cartons have not been so positioned.

Further details of the invention will appear from the following description.

In the particular embodiment of the invention illustrated in the drawings, the machine is supported on vertical posts 20 and 21 at the front or receiving end of the machine and on vertical posts 22 and 23 at the discharge end of the machine. The main framework of the machine comprises two longitudinally extending bars 25 and

26 and a second pair of longitudinally extending bars parallel to and disposed above the bars 25 and 26, the second pair of bars being designated as 27 and 28.

The bars 25 and 26 are mounted at the front or receiving end of the machine on brackets 30 and 31 which are adjustably secured to the posts 20 and 21. The other ends of these bars are mounted on brackets 32 and 33, which in turn are adjustably mounted on the vertical posts 22 and 23.

The bars 27 and 28 at the front end of the machine are carried by brackets 35 and 36 which are adjustably mounted on posts 37 and 38, the lower ends of which are mounted in sockets in the upper ends of brackets 30 and 31. The other ends of the bars 27 and 28 are secured to brackets 40 and 41 which are mounted on vertical posts 42 and 43, which in turn are carried by brackets 44 secured to the bars 25 and 26.

The cartons are guided through the machine between plates 50 and 51 carried by two sets of posts 52 and 53. The posts 52 are secured to and depend from brackets 55 which are mounted on a pair of parallel rods 56 and 57, these rods being mounted in brackets 58 which are secured to cross rods 59 and 60 mounted on the upper ends of posts 37 and 38 at the front end of the machine and on the upper ends of posts 61 and 62 which are secured to the bars 25 and 26 by brackets 63 and are secured to the bars 27 and 28 by brackets 64.

The posts 53 which support the lower plate or platform 51 are carried by brackets 70, 71 and 72, which are mounted on longitudinally extending parallel rods 73 and 74. The front ends of the rods 73 and 74 are mounted in a bracket 75, which in turn is carried by a cross rod 76 mounted in the lower ends of a pair of downwardly extending bars 77 and 78 secured to the longitudinally extending bars 25 and 26. The bracket 75 also has mounted therein a rod 79, on the front end of which is secured a post 80, the upper end of this post being secured to and supporting the front end of the plate or platform 51. The other ends of the rods 73 and 74 are supported by a bracket 85, which is mounted on a cross rod 86 secured by brackets 87 to the lower ends of posts 60 and 62.

The cartons, which are fed in the manner hereinafter described between the plates 50 and 51 and along the plate or platform 51, are engaged on their side walls by angle bars 90 and 91 which are mounted on rods 92 and 93, which in turn are supported on the lower ends of bars 94 and 95 which are secured to the longitudinally extending bars 27 and 28.

When the cartons are fed along the platform 51 and between the plates 50 and 51, the inner flaps A and B are folded inwardly, as shown in Fig. 17, but the outer flaps C and D at the upper end of the carton and the outer flaps E and F at the lower end of the carton extend outwardly or vertically in alinement with the side walls G and H. Means are provided for holding the flaps C, D, E and F in vertical positions as the carton is fed through the machine and these means are illustrated particularly in Figs. 3 and 5.

The upper flaps C and D are guided in channels 100 and 101 formed between channel walls 102 and 103 which are connected by bolts 104 but are held in spaced relation by suitable spacing means 105. The walls 102 have secured thereto heating bars 106 having suitable heating elements for heating the flaps as they pass through the channels 100 and 101.

The walls 102 are supported on angle irons 110, which are mounted on the outer surfaces of the plate 50. The walls 102 also have mounted on one end thereof, the adhesive discharge conduits or nozzles 111 hereinafter described.

The supporting plate or platform 51 also has secured to the under surface thereof, angle irons 115 which support walls 116 corresponding to the walls 102, and the walls 116 have connected thereto in spaced relation, walls 117 which correspond to the walls 103 above described. Walls 116 have heaters 118 similar to the heaters 106.

Carton feeding mechanism

The cartons are pushed manually between the receiving ends of the plates 50 and 51, with the outer flaps disposed vertically in the guiding channels above described. The cartons are fed between the plates and with the outer flaps disposed in the channels by means of a plurality of sets of feeding lugs 120 and 121, each set of lugs comprising a pair of lugs disposed on opposite sides of the longitudinally extending supporting plate or platform 51. These sets of lugs are slidably mounted on bars 122 and 123 which are mounted in the upper ends of brackets 124 and 125 secured to the longitudinally extending frame bars 25 and 26 and also in the upper ends of brackets 126 and 127 secured intermediate the ends of the bars 25 and 26.

The lugs 120 and 121 are pivoted on pivot posts 128 mounted in U-shaped bars 129 which are secured in sliding relation on the bars 122 and 123 by means of U-shaped longitudinally extending bars 130 which receive the supporting bars 122 and 123 and are slidably mounted thereon.

The inner ends of the lugs 120 and 121 are offset and extend inwardly and have rectangular ends 135 which are adapted to engage around the rear vertical corners and receive these corners. The lugs 120 and 121 are forced inwardly by means of springs 136. Tails or rearwardly extending portions 137 limit the inward movement of lugs 120 and 121.

From the showing in Fig. 2 it will be seen that there are three sets of lugs which engage successively with a box or carton as it is fed through the machine. These lugs and the bars 129 in which they are mounted are reciprocated in the following manner. The bars 130 at the two sides of the machine have pivotally connected thereto at 139, links 140, the other ends of said links being pivoted at 141 to the upper ends of arms 142, which are secured at their lower ends to a spindle 143 mounted in brackets 144 and 145, which in turn are mounted on posts 20 and 21. The arm 142, at one side of the machine, has connected thereto a link 146, the other end of the link being pivoted at 147 to a gear wheel 148 mounted on a shaft 149. The gear 148 meshes with a gear 150 carried by a shaft 151 on which is also mounted a sprocket wheel 152 which is driven by a chain 153 from a sprocket wheel 154 carried by a gear box 155 driven by a motor M. The motor M and gear box are supported by cross bars 156 and 157 connected to the under surface of the longitudinally extending frame bars 25 and 26. The shaft 149 is supported in suitable supporting brackets, these brackets being mounted on the longitudinal frame bar 26.

From the above description it will be seen

that the lug supporting bars 130 at the two sides of the machine will be reciprocated in unison by means of the link and lever driving connections to the gear 148. As the bars and lugs are reciprocated, the cartons will be fed through the machine, with the outer flaps disposed outwardly in vertical positions. At predetermined stations in the feeding movement of the cartons, adhesive is applied, and thereafter the upper flaps are folded inwardly and downwardly and the lower flaps are folded inwardly and upwardly to close the outer flaps against the inner flaps and seal the cartons. The sealing operation and the setting and drying of the adhesive is facilitated by the heating of the flaps as they pass through the machine.

Adhesive applying mechanism

The adhesive for sealing the flaps is positively fed through conduits to the flap engaging and adhesive discharge means when the cartons reach predetermined stages in the feeding movement thereof.

The adhesive is discharged through passages 165 and 166 in plates 167, which are mounted on the ends of the bars 102 and 102 which engage the upper flaps and plates 116 which engage the lower flaps. Adhesive is conducted to the passages 165 and 166 in the plates 167 through check valves 168 and 169 mounted on the ends of conduits 170 and 171 which extend to the adhesive pumping or ejecting mechanism, as shown at 172 and 173. It will be seen from the showing, particularly in Fig. 4, that separate conduits and flap engaging and contacting mechanism is provided for each flap. The adhesive feeding mechanism is operated twice for each carton. When the carton reaches a position in which the advance ends of the flaps C, D, E and F are positioned opposite the plates 167 through which the adhesive is conducted to the flaps, the adhesive applying mechanism is operated to apply the adhesive to the advance inner surfaces of the flaps, as shown at 175 in Fig. 19. Thus, adhesive is applied to the corresponding surfaces on the flaps C, D, E and F. The carton is then fed to a position in which the rear inner surfaces, as shown at 176 in Fig. 19, are disposed opposite the plates 165, whereupon the adhesive feeding mechanism is again operated. This is accomplished in the following manner.

As shown in Figs. 10 and 11, the ejector feeding mechanism has eight plungers, or two sets of four plungers each. One set comprises plungers 180, 181, 182 and 183 and the other set comprises plungers 184, 185, 186 and 187. These plungers are all operated simultaneously by a plate having one portion 188 which operates one set of plungers and another portion 189 which operates the other set of plungers.

The plates 188 and 189 are connected, as shown at 190, and are guided in their vertical reciprocation on vertical pins 191 and 192 which extend into vertical openings 193 and 194 formed in the central or bridge portion connecting the plates 188 and 189. This bridge portion has a central opening 195 having an upper wall 196 and a lower wall 197 between which is slidably mounted a block 198 having a central opening 199 which receives a pin 200 eccentrically mounted on a disk or eccentric 201 secured to one end of a shaft 202. The shaft 202 has secured to the other end thereof, a bevel gear 203, which meshes with a bevel gear 204 carried by a shaft 205. The shaft 205 is driven by a one revolution clutch 206, the clutch being driven from a gear 210 which meshes with a gear 208 connected to the clutch.

From the showing in Fig. 1 it will be seen that the gear 208 meshes with the idler gear 210, which in turn meshes with a gear 211 mounted on a spindle 212. The spindle 212 also carries a gear 213, which meshes with the gear 148 mounted on the shaft 149.

The one revolution clutch is operated and controlled in the manner illustrated particularly in Figs. 10 to 13 inclusive. As shown particularly in Figs. 1, 10 and 11, the U-shaped bar 129 at one side of the machine has pivoted on the upper surface thereof, levers 215 and 216. In addition to the levers 215 and 216, a second set of levers 218 and 219 are mounted on the same pivots as the levers 215 and 216. The levers 218 and 219 have inwardly projecting arms or ends which are disposed in the path of movement of the cartons as the cartons are fed through the machine. Each of the levers 218, 219 has a lug 220 to which is connected a spring 221, the other end of the spring being connected at 222 to the lever 215 or 216. The levers 215 and 216 are limited in their movements by stops 223 and 224. The levers 218 and 219 are normally held in the position shown in Fig. 10 by means of springs 225 which engage the levers at 226 and engage at their other ends pins 227 which extend upwardly from the upper surfaces of the bars 129.

When a carton is disposed in feeding relation to the second set of feeding lugs 120 and 121 by which the carton is engaged and fed and is disposed in the position shown in Fig. 11, the levers 218 and 219 will be swung on their pivots in an anticlockwise direction, and by the action of the springs 221 will swing the lugs 215 and 216 in an anticlockwise direction or against the stops 223 and 224. When the levers 215 and 216 are in the position shown in Fig. 11, they are disposed in a position to engage a roller 230 mounted on the end of an arm 231, which in turn is secured to the upper end of a shaft 232. The shaft 232 has secured to its lower end, a bevel gear 233, which meshes with a bevel gear 234 on a shaft 235. This shaft has secured thereto, an arm 236, to the upper end of which is connected at 237 one end of a link 238, the other end of the link being pivoted at 239 to a lever 240 mounted on a pivot 241. The lower end 242 of the lever 240 is disposed in the path of movement of a notch 243 on a disk 244, which forms a part of the one revolution clutch 206 above mentioned. As the end 242 of the lever 240 moved out of the path of movement of the notch 243, the clutch is permitted to operate and to connect the shaft 205 to the drive transmitted through the gear train above described from the gear 148.

For each revolution of the shaft 205 the shaft 202 will also rotate one revolution and by means of the eccentric 201 and block 198 the plates 188 and 189 will be vertically reciprocated, thus operating the plungers 180 to 183 and 184 to 187 and causing measured or predetermined amounts of adhesive to be forced through the conduits and the openings in the discharge plates 167. The plungers, as shown in Figs. 12 and 13, are adjustably connected to the plates, thereby providing for varying the amounts of adhesive discharged through the conduits per operation of the plungers.

Every time a carton is so positioned that the front inner surfaces 175 of the flaps C, D, E and F are positioned opposite the plate 167, the front lever 216 will be swung in an anticlockwise direction into a position in which it will engage the roller 230 and operate the clutch control mechanism to connect the shaft 205 to the power shaft and rotate this shaft and the shaft 202 through one revolution, thus causing two measured deposits of adhesive on the portions 175 of the flaps C, D, E and F.

When the carton has been again fed, the lever 215 will actuate the clutch mechanism in the same manner as above described in connection with the lever 216, and two charges of adhesive will be deposited on the rear inner surfaces 176 of the flaps C, D, E and F.

From the showing particularly in Fig. 19 and from the foregoing description, it will be clear that the central portion 250 of each of the flaps C, D, E and F is free from adhesive, or, in other words, the adhesive is supplied on the end portions of the flaps and not at the middle portion thereof. This middle portion 250, when the flaps are closed, is disposed opposite the gap between the flaps A and B and, therefore, it is essential that no adhesive be applied to the portion 250.

The above description has explained how adhesive is positively fed in measured amounts to the portions 175 and 176 when the cartons reach predetermined positions in the machine. However, in order to prevent the central portions 250 from wiping over the inner surfaces of the plates 167 and receiving glue therefrom, means illustrated particularly in Figs. 6, 7, 8 and 9 is provided for positively moving the flaps into adhesive receiving position when the cartons are positioned to receive the adhesive and for positively moving the flaps out of adhesive receiving position when the portions 250 thereof are disposed opposite the plates 167.

As shown in Figs. 2, 6, 7 and 9, a bell crank lever, having angularly disposed arms 251 and 252, is pivoted at 253 to brackets 254 adjustably mounted on frame members 255 secured to the bars 102 at the top of the machine and to bars 116 at the bottom of the machine. The arms 252 of the two bell crank levers have mounted thereon and extending downwardly therefrom, a pair of rollers 260 and 261. These rollers are disposed opposite the path of movement of the outer surfaces of the flaps C, D, E and F, as shown particularly in Fig. 4.

Each of the arms 252 also has adjustably mounted thereon, a rod 262 having an angular portion 263 and an end portion or pin 264 disposed on the opposite side of the flaps C, D, E and F.

When the bell crank lever, viewing Fig. 6, is moved in a clockwise direction, the rollers 260 and 261 will engage the outer surfaces of the flaps and force the flaps inwardly or into engagement with the plate 167, so that the flaps will be in a position to receive adhesive.

However, when the cartons are so positioned that when the portions 250 of the flaps are disposed opposite the plates 167, the bell crank levers will be swung in an anticlockwise direction, as shown in Fig. 7, so that the pins 264 on the insides of the flaps will move the flaps outwardly away from the inner surfaces of the plates 167 so that no adhesive will be applied to the portions 250.

The means for operating the bell crank levers will now be described. Attention is directed particularly to Figs. 2, 14 and 15. The outwardly extending arm 251 of each of the bell crank levers has pivotally connected thereto at 270, a link 271. The links 271 of the bell crank levers disposed adjacent the sides of and below the lower plate or platform 51 are pivotally connected to arms 272 secured to shafts 273 and 273A. Shaft 273 has secured to its lower end thereof, a bevel gear 274, which meshes with a bevel gear 275 mounted on a spindle 276. This spindle also has secured thereto, an arm 277 having on its outer end a roller 278 which engages a cam 279 adjustably secured to the shaft 149, in the manner shown in Fig. 14. The cam 279 is so designed that the arm 277 will be oscillated and the movement of the arm will oscillate the gear 275 and the intermeshing gear 274, thus oscillating the shaft 273.

Each of the shafts 273 and 273A has mounted on the upper end thereof, a bell crank lever 280, and the inner arm 281 of each bell crank lever 280 is pivoted at 282 to the link 271 which is connected to the arm 251 at the upper end of the machine above the upper plate 50, as shown in Fig. 14. The lower links 271, which are disposed adjacent the bars 25 and 26, are connected at their front ends to the arms 272. The other ends 283 of the bell crank levers 280 at the upper ends of the shafts 273 are connected by a link 284 to transmit movement of shaft 273 to shaft 273A so that the bell crank levers 280 will be operated in unison.

After the adhesive has been applied to the portions 175 and 175 of the flaps C, D, E and F in the manner above described, these flaps are folded inwardly into engagement with the flaps A and B and are sealed thereto. The flaps are folded in the usual well known manner by means of Y-shaped folding frames (see Fig. 2), comprising substantially parallel rods 290 and 291 which converge, as shown at 292 and 293, and are bent angularly with reference to the portions 290 and 291, and then extend in parallel relation, as shown at 294 and 295. The upper set of folding rods extend downwardly in order to fold the flaps C and D downwardly, and the lower set of folding rods extend upwardly in order to fold the flaps E and F upwardly. The upper set of folding rods are secured at their front ends by a bracket 296 to the rods 56 and 57 and are secured at their rear ends to the same rods by means of a bracket 297. The lower set of folding rods are connected in a similar manner to the rods 73 and 74 at their rear ends and are supported at their front ends by a bracket connected to one of the posts 53, as shown in Fig. 1.

After the flaps C, D, E and F have been folded against the inner flaps A and B at the top and bottom of the carton, the carton is discharged by the feeding movement of the carton in the rear thereof, which is being pushed between the folding means by means of the feeding lugs 120 and 121 disposed at the inner end of the feeding mechanism. As the cartons are discharged, they pass between two sets of rollers 300 and 301, the rollers 301 being rotatably mounted in bearings carried by bars 302, which in turn are carried by the side frames or bars 25 and 26. The upper set of feeding rollers are carried by bearing bars 305 and 306, which are supported by links 307 and 308, which in turn are carried by the ends of spindles 309 and 310. The spindles 309 and 310 are carried by the ends of arms 311 and 312 of bell crank levers 313 and 314, which are pivoted at 315 and 316 on spindles 317 and 318 mounted

in brackets secured to the side frames 25 and 26. The other arms 319 and 320 of the bell crank levers 313 and 314 are connected by a link 321, which consists of a rod threaded at its ends into couplings 322 and 323. As this rod is turned in one direction, the arms 319 and 320 will be drawn toward each other, thus causing the arms 311 and 312 to be raised and raising the rollers 300. As the link 321 is turned in the other direction, the bell crank arms 319 and 320 will be forced apart, thus depressing the arms 311 and 312 and the rollers supported thereby.

Operation

The operation of the machine may be briefly summarized as follows. The cartons are first placed on the platform or lower plate 51, with the lower flaps E and F extending downwardly and the other flaps C and D extending upwardly into the channels between the plates 102 and 103 at the top of the machine and 116 and 117 at the bottom of the machine. During their passage through these channels, the flaps are heated by the heating bars 106, thus facilitating their drying and setting after the glue has been applied thereto and the flaps have been folded to closed position. When the cartons reach a position in which the inner surfaces 175 of the outwardly extending flaps are disposed opposite the plates 167, the lever 216, having been swung in a clockwise direction by the engagement of the carton with the lever 219, is in a position to engage the roller 230 and swing the arm 231 in an anticlockwise direction. Thus, in the manner hereinbefore described, causing the lever 240 to release the one revolution clutch and connect the drive to the shaft 202 to cause the plates 188 and 189 to be depressed and causing the plungers to discharge measured amounts of adhesive on the portions 175 of the flaps.

When the portions 176 of the flaps have been fed to positions opposite the plates 167, the levers 215 will operate in a similar manner to again connect the drive to the plunger operating shaft and cause measured amounts of adhesive to be deposited on the flaps.

As hereinbefore described, the flap positioning mechanism, shown particularly in Figs. 6 and 7, is operated periodically to hold the flaps in the position shown in Fig. 6 to receive the adhesive and to hold the flaps in the position shown in Fig. 7 when the flaps are being fed from one adhesive receiving position to the second receiving position, thus preventing the portions 250 of the flaps from contacting the plates during this feeding operation.

After the adhesive has been applied in the manner described, the flaps are folded and the cartons are discharged from the machine between the upper and lower sets of pressure rollers which hold the flaps C, D, E and F in engaging and sealing relation with reference to the inner flaps A and B.

Although one specific embodiment of the invention has been particularly shown and described it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claims.

What I claim is:

1. In a machine for applying adhesive to carton flaps, having a support for a carton to be sealed, means for feeding the cartons along the support, and means for holding the outer flaps of the carton in open position, means for depositing on said flaps measured amounts of adhesive when said cartons and flaps reach predetermined positions, the improvement which consists of means separate from and operated independently of the adhesive applying means for moving said flaps into and out of engagement with said adhesive applying means when the flaps are disposed opposite the adhesive applying means.

2. In a machine for applying adhesive to carton flaps, having a support for a carton to be sealed, means for feeding the cartons along the support, and means for holding the outer flaps of the carton in open position, glue applying means including pumps and conduits for depositing measured amounts of adhesive on said flaps when the cartons and flaps reach predetermined positions on the support, means including a clutch for operating said pump, and means carried by and movable with said carton feeding means for controlling the clutch and causing the pump to operate.

3. In a machine for applying adhesive to carton flaps, having a support for the cartons to be sealed, step by step feeding means for feeding the cartons to successive stations on said support, and means for holding the outer flaps of said cartons in open position during the movement of the cartons on the support, means operable when said cartons reach predetermined positions for depositing adhesive on said flaps in measured amounts, the improvement which consists of means separate from and operated independently of the adhesive applying means engaging said flaps for moving the flaps to a position to receive the deposits of adhesive and away from said position.

4. In a machine for applying adhesive to carton flaps, having a support for the cartons to be sealed, step by step feeding means for feeding the cartons to successive stations on said support, means for holding the outer flaps of said cartons in open position during the movement of the cartons on the support, conduits having discharge ends disposed adjacent the path of travel of the open flaps, the improvement which consists of means separate from and operated independently of the adhesive applying means for moving said flaps toward and away from said discharge ends of the conduits, and means operable when the cartons and flaps have reached predetermined positions of movement for feeding adhesive through said conduits to said flaps.

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