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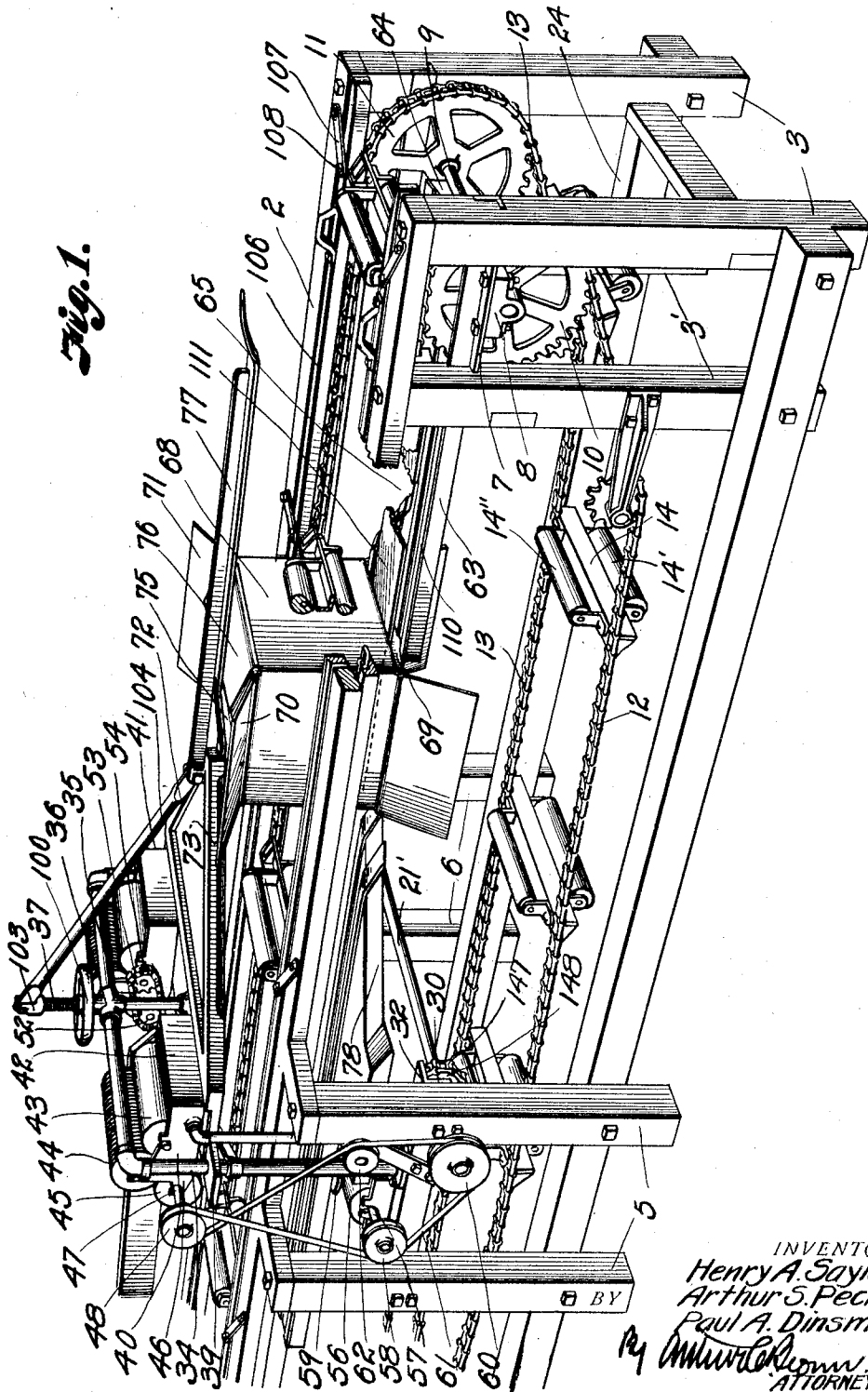
H. A. SAYLOR ET AL

BOX SEALING MACHINE

Filed May 16, 1921

6 Sheets-Sheet 1

Fig. 1.



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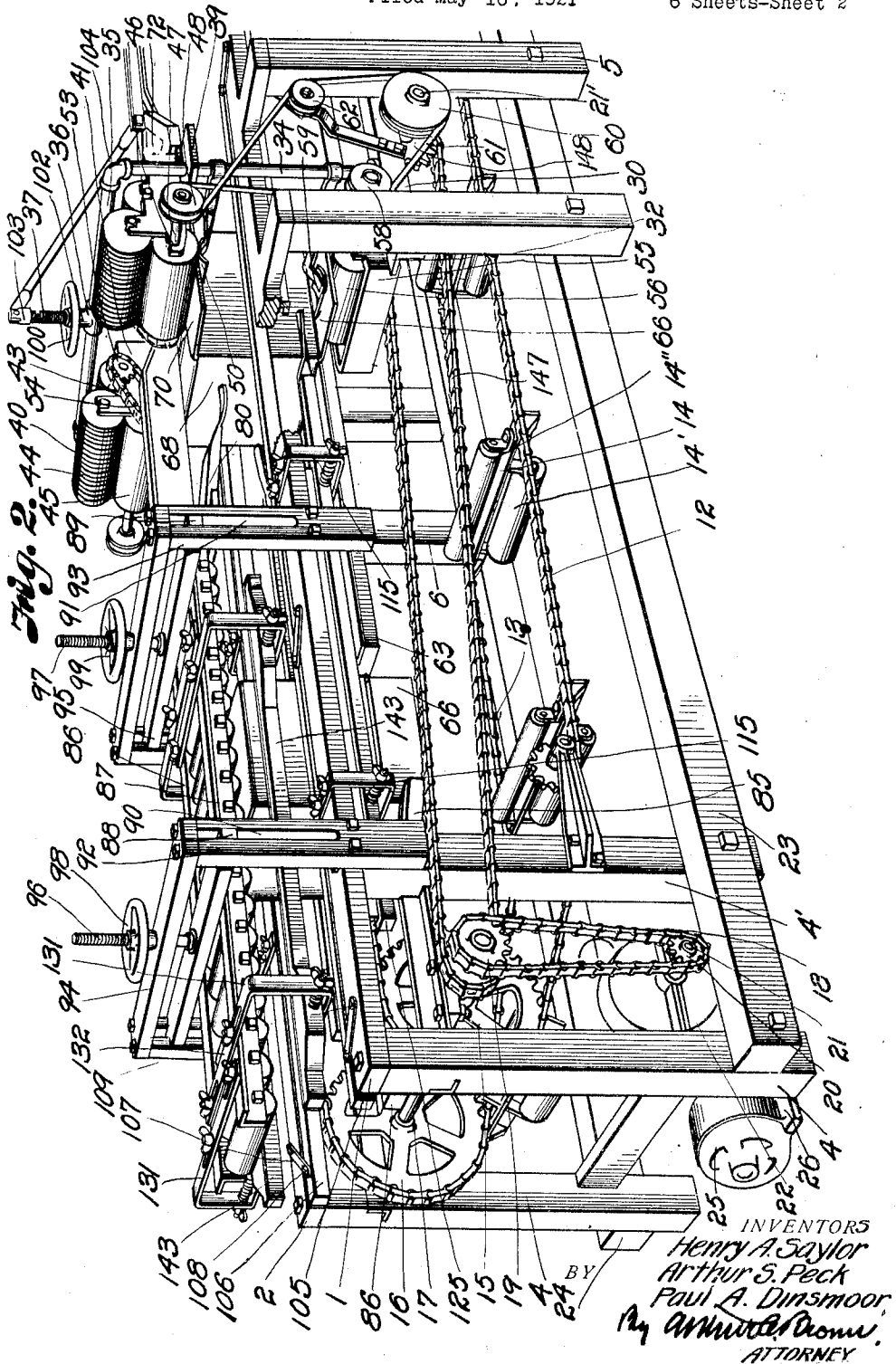
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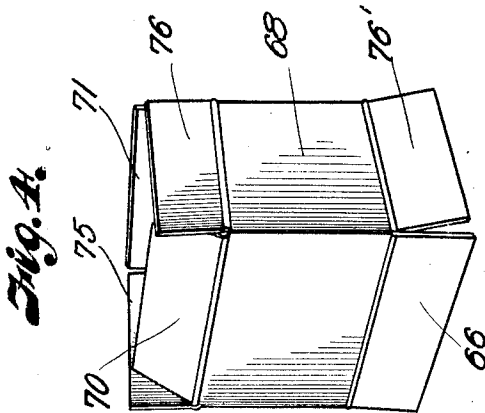
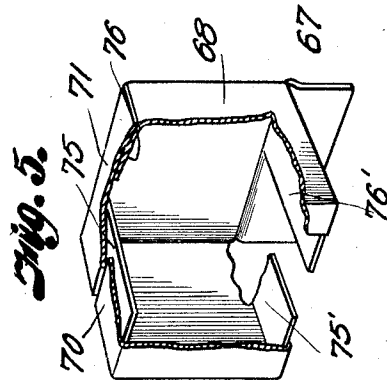
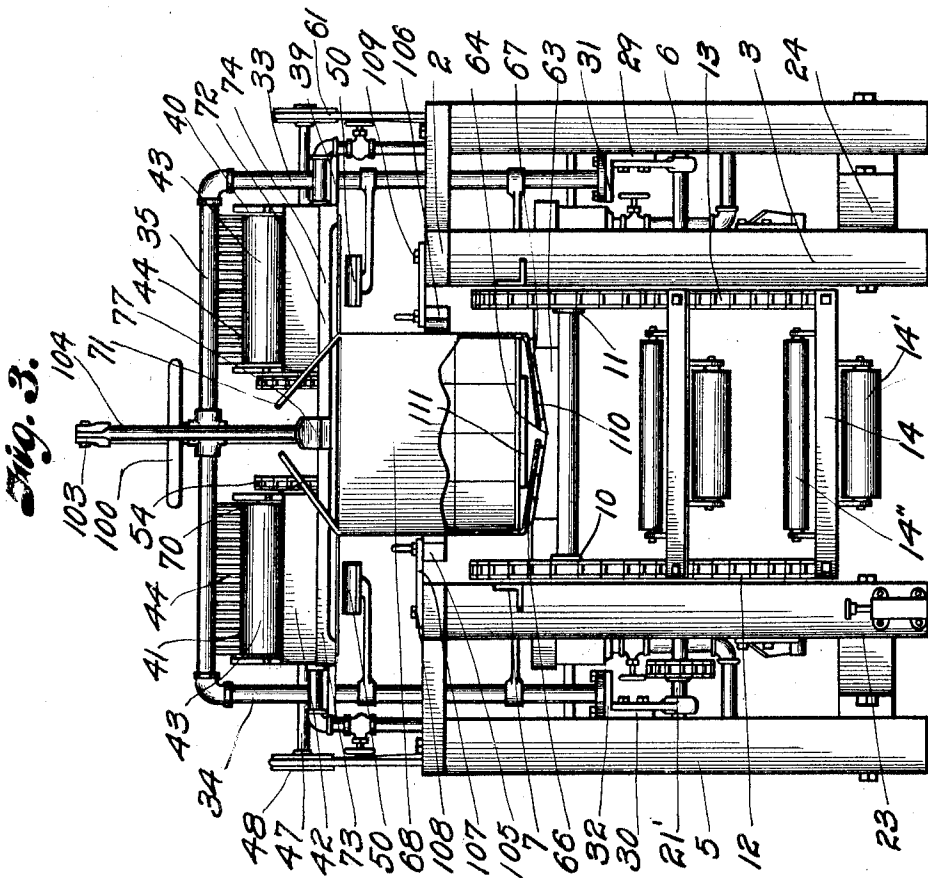
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BOX SEALING MACHINE

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6 Sheets-Sheet 3



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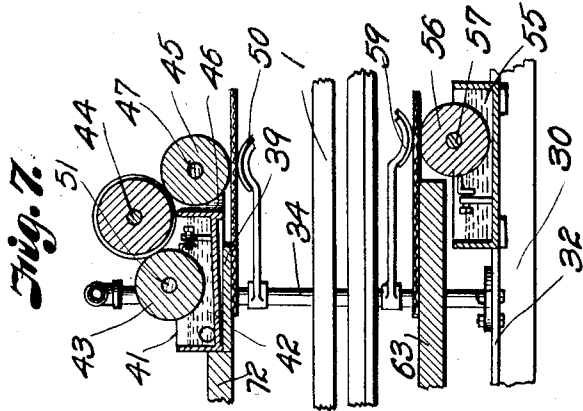
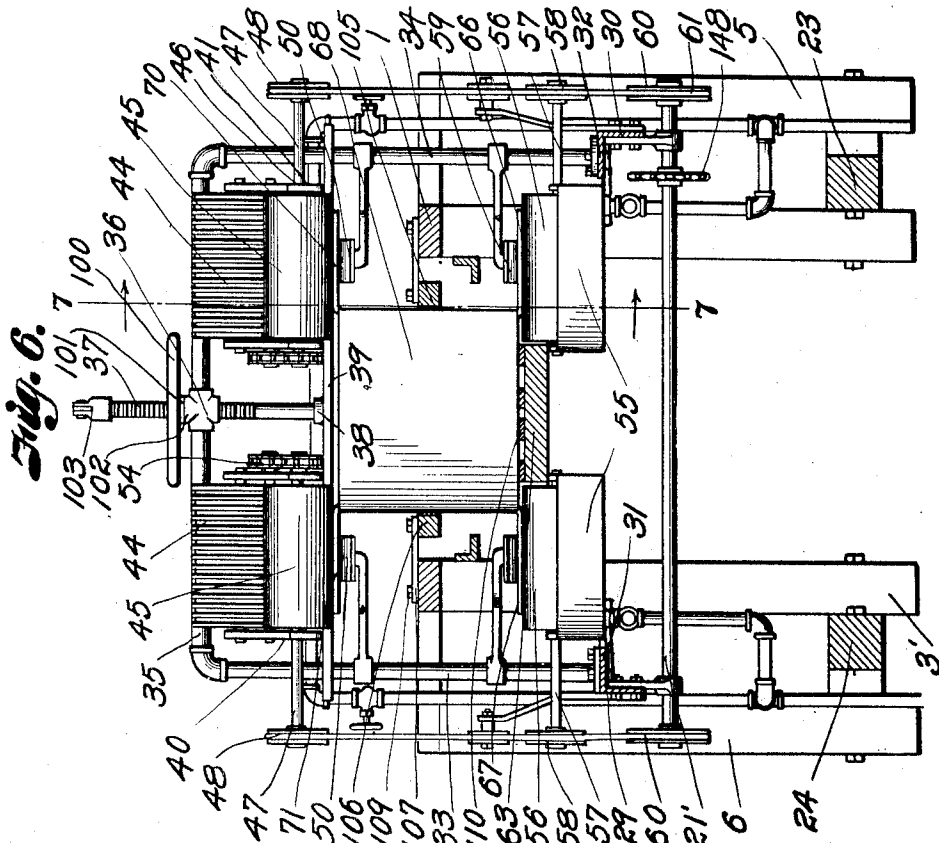
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6 Sheets-Sheet 4



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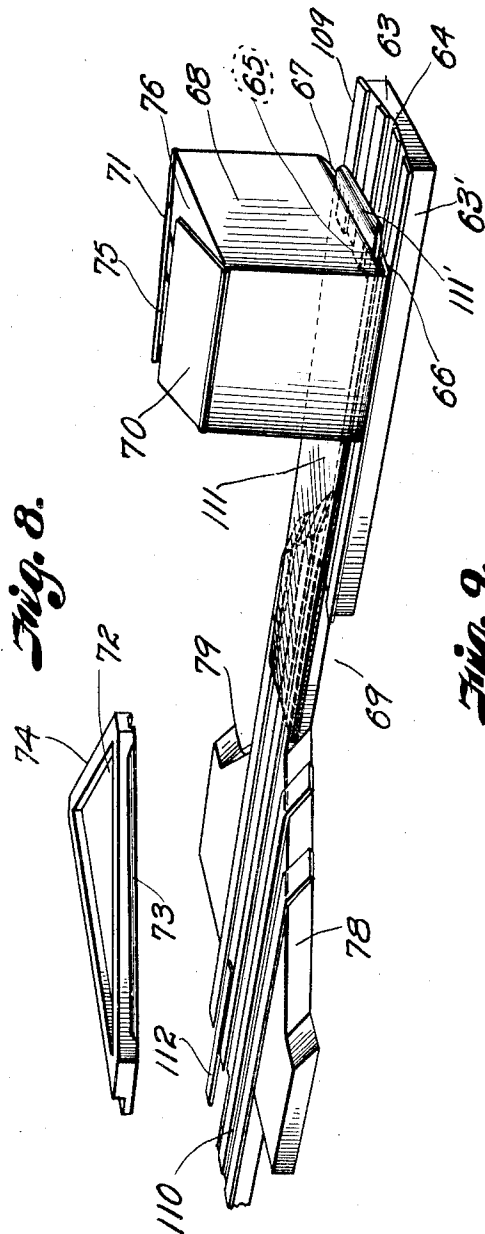
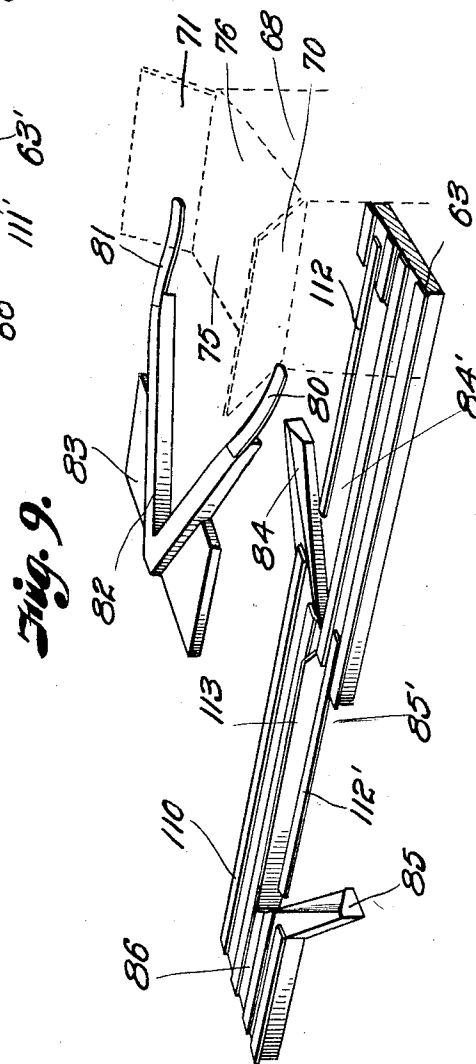
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BOX SEALING MACHINE

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6 Sheets-Sheet 5



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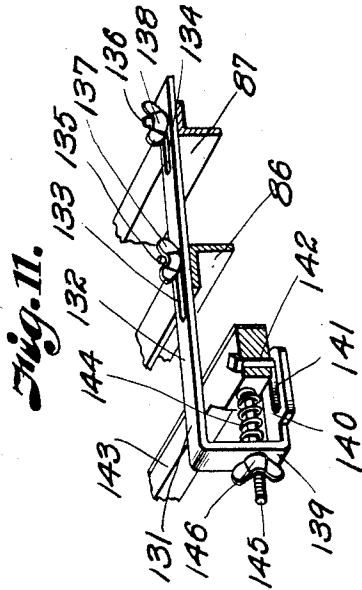
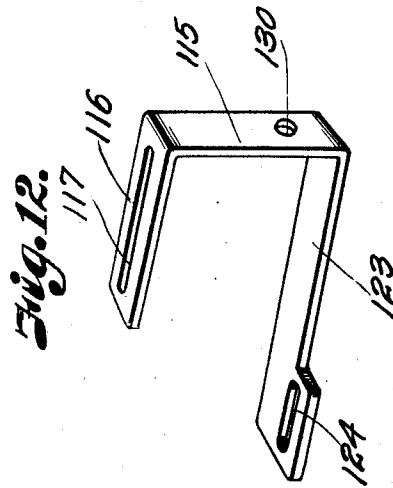
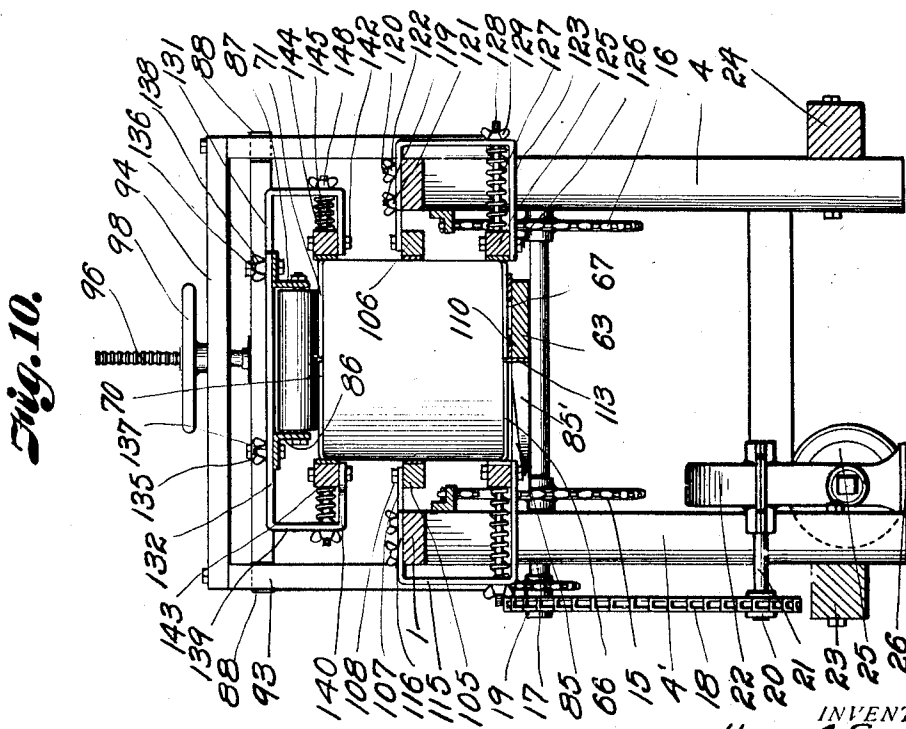
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BOX SEALING MACHINE

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6 Sheets-Sheet 6



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UNITED STATES PATENT OFFICE.

HENRY A. SAYLOR, ARTHUR S. PECK, AND PAUL A. DINSMOOR, OF LAWRENCE, KANSAS, ASSIGNORS TO LAWRENCE PAPER MANUFACTURING COMPANY, OF LAWRENCE, KANSAS, A PARTNERSHIP COMPOSED OF M. G. BOWERSOCK, IRVING HILL, PAUL A. DINSMOOR, HORTENSE B. HILL, MARY B. DINSMOOR, JEAN B. BLACKWELDER, AND MARGERY B. DALTON.

BOX-SEALING MACHINE.

Application filed May 16, 1921. Serial No. 470,033.

To all whom it may concern:

Be it known that we, HENRY A. SAYLOR, ARTHUR S. PECK, and PAUL A. DINSMOOR, citizens of the United States, residing at Lawrence, in the county of Douglas and State of Kansas, have invented certain new and useful Improvements in Box-Sealing Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a machine for sealing boxes, particularly of the type commonly known as shipping cartons consisting of foldable material, such as fiber or "box" board wherein each of the four sides of the box has an extension at each end adapted to be folded inwardly to form inner and outer flaps for closing the ends of the box, the practice being to first fold one pair of flaps and then the other to form a double closer for the ends, a sealing medium being applied to the outer flaps to cause them to adhere to the inner flaps and thereby seal as well as close the ends of the box.

If the boxes are made from blanks or constructed so that the inner flaps have their edges spaced apart, that is, if the lengths of the flaps are such that there will be a space between the aligning edges, it is apparent that the merchandise within the box will have a tendency to drop out during the passage of the box through the machine during the time that the side flaps are hanging in vertical planes, preparatory to being folded into sealing position. It, therefore, becomes necessary to provide a shelf or runway which will not only hold the inner flaps in horizontal positions to constitute floor members for the merchandise but also efficiently provide a merchandise support.

This invention contemplates means for

efficiently supporting the merchandise so that it will not accidentally be dislodged from the box during the sealing operation.

It is also desirable that means be provided for pressing-in the outer flaps so that their meeting edges may come together to present a neat, efficient seal and to prevent the edges of the flaps where they are connected to the box from protruding.

In other words, the boxes are usually rectangular and it is desired to have the finished package symmetrical so as to maintain the strength of the box and enhance its appearance.

The main feature of this invention is the provision of means for supporting the merchandise and for truing up the box during the sealing operation. There are other minor features of the invention which will appear hereinafter as, for example, the novel form of conveyor belt.

In order to present the invention in a comprehensive manner we will describe a machine in which these novel features are embodied, it being understood that the invention forming the subject matter of this application consists in providing the novel supporting means for the inner flaps and the merchandise, the truing or squaring mechanism, and the conveyor.

In the drawings,

Fig. 1 is a perspective view of the forward part of the machine looking toward the rear.

Fig. 2 is a perspective view of the rear end of the machine looking toward the front.

Fig. 3 is a front end view of the machine.

Fig. 4 is a perspective view of a box with the flaps extended.

Fig. 5 is a fragmentary perspective view of the box showing some of the flaps folded.

Fig. 6 is a cross sectional view through the machine in front of the sealing means.

Fig. 7 is a sectional view on the line 7—7 of Fig. 6.

Fig. 8 is a perspective view of the receiving end of the box table.

Fig. 9 is a perspective view of the delivery end of the box table.

Fig. 10 is a cross sectional view through the machine at the delivery end thereof.

Fig. 11 is a perspective view of one of the box presser members, and

Fig. 12 is a perspective view of one of the box presser supporting brackets.

The mechanism is supported upon a frame consisting of the side bars 1 and 2 mounted upon the end standards 3 at the receiving end of the frame and the corresponding standards 4 at the delivery end of the frame. Intermediate the ends of the bars 1 and 2 and connected thereto are sets of standards 5 and 6 which support certain mechanism to be referred to hereinafter. The standards 3 are provided with complementary standards 3' adjacent thereto and in line therewith to receive angle brackets 7 provided with bearings 8, in which is mounted a shaft 9 carrying sprocket wheels 10 and 11, which engage the links of the chains 12 and 13 respectively, connected by the slats or cross bars 14 carrying box-engaging rollers 14' and 14'' so that a conveyor is provided, between the slats of which the boxes are entrained as they pass from the receiving end of the machine to the delivery end thereof.

The conveyor is supported at the delivery end of the machine by sprockets 15 and 16 corresponding to those designated 10 and 11, and these are mounted upon a shaft 17 in bearings corresponding to the bearings for the shaft 9 and supported by the standards 4 and the standards 4' adjacent thereto. In other words, the mechanism for supporting the conveyor at the delivery end of the machine is substantially an equivalent of that described in connection with the receiving end of the machine so that the conveyor or belt may have a continuous movement imparted thereto by driving one of the shafts. In the present instance, we have shown the conveyor as being driven from the shaft 17 through the medium of a flexible connection illustrated as a chain 18, which passes around the sprocket 19 mounted on the outer end of the shaft 17 and engages a sprocket 20 on the shaft 21 which is part of a reduction gearing 22 located near either the sills 23 or 24 and which receives motion from a motor illustrated as an electric motor 25 on the base 26. Therefore, when the motor is operating, motion will be communicated to the shaft 17 through the driving connections just described and the functioning movement of the conveyor will be from the forward end of the machine to the rear end of the machine.

Supported by opposite pairs of standards 5 and 6 are brackets consisting of the angles 29 and 30 having their laterally projecting flanges 31 and 32 forming tables or supports for the standards 33 and 34 respectively.

The standards 33 and 34 are shown as consisting of pipes connected at their upper ends by the cross pipe 35, midway of which is a fourway union 36, connecting opposite pipe sections and which supports a threaded rod or bar 37 slidable in the union 36 and fixed in a socket 38 on a cross bar or support 39, having holes in its ends through which the standards 33 and 34 project so that the cross bar or table will be guided vertically with respect to the frame formed by the standards 33 and 34 and the cross bar 35.

Supported at opposite ends of the cross bar or table are sets of adhesive material distributors, one set being designated 40 and the other 41, and each consisting of a pan 42 constituting a receptacle or container for the adhesive material, preferably silicate of soda or water glass. Mounted within the receptacle or pan 42 is a delivery roller 43, bearing against a corrugated transfer roller 44 between the rollers 43 and 45, the latter being mounted in brackets 46 on the container or pan 42, the roller 45 being mounted on a shaft 47 carrying a pulley 48 adapted to be driven from the shaft 21, as will be presently explained.

The distributing roller 45 is adapted to distribute the adhesive material upon the upper flaps of boxes as they pass between the lower portions of the rollers 45 and the supports or bracket blades 50, as will be clearly apparent by reference to Fig. 7, it being apparent that the adhesive material will be spread over the flaps as they pass by the founts or containers 42.

By reference to Figs. 1 and 6 it will be observed that the inner end of the shaft 47 and the inner end of the shaft 51, which carries the roller 43, are provided with sprockets 52 and 53 around which a sprocket chain 54 passes so that when the shaft 47 turns, the motion will be communicated to the roller 43 by means of the sprockets and chain just described. The lower founts 55 on tables 31 and 32 supply adhesive material to the under side of the lower flaps. These founts consist of reservoirs in which are mounted rollers 56 on the shaft 57, the shaft 57 being driven through the medium of the pulleys 58 so that adhesive material will be applied to the under side of the lower flaps as they pass between the rollers 56 and the bracket blades 59, mounted upon the standards 33 and 34, as shown.

The pulleys 48 and 58 are driven from the pulleys 60 on shaft 21' through the medium of the flexible connection or belt 61, which passes over the idler 62, around pulley 48, over pulley 58 and back to pulley 60, as shown in Figs. 1 and 2.

In order to present the boxes to the adhesive applying devices, it is desirable that they be continuously fed from the receiving end of the machine to the discharging

end thereof and that they pass along a table in such manner that certain flaps may be manipulated to present themselves at the proper time and in the proper manner to the adhesive distributing mechanism.

As the bottom flaps move away from the body of the box to receive the adhesive material, it is necessary that the contents be held in place and to this end means is provided whereby first one side flap may move into unsealing position while the other side flap remains on the table and supports the inner end flaps to retain the contents of the box, the construction of the table being such that the second side flap may be released after the box has moved along the table to a position where the table alone will hold up the end flaps. In other words, there is no time when there is any liability of both the end flaps moving out of position for supporting the contents of the box until such time as the side flaps are adequately supported by the table. The construction whereby this result is effected will be specifically referred to hereinafter.

An important part of our invention is illustrated in Figs. 3, 8 and 9 as consisting of the table 63, having a laterally curved or concave anterior portion 64 of substantially the width of the bottoms of the boxes to be passed thereover. In rear of the anterior portion 64 is a cutaway portion or offset 65, slightly in excess of the width of one of the two longitudinally hinged flaps or closure members 66 and 67 of the box 68. The cutaway or offset portion is so disposed that as the box moves along the table, one of the flaps, for example 67, will drop and swing outwardly into the cutaway portion 65 shown in Fig. 8. As the box progresses toward the discharge end of the machine, the progression being induced by its entrainment between the cross slats and rollers of the conveyor, it will pass over another offset or cutaway portion 69 on the opposite side of the table 63, so that the flap 66 will drop and swing outwardly, as shown in Fig. 1. During this time the upper longitudinally hinged flaps 70 and 71 are slightly raised so they will come in contact with the pointed end 72 of the spreader member, consisting of a triangular body rigid with the adjustable table or bar 39. The rearwardly and outwardly diverging sides 73 and 74 of the spreader will force the flaps 70 and 71 outwardly, as shown in Fig. 1, the inner end flaps 75 and 76 being held in horizontal planes by the smoother bar 77, projecting from the spreader 72, as clearly seen in Fig. 1. The box is conveyed beneath the spreader 72 to a relatively broad portion of the table 63 having forwardly extending, chamfered edges 78 and 79, which serve as spreaders for the flaps 66 and 67, so that when the box

has reached the relatively broad portion constituting the adhesive applying station, the flaps 66, 67, 70 and 71 are all held in substantially horizontal planes, the flaps 66 and 67 passing over the delivery rollers 56 and the flaps 70 and 71 passing beneath but in contact with the delivery rollers 45 so that adhesive material, for example, water glass, is applied to the inner faces of the respective flaps during their continuous passage along the table 63.

After the box leaves the adhesive applying mechanism, the upper flaps are bent in upon the inner flaps 75 and 76 by the forwardly projecting fingers 80 and 81 of the rearwardly directed closing member 82, from which they pass under a smoothing blade 83, to a vertically adjustable sealing frame carried by the main frame of the machine.

To the rear of the adhesive-applying mechanism, the table 63 is narrowed and provided with staggered recesses 84', 85', corresponding to the recesses 65, 69 at the front end, so that as the box leaves the adhesive-applying mechanism, the side flaps drop to vertical position and are then turned in the recesses. Projecting outwardly and forwardly from the rear ends of the recesses 84' and 85' and preferably formed integral with the table, are flap-folding arms 84 and 85, having chamfered edges engageable by the side flaps as the box moves along the table, to turn the side flaps back against the bottom of the box to which they are sealed on contact.

While the side flap 67 is hanging in the recess 84', and the side flap 66 is hanging along the edge of the table (Fig. 9), after leaving the adhesive-applying mechanism, the inner end flaps are held closed by, and the contents of the box supported from, the table. As the box moves along the table, the arm 84 engages the flap 67 and turns it against the bottom end flaps, sealing it thereto and moving the side of the box onto the portion of the table opposite recess 85'. Continued travel of the box carries the flap 66 to engage arm 85 and be turned thereby to sealing contact with the bottom end flaps. The box then moves onto the broad portion 86 of the table and the flaps are pressed to place during further travel of the box to effect sealing.

By reference to the drawings it will be apparent that as the distributing rollers for either the top sealing devices or the lower sealing devices rotate in contact with the flaps, the adhesive will be distributed over a sufficiently wide area to insure ample material being deposited thereon so as to avoid the liability of an imperfect adhesion or sealing in the final stages of the operation.

In order to insure the sealing of the box,

we have provided a sealing frame consisting of a substantially rectangular member 87 having projections 88 and 89 on opposite sides thereof, and vertically guidable in slots 90 and 91 in the guides 92 and 93, the pairs of guides 92 and the pairs of guides 93 being connected by cross bars 94 and 95 respectively. There are vertically adjustable screws 96 and 97 in the cross bars 94 and 95 so that when the screws are adjusted vertically, the roller carrying frame 87 will be raised or lowered in response to turning movement of the hand wheel 98 and 99, the screw 37 being controlled by a hand wheel 100, the hub 101 of which bears against the edge 102 of the coupling 36.

The socket 103 and the screw 37 connected to it, are braced by a brace 104 connected to the socket 103 and to the smoother 77 rigid on the spreader 72, this being a detail of construction which may or may not be omitted, according to the strength of the parts of which the machine is made up.

In order to provide for boxes of different widths, we have included supplemental side rails 105 and 106, projectable toward and retractable from the longitudinal center of the table 63 through the medium of the adjusting links 107 which are fastened to the bars 105 and 106 and the side bars 1 and 2 by the nuts 108 and 109 respectively, it being obvious that the supplemental bars 105 and 106 will constitute adjustable guide rails which will constrict or increase the width of the passageway for the boxes as they travel along the table 63 and hold the boxes closely, so that as they are pushed along the table by the conveyor cross bars, friction on the sides will sufficiently retard the boxes to square them.

The construction of the machine thus far described is generically like a machine already in use. Our invention contemplates the provision of certain improvements on such machines which we will now proceed to describe.

By reference to Fig. 8 it will be seen that the shelf or table 63 is curved laterally and it is provided with wear strips or straps 110 which run lengthwise thereof to serve as guides for the box and the flap. Immediately above the forward end of the table 63 is an elongated shelf or strip 111, which extends a suitable distance along the table to support the flaps 75' and 76' as well as the contents of the box 68.

The shelf or runway 111 extends to the broad portion of the table 63, having the chamfered or curved portions 78 and 79, which fold the flaps 66 and 67 outwardly into adhesive-receiving position. At this point the box passes off the shelf or runway 111 onto the intermediate portion of the table and then onto the rear portion, it

being understood that the broad flat portion will support the contents of the box.

As the box leaves the broad portion of the table 63 and passes the cut-out portions 84' and 85', the contents of the box will be supported by the bridge strips 112 and 112' respectively until the arms 84 and 85 fold the flaps 67 and 66 against the bottom of the box in the order named. Then the flaps 66 and 67 will support the contents of the box during the rest of the movement of the box through the machine.

The support table or runway 111 is an important feature of our invention as are the supports 112 and 112' because without such features there would be liability of the contents of the box 68 dropping through the various cut-out portions 65, 69, 84' and 85' which, however, cannot take place with the improvements incorporated in this machine.

Another important feature of the invention is the means for maintaining the in-turned bottom flaps in their proper positions. To this end we have provided a separator bar 113 longitudinally of the rear end of the machine, which passes between the edges of the flaps 66 and 67 as the box is being subjected to sealing pressure and in order to square up the box properly, we provide certain presser devices, best shown in Figs. 10, 11 and 12. In addition to the bars 105 and 106 we provide certain additional presser devices, for example, on the bars 1 and 2 are adjustably secured U-shaped brackets 114 and 115, the upper bars 116 of which are provided with elongated slots 117 which engage bolts 119 and 120 in the bars 1 and 2, the bars 116 being adjustably held in place by the thumb screws 121 and 122. The lower bars 123 are provided with elongated slots 124, in which are mounted longitudinal bars 125 substantially in line with the table 63 so that they are adapted to press against the bottom flaps 66 and 67, it being understood that the bars 125 are loosely mounted in the slots 124 through the medium of the bolts 126 and are yieldingly urged by the springs 127, the tensions of which may be controlled by the rods 128 and the thumb nuts 129. The rods 128 are secured to the bars 125 and project through the openings 130 in the vertical bars of the U-shaped brackets 115, as clearly seen in Figs. 10 and 12.

The slotted connections 117 with the bars 1 and 2 allow the brackets to be adjusted laterally for different widths of boxes. Therefore, as the box passes over the table 63 with the separator bar or knife 113 between the flaps 66 and 67, pressure is applied against the opposite edges of said flaps so they will be pressed inwardly against the bar 113 to true up the corners as well as to maintain the configuration of

the box, the bars 125 assisting the bars 105, 106 in this capacity.

There are two brackets on each side of the machine, each of which constitutes a seat 5 for supporting the bars 125 so that the bars will extend through a considerable length of the machine and be properly supported, as clearly seen in Figs. 2 and 10.

The top flaps 70 and 71 of the box are 10 also provided with pressers, the construction of which will be seen by reference to Figs. 10 and 11. On each side of the machine are two bracket members 131, each of which consists of a bar 132 having elongated slots 15 133 and 134 which are engaged by the threaded studs 135 and 136 on the angles 86 and 87 and are adjustably held by the wing nuts 137 and 138. Each outer end of each bar 133 is provided with a hook-shaped portion 139, the lateral extension 20 140 of which is provided with a slot 141 in which is a sliding bolt 142 which carries the presser bar 143 rigid therewith so that the bars may have movement with respect 25 to the extension 140. There is a coil spring 144 between the bar 143 and the vertical portion of the hook-shaped portion 139 and the tension of said spring can be controlled through the medium of the threaded rod 30 145 and thumb nut 146, as clearly seen in Fig. 11. The members 131 can be adjusted laterally on the angles 86 and 87 to provide for different widths of boxes and will conform in their adjustments to the adjustments of the lower bracket members 114 and 35 115. The bars 143 will be co-extensive in length with the bars 125, as will be clearly seen in Fig. 2.

It will, therefore, be apparent that the 40 boxes will be tried to maintain their contour as they pass from the machine and thereby present symmetrical packages.

By reference to Figs. 1, 8 and 9 it will be observed that each offset portion or recess 45 65 and 69 is substantially the same width as the flaps 66 or 67 which it is to receive. The runway or shelf is sufficiently short to enable the box to be placed on the anterior portion 64 of the table 63 without touching or being as far advanced as the rearward end of the shelf or runway, because of the fact that the table is a trough, the outer flaps drop slightly downward, providing sufficient space between the outer and inner 50 flaps for the shelf or runway to insert itself between them when the box is moved forward by the conveyor. As the boxes entrained by the conveyor move along the table 63, the flap 67 will first meet the cut-away portion formed by the offset 65 and 55 since the offset 65 does not exceed one-half the width of the box, there will be no support for the flap 67. Therefore, the flap will drop. As the box moves toward the 60 rear of the machine, the second flap 66 will

drop, as clearly seen in Fig. 1. The end flaps of the box, however, will be supported by the shelf or runway 111 and even if there is a space between the flaps, the contents of 70 the box will be efficiently supported by the shelf or runway 111 so that the contents of the package will be retained in the box. Then as the box moves forwardly, it will pass over the broad portion of the table 75 while the flaps are being pasted by the pasting mechanism. At the same time, the flaps 70 and 71 will be opened and pasted, as indicated in Fig. 1.

As the box leaves the pasting mechanism, 80 the top flaps will be folded into sealing position and the lower side flaps will drop into the spaces 84' and 85'. At this time the end flaps 75' and 76' as well as the contents of the box will be supported by the bridge strips 112 and 112' until the side flaps 66 85 and 67 are folded inwardly against the end flaps by the projecting portions 84 and 85, so that the side flaps 66 and 67 will then efficiently support the end flaps 75' and 76' 90 as well as the contents of the box.

The entraining conveyor consisting of the chains, the cross bars 14 and the rollers 14' and 14'' will be effective in continuing the traversing movement of the boxes under the rollers of the sealing frame so that they will 95 be slightly squeezed between the rollers and the table portion 86 and the preliminary sealing assured so that when the box is discharged from the machine, any danger of unsealing will be eliminated. 100

At the same time the box is passing under the sealing rollers, it is also being subjected to a slight side pressure from the flap presser bars 125 at the lower portion and the top 105 presser bars 143 for the top flaps, as is clearly apparent by reference to Figs. 10, 11 and 12.

It will be observed by reference to Fig. 2 that the shaft 21' is driven by a chain 147, which passes around a sprocket 148 on said shaft and around a sprocket 149 on shaft 110 17 so that the shaft 21' will be driven from the power source to rotate in the proper time relation with the co-operating parts of the machine.

Therefore, when the box leaves the machine, it will be, to all intents and purposes, 115 efficiently sealed, time being necessary, however, in some instances for the adhesive to harden, as will be well understood.

What we claim and desire to secure by 120 Letters-Patent is:

1. A machine for pasting and sealing folded boxes having end flaps, comprising a table over which the boxes are adapted to travel, the table having alternating recesses 125 through which the flaps may drop in sequence, and a superposed table above the first named table for supporting the boxes throughout a part of their travel, the superposed table being of substantially uniform 130

width whereby the contents of the boxes will be held against displacement during the time that the flaps are in dropped positions.

2. A machine for pasting and sealing 5 folded boxes having end flaps, comprising a table over which the boxes are adapted to travel and having alternating recesses through which the flaps drop in sequence, a superposed table above the first named table 10 extending throughout a portion of the length of the first named table and of sufficient width to support the contents of the boxes during their travel past the recesses, and means for pasting the flaps.

3. A machine for pasting and sealing 15 folded boxes having end flaps, comprising a table over which the boxes are adapted to travel and having alternating recesses through which the flaps drop in sequence, a superposed table above the first named table 20 extending throughout a portion of the length of the first named table and of sufficient width to support the contents of the boxes during their travel past the recesses, means for pasting the flaps, and means for closing the flaps after the boxes have passed off the superposed table.

4. A machine for pasting and sealing folded boxes having end flaps, comprising a table 30 over which the boxes are adapted to travel and having alternating recesses through which the flaps drop in sequence, a superposed table above the first named table and bridging the recesses to support the boxes 35 and prevent the contents thereof from dropping therefrom while the flaps are in dropped positions, means for pasting the flaps, means for closing the flaps after the boxes have moved off the superposed table, 40 and means for pressing the closed flaps to the boxes.

5. A machine for pasting and sealing 45 folded boxes having end flaps, comprising a table over which the boxes are adapted to travel and having recesses into which the flaps drop, a superposed table over which the boxes move while the flaps are in dropped position whereby the contents of the boxes will be supported against displacement, means for moving the boxes 50 through the machine, means for applying paste to the flaps, and means for closing the flaps.

6. A machine for pasting and sealing 55 folded boxes having end flaps, means for supporting a box and its contents from opposite sides of its center while the flaps of the other side are open, means for applying paste to the open flaps, means for closing the flaps, means for moving the box 60 through the machine, means for exerting pressure against the edges of the sealed flaps from opposite sides of the box, and a centrally located separator bar in the machine

against which the free ends of the flaps contact when pressure is applied on opposite edges thereof. 65

7. A machine for pasting and sealing 70 folded boxes having bottom sealing flaps at their side and end edges, comprising a table over which the boxes are adapted to travel, the construction of the table being such that first one side flap of the boxes and then the other will drop onto the table, and a superimposed table above the first 75 named table for supporting the boxes and their contents during the time that a side flap is in dropped position.

8. A machine for pasting and sealing 80 folded boxes having bottom sealing flaps at their side and end edges, comprising a table over which the boxes are adapted to travel, the construction of the table being such that first one side flap of the boxes and then the other will drop onto the table, 85 a superposed table above the first named table for supporting the boxes and their contents during the time that a side flap is in dropped position, means for applying paste to the dropped flaps, means for moving the pasted flaps into sealing position, means 90 for exerting pressure against the connected edges of the sealed flaps, and means for conveying the boxes past the pressure means.

9. A machine for pasting and sealing 95 folded boxes having end flaps, comprising two tables, one of which is superposed above the other, the upper table having a uniform area throughout, the lower table having a concave entrance at its forward end and 100 provided with offset recesses into which the flaps may drop during the passage of the box over the superposed table, means for pasting the dropped flaps, means for moving them into sealing position, and means 105 for conveying the box through the machine.

10. A machine for pasting and sealing 110 folded boxes having end flaps, comprising two tables, one of which is superposed above the other, the upper table having a uniform area throughout, the lower table having a concave entrance at its forward end and provided with offset recesses into which the flaps may drop during the passage of the 115 box over the superposed table, means for pasting the dropped flaps, means for moving them into sealing position, and means for conveying the box through the machine, said means comprising an endless belt having transverse slats with box-engaging rollers supported above and below the slats. 120

11. A machine for pasting and sealing 125 folded boxes, comprising a table over which the boxes are adapted to travel, means for opening the side flaps of the boxes, means for applying paste thereto, means for moving the pasted flaps into sealing position,

and means for moving the boxes through the machine, said means comprising an endless conveyor having its effective portions supported on opposite sides of the boxes and
5 traveling through a plane between the upper and lower ends of the boxes, said conveyor having transverse slats and rollers supported on opposite edges of the slats to engage the boxes between their upper and lower portions.
10 In testimony whereof we affix our signatures.

HENRY A. SAYLOR.
ARTHUR S. PECK.
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