

W. S. SCALES.
CARTON SEALING DEVICE.
APPLICATION FILED OCT. 1, 1909.

954,704.

Patented Apr. 12, 1910.

5 SHEETS—SHEET 1.

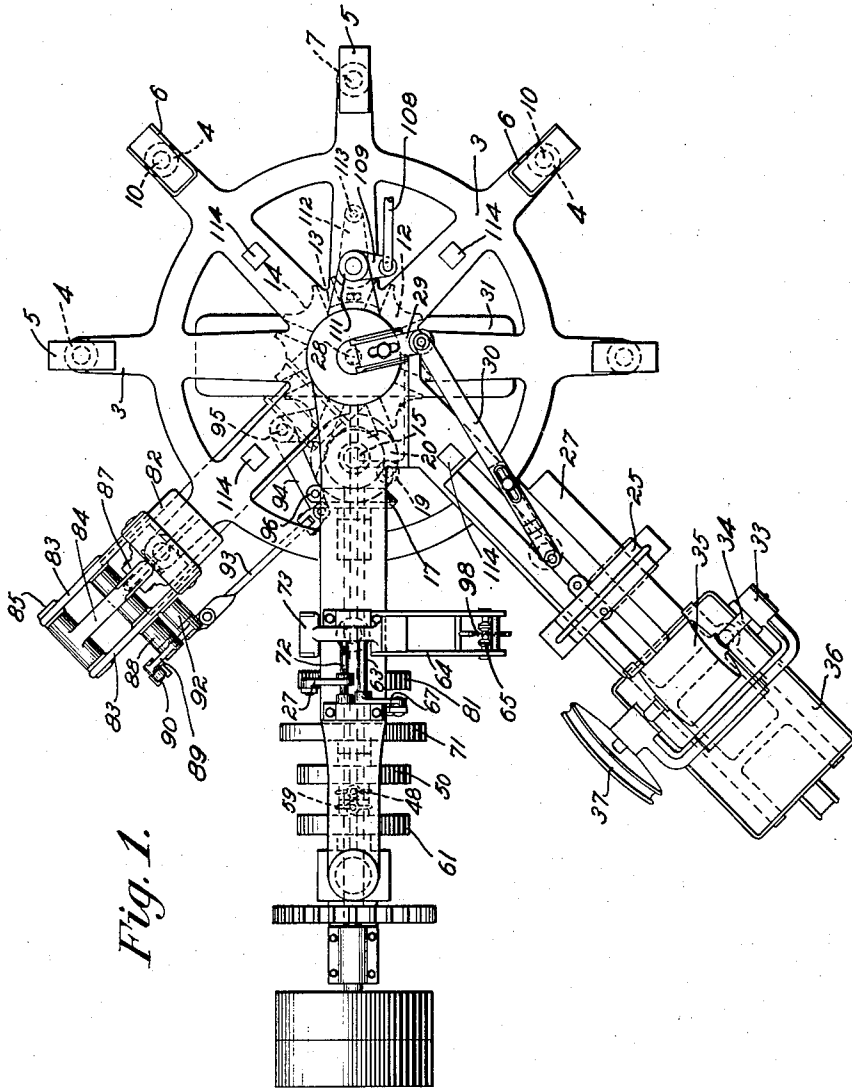


Fig. 1.

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John H. Parker

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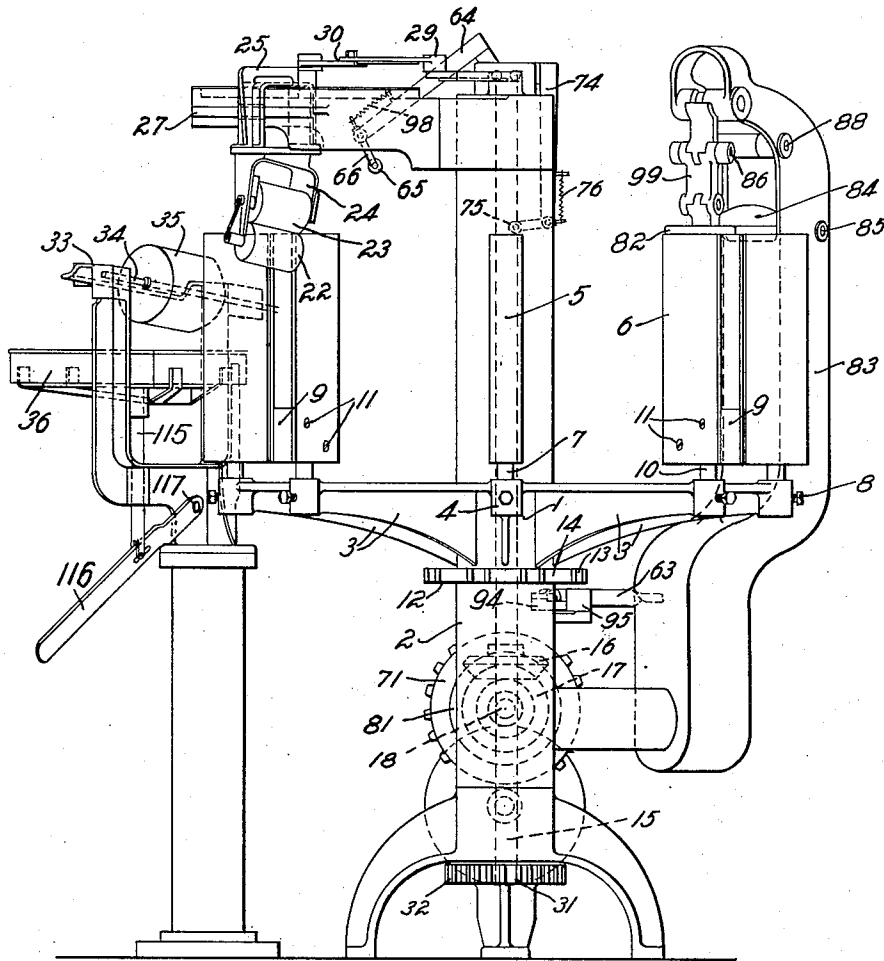


Fig. 2.

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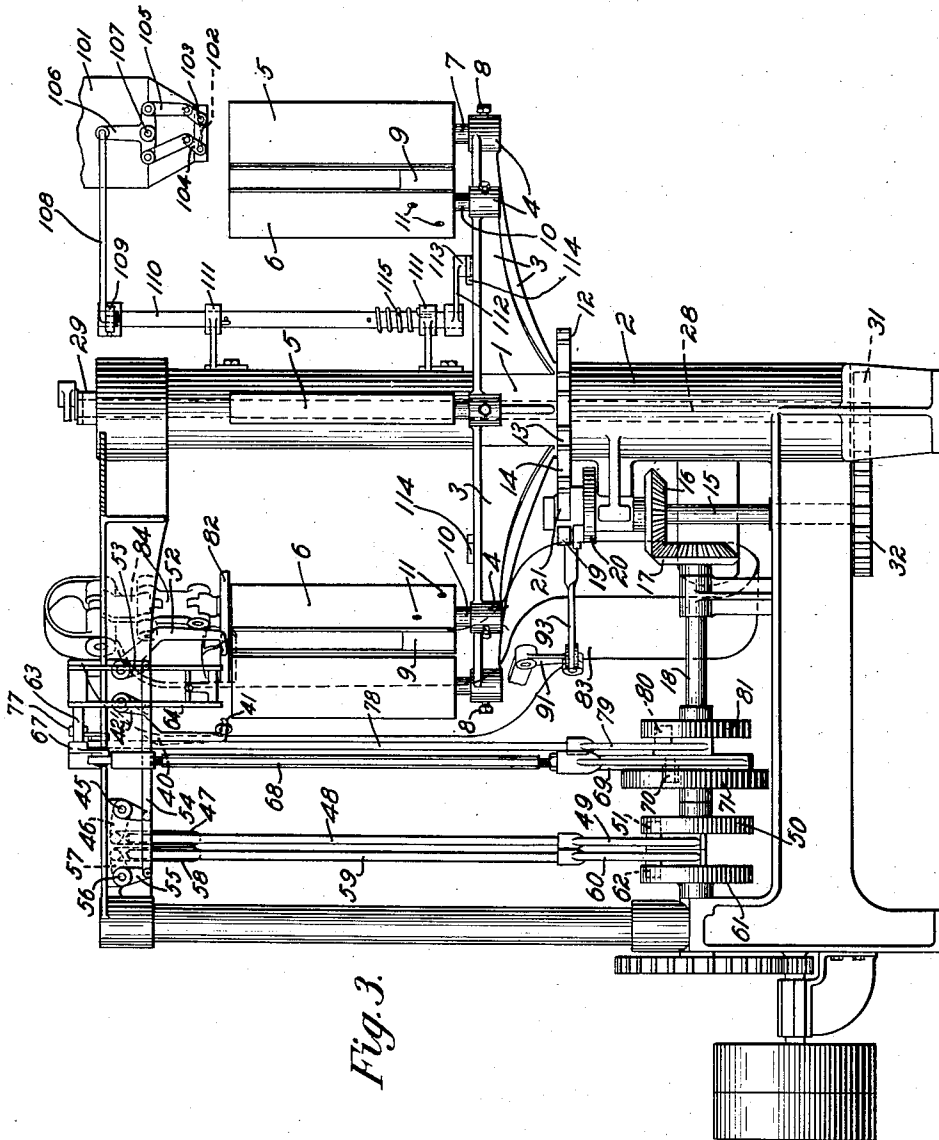


Fig. 3.

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5 SHEETS—SHEET 4.

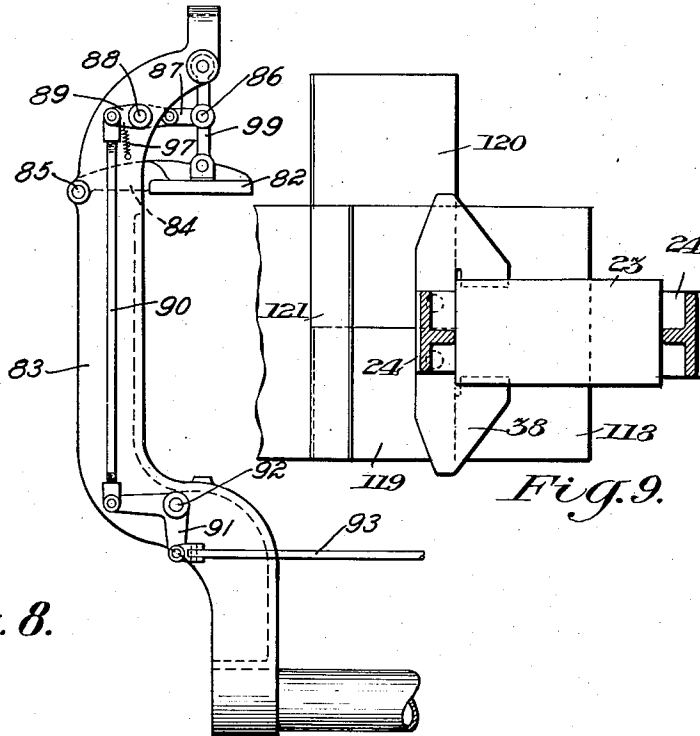


Fig. 8.

Fig. 9.

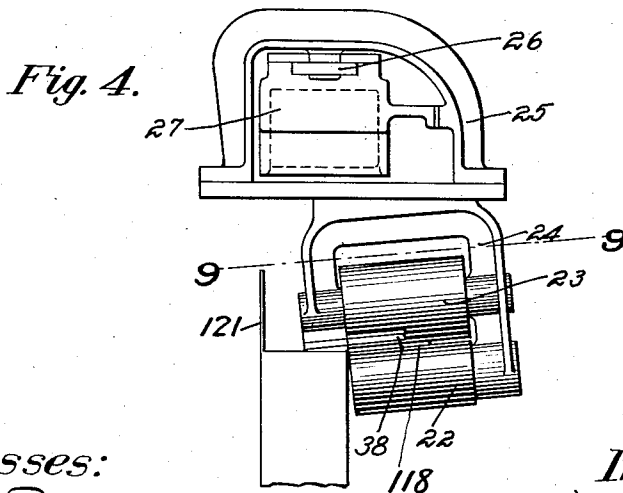


Fig. 4.

Witnesses:
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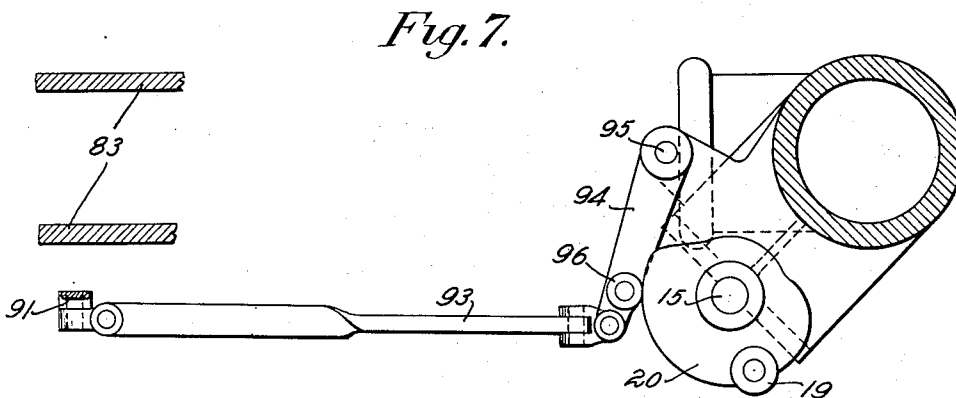
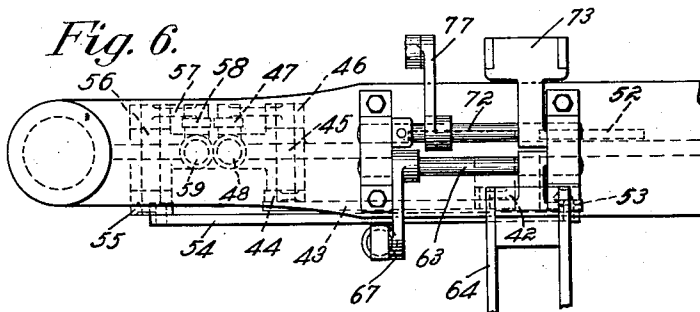
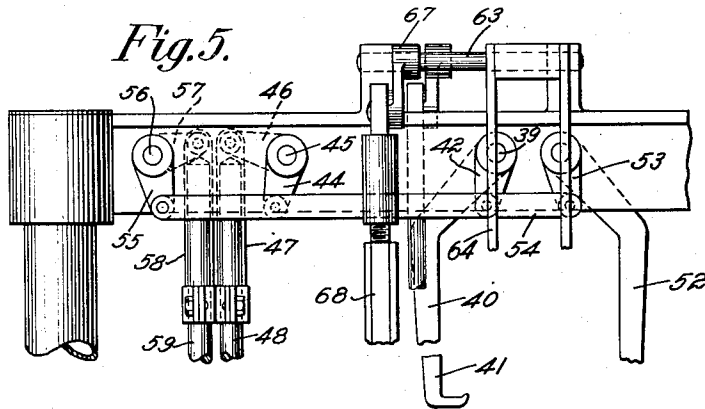
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5 SHEETS—SHEET 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM S. SCALES, OF MEDFORD, MASSACHUSETTS, ASSIGNOR TO PNEUMATIC SCALE CORPORATION, LIMITED, OF QUINCY, MASSACHUSETTS, A CORPORATION OF MAINE.

CARTON-SEALING DEVICE.

954,704.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed October 1, 1909. Serial No. 520,541.

To all whom it may concern:

Be it known that I, WILLIAM S. SCALES, a citizen of the United States, residing at Medford, county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Carton-Sealing Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The cartons in which package goods are put up by machine usually come in knock-down form, and have end-closing flaps which are intended to be subsequently folded to close both the bottom and the top. The carton has to be opened up and the bottom flaps closed and sealed before the goods are put into the package and after the package is filled the flaps which are to close the top have to be folded and sealed. Heretofore this flap-closing operation has sometimes been done by hand and sometimes by machinery. When it has been done by machinery, so far as is known to me, the bottom flaps have all been closed and sealed upon one machine, the cartons have then been filled and the top-closing flaps have then been closed and sealed by another machine especially designed for that purpose. In some factories the business is not of sufficient magnitude to warrant the employment of independent machines for folding and sealing the bottom flaps and for folding and sealing the top flaps both on account of the expense of the machine and the space occupied by them.

35 One object of the present invention is to provide a combination machine by which both the bottom of the unfilled carton and the top of the filled carton may be folded and sealed in one machine.

40 Another object of the invention is to utilize a single combination of gluing and folding apparatus for the closing in of an empty carton in alternation with the closing in of a filled carton.

45 Another object of the invention is to so combine the folding and sealing mechanism with mechanism for filling the empty cartons that the filling mechanism will discharge into one of the empty packages at every alternate stopping position of the carton carrier.

50 The invention will be fully understood from the following description taken in connection with the accompanying drawings,

and the novel features will be pointed out and clearly defined in the claims at the close of the specification.

In the drawings, Figure 1 is a top plan of a machine embodying the invention. Fig. 2 is a front end view. Fig. 3 is a side view, the gluing mechanism being omitted for the purpose of more clearly showing parts which would be obscured. Fig. 4 is an end view of the gluing mechanism. Fig. 5 is a side elevation of the folding mechanism. Fig. 6 is a plan view of Fig. 5. Fig. 7 is a plan view of the press-operating cam and connections. Fig. 8 is a side view of the press column which presses the flaps after they are folded. Fig. 9 is a section on line 9—9 of Fig. 4.

In carrying out the invention there is provided a step-by-step rotary spider having radiating arms, some of which carry blocks to hold empty cartons in opened-out form and to support them during the operation of closing and sealing the bottom flaps and others of said arms have pockets to hold the filled cartons and to carry them through the mechanism for closing and sealing the top-closing flaps, said carton-holding blocks and package-holding pockets alternating with each other and the same gluing mechanism being used for folding and sealing the flaps of the empty cartons that are used for folding and sealing the top flaps of the filled packages.

Referring now to the drawings, the spider is formed with a central hub 1 rotatably mounted on a column 2 and having a series of radiating arms 3 each terminating in a boss 4 on which the carton carrying blocks 5 and pockets 6 are mounted. The blocks are to carry the empty cartons and the pockets to carry the filled cartons and preferably alternate with each other, although they may be disposed in any relative order or proportion as desired. The blocks 5 are each shown as provided with a stud 7 fixed in its lower end and the bosses 4 are each formed with a hole to receive the stud, which is clamped therein by a set screw 8. The pockets are secured to short blocks 9 each provided with a stud 10 which enters a hole in the boss 4 and is clamped therein by a set screw in the same manner as the carton blocks 5 are secured to the spider.

The pockets 6 are preferably formed of sheet metal bent around three sides of the

block 9 thus forming three closed sides, the outer side being open. The pockets are secured to the blocks 9 by screws 11. The outer side of the pockets is left open for the purpose of readily inserting and removing the filled cartons. The spider or skeleton form is not essential to the invention but is preferable for lightness of construction, and saving of metal and general convenience in the construction and handling of the machine.

The spider is given an intermittent or step-by-step rotary movement in any well known manner, as for instance, the well-known Geneva stop-motion. A detail description of the Geneva stop motion is deemed unnecessary. In brief, the star-wheel 12 is formed with a series of slots 13 and scallops 14, eight in number corresponding in number with the combined number of the carton holding blocks and pockets so that at each revolution of the spider there will be eight periods of rest. The exact number of blocks and holders is not material. They may be of any number that is convenient. The star-wheel 12 is mounted fast on the hub of the spider or made integral therewith so that the spider will move in unison with the star-wheel. The Geneva stop-mechanism is driven by a shaft 15 having a beveled gear 16 engaging with a beveled gear 17 on the driving shaft 18. The shaft 15 drives the star-wheel 12 by means of a roll 19 mounted on the press operating cam 20 carried by shaft 15. After the spider has come to a rest it is locked in position by engagement of the disk 21 mounted on shaft 15 with the scallops 14.

Each end of the carton is usually provided with four flaps, the form which is preferred having two opposite flaps which extend only part way across the open end of the carton so that they do not overlap but when folded their ends will meet or nearly meet. One of the side flaps folds over onto the first two folded flaps and the last flap folds over to cover the entire bottom or top, as the case may be. It is frequently and perhaps usually customary to apply glue to at least two of the flaps. In carrying out the present invention glue is applied to only one of the flaps, that is the first folded of the side flaps, glue being applied to both faces of said flap so that the inner face will adhere to the inner folded flaps and the outer face will adhere to the outside folded flap, thus making the gluing operation much simpler. Further, this gluing operation is performed by means of two movable glue rolls whose peripheries have yielding contact with each other and which are mounted on a reciprocable traveler in such manner that the glue rolls will embrace the flap which is to be glued between them and thereby apply glue to both faces of the flap.

The glue rolls 22 and 23 are journaled in a yoke 24 and have their peripheries in feeding contact with each other. The yoke 24 is slidably mounted on a bracket 25, said yoke being formed with a tongue 26 which moves in a grooved way in the bracket 27.

The mechanism for actuating the sliding of the yoke and thereby the movement of the glue rolls is as follows: Mounted on a vertical shaft 28 which is journaled inside of the column 2 is a crank 29 which can be adjusted to vary its length, and which is connected to yoke 24 by an adjustable connecting rod 30. The purpose of varying the length of the crank is to vary its throw. At each rotation of the shaft 28 the yoke 25 is given a full stroke in both directions. At each stroke of the yoke and glue rolls they are adapted to engage between them one of the extended flaps of the carton, if the carton is in the proper position as will be hereinafter described. Shaft 28 is driven intermittently by the intermittent gear 31 on shaft 28 and intermittent gear 32 on shaft 15. The intermittent movement of shaft 28 which drives the glue rolls is so timed with relation to the movement of the spider which carries the carton that the glue rolls will reciprocate when the spider is at rest and the spider will move when the glue rolls are in contact with the glue feed roll.

The mechanism for applying glue to the glue rolls is as follows:—Journaled in bearings 33 is a shaft 34 on which is mounted a feed glue roll 35 which as it revolves dips into a glue pot 36 and is constantly rotated by means of driving pulley 37 on shaft 34. The glue-pot 36 is mounted on a vertically movable rod 115 whose lower end is pivotally connected with a lever 116 fulcrumed at 117. The purpose of thus mounting the glue-pot is in order that the glue-pot, when the machine is not in operation, may be lowered as shown in Fig. 2, so that the glue roll will be out of the glue. By turning up the lever 16 on its pivot, the rod 115 is raised and thereby the glue-pot may be elevated sufficiently so that as the glue roll 35 rotates, its lower part will dip into the glue. The engagement of the rotating feed roll 35 with the glue roll 22 will cause the glue roll 22 to revolve and thereby a film of glue will be deposited from the feed roll 35 upon the said glue roll 22. The rotation of the glue roll 22 which is in frictional engagement with the glue roll 23 will also cause the glue roll 22 to revolve, thereby depositing a part of the film of glue upon glue roll 23. As the carton approaches the position where the gluing is to take place the flaps are all usually in the upright position. The cartons are moved broadside on, and it is the rear side flap 118 which is to be glued. The glue rolls move transversely of the path of the carton just at the rear of the carton

after the carton has come to a period of rest. In order therefore to glue the flap it is necessary to turn the said flap backward at an angle to the carton into the path of the glue rolls, that is if the cartons are held in a vertical position the flap will be turned into or nearly into a horizontal position pointing rearward. Inasmuch as when the bottom flap of the empty carton is to be sealed the carton is in an inverted position upon the block, that is the bottom end of the carton is upward, then so far as the operation of the gluing is concerned, the bottom of the empty carton will occupy the same position as the top end of the filled carton occupies when the filled carton comes around because the filled carton stands bottom downward so that the same means for spreading and gluing and folding the bottom flaps of the empty carton are also adapted to spread and fold and glue the top flaps of the filled carton.

Not only is it necessary to fold outward the side flap which is to be glued, to bring it into position to be engaged by the glue rolls, but it is also desirable to flatten the two end flaps to get them out of the way temporarily during the gluing of the side flaps. Means for doing this is as follows:— Secured to the yoke is a thin folder plate 38 which extends between the ends of the glue rolls and projects beyond the ends of the glue rolls and has a tapered lateral portion adapted to turn the rear flap and the end flaps. This plate is normally outside of the path of the carton. When the yoke and glue rolls reciprocate after the carton is at rest this tapered portion is carried transversely of the path of the upwardly projecting flaps and engages the outer end flap, turning it inward and also engages the rear side flap 118, folding it backward and as it continues the movement it turns the inner end flap away from the carton, that is toward the center of the circular path of the cartons so that the forward and rear end flaps and the outer side flap will be turned down into a nearly horizontal position in time for the two glue rolls 22 and 23 to engage the rearwardly spread side flap. The forward movement of the yoke is sufficient for the glue rolls to travel over the entire length of the rear side flap. This gluing of the flap takes place during one of the periods of rest of the spider and carton. Fig. 9 shows one end flap 119 folded in over the top of the package, the other end flap 120 and the rear side flap 118 being spread horizontally outward and the advance side flap 121 standing up in a vertical position. If the flap to be glued is spread out into a position at right angles to the body of the carton the end of the lower glue roll is liable to engage the body of the carton and render it sticky where not wanted. In order to avoid such

gluing of the body of the carton, I prefer to have the flap which is to be glued when spread out to stand at a slight inclination so that when it is embraced by the glue rolls and the glue rolls traverse the flap the end of the glue roll will be inclined somewhat to the body of the carton and therefore at the most only one corner of the rim of the glue roll can contact with the body of the carton. After passing out from the folder plate 38 the flaps which have thereby been spread down have a tendency to spring back again toward the vertical position and it is now necessary to fold inwardly the two end flaps and to fold down upon said two end flaps the side flap which has been glued and then to fold outside of all the other side flaps. The mechanism for doing this is as follows: Pivoted at 39 to a stationary portion of the machine above the path of the moving cartons is a downwardly hanging arm 40 terminating at its lower end in a finger 41, said finger being above the body of the carton and pointing at right angles with the path of movement of the carton and adapted to engage with the outer end flap of the carton.

The mechanism for actuating the arm 40 is as follows: Fast to the stud 39 is a lever 42 pivoted to a connecting rod 43 whose opposite end is pivoted to a crank 44 which is fast to a stud 45 which passes through the frame and the other end is fast to a crank 46 which is pivoted to a connecting rod 47 which is adjustably connected to a rod 48 whose lower end is connected with a fork 49 which straddles the shaft 18 merely as a guide. Mounted on the shaft 18 is a cam 50 having in its side a cam path with which there engages a roll 51 projecting from the side of the fork 49 as the cam 50 revolves. The connecting rod 48 is raised and lowered thereby through the connecting mechanism, actuating the arm 40, rocking said arm so as to give the proper movement to the folder finger. The other end flap is folded by a finger 52 which is actuated by mechanism corresponding exactly to the mechanism which actuates arm 40 the only difference being that one is right and the other is left. This mechanism includes lever 53, connecting rod 54, crank 55, stud 56, crank 57 connecting rods 58, and 59, fork 60, cam 61, and roll 62.

The glued flap, which is the rear flap the way the carton is moving, should next be folded. The mechanism for doing this is as follows: Fast to a rock shaft 63 is a forked arm 64 which hangs down over the path of the carton. Pivoted to the arm 64 is a fork which carries a roller 65. The fork 66 is held under spring tension in position with relation to the arm 64 by a spring 98. The rock shaft 63 is actuated in such manner that after the carton has come to one of its

periods of rest the arm 64 will be caused to sweep down and forward just behind the carton in the same direction that the carton has moved, and the roller 65 will engage the rear face of the glued flap. The continued
 3 onward sweep of the arm 64 will fold the said glued flap down upon the previously folded end flaps.

The mechanism for actuating the rock shaft 63 is as follows:—The rock shaft 63 is pinned to a lever 67 one end of which is pivoted to a connecting rod 68, the other end of said connecting rod being connected to a fork 69 which straddles shaft 18 as a guide.
 15 Said fork 69 carries a roll 70 which engages a cam 71 on shaft 18.

After the glued rear flap is folded, the forward side flap is folded over onto the said folded rear flap. The mechanism for doing
 20 this is similar to the mechanism for folding the said glued flap and timed so as to immediately follow the latter and is as follows: Fast to a rock shaft 72 is a forked arm 73 which hangs down over the path
 25 of the carton. Pivoted to the arm 73 is a fork 74 which carries a roller 75. The fork 74 is held under spring tension in position with relation to the arm 73 by a spring 76. The rock shaft 72 is actuated
 30 in such manner that after the arm 64 has folded in the glued flap the arm 73 will be caused to sweep down and cause the roller 75 to engage the forward flap and fold it down upon the glued flaps. The move-
 35 ments of the folding arms 64 and 73 are so timed with relation to each other that the arm 64 will not lift the roller 65 from the folded glued flap until the arm 73 has partially folded the last flap so as to prevent
 40 the folded glued flap from springing back. The rock shaft 72 is pinned to a lever 77 one end of which is pivoted to a connecting rod 78, the other end of said connecting rod being connected to a rod 79 which straddles
 45 shaft 18 as a guide. Said rod 79 carries a roll 80 which engages a cam 81 on shaft 18.

At one of the periods of rest of the spider after the flaps have been folded the carton stops beneath the press plate 82. Mechanism is provided for causing the press plate
 50 to descend and to press down upon the top of the outside folded flap during this period of rest. The mechanism is as follows: Rising from and supported by the frame is a bracket 83. The press plate is provided
 55 with an arm 84 rigidly connected or integral therewith, fulcrumed at 85 to the bracket 83. The upper side of the press plate is connected by a toggle joint 99 with an over-
 60 hanging arm of said bracket 83. Pivotaly connected with the pivot 86 of the toggle joint 84 is another toggle joint 87, one arm of which is rigidly connected with a shaft 88 which is journaled in the bracket 83.
 65 Rigidly connected with said shaft 88 is a

lever 89 which is connected by a rod 90 with one arm of a bell crank 91 fulcrumed at 92 in the said bracket 83, the other arm of the bell crank being pivoted to one end of a connecting rod 93. The other end of connecting
 70 rod 93 is pivoted to one end of a cam lever 94, the other end of said cam lever being pivoted to the frame at 95. Said cam lever 94 carries a roll 96 which engages with cam 20 on shaft 15. A spring 97 tends to hold
 75 the toggles in a bent position and the press plate 82 in its raised position. The cam 20 is so formed that the toggles will be straightened out and cause the press plate to descend when the carton reaches a position
 80 beneath it, the press plate being so located over the carton that when the toggles are straightened out the press plate will descend far enough to engage the top of the folded flaps of the carton. When the cam
 85 rotates far enough to allow the toggles to be bent again the spring 97 will pull down lever 89 and move the toggles and lift the press plate. The object of this press plate is to press upon the folded flaps during one
 90 of the dwells of the spider so that the glue may become set sufficiently to prevent the flaps from springing open when the carton is moved away from the press. This is of greater importance in sealing the bottom
 95 flaps of the empty cartons than of sealing the top flaps of the filled cartons, although it is useful in both cases. The press plate is raised before the spider begins its next movement.

After the empty carton has had the bottom flaps folded and sealed it is removed from the block and may either be filled by hand or by machine and then placed in one of the pockets or the filling mechanism may be
 100 so combined with and controlled by the sealing mechanism that the empty carton, after having the bottom sealed, and placed in one of the pockets, may be filled automatically and again carried through the folding and
 105 sealing mechanism to close and seal the top. In the drawings I have shown such combined mechanism. A valved receptacle 101 is located above the position which an empty carton in one of the pockets will occupy
 110 during one of the periods of rest before it enters the mechanism for closing the top flaps, so that if one of the empty cartons is in the pocket in this position the material may be discharged from said receptacle into
 115 the carton. The receptacle 101 may be supplied with sufficient quantity of material for the filling of a single package, this supply being furnished in any way desired, either by pouring it into the receptacle by hand or
 120 by automatic measuring or weighing devices operated intermittently. There are various well known means for intermittently furnishing a predetermined quantity to the receptacle. The outlet from the receptacle
 125 130

is controlled by a valve, the opening and closing of which is controlled by the movement of the spider which carries the pockets. The form of the valve shown in the drawings comprises two shutters 102, 102, each of which is mounted on a shaft 103 connected by a lever 104 with a connecting rod 105, said connecting rod being connected with one of the arms of a rocker lever 106 mounted on shaft 107. Said rocker lever 106 is connected with one end of a connecting rod 108, the other end of said connecting rod being connected with a crank 109 mounted on the upper end of a rocker shaft 110. The rocker shaft 110 is mounted in bearings 111 connected with the frame of the machine. Mounted fast on the lower end of the shaft 110 is an arm 112 carrying on its outer end a roll 113. Fast on each one of the spider arms 3 which carry the pockets—that is, on every alternate arm of the spider,—is a block 114 which is so positioned as to engage the roll 113 on the arm 112 during the period of movement before the pocket comes to a rest beneath the receptacle, thereby turning the arm 112 and the rocker shaft 110 in a direction to open the shutters 102 by means of the intermediate connections so that the load of material in the receptacle 101 will be discharged into the carton while the carton is at rest under the receptacle. At the next period of movement of the spider, the block 114 as it moves around in a circular path will ride off of the roll 113 on the arm 112 and a spring 115, which has been put under tension by the turning of the shaft during the opening of the shutters, will turn the shaft back to its normal position, and in so doing will actuate the shutter moving mechanism to close the shutters. The blocks 114 are placed only upon the pocket-carrying arms and not upon the block-carrying arms so that the valve or shutters will be opened only when a pocket is being moved to a position beneath the receptacle 101.

It is obvious that the particular form of mechanism for opening and closing the discharge outlet from the receptacle 101 may be varied, and I regard any such variation as coming within the scope of my invention.

The operation of the machine will be sufficiently obvious from the foregoing description without giving a detailed further description of the operation.

What I claim is;

1. In a machine for closing and sealing the flaps of cartons, a rotary carton-carrier whereby the cartons are held in a vertical position and moved in a circular path in a horizontal plane, means for turning rearwardly the rear end closing flap of the carton at an angle to the body of the carton, a gluing device normally located radially outside of the path of movement of the carton,

means for moving said gluing device radially of the path of movement of the carton just at the rear of each carton at a predetermined position of the carton so as to engage said rearwardly turned flap and apply adhesive thereto.

2. In a machine for closing and sealing the flaps of cartons, a carton carrier, means for turning outwardly one of the end closing flaps of the carton, two gluing devices normally located outside of the path of movement of the cartons with their gluing surfaces in proximity to each other, means for moving said gluing devices transversely of the outwardly spread flap in such manner as to embrace said flap between them during one of the periods of rest of the carrier and travel across the same, one of the gluing surfaces engaging the upper face of the flap and the other gluing surface engaging the under face of the flap.

3. In a machine for closing and sealing the flaps of cartons, a movable carton carrier, means for turning one of the flaps outwardly into a position inclined with relation to the body of the carton, two glue rolls normally located outside of the path of movement of the cartons mounted with their axes at an inclination to the body of the carton, means for moving said glue rolls transversely of the path of the carton whereby said glue rolls will embrace between them the outwardly turned inclined flap of the carton.

4. In a machine for closing and sealing the flaps of cartons, a carrier having a plurality of blocks each adapted to receive an empty carton slipped thereon bottom upward, with upwardly extending flaps, a plurality of pockets each adapted to hold a filled carton in an upright position with upwardly extending flaps, means for moving said carrier, means for turning outwardly one of the flaps on the uppermost end of each carton in turn whether filled or unfilled, two glue rolls normally located outside of the path of movement of the cartons means for moving said glue rolls transversely of the path of the cartons whereby said glue rolls will embrace between them the outwardly turned flap of the carton and travel across the same gluing both faces thereof, means for then successively folding the flaps of the carton in such manner that the glued flap will be interposed between the uppermost flap and the under flap.

5. In a machine for closing and sealing the flaps of cartons, a movable carrier for carrying the cartons, means for turning outwardly one of the end closing flaps of the carton, two glue rolls normally located outside of the path of movement of the cartons, means for moving said glue rolls transversely of the path of the cartons whereby said glue rolls will embrace between them

the outwardly turned flap of the carton and travel across the same, gluing both faces thereof, and means for then successively folding the end closing flaps of the carton in such manner that the said glued flap will be interposed between the outermost flap and the under flaps.

6. In a machine for closing and sealing the flaps of cartons, a movable carrier for carrying the cartons, means for turning outwardly one of the end closing flaps of the carton, two glue rolls normally located outside of the path of movement of the cartons, means for moving said glue rolls transversely of the path of the cartons whereby said glue rolls will embrace between them the outwardly turned flap of the carton and travel across the same gluing both faces thereof.

7. In a machine for closing and sealing the flaps of cartons, a movable carrier for carrying the cartons, means for intermittently moving said carrier, means for turning the rear end closing flap of the carton rearward, two glue rolls mounted on a reciprocable traveler normally outside of the path of movement of the cartons, means for reciprocating said traveler transversely of the direction of movement of the cartons, means for controlling the movement of said traveler whereby the traveler carries the glue rolls across the path of the carton in the rear thereof during one of the periods of rest of the carton whereby said glue rolls embrace between them said rearwardly turned flap and travel across the same gluing both faces thereof.

8. In a machine for closing and sealing the flaps of cartons, a movable carrier for carrying the cartons, means for intermittently moving said carrier, means for turning the rear end closing flap of the carton rearward and turning the two adjacent end closing flaps also, two glue rolls mounted on a reciprocable traveler normally outside of the path of movement of the cartons, means for reciprocating said traveler transversely of the direction of movement of the cartons, means for controlling the movement of said traveler whereby the traveler carries said glue rolls across the path of the carton in the rear thereof during one of the periods of rest of the carton, whereby said glue rolls embrace between them said rearwardly turned flap and travel across the same gluing both faces thereof.

9. In a machine for closing and sealing the flaps of cartons, a movable carrier for carrying the cartons, means for intermittently moving said carrier, two glue rolls mounted on a reciprocable traveler normally outside of the path of movement of the cartons, means for reciprocating said traveler transversely of the path of the cartons, means for controlling the movement of said

traveler whereby the traveler moves the glue rolls across the path of the carton in the rear thereof during one of the periods of rest of the carton, a folder plate carried by said traveler which engages the rear flap of the carton and turns it into a rearwardly extending position whereby said glue rolls embrace between them said rearwardly turned flap and travel across the same gluing both faces thereof said folder also engaging and turning the two adjacent end flaps.

10. In a machine for closing and sealing the flaps of cartons, a movable carrier for carrying the cartons, means for intermittently moving said carrier, means for turning the rear end closing flap of the carton rearward, two glue rolls mounted on a reciprocable traveler normally outside of the path of movement of the cartons, means for reciprocating said traveler transversely of the direction of movement of the cartons, means for controlling the movement of said traveler whereby the traveler moves the glue rolls across the path of the carton in the rear thereof during one of the periods of rest of the carton whereby said glue rolls embrace between them said rearwardly turned flap and travel across the same gluing both faces thereof, and means for then successively folding inwardly all of the flaps in such manner that the glued flap shall be interposed between the other flaps.

11. In a machine for closing and sealing the flaps of cartons, a movable carrier having a plurality of holders for empty cartons, a plurality of holders for filled cartons alternating with the holders for empty cartons, mechanism for closing and sealing the bottom closing flaps of the empty cartons and the top closing flaps of the filled cartons, mechanism for intermittently moving the carrier through a distance equal to the space between two of the carton holders in combination with mechanism adapted to supply material to a carton at every alternate stopping position of the carrier and mechanism controlled by the movement of the carrier to control the delivery of the material from the supply mechanism to one of the empty cartons at every alternate stopping position of the carrier.

12. In a machine for closing and sealing the top and bottom flaps of cartons, a movable carrier having a plurality of holders for the cartons during the bottom sealing, a plurality of holders for the cartons during the top sealing alternating with the bottom sealing holders, mechanism for closing and sealing alternately the bottom closing flaps of one carton and the top closing flaps of another carton, mechanism for intermittently moving the carrier through a distance equal to the space between two of the carton holders, in combination with mechanism adapted to supply material to the carton

while in the top sealing holder at every alternate stopping position of the carrier and mechanism controlled by the movement of the carrier to control the delivery of the material to one of the empty cartons at every alternate stopping position of the carrier.

13. In a machine for closing and sealing the flaps of cartons, a movable carton carrier, mechanism for intermittently moving the carrier, mechanism for alternately sealing the bottom of one carton and the top of another carton and mechanism controlled by the movement of the carrier to discharge material into one of the cartons at every alternate stopping position of the carrier.

14. In a machine for closing and sealing the flaps of cartons, a movable carton carrier, mechanism for intermittently moving the carrier, mechanism for alternately sealing the bottom of one carton and the top of another carton and mechanism to discharge material into one of the cartons at every alternate stopping position of the carrier.

15. In a machine for closing and sealing the flaps of cartons, a carton carrier adapted to carry a plurality of cartons, mechanism for alternately sealing the bottom of one carton and the top of another carton, and mechanism to discharge material into each alternate carton.

16. In a machine for closing and sealing the flaps of cartons, a carton carrier adapted to carry a plurality of cartons, mechanism for discharging material into the cartons and means whereby the feed of the material is so controlled that it will be opened to supply material to certain of the cartons and closed against supplying material to other cartons with uniform variations between those which receive material and those which do not receive material.

17. In a machine for closing and sealing the flaps of cartons, a carton carrier adapted to carry a plurality of cartons, mechanism for discharging material into the cartons and means whereby the feed of the material is so controlled that it will be opened to supply material to certain of the cartons and closed against supplying material to other cartons with uniform variations between those which receive material and those which do not receive material.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM S. SCALES.

Witnesses:

WILLIAM A. COPELAND,
ALICE H. MORRISON.