

E. G. STAUDE.
 BLANK PACKING AND COUNTING MECHANISM.
 APPLICATION FILED SEPT. 29, 1906.

1,018,087.

Patented Feb. 20, 1912.

3 SHEETS—SHEET 1.

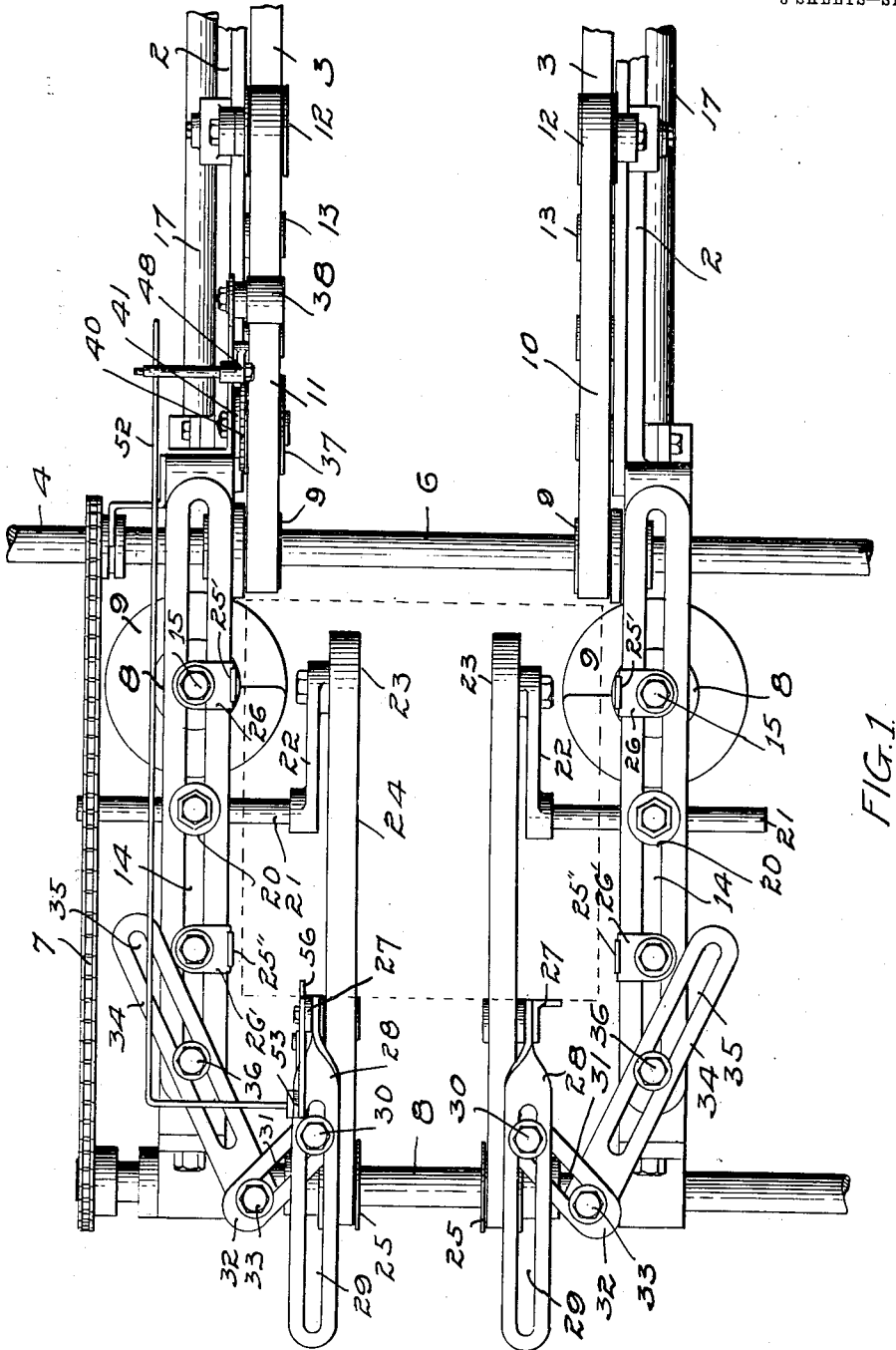


FIG. 1.

WITNESSES

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INVENTOR
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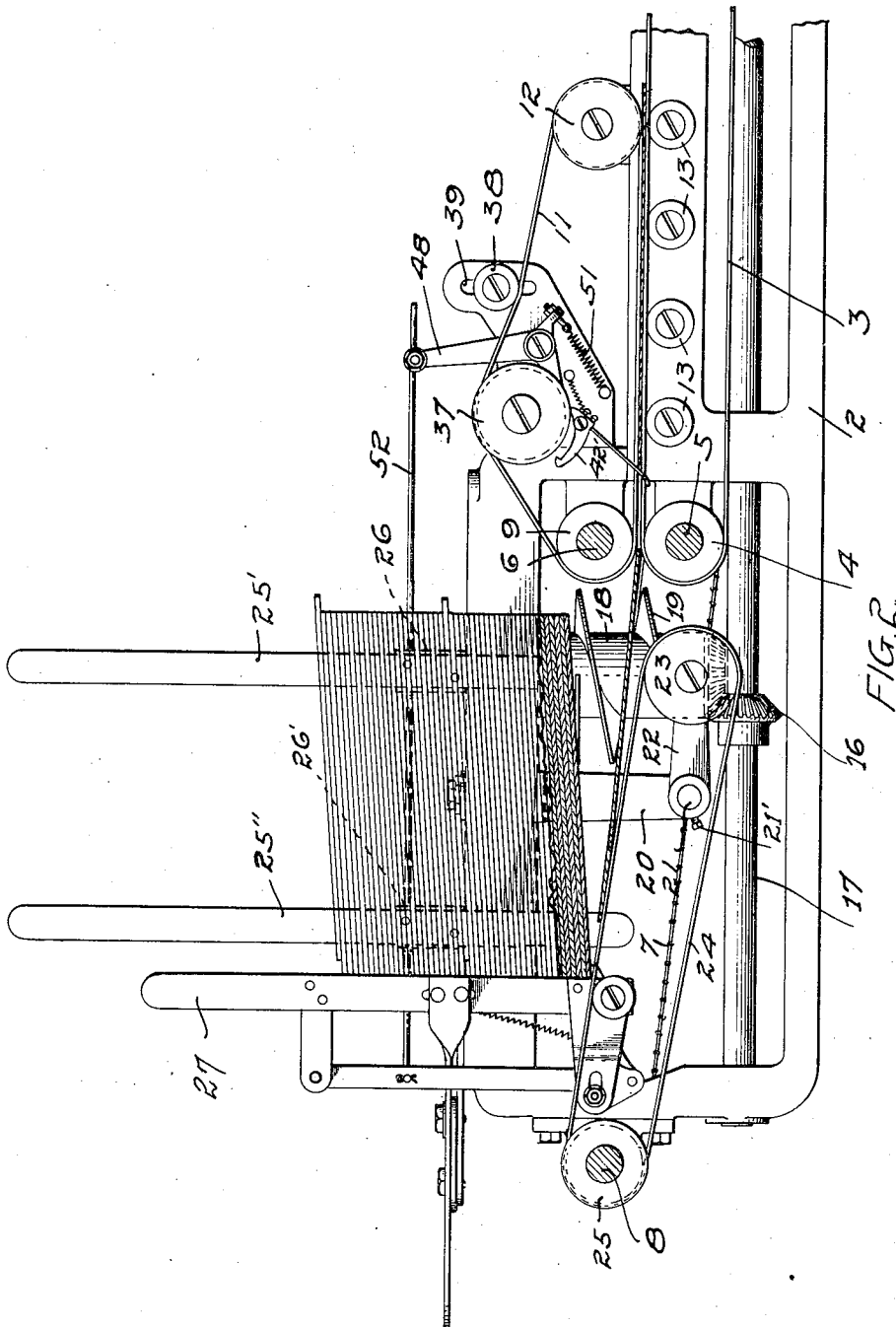
BY
 Paul Paul
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

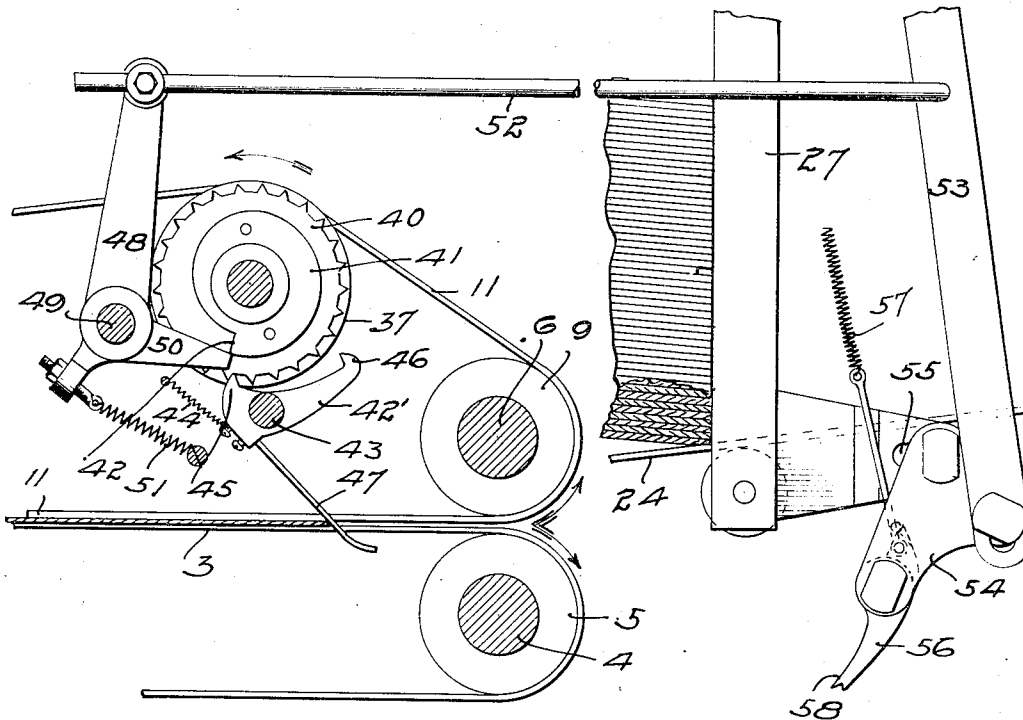


FIG. 3.

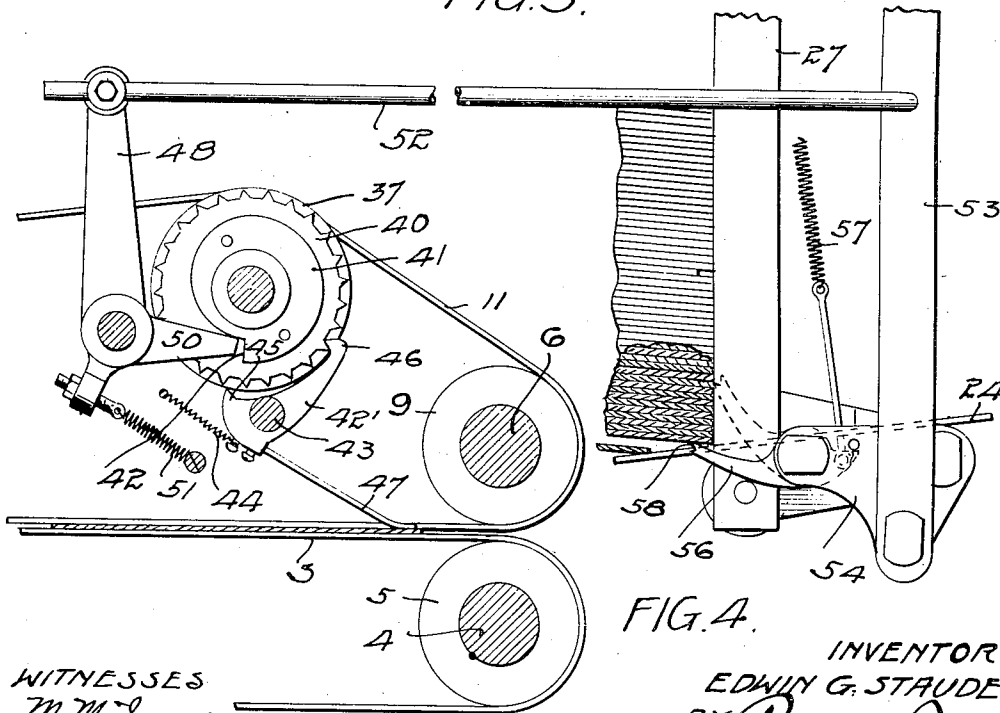


FIG. 4.

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UNITED STATES PATENT OFFICE.

EDWIN G. STAUDE, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO E. G. STAUDE MANUFACTURING CO., OF MINNEAPOLIS, MINNESOTA, A CORPORATION.

BLANK PACKING AND COUNTING MECHANISM.

1,018,087.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed September 29, 1906. Serial No. 336,794.

To all whom it may concern.

Be it known that I, EDWIN G. STAUDE, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Blank Packing and Counting Mechanism, of which the following is a specification.

My invention relates to improvements in machines for packing and counting blanks such as are usually employed in the manufacture of various kinds of folding boxes, cartons or envelops, and the object of the invention is to provide improved means for packing the blanks or cartons in a compact pile or row with coinciding edges, as they are delivered from the folding mechanism.

A further object is to so arrange the blanks or cartons in a pile or row that the number can be accurately determined at a glance.

The invention consists generally in suitable packers and means coöperating therewith to impart a forward movement to the blanks or cartons and also a movement toward the preceding blanks or cartons in the pile.

Further the invention consists in means having a moving surface for advancing the blanks into a receptacle, and means actuated by the moving blanks for dividing the pile of blanks into groups, each of a predetermined number of blanks.

The invention consists further in the constructions and combinations hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, forming part of the specification, Figure 1 is a plan view or rear portion of a flexible blank forming machine, with my invention applied thereto, Fig. 2 is a vertical sectional view of the same, Figs. 3 and 4 are detail views illustrating the operation and counting mechanism.

In the drawing 2 represents the frame of the machine, having lower feed belts 3 on each side operating over pulleys 4 on a shaft 5. A sprocket chain 7 connects the shaft 5 with a shaft 8 at the rear of the machine. Pulleys 9 are mounted on a shaft 6 that is disposed above the shaft 5, and from the pulleys 9 belts 10 and 11 pass to pulleys 12 mounted on the machine frame

above the feed belts 3. The cartons delivered from the folding mechanism pass between the lower belts 3 and the upper belts 10 and 11, the belts 3 being supported by anti-friction wheels 13 journaled on the machine frame. The upper portion of the machine frame is provided with longitudinal slots 14 and in these slots vertical shafts 15 are adapted to slide horizontally toward or from the feed belts 3, 10 and 11. The lower ends of the shafts 15 are provided with beveled gears as indicated by dotted lines in Fig. 2, meshing with corresponding gears 16 on the shafts 17, which are mounted on each side of the machine frame and extend lengthwise thereof. Sleeves 18 are mounted on the shafts 15 and are provided with circumferentially arranged spirals 19, extending preferably from the upper to the lower ends of said sleeves. Hangers 20 are also slidably adjustable in the slots 14 and have sockets in their lower ends to receive transverse rods 21, which are secured in said sockets by means of set-screws 21'. The inner ends of the rods 21 are provided with crank arm 22 on which pulleys 23 are mounted. Belts 24 connect the pulleys 23 with similar pulleys 25 on the shaft 8. By adjusting the hangers back and forth in the slots 14 and moving the rods 21 lengthwise in their bearings in said hangers the position of the belts 24 with respect to the packers and the distances between the belts themselves and their elevation in the receptacle, may be varied according to the size or character of the blanks delivered to the packing mechanism. The belts 24, as shown clearly in Fig. 2, operate on an incline, the top of the belts being preferably on a level with the top of the spirals, and the function of these belts is to engage the forward ends of the cartons and move them inwardly and upwardly or outwardly according to the vertical or horizontal position of the blank receptacle, while the rear portions are being moved by the spirals. I have found that the use of these belts insures, in connection with the packers, a uniform movement of both ends of the blanks, thereby preventing them from clogging and greatly facilitating the packing operation. The rods 21 are also capable of rotary adjustments on their supports to allow the crank arms to be raised or

lowered and the level of the pulleys changed to increase or decrease the inclination of the feed belts to the horizontal.

Standards 25' are secured to brackets 26 on which the shafts 15 are mounted on each side of the machine, and said brackets are slidable back and forth in the slots 14 with the spirals and their shafts. Similar standards 25'' and brackets 26' are provided on the machine frame in the rear of the spirals and form, with the standards 25' the sides of the inclosures or receptacles in which the blanks are received and stacked. At the rear side of the inclosure for the cartons is an upright bar 27 attached to a plate 28, having a longitudinal slot 29 through which a bolt 30 extends into a slot 31 in a link 32. The bolt 33 connects the link 32 with a plate 34 which is provided with a longitudinal slot 35 through which a bolt 36 passes into the slot 14.

The same construction is provided on both sides of the machine and the compound ring and slotted plate connection allows the bar 27 to be adjusted back and forth in the receptacle, or tilted to any desired angle to accommodate the shape of the blanks delivered to the packing mechanism.

On one side of the machine I provide a mechanism to aid in counting the cartons. This mechanism I will now describe in detail; the belt 11 runs over a drum or wheel 37, (see Fig. 2), and under a roller 38 that is adjustable in a slot 39 on the machine frame. A ratchet 40 is provided on one face of the drum 37 and a cam surface 41 having a shoulder 42 is also formed on one face of the drum. An escapement pawl 42' is pivoted at 42 and is adapted to have its end alternately engage the teeth of the ratchet 40. A spring 44 normally holds the end 45 in engagement with the teeth of the ratchet, and the end 46 out of engagement with said teeth. A finger 47 is mounted in said pawl and extends down into the path of the moving carton. Any other suitable device might be employed in place of this finger. A lever 48 is pivoted at 49 and has an arm 50 held in engagement with the cam surface 41 by a spring 51. A lever 48 is adjustably connected with the rod 52 that is attached to a lever 53, having a pivotal connection at its lower end with a plate 54. This plate 54 is adjustably mounted in a slot 55 in one of the bars 27. A pawl 56 is pivoted on the plate 54 and is adapted to swing up into the path of the blanks as they are brought up by the belts 10 and 11. A spring 57 is attached to one end of said pawl, and its other end has a notch 58 in the path of the blanks.

The ratchet 40 has preferably 25 teeth and is moved one step or tooth each time a blank is delivered to the packing mechanism and the lever 48 is so arranged that when 25 blanks have been delivered, the arm 50 will

drop off the shoulder and allow the spring 51 to oscillate the lever 48 and swing the lever 53 to a point past the pivotal center of the plate 54, whereupon the plate 54 will be raised and the pawl 56 swung up to a point as indicated by full lines in Fig. 4 where it will be in the path of one of the blanks and prevent it from contacting with the upright bars 27 in the rear of the packing receptacle. The second blank thus delivered there- after to the receptacle will pass beneath the pawl 56 into contact with the bars 27 and will press the pawl 56 upwardly or outwardly should the packing receptacle be in a horizontal position. This movement of the blanks against the bars 27 will continue while the arm 50 is sliding over the cam surface 41 until twenty-five blanks have been delivered, or more or less, if preferred, according to the number of teeth on the ratchet. The arm 50 will then drop off the shoulder 42 and the lever 48 and the bar 53 will be again oscillated to move the pawl 56 and swing its notched end again into the path of the blanks. During the packing of the 25 blanks the plate 54 and the pawl 56 will be swung down from the position shown in Fig. 4 to the position indicated in Fig. 3, ready to be again raised, and retard the movement of one of the blanks when the arm 50 slides off the cam shoulder, the pawl swinging back against the pin in the plate 54 upon leaving the pack or pile of blanks.

With this apparatus the blanks will have one or more of their number, as preferred, inset on one side and projected on the other side, to indicate the division of each group of twenty-five blanks, and enable the attendant to determine at a glance the number of blanks in the pile or row and also facilitate their removal from the machine. As shown, the spirals and their coöperative belts are arranged to pack the blanks in a vertical pile, but I do not confine myself to this arrangement as they will perform their functions equally well if arranged horizontally.

I have shown the belts arranged at an incline for feeding the blanks forward to the receptacle, but it will be understood that I do not confine myself to the use of such a conveying means as a moving inclined surface, formed, for instance, by a series of rollers would be an equivalent construction, and would give similar functions to the belt. These rollers being a pure equivalent of a carrier or a conveyer for the belts, I have not thought it necessary to illustrate them herein.

In case the carton receptacle is arranged horizontally instead of vertically, as shown in the drawings, the blanks will be advanced therein with a forward or lengthwise movement, instead of being lifted or moved vertically, an outward movement will be imparted thereto, or a substantially hori-

zontal movement lengthwise of the receptacle. I prefer to arrange the receptacle uprightly as shown, but I mention the other arrangement as one that might be adopted and still be within the scope of my invention.

I claim as my invention:—

1. In a machine of the class described, the combination, with a blank carton receptacle and means for delivering the blanks thereto, of a movable feed bed in the bottom of said receptacle, said bed having a continuous contact with the pile of blanks and imparting a combined forward and upward movement to each blank as it enters the receptacle, and means at the receiving side of said receptacle for moving the rear ends of the blanks upwardly.

2. In a machine of the class described, the combination, with a receptacle and means for feeding the blanks horizontally, of moving means located in the bottom of said receptacle and presenting an inclined surface and having a continuous contact with the pile of blanks to move them upwardly and means at the receiving side of said receptacle to engage the rear ends of the blanks and move them upwardly simultaneously with their forward movement.

3. The combination, with means for delivering the blanks, of feeding means operating beneath the blanks to feed them one beneath another to form a pile, said feeding means having a continuous contact with the pile of blanks and imparting a combined forward and upward movement thereto, and elevating means arranged to engage the blanks near the receiving side of said feeding means.

4. The combination, with a blank receptacle, of means operating therein to engage and move the blanks forward in said receptacle and simultaneously elevate the forward ends of the blanks, and means for lifting the rear ends of the blanks during said forward movement.

5. The combination, with a receptacle and means for delivering the blanks thereto, of means having an inclined carrying surface, the receiving end of said surface being on a different level than the opposite end thereof, and a blank elevating means provided at the receiving side of said receptacle and adapted to elevate the rear portion of the blank while its forward portion is supported on said carrying surface.

6. The combination, with a blank receptacle, of a blank feeding means and means extending from the receiving side of said receptacle to the opposite side thereof and adapted to receive the blanks from said feeding means and imparting a forward movement thereto and simultaneously a movement lengthwise of said receptacle, and means at the receiving side of the receptacle

for elevating the rear portion of the blanks.

7. The combination, with a receptacle, and means for delivering the blanks, of a belt operating in said receptacle in a plane inclined to the horizontal to feed the blanks one beneath another, and an elevating means engaging said blanks at the receiving side of said receptacle.

8. The combination, with means for feeding the blanks, of a blank receptacle, means having a moving surface in continuous contact with the pile of blanks for raising the forward ends of the blanks in said receptacle, and means for raising the rear ends thereof, the blank traveling at an angle to the horizontal from the discharge side of said feeding means into said receptacle.

9. The combination, with a blank receptacle, of inclined belts arranged to engage the forward ends of the blanks and impart thereto a combined forward and outward movement, means arranged to engage the rear portions of the blanks and move them outwardly in said receptacle.

10. The combination, with a blank receptacle, of a blank delivering means operating in a plane at an angle to the horizontal in the bottom of said receptacle, means for feeding the blanks to said delivering means, and means operating on a vertical axis near the receiving end of said delivering means for elevating the rear portions of the blanks.

11. The combination, with a blank receptacle, of a feeding means and a blank delivering means located within said receptacle and extending from the receiving side to the opposite side thereof, said delivering means imparting a movement at an angle to the horizontal to the blanks passing from said feeding means into said receptacle, and means operating on a vertical axis for elevating the rear portion of the blanks.

12. The combination, with the spiral packers, of means having inclined surfaces arranged to engage the forward ends of the blanks and impart thereto a combined forward and outward movement simultaneously with the movement of said spirals.

13. The combination, with the spiral packers and means for delivering the blanks thereto, of means for engaging the forward ends of the blanks and moving them lengthwise and simultaneously imparting a movement thereto at right angles substantially to their forward movement.

14. The combination, with a blank receptacle, of means for delivering blanks thereto, a spiral packer operating to elevate the blanks into said receptacle and a delivering means cooperating with said spiral to impart a movement at an angle to the horizontal to said blanks within said receptacle.

15. The combination, with revolving vertical spirals and means for feeding the

blanks thereto, of means for engaging the forward ends of the blanks as their rear ends are lifted by said spirals, said engaging means having an inclined surface adapted to elevate the forward ends of the blanks.

16. In a machine of the class described, the combination, with a carton receptacle, of a belt arranged at an incline and adapted to engage the forward portion of the blank, and a spiral coöperating with said belt to deliver the blank to said receptacle.

17. The combination, with the vertically arranged spiral packers, of belts arranged at an incline in position to engage the forward ends of the blanks and move the same forward and upward while the rear ends of the blanks are elevated by said spirals.

18. The combination, with inclined belts arranged to deliver the blanks one beneath another with their forward edges coinciding, of vertically arranged spirals arranged to engage the blanks and impart a combined forward and diagonal movement thereto, the upper portion of said belts being on the same level substantially as the corresponding portions of said spirals.

19. The combination, with the vertically arranged spirals adapted to engage the rear portions of the blanks and elevate the same, of means arranged at an incline and adapted to engage the forward portions of the blanks and impart thereto a combined upward and forward movement, the upper portion of said inclined means being on a level substantially with the top of said spirals.

20. In a machine of the class described, the combination, with a blank receptacle and means for feeding the blanks thereto, of a stop and means for moving said stop into the path of the incoming blank, said stop remaining for a predetermined period in the path of the blanks, and means released by the incoming blanks for moving said stop at predetermined intervals out of the path of the blanks.

21. The combination, with a blank receptacle, of means extending across the bottom of said receptacle from the receiving side to the opposite side thereof and having a moving surface to feed the blanks, a stop device in the path of the moving blank and a mechanism operatively connected with said stop device and actuated by the movement of the blanks.

22. The combination, with a blank receptacle, of means extending from the entrance opening into said receptacle to the opposite side thereof and having a moving surface to feed the blanks transversely in said receptacle, a stop device in the path of the blanks in said receptacle, an actuating means therefor and a releasing means operated by the incoming blanks and connected with said stop device.

23. The combination, with a blank recep-

tacle, of a carrier operating in the bottom of said receptacle to feed the blanks by frictional engagement therein, a stop device in the path of the blanks moving in said receptacle, and a mechanism operatively connected with said stop device and actuated by the movement of the blanks.

24. The combination, with a blank receptacle, of means supporting the blanks and feeding them by frictional engagement therein, a stop device in the path of the blank moving in said receptacle, said stop device including a pawl, and a ratchet mechanism actuated by the passage of a blank for tilting said pawl.

25. The combination, with a blank feeding means, of a carton receptacle, means having a moving surface within said receptacle for advancing the blanks therein, one beneath another, means for arresting the movement of a blank at predetermined intervals and causing one end thereof to be projected beyond the stack, and a mechanism actuated by the incoming blank and controlling the movement of said arresting means.

26. The combination, with the feed belts, of a blank receptacle, means located within said receptacle and extending from the entrance thereof to the opposite side thereof and adapted to deliver the blanks into said receptacle with a combined forward and outward movement, and means for inseting one of the blanks in said receptacle at predetermined intervals.

27. In a machine of the class described, a blank receptacle, a carrier operating in the bottom of said receptacle to advance the blanks transversely thereof, a tilting stop device and a mechanism operatively connected with said stop device and actuated by the passage of a blank for tilting said device into the path of a blank in said receptacle.

28. The combination, with a blank receptacle, of means within said receptacle having a moving surface to move the blanks across said receptacle, and a temporarily inoperative stop device in the path of the forward edges of the blanks, said stop device including a tilting pawl and a ratchet mechanism actuated by the passage of a blank and operatively connected with said pawl.

29. The combination, with means for feeding the blanks, of a blank receptacle, an inseting device adapted to be projected into said blank receptacle and into the path of the blanks entering therein to stop their forward movement, a ratchet mechanism, means operatively connecting said ratchet mechanism and said inseting device to positively move the latter into the path of the blanks, and means actuated by a moving blank for operating said ratchet mechanism.

30. The combination, with the feed belts, of a slipping belt coöperating therewith, a drum driven from said slipping belt and having a series of ratchet teeth and an escapement, means mounted on said escapement and projecting into the path of the blanks moving between said belt for releasing said escapement to allow a step by step movement of said ratchet, a packing mechanism, means projecting into the path of the blanks and operated at predetermined intervals to arrest the movement of one of the blanks whereby it will be projected on one side with respect to the preceding and succeeding blank, and mechanism controlled by the revolution of said drum and ratchet, for operating said arresting means.

31. The combination, with means for delivering and packing the blanks in a pile one above another, of a drum having a series of ratchet teeth and an escapement, and a cam surface having a shoulder and means for operating said drum, means mounted on said escapement and projecting into the path of the moving blanks to permit a step by step movement of said drum, a lever having an arm to bear on said surface and drop off said shoulder with each revolution of said drum, a pawl, and means connecting said pawl with said lever, whereby the former will be moved into the path of the incoming blank once with every revolution of said drum, whereby at predetermined intervals one of the blanks on the pile will be inset beyond the others to enable the operator to determine at a glance the number in the pile.

32. The combination, with the feed belts and the packing mechanisms for delivering and packing the blanks in a pile one above another, of a drum driven from one of said belts and having a series of ratchet teeth and a cam surface, said ratchet having an escapement provided with means projecting into the path of the moving blank whereby a step by step movement of said ratchet is obtained, a lever having an arm to bear on said cam surface and drop off the high side of the cam once with every revolution of said drum and ratchet, an oscillating pawl connected with said lever and arranged to be moved into the path of the blanks as they are delivered to the pile, said pawl being operated once with every revolution of said drum and ratchet and adapted to limit the movement of one of said blanks, whereby it will be inset on one side and projected on the other side of the pile and the number of blanks in the pile between those that are inset corresponding in number to the teeth of the ratchet, whereby the operator can determine at a glance the number of blanks in the pile, substantially as described.

33. The combination, with the feed belts and means for packing the blanks, of a belt 11 arranged above said feed belts, a counter

drum driven from said belt 11 and having a ratchet and cam surface, an escapement engaging the teeth of said ratchet and having an arm projecting into the path of the blank moving between said belts, a lever having an arm to bear on said cam surface, a spring connected with said lever for oscillating the same when said arm slides off the high side of said cam, a plate connected with said lever, a pawl carried thereby, a spring connected to the end of said pawl and said pawl being swung by the oscillation of said plate into the path of the incoming blanks to arrest the movement of one of them at predetermined intervals.

34. The combination, with the upper and lower feed belts, of a blank receptacle, mechanism adapted to receive the blanks from said feed belts and pack them successively in said receptacle, said means including an inclined carrying surface extending from side to side of said receptacle, means provided in connection with the blank receptacle for insetting one of them in the pile at predetermined intervals, and mechanism in connection with said feed belts and actuated by the movement of the blanks for rendering said insetting mechanism temporarily operative.

35. The combination, with a blank receptacle adapted to receive the blanks placed one against another, of revolving spirals adapted to receive the blanks and feed their rear portions into said receptacle, means for delivering the forward portions of the blanks to said receptacle, and means for limiting the movement of one of said blanks at predetermined intervals, whereby it will be inset on one side and projected on the other side with respect to the other blanks.

36. In a machine of the class described, a blank receptacle, belts operating within said receptacle on each side of the middle portion thereof, said belts operating at an angle to the horizontal, and means for increasing or decreasing the inclination of said belts to the horizontal.

37. In a machine of the class described, a blank receptacle adapted to receive the blanks fed one beneath another therein, belts operating across the bottom of said receptacle and inclined to the horizontal and adapted to feed the blanks forwardly therein, said belts being adjustable toward or from one another.

38. In a machine of the class described, a blank receptacle, belts operating therein to advance the blanks transversely of said receptacle, crank arms having pulleys thereon for said belts, rods whereon said crank arms are mounted, said rods being capable of rotary adjustment to permit the raising and lowering of said pulleys.

39. In a machine of the class described, a blank receptacle, belts operating therein to

advance the blanks, crank arms having pulleys for said belts, rods whereon said crank arms are mounted, said rods being adjustable lengthwise to permit said belts to be moved toward or from one another.

40. In a machine of the class described, a blank receptacle in combination, with stacker belts operating to pack cartons therein and having portions inclined to the horizontal and adjustable arms arranged to engage said belts.

41. In a machine of the class described, a blank receptacle and feeding means extending from the entrance of said receptacle to the opposite side thereof and adapted to engage the forward portions of the blanks and move them one beneath another into said receptacle, said means operating at an angle to the horizontal and means for changing the elevation or level of one end of said moving means.

42. In a machine of the class described, a blank receptacle having adjustable side walls and revolving packers operating parallel with said walls, substantially to feed the blanks into said receptacle, said packers being adjustable toward and from said walls.

43. In a machine of the class described, a blank receptacle having an entrance opening on one side and a wall opposite said opening, said wall being adjustable toward or from said opening to adapt the receptacle to blanks of different sizes, and means operating within said receptacle and extending from the entrance opening to said wall and operating to feed the blanks lengthwise against said wall, and means operating on a vertical axis at the receiving side of said receptacle for elevating the blanks therein.

44. In a machine of the class described, a blank receptacle, packers provided at the entrance of said receptacle, means within said receptacle for moving the blanks transversely thereof, said means being adjustable toward and from said packers.

45. In a machine of the class described, a blank receptacle, feed belts operating to deliver the blanks thereto, and spiral packers provided at the corners of said receptacle on each side of the moving blank and adapted to engage the edges of the blank and elevate the rear portion thereof, said packers and feed belts being relatively adjustable.

46. The combination, with a blank receptacle having an open end and adjustable side walls, of revolving spirals operating parallel substantially with said walls to feed the blanks through said open end into said receptacle, said spirals being adjustable toward and from the walls of said receptacle to adapt them for feeding blanks of different sizes.

47. In a machine of the class described, a blank receptacle adapted to receive the blanks fed one beneath another therein,

means extending across the bottom of said receptacle and inclined to the horizontal and adapted to engage the forward portions of the blanks and feed them into said receptacle, said feeding means being adjustable to adapt the receptacle for blanks of different sizes, and means adjustable with respect to said feeding means and adapted to elevate the rear portions of the blanks.

48. In a machine of the class described, a blank receptacle having side walls adjustable toward and from one another to adapt the receptacle to blanks of different sizes, blank raising means operating on vertical axes provided at the entrance of said receptacle, said raising means being capable of transverse adjustment with respect to said receptacle.

49. In a machine of the class described, a blank receptacle, upright revolving spirals provided at the entrance to said receptacle adapted to engage and raise the rear portion of the blanks, said spirals being capable of transverse adjustment with respect to said receptacle to adapt them for blanks of different sizes.

50. In a machine of the class described, the combination, with a blank receptacle, of feed belts, spiral packers provided at the entrance to said receptacle, said packers operating to move the blanks at an angle to their direction of movement by said feed belts, and said spiral packers being movable toward and from said belts.

51. The combination, with a blank feeding means, of a blank receptacle, means having a moving surface within said receptacle for advancing the blanks, one beneath another, therein, said moving surface means, and the walls of said receptacle, being relatively adjustable to adapt the receptacle for blanks of different sizes.

52. The combination, with a blank feeding means, of a blank receptacle, belts arranged in said receptacle and operating to move the blanks therein, one beneath another, the side walls of said receptacle and said belts being adjustable toward and from one another to adapt the device to blanks of different sizes.

53. In a machine of the class described, a blank receptacle adapted to receive the blanks fed one beneath another therein, belts operating across the bottom of said receptacle and inclined to the horizontal and adapted to feed the blanks forwardly therein, and means actuated by the moving blanks for dividing the pile of blanks into groups to indicate a predetermined number of blanks in each group.

54. In a machine of the class described, a blank receptacle adapted to receive the blanks fed one beneath another therein, means having a moving surface within said receptacle for advancing the blanks therein, and means actuated by the moving blanks

for dividing the pile of blanks into groups, each of a predetermined number of blanks.

55. In a machine of the class described, a blank receptacle adapted to receive the
5 blanks fed one beneath another therein, means having a moving surface within said receptacle for advancing the blanks therein, and means rendered operative by the moving blanks before entering said receptacle
10 for dividing or marking the pile of blanks

in said receptacle into groups of a predetermined number of blanks as they are piled in said receptacle.

In witness whereof, I have hereunto set my hand this 22nd day of September 1906. 15

EDWIN G. STAUDE.

Witnesses:

RICHARD PAUL,
J. B. ERA.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."