

Oct. 30, 1928.

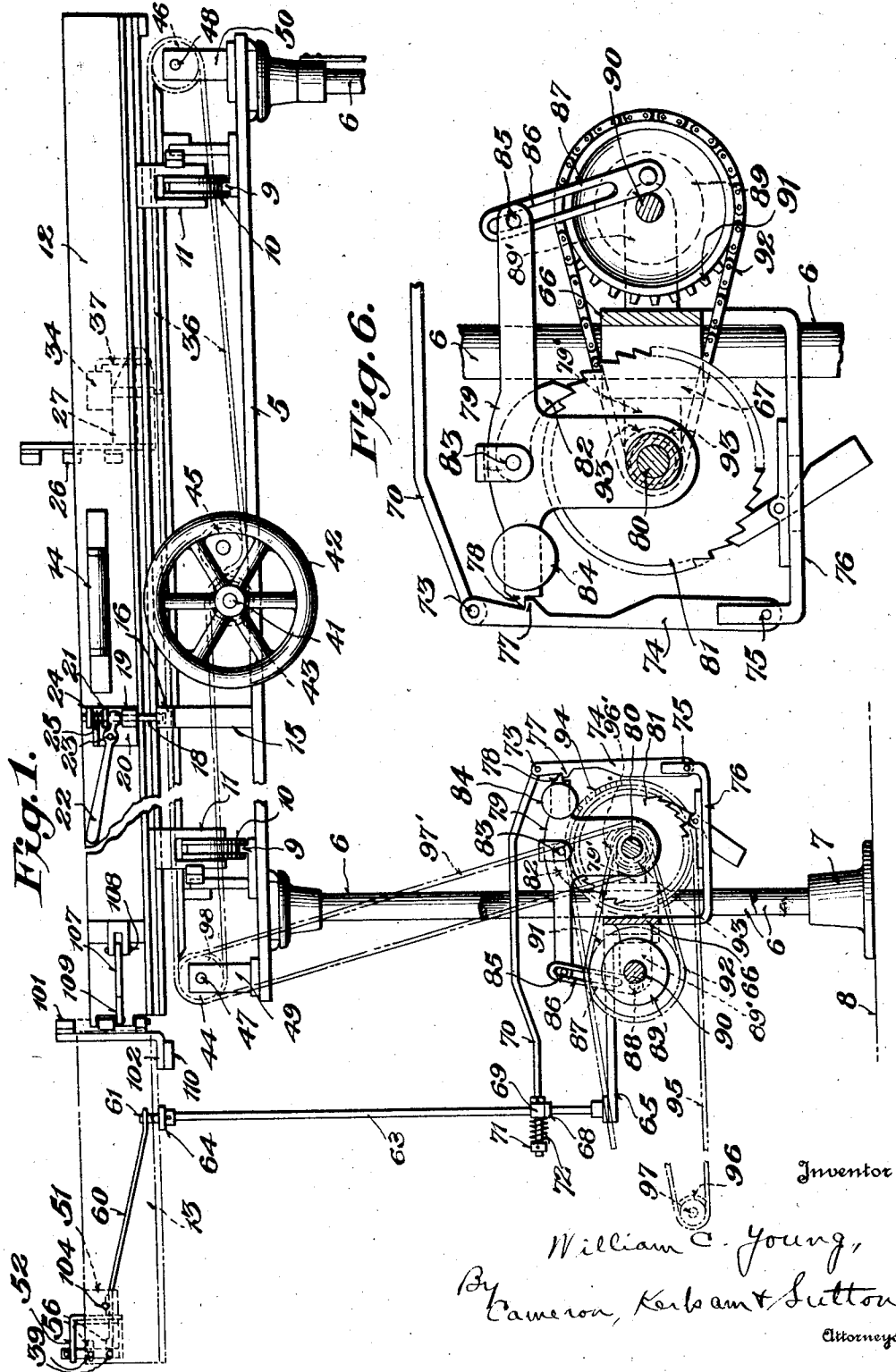
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PACKER AND FEEDER FOR CARTON BLANKS

Filed May 18, 1927

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PACKER AND FEEDER FOR CARTON BLANKS

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Fig. 2.

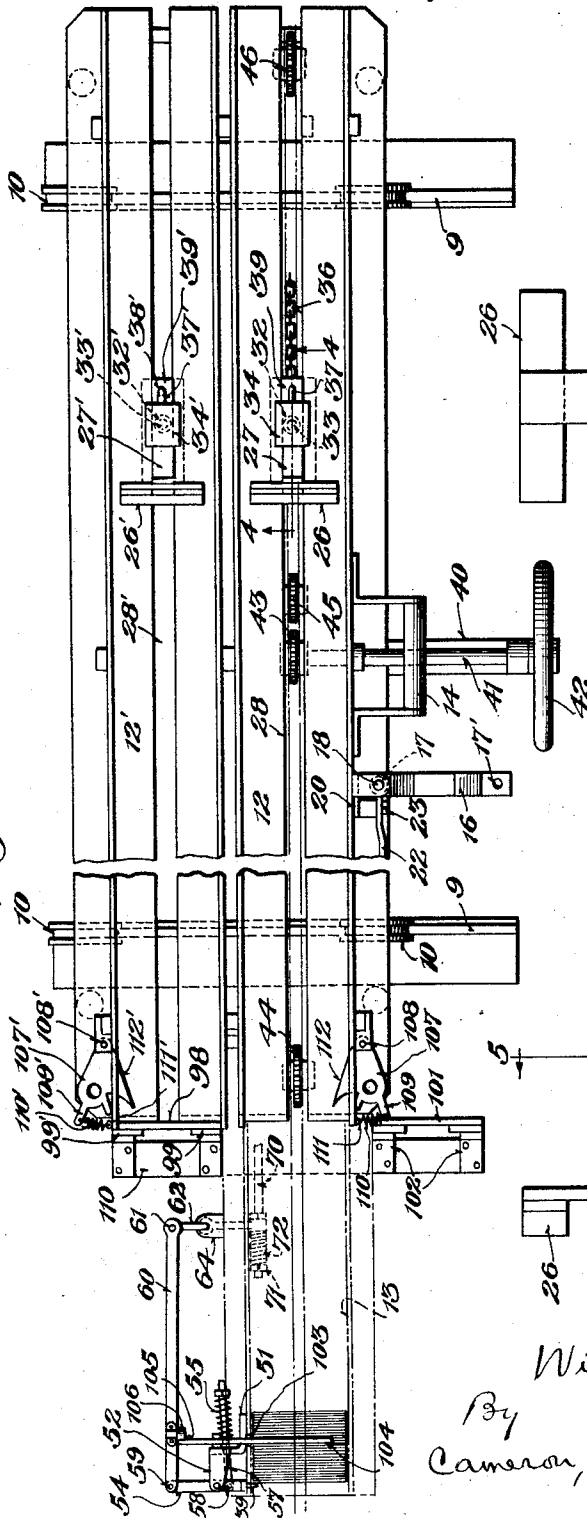


Fig. 5.

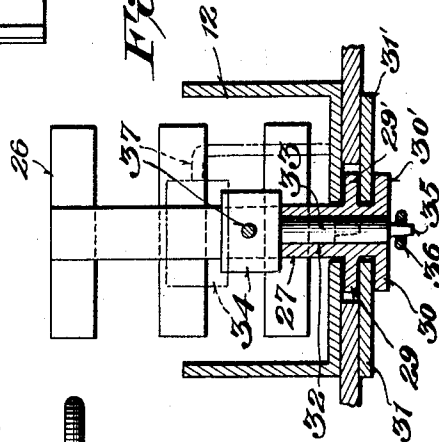
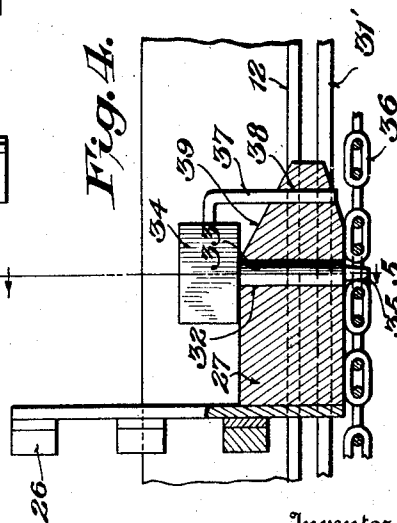


Fig. 4.



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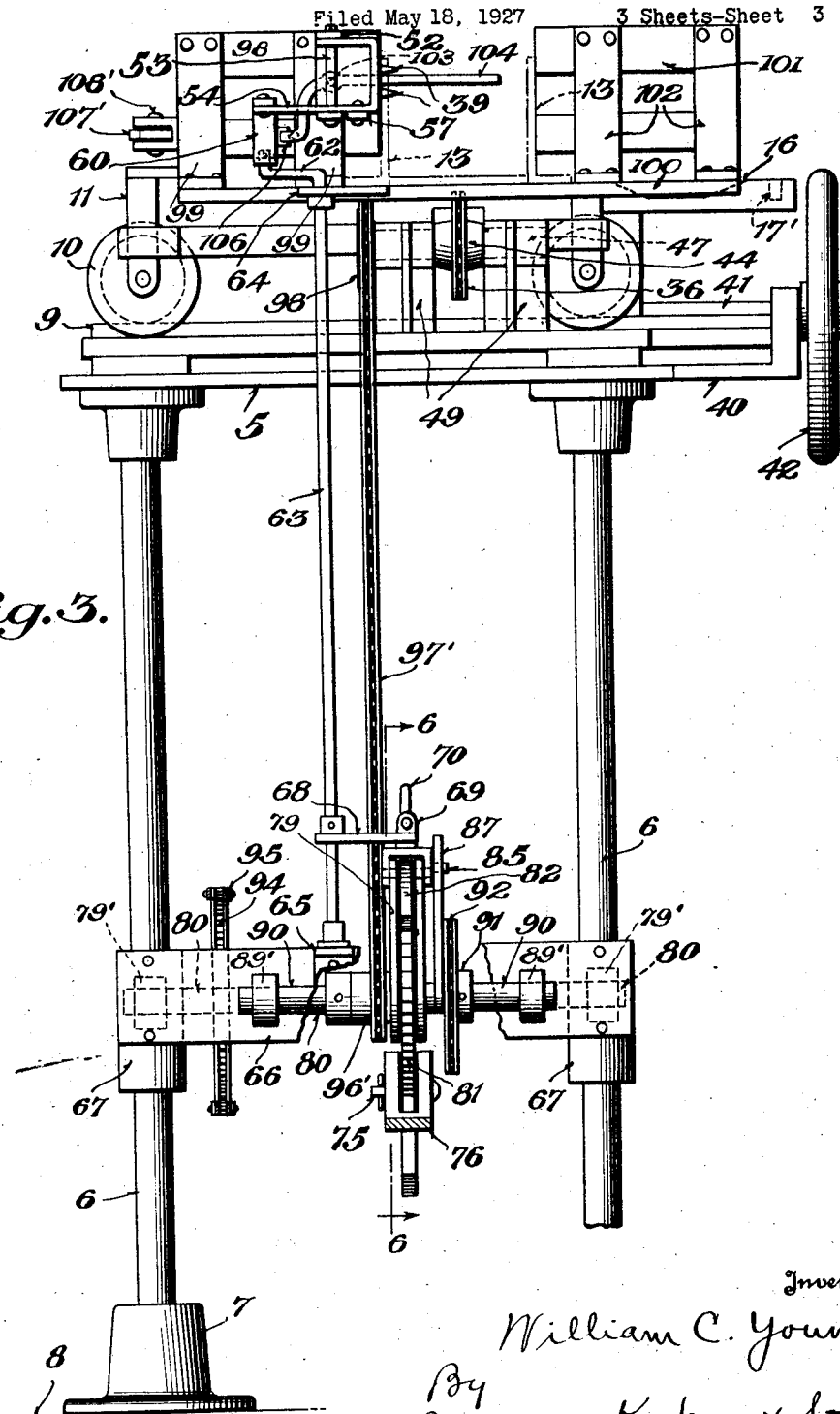
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Inventor

William C. Young

By
Cameron, Kerkam & Sutton
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM C. YOUNG, OF BATTLE CREEK, MICHIGAN, ASSIGNOR TO POSTUM COMPANY, INCORPORATED, OF BATTLE CREEK, MICHIGAN, A CORPORATION OF DELAWARE.

PACKER AND FEEDER FOR CARTON BLANKS.

Application filed May 18, 1927. Serial No. 192,402.

This invention relates to carton blank feeding machines, and more particularly to a machine for supplying carton blanks or the like to carton making and analogous instrumentalities.

The principal objects of this invention are to provide a machine of this type which can be operated in a substantially continuous manner; which feeds or advances one pack of blanks while another pack is being loaded in the machine; which embodies a plurality of magazines shiftable in the machine to feeding and loading positions respectively; which maintains proper pressure at all times on blanks being advanced in and fed from the machine; which enables the magazines to be shifted while maintaining pressure on blanks that have not been fed from the machine; which includes a device for quickly applying initial pressure to the pack of blanks when it is moved to the feeding position; which enables the magazines to be locked in the feeding and loading positions; which includes a stop device for controlling the feeding or advancing movement of the blanks; and which is an expeditious, inexpensive and highly efficient machine for advancing blanks or the like and feeding them to a carton making machine or other instrumentality.

In order to more clearly understand this invention reference may be had to the accompanying drawings which illustrate one embodiment of the inventive idea; wherein—

Fig. 1 is a side elevation of the machine;

Fig. 2 is a top plan view thereof with parts omitted;

Fig. 3 is an end view partly in section, looking from the left of Fig. 1;

Fig. 4 is an enlarged longitudinal sectional view on the line 4—4 of Fig. 2;

Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 4; and

Fig. 6 is an enlarged vertical sectional view on the line 6—6 of Fig. 3.

Referring to the drawings, wherein like reference characters designate like parts throughout the several views, the framework of the machine is preferably constituted by a support or table 5 that is secured in any suitable manner on the upper ends of legs 6, 6 the lower ends of which are received in sockets 7, 7 that are bolted or otherwise suitably fastened to the machine-room floor 8. Fixed on the opposite ends of the table 5 and extending transversely thereof are tracks 9, 9

for rollers 10, 10 that are journaled in brackets 11, 11 bolted or otherwise suitably fastened to a multiple magazine unit that is movable in opposite directions on the tracks 9, 9 to bring the carton blank holders or magazines 12, 12' of said unit into a delivery position aligned with and loading positions removed from and at opposite sides of the instrumentality to be fed. The instrumentality to be fed is here shown as comprised by a receiver or trough 13 of a carton making machine but it is to be expressly understood that the term "receiver" used in this description and the appended claims is intended to include any machine, device or instrumentality with which the machine of the present invention is associated.

The multiple magazine unit 12, 12' is provided with a handle 14 by which said unit may be rolled in opposite directions along the tracks 9, 9 and, in accordance with the present invention, means are provided for locking the magazines 12, 12' in a delivery position aligned with the receiver or trough 13 and in loading positions removed from and at opposite sides of the receiver. Said locking means is preferably comprised by an L-shaped bracket, one arm 15 of which is secured in any suitable manner on the table 5 at the forward side thereof as viewed in Figs. 1 and 2. The other arm 16 of said bracket serves as a keeper having spaced openings 17, 17' therein adapted to receive a spring-controlled bolt 18 slidably mounted in an apertured lug 19 of a bracket 20 bolted or otherwise suitably secured on the front wall of the magazine 12. The bolt 18 is provided intermediate its ends with an abutment plate 21 engaged on the under side thereof by the forward end of a lever 22 that is pivoted at 23 on bracket 20, the spring 25 for the bolt 18 encircling the latter and being interposed between the abutment 21 and an abutment 24 on the upper end of the bracket 20.

In accordance with the present invention, each magazine is provided with means for feeding carton blanks therethrough, the feeding means of each magazine being constructed for connection with or disconnection from a single mechanism for operating said feeding means. The blank feeding means and the mechanism for operating the same are preferably constituted by the following instrumentalities. Slidably mounted on the bottom walls of the magazines 12 and 12' are

followers 26, 26' fixed on the front ends of blocks 27, 27' projecting downwardly through slots 28 and 28' extending longitudinally of the magazines 12 and 12' and formed in the bottom walls thereof respectively. The blocks 27, 27' are provided at the opposite sides thereof with spaced flanges 29, 29' and 30, 30' (Fig. 5) that slidably engage opposed edge portions of spacing pieces 31, 31' forming part of the magazine unit and extending longitudinally of the same. These spacing pieces, together with the flanges 29, 29' and 30, 30' of the followers, prevent displacement of the latter from the magazines and insure that the followers will always be properly guided in the slots 28 and 28'. The follower blocks 27, 27' have suitable openings 32, 32' extending therethrough that receive pins 33, 33' at the upper ends of which are fixed weights 34, 34'. The lower end of each of the pins 33, 33' is provided with a projection 35 (Figs. 4 and 5) adapted to be engaged in one of the links of a chain 36 that serves to propel the followers along the magazines. Fixed on the weights 34, 34' are pins 37, 37' adapted to engage in openings 38, 38' formed in inclined rear portions 39, 39' of the follower blocks.

As shown in Figs. 1 and 2, the magazines 12, 12' occupy aligned delivery and removed loading positions respectively relatively to the receiver 13, and the follower 26 is connected with the chain 35. Carton blanks already loaded in the magazine 12 and the receiver 13 will then, in accordance with the present invention, be packed between the follower 26 and stops 39, 39 at the left end of the receiver 13. The mechanism for packing or clamping the carton blanks in the magazine 12 and the receiver 13 is preferably constituted by the following instrumentalities. Extending outwardly from the table 5 and secured thereto in any suitable manner is a bracket 40 that carries a shaft 41 journaled in suitable bearings on said bracket and said table. Fixed on the outer end of shaft 41 is a hand wheel 42 that serves to rotate said shaft which has fixed on the opposite end thereof a sprocket wheel 43 meshing with the chain 36. The chain 36 also meshes with and is adapted to travel over sprockets 44, 45 and 46, the sprocket 45 being an idler journaled in suitable bearings on the table 5. The sprockets 44 and 46 are fixed on shafts 47 and 48 respectively that are carried on brackets 49 and 50 bolted or otherwise suitably fastened on the table 5 at the opposite ends thereof. It will thus appear that with the parts in the positions shown in Fig. 2, the hand wheel 42 will on rotation thereof in the proper direction, move the chain 36 and the follower 26 and pack or clamp the carton blanks between the stops 39, 39 and the follower 26. The carton blanks having been packed as stated, power from any suitable

source is connected with the machine to operate it through the medium of the following instrumentalities. Fixed on the rear wall of the receiver 13 is a bracket 51 provided with spaced ears or lugs 52, 52 carrying a bolt 53. Pivoted on the bolt 53 is a yoke 54, the front end of which carries the stops 39, 39 that project through slots 56, 56 (Fig. 1) in the rear wall of the receiver 13. A rod 57 (Fig. 2) is pivotally connected at 58 with the yoke 54 and extends therefrom to the right through a suitable opening in the bracket 51. Interposed between an abutment on the free end of rod 57 and an abutment provided by the bracket 51 is a spring 55 that encircles the rod 57 and normally tends to throw the forward end of the yoke 54 to the right, as viewed in Figs. 1 and 2.

Pivotally connected with the rear end of the yoke 54, as by a pin 59, is a link 60 that is pivoted at 61 on the free end of an arm 62 fixed on the upper extremity of a rock shaft 63 (Fig. 3). This rock shaft is journaled in suitable bearings on brackets 64 and 65, the bracket 64 being secured in any suitable manner to the bottom of the receiver 13. The bracket 65 is fixed on a cross piece 66 that is bolted or otherwise suitably fastened on collars 67, 67 fixed on a pair of the supporting legs 6, 6. Rigidly secured on the rock shaft 63 is an arm 68 the free end of which is provided with an apertured lug or ear 69. Extending loosely through the lug or ear 69 is a rod 70 that has fixed on one end thereof a collar 71 between which and the ear or lug 69 is interposed a spring 72 that encircles the rod 70. The end of the rod 70 opposite that carrying the collar 71 is pivotally connected at 73 with the upper extremity of a lever 74 pivoted at 75 on a bracket 76 on the cross piece 66 (Figs. 1, 3 and 6). The lever 74 is provided with a detent 77 that may be engaged with and disengaged from a detent 78 on a weighted pawl carrier or lever 79. This lever 79 is loosely mounted on a driven shaft 80 journaled in bearings 79', 79' on the collars 67, 67 and also having loosely mounted thereon a ratchet wheel 81, the teeth of which are adapted to be engaged by a pawl 82 pivoted at 83 on said lever. The pawl-carrying lever 79 is provided at the end thereof adjacent the detents 77, 78 with a weight 84 and the opposite end of said lever has fixed thereon a pin 85 that rides in a slot 86 of a connecting rod 87 that is pivoted at 88 on a crank disk 89. The crank disk 89 is fixed on a shaft 90 journaled in suitable bearings 89', 89' on the cross piece 66 and said crank disk is provided with a sprocket wheel 91 around which passes a chain 92 that also passes around a sprocket wheel 93 that is fixed on the driven shaft 80. Rigidly mounted on the shaft 80 is a sprocket wheel 94 around which passes a sprocket chain 95 that also passes around a sprocket wheel 96 on a driving shaft 97. This shaft 97 may

be the armature shaft of an electric motor or said shaft may be a component part of the carton making or other machine with which the mechanism of the present invention is associated.

With the parts in the full line position shown in the drawings and the magazine 12 and receiver 13 packed with carton blanks, pressure of the latter against the stops 39, 39 produces tension on the spring 55. When the pressure on the stops 39, 39 decreases, however, due to feeding of the blanks in succession off the end of the pack by any suitable means for this purpose, the spring 56 and the rod 57 swing the yoke 54 about the pivot 53 in a counterclockwise direction, as viewed in Fig. 2, this movement of the yoke being limited by the slots 56, 56 through which the stops 39, 39 project into the receiver 13. Counterclockwise swinging movement of the yoke 54 moves the link 60 to the left, as viewed in Fig. 2, thereby, through the connections between said link and the rod 70, moving the latter to the right and disengaging detents 77 and 78. When these detents are disengaged, the weight 84 on the lever 79 causes the latter to swing in a clockwise direction carrying the pawl 82 over one or more of the teeth on the ratchet wheel 81 and moving the pin 85 to the outer end of the slot 86 in rod 87. The lever 79 is then pulled to the left by the rod 87 and crank disk 89, thus imparting partial rotation to the ratchet wheel 81 in a counterclockwise direction.

Fixed on the hub of the ratchet wheel 81 is a sprocket wheel 96' around which passes a chain 97', said chain also passing around a sprocket wheel 98 fixed on the shaft 47 that carries the sprocket 44. It will thus appear that when the ratchet wheel is rotated as described, the shaft 47 will be rotated in a counterclockwise direction by the chain 97', thus moving the upper reach of the chain 36 to the left and causing like movement to be imparted to the follower 26. Movement of the follower 26 to the left, advances and packs the carton blanks in the magazine 12 and the receiver 13, thereby restoring the pressure of the blanks on the stops 39, 39 and swinging the yoke 54 in a clockwise direction, as viewed in Fig. 2, and again producing tension on the spring 55. The rod 60 is thus moved to the right, thereby turning the rock shaft 63 in a clockwise direction and moving the lever 74 to the left (Fig. 1), so that the detents 77 and 78 are again engaged by upward movement of the weighted end of the lever 79 imparted thereto as the lever is swung in a clockwise direction by the connecting rod 87 on crank disk 89. Further feeding of the carton blanks in the magazine 12 and receiver 13 is thus prevented until a number of blanks have been fed off the end of the pack sufficient to again decrease the pressure on the stops 39, 39. When the pressure on the stops 39, 39 is again

decreased, the follower 26 is again advanced and these operations are continued, as described, in an intermittent manner until all of the carton blanks have been fed out of the magazine 12.

While the carton blanks are being advanced in the magazine 12 and receiver 13 and said blanks are being fed in succession off the left end of the pack, carton blanks may be loaded in the magazine 12', the follower 26' of which has been moved to the right a distance sufficient to accommodate the desired number of blanks therein. In the position of the magazines as shown in Fig. 2, the left end of the magazine 12' is closed by a gate 98 between which and the follower 26' carton blanks are loaded in the magazine 12'. This gate 98 is bolted or otherwise suitably fastened on the upper end of brackets 99, 99 that are carried by a crosspiece 100 extending transversely of the machine and secured to the bottom of the receiver 13. When the supply of blanks in the magazine 12 has been depleted, the weight 34 on the follower block 27 is lifted and turned to the dotted line position shown in Fig. 5, thereby disengaging the projection 35 of the pin 33 from the chain 36. The pin 33 and the weight 34 are thus supported in an inoperative position by the pin 37 which, on lifting or turning movements imparted to the weight 34 and the pin 33, rests on the rear inclined portion of the follower block 27 or on the bottom of the magazine 12, as desired. The bolt 18 is then disengaged from the opening 17 in keeper 16 by depressing the lever 22 downwardly, whereupon the multiple magazine unit 12, 12' is pulled toward the front of the machine by the handle 14 until the magazines 12' and 12 have aligned delivery and removed loading positions respectively relative to the receiver 13. In the last named positions of the magazines, the spring bolt 18 automatically engages in the opening 17' of bracket arm 16, thereby locking said magazines in said positions, whereupon the weight 34' and the pin 33' which have been supported in an inoperative position by the pin 37', are turned so that the pins 33' and 37' drop in the openings 32' and 38' and the pin 33' is engaged with the chain 36. The carton blanks are then packed in the magazine 12', and the receiver 13, by turning the hand wheel 42, whereupon the mechanism that feeds the blanks in succession off the front of the stack is started and the blanks in the magazine 12' and the receiver 13 are advanced therein as described in connection with the magazine 12. While the blanks are being fed out of the magazine 12', the magazine 12 may be loaded with carton blanks that are placed in the magazine 12 between an end gate 101 and the follower 26, which follower has previously been moved to the right a distance sufficient to accommodate the desired number of blanks. This

end gate 101 is bolted or otherwise suitably fastened on the upper end of brackets 102, 102 that are carried on the crosspiece 100 at the end thereof opposite the brackets 99, 99 and the end gate 98. When the supply of blanks in the magazine 12' has been depleted, the follower 26' is disengaged from the chain 36 and the multiple magazine unit is unlocked by depressing the handle 22 and disengaging the bolt 18 from the opening 17' in the bracket arm 16. The magazine unit can then be moved toward the rear of the machine by the handle 14 until the parts occupy the position shown in Fig. 2, whereupon blanks that have been loaded in the magazine 12 may be packed and advanced therein as previously described.

From the foregoing it will appear that by the present invention, carton blanks may be packed and fed to a carton making machine or other instrumentality in a substantially continuous manner and that the feeding and the advancing movements of the blanks in the magazine are controlled automatically by the feeding of said blanks off the left end of the pack.

In accordance with the present invention, means are provided for retaining blanks in the receiver 13 while the magazines are being shifted, and for preventing feeding of the blanks when the machine is running idly, said means preferably being constituted by the following instrumentalities. Pivottally mounted at 103 in a suitable slot formed in the rear wall of the receiver 13, is a lever 104 which, when the magazines are being shifted or when the machine is running idly, is turned into a substantially horizontal position so that the front end of said lever lays across the receiver 13 and confines the carton blanks therein between said lever and the stops 39, 39. This lever 104 is provided on its rear end with a cam 105 that is adapted to engage a roller 106 journaled on the link 60. Engagement of the cam 105 with the roller 106 holds the yoke 54 and the link 60 against movement and thus prevents the cartons in the magazine and receiver from being advanced by the follower when the machine is running. It will of course be understood that when the blank feeding mechanism is started, the lever 104 is raised to an inoperative position so that the cam 105 is disengaged from the roller 106.

Projecting through suitable openings in the front and rear walls of the magazines 12 and 12' respectively, are stop members 107 and 107' that are pivoted at 108 and 108' on said walls. These stop members 107 and 107' are provided with arms 109 and 109' to which are connected the outer ends of springs 110 and 110'. The inner ends of these springs are connected at 111 and 111' with the front and rear walls of the magazines 12 and 12' respectively, and said springs tend to swing the points of the stop members into the magazines so that the said stop members prevent move-

ment of the carton blanks to the right if, for any reason, it is desired to move the followers of the magazines to the right in the delivery position of the magazine relative to the receiver 13. The stop members 107 and 107' are provided with inclined cam faces 112, 112' that are engaged by the carton blanks during advancing movement thereof in the respective magazines. As the carton blanks are advanced intermittently in the magazines 12, said blanks ride over the cam face 112 and swing the stop member 107 forwardly against the tension of the spring 110. As carton blanks are advanced in the magazine 12', said blanks ride over the cam face 112' and swing the stop member 107' rearwardly against the tension of the spring 110'.

While one illustrative embodiment of the idea has been described in detail, the scope of the invention is not limited to such embodiment, or otherwise than by the terms of the appended claims.

What is claimed is:

1. In combination, a receiver, a support adjacent thereto, and a blank holding magazine mounted on said support for movement to a delivery position aligned with said receiver and to a loading position at one side thereof.

2. In combination, a receiver, a support adjacent thereto, and a blank holding magazine arranged on said support for movement transversely of said receiver to a delivery position in alignment therewith and to a loading position removed therefrom.

3. In combination, a receiver, a support adjacent thereto, and a plurality of blank holding magazines each mounted on said support for movement into and out of alignment with said receiver so that blanks may be delivered thereto from one magazine while blanks are being loaded in another magazine.

4. In combination, a receiver, a support adjacent thereto, and a plurality of blank holding magazines mounted on said support and selectively movable to a delivery position aligned with said receiver and to loading positions removed therefrom.

5. In combination, a receiver, and a plurality of blank holding magazines arranged as a unit reciprocable transversely of the receiver so that blanks may be delivered thereto from one magazine while blanks are being loaded in another magazine at one side of said receiver.

6. In combination, a receiver, and a multiple magazine unit arranged for movement in opposite directions transversely of the receiver to selectively bring the magazines in an aligned delivery position relative thereto and in loading positions at opposite sides of said receiver.

7. In combination, a receiver, a support or table adjacent one end thereof, a track on the support or table and extending transversely of the receiver, and a wheeled blank hold-

ing magazine mounted on said track for movement to an aligned delivery position relative to said receiver and to a loading position at one side thereof.

8. In combination, a receiver, a blank holding magazine open at one end and movable into and out of alignment with the receiver to a delivery position and a loading position, and means for closing the open end of said magazine while it is in the loading position.

9. In combination, a receiver, a blank holding magazine open at one end and movable transversely of the receiver to a delivery position aligned therewith and to a loading position removed therefrom, and a stationary gate at one side of the receiver adapted to close the open end of said magazine while it is in the loading position.

10. In combination, a receiver, a pair of blank holding magazines open at corresponding ends and arranged as a unit movable transversely of the receiver to selectively bring the magazines in a delivery position aligned with the receiver and loading positions at opposite sides thereof respectively, and means at said sides of the receiver for closing the open ends of the magazines while they are being loaded.

11. In combination, a receiver, a support adjacent one end thereof, a blank holding magazine movable on said support transversely of the receiver to an aligned delivery position relative thereto and to a loading position removed therefrom, and means for locking said magazine in said positions.

12. In combination, a receiver, a support adjacent one end thereof, a blank holding magazine movable on the support transversely of the receiver to a delivery position aligned therewith and to a loading position removed therefrom, and means for locking the magazine in said positions comprising a keeper on the support provided with spaced openings and a movable member on the magazine adapted to be engaged in and disengaged from the openings of said keeper.

13. In combination, a receiver, a support adjacent one end thereof, a blank holding magazine movable on the support transversely of the receiver to a delivery position aligned therewith and to a loading position removed therefrom, and means for locking the magazine in said positions comprising a spring-controlled bolt and a keeper, one carried on the magazine and the other on said support.

14. In combination, a receiver, a support adjacent one end thereof, a blank holding magazine movable on the support transversely of the receiver to a delivery position aligned therewith and to a loading position removed therefrom, and means for locking the magazine in said positions comprising a spring-controlled bolt and a keeper, one carried on the magazine and the other on said

support, and an operating handle for said bolt.

15. In combination, a receiver, a pair of blank holding magazines arranged as a unit and movable transversely of the receiver to selectively bring the magazines in a delivery position aligned with the receiver and loading positions at opposite sides thereof, and means for locking said unit to hold the magazines in said positions.

16. In combination, a receiver, a support adjacent one end thereof, a blank holding magazine movable on said support transversely of the receiver to a delivery position aligned therewith and to a loading position removed therefrom, and means for feeding blanks from the magazine to the receiver comprising follower operating mechanism and a follower in the magazine adapted to be connected with and disconnected from said mechanism.

17. In combination, a receiver, a multiple blank holding magazine unit movable transversely of the receiver to selectively bring the magazines in an aligned delivery position relative to the receiver and loading positions removed therefrom, and means for feeding blanks from the magazines to the receiver comprising follower operating mechanism and a follower in each magazine adapted to be connected with and disconnected from said mechanism.

18. In combination, a receiver, a blank holding magazine movable transversely of the receiver to an aligned delivery position relative to the receiver and to a loading position removed therefrom, means for feeding blanks from the magazine to the receiver comprising a driven element arranged exteriorly of the magazine and a follower slidably mounted in the magazine, and means for connecting said follower with and for disconnecting the follower from said driven element.

19. In combination, a receiver, a multiple blank holding magazine unit movable transversely of the receiver to selectively bring the magazines in an aligned delivery position relative to the receiver and to loading positions removed therefrom, means for feeding blanks from the magazines to the receiver comprising a driven element arranged exteriorly of said unit and a follower arranged in each magazine for sliding movement therealong, and means on each follower for connecting and disconnecting the same from said driven element.

20. In combination, a blank holding magazine, means for feeding blanks therealong comprising an endless driven element disposed adjacent the magazine and a follower mounted in said magazine for sliding movement in opposite directions along the same, and a device mounted on the follower for rotary and sliding movement and adapted to

connect said follower with and disconnect the same from said endless driven element.

21. In combination, a blank holding magazine having a slot in the bottom thereof, an
5 endless driven element arranged under the magazine adjacent the slot, a follower slidably mounted in the magazine, a device rotatably and slidably mounted on the follower and adapted to be connected with and dis-
10 connected from the endless driven element through said slot, and means on said device adapted when it is lifted and rotated, to hold said device in an inoperative position with respect to said driven element.

22. In combination, a blank holding maga-
15 zine, stop means adjacent one end thereof, follower operating means, a follower in the magazine and adapted to be connected with the follower operating means, and manually
20 operated means for actuating said follower operating means and the follower so as to compress or pack blanks in the magazine between said stop means and said follower.

23. In combination, a receiver provided
25 with stop means, a magazine from which blanks are fed to the receiver, follower operating means, a follower in the magazine adapted to be connected with the follower operating means, and manually operated means
30 for actuating the follower operating means and the follower so as to compress or pack blanks in the magazine and the receiver between said stop means and said follower.

24. In combination, a receiver provided
35 with stop means, a magazine movable transversely of the receiver to a delivery position aligned therewith and a loading position removed therefrom, follower operating means adjacent the receiver, a follower in the maga-
40 zine adapted when the latter is aligned with the receiver, to be connected with the follower operating means, and manually operated means for actuating the follower operating means and the follower so as to compress or
45 pack blanks in the receiver and the magazine between said stop means and said follower.

25. In combination, a blank holding maga-
zine having a slot in the bottom thereof, stop
50 means adjacent one end of the magazine, an endless chain mounted under the magazine, a follower in the magazine adapted to be connected with the chain through said slot, a shaft geared to the chain, and a hand wheel
55 fixed on said shaft for rotating the same to move the chain and follower and compress or clamp blanks in the magazine between said stop means and said follower.

26. In a machine of the character described, a trough or the like, a follower for advancing
60 blanks therein, a stop projecting in the trough and movable under pressure of blanks fed thereagainst by said follower, follower operating mechanism including a driven shaft, a
65 ratchet wheel loose thereon, driving connections between the ratchet wheel and the fol-

lower, a pawl carrier mounted loosely on the driven shaft for movement by gravity in one direction, and a pawl on said carrier adapted to turn said wheel on movement of the pawl carrier in the opposite direction, means driv-
70 en from said shaft for operating the pawl carrier in the last named direction and having a lost motion connection with said carrier, and means connected with said stop and con-
75 trolling the movement of the pawl carrier.

27. In a machine of the character described, a trough or the like, a follower for advancing blanks therein, follower operating mechanism including a driven shaft, a ratchet wheel loose thereon, driving connections be-
80 tween the ratchet wheel and the follower, and a pawl carrier loosely mounted on the driven shaft and carrying a pawl for turning said wheel on operation of the pawl carrier, means driven from said shaft adapted to operate
85 the pawl carrier and having a lost motion connection therewith, a latch, a stop projecting in the trough and against which the blanks are fed by the follower, connections between the latch and the stop and operable by pres-
90 sure of blanks on the latter, to engage said latch with the pawl carrier and prevent the operation thereof, and means adapted when pressure on the stop is relieved, to operate said
95 last named connections whereby the latch is disengaged from the pawl carrier so that the latter may be operated.

28. In a machine of the character described, a trough or the like, a follower for advancing blanks therein, follower operating mechanism including a driven shaft, a pawl and ratchet mechanism loosely mounted on the driven shaft, and connections between the ratchet and the follower adapted to advance the lat-
100 ter, means driven from said shaft adapted to operate the pawl and ratchet mechanism, a latch, a stop projecting in the trough and against which the blanks are fed by the fol-
105 lower, connections between the latch and the stop and operable by pressure of the blanks on the latter, to engage said latch with a part of the pawl and ratchet mechanism and prevent the operation thereof, and means adapt-
110 ed when the pressure on said stop is relieved, to operate said last named connections where-
115 by the latch is disengaged from said part and the pawl and ratchet mechanism is operated by the pawl carrier to advance said follower.

29. In a machine of the character described, a follower, a stop operated in one direction
120 under pressure of blanks fed thereagainst by said follower, means for operating said stop in the opposite direction when the pressure thereon is relieved, follower operating mechanism, connections between the follower op-
125 erating mechanism and the stop movable with the latter in opposite direction to control the operation of the former, and a manually operable device adapted to be engaged with a part of said connections to thereby prevent move-
130

ment of the same and operation of said mechanism.

30. In a machine of the character described, blank feeding means, a stop movable under
5 pressure of blanks fed thereagainst by said means, mechanism for operating said blank feeding means, connections between said stop and said mechanism and controlling the oper-

ation of the latter, and manually operable means adapted to be engaged with a part of 10 said connections to thereby prevent operation of the same and said mechanism.

In testimony whereof I have signed this specification.

WILLIAM C. YOUNG.