

Feb. 21, 1933.

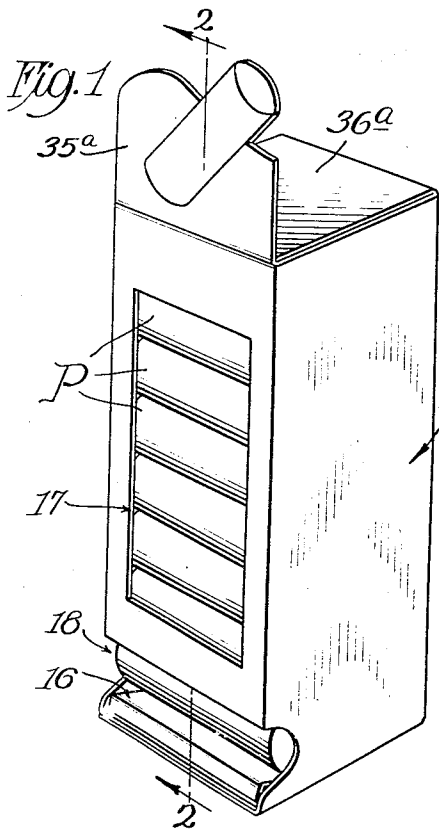
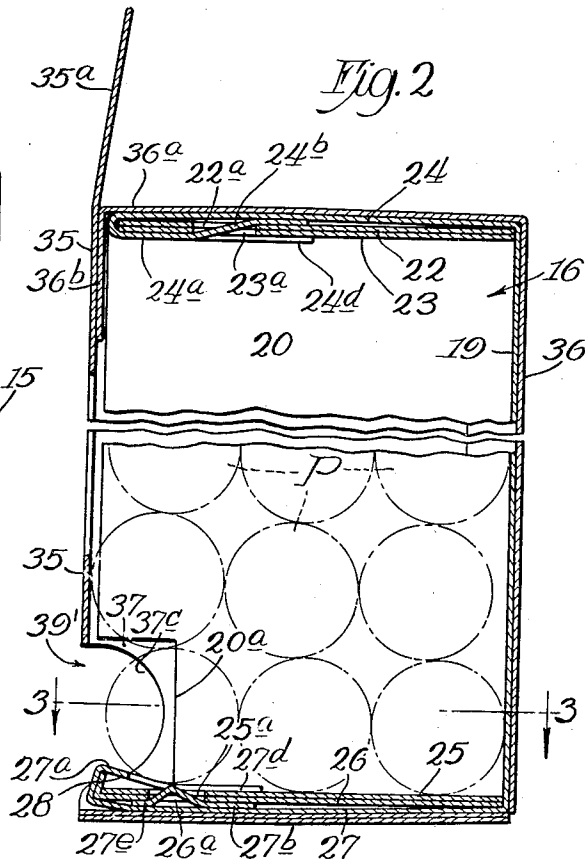
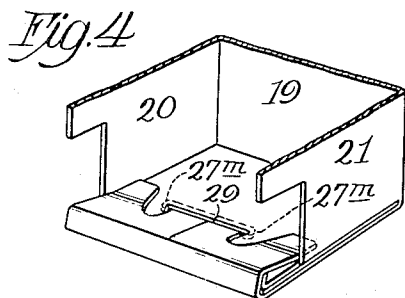
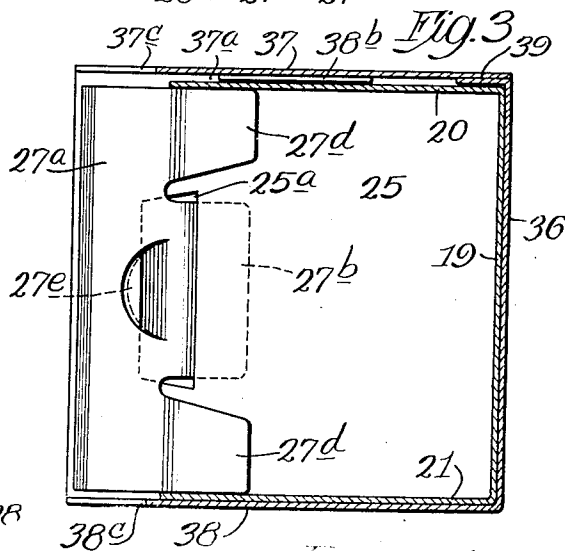
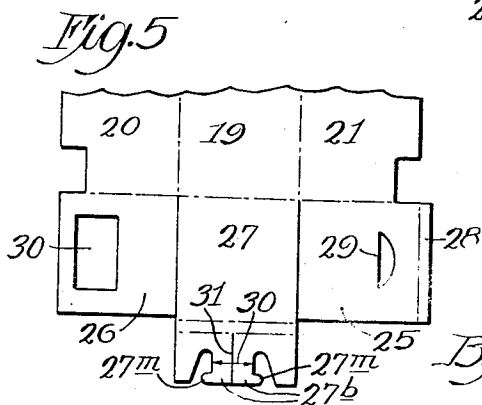
E. W. JOHNSON

1,898,056

DISPENSING CARTON

Filed July 23, 1930

3 Sheets-Sheet 1



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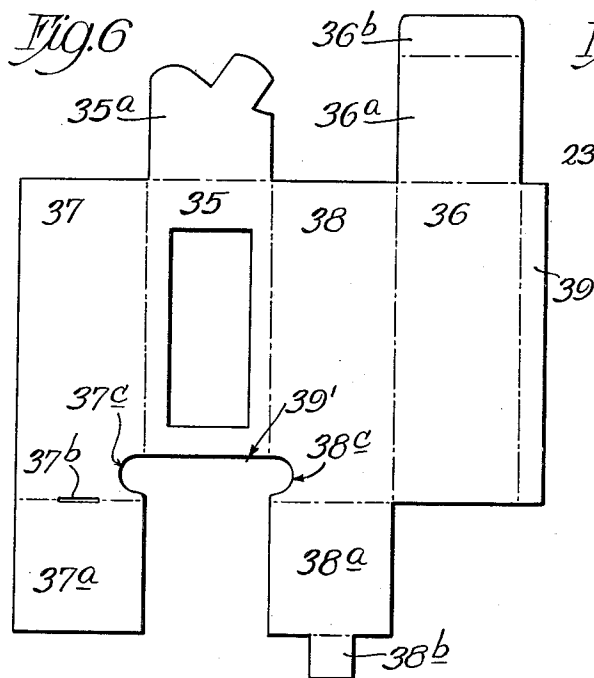
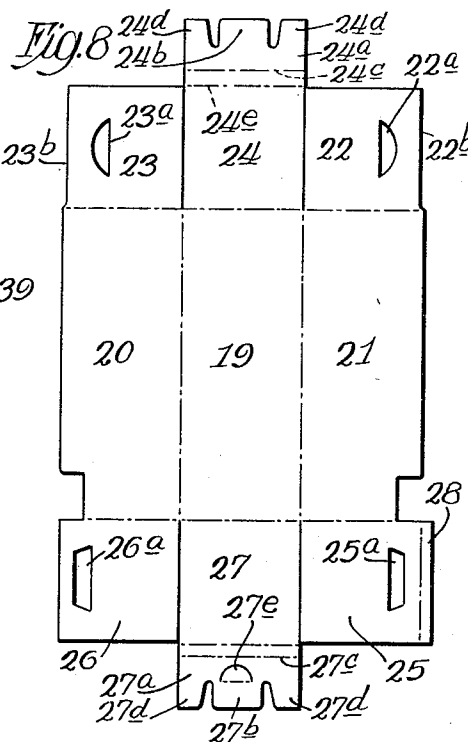
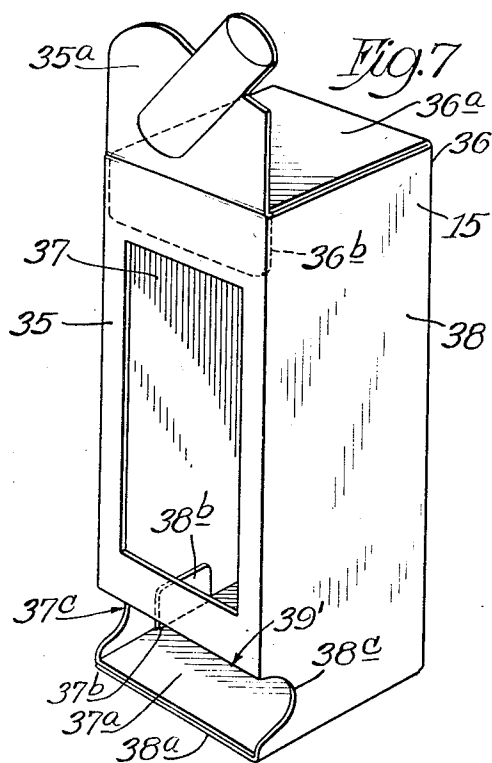
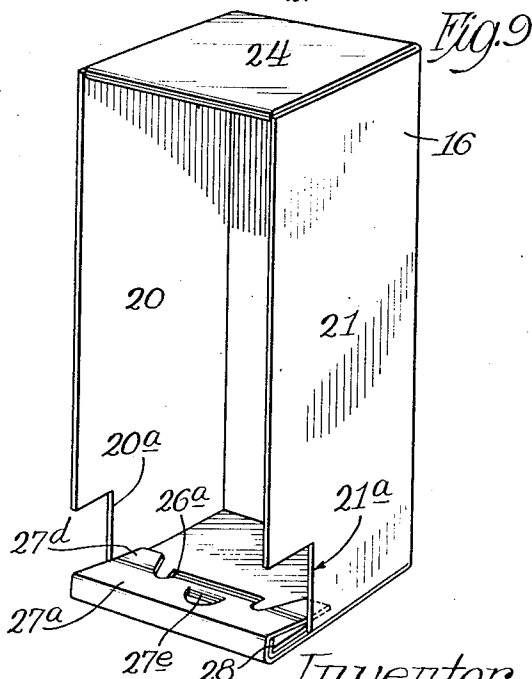
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DISPENSING CARTON

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3 Sheets-Sheet 2



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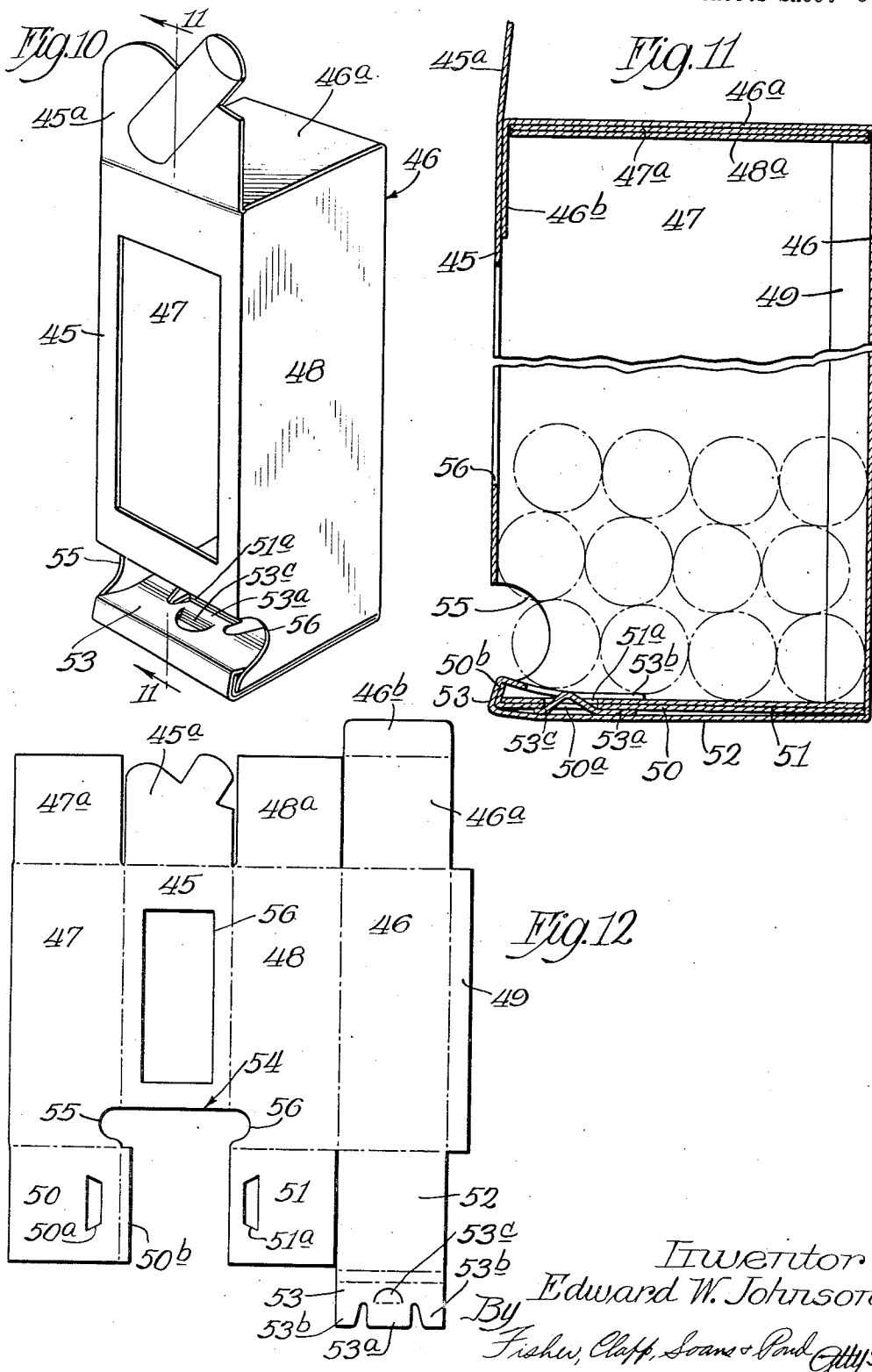
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DISPENSING CARTON

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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DISPENSING CARTON

Application filed July 23, 1930. Serial No. 470,068.

This invention relates to a foldable paper carton, and more particularly, to a foldable paper carton capable of serving for a dispensing magazine for cylindrical articles or packages, such as cylindrical candy packages.

The main objects of the invention are to provide a foldable paper carton of rigid but simple and easily assembled construction, having means for dispensing, one at a time, the articles contained in the carton; to provide an arrangement which will dispense the articles by permitting the same to be withdrawn, but which will be effective to prevent unassisted discharge of the articles; to provide improved means for maintaining the parts in assembled relation; to provide a neat and attractive device of the class described which will prominently display the articles and so assist in the sale thereof, and, in general, it is the object of my invention to provide an improved carton of the type described.

Other objects and advantages of my invention will be understood by reference to the following specification and accompanying drawings in which I have illustrated my improved dispensing carton in two of its selected forms.

In the drawings, of which there are three sheets,

Fig. 1 is a perspective;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a perspective of the bottom portion of a modified form of the inner box construction;

Fig. 5 is a plan of a portion of the paper blank which is folded to form the inner box construction shown in Fig. 4;

Fig. 6 is a plan of the blank which is folded to form the outer box shown in Figs. 1, 2 and 3;

Fig. 7 is a perspective of the outer box formed of the blank shown in Fig. 6;

Fig. 8 is a plan of the blank which is folded to form the inner box shown in Figs. 1, 2 and 3;

Fig. 9 is a perspective of the inner box formed with the blank shown in Fig. 8;

Fig. 10 is a perspective of a modified form

of my dispensing carton in which the structure involves only one blank;

Fig. 11 is a section on the line 11—11 of Fig. 10, and

Fig. 12 is a plan of the blank which is folded to form the dispensing carton shown in Figs. 10 and 11.

Referring now to the drawings, and particularly to Figs. 1 to 9 inclusive, one form, a double box form, of my invention includes an outer box or cover 15 and an inner box or container 16.

The inner box consists of a bottom or back wall, side walls and end walls, and the outer box is in the form of a tubular body having suitable end closures. The inner box fits inside of the outer box, and the front wall of the latter is provided with a display opening 17 and a dispensing opening 18. The open side of the inner box being positioned adjacent the front of the outer box, it will be understood that the articles contained in the inner box will be visible through the display opening 17 and removable through the dispensing opening 18. The inner box 16 is formed of a blank (see Fig. 8) which includes a back or bottom wall member 19, side walls 20 and 21, and flaps projecting from the ends of said wall members to form end walls or closures for the inner box.

The upper or top end wall of the box is formed from side wall end flaps 22 and 23 and a back end flap 24 which are folded into mutually overlapping relation along suitable score lines which are indicated in broken lines in Fig. 8 and which serve to facilitate folding at the proper places in accordance with well known practice.

The side wall end flaps 22 and 23 are provided with openings 22^a and 23^a, respectively, which register when the flaps are folded, and the back end flap 24 is provided with an extension 24^a which is notched to provide a tongue 24^b intermediate its width. The side wall end flaps are folded into overlapping relation and the openings 22^a and 23^a register with one another, as shown in Fig. 2. The back wall end flap 24 is then folded into overlapping relation on the outside of the side wall end flaps, and the extension 24^a is folded

around the front end of the overlapping side wall flaps, and the tongue 24^b is inserted through the registering openings 22^a and 23^a and between the adjacent flaps 23 and 24 (see Fig. 2). The extension 24^a may conveniently be provided with a score line 24^c intermediate its length for facilitating insertion of the tongue without cracking the paper as an incident to the folding thereof necessary for inserting the tongue. The incidentally formed side tongues 24^d remain on the inside of the end wall, and it will be seen that because of the resiliency of the paper or cardboard of which the box is formed, the tongues 24^b and 24^d tend to grip the interposed end flaps so as to maintain the parts in assembled position. The tongue 24^b is also frictionally held between the flaps 23 and 24 to resist withdrawal of the tongue.

The bottom end wall or closure for the inner box 16 is formed of side wall end flaps 25 and 26 and a back wall end flap 27. The side wall flaps 25 and 26 are provided with openings 25^a and 26^a, respectively, and the back wall flap 27 is provided with an extension 27^a which is provided with an intermediate tongue 27^b and side tongues 27^d, all similar to the structure of the top end wall. The end flaps 25, 26 and 27 are folded into overlapping relation in substantially the same manner as above described in connection with the top end closure and the parts are locked in assembled overlapping position in substantially a like manner.

The lower end closure or wall of the inner carton is further provided with means constituting a guard for the dispensing opening, i. e., a device for normally retaining the articles in the carton. This guard is formed of a lip 28 integral with one of the side wall bottom end flaps, in this instance, integral with the flap 26. When the bottom end flaps 25, 26 and 27 are folded into overlapping relation, the lip 28 is folded upwardly and the extension 27^a of the back wall end flap 27 is folded around the lip 28, as shown in Fig. 2. The inner end of the extension, that is, the tongue part of the extension, being secured to the bottom wall by being inserted through the registering openings 25^a and 26^a, causes the extension 27^a to assume a downwardly and inwardly inclined position or angular relation to the normal plane of the box bottom. This arrangement obviously serves to prevent the cylindrical packages designated P in Fig. 2 from rolling outwardly across the bottom wall of the box.

Inasmuch as the articles or packages are withdrawn from the carton across the inclined guard part 27^a, there may be a tendency to pull the tongue 27^b out of its interlocking relation with the end flaps. In order to prevent such possible withdrawal, I provide an auxiliary lock which is formed by means of an ear 27^c which is punched out of

the extension 27^a and extends forwardly or in the direction opposite to that of the tongue 27^b. The ear 27^c is inserted through the registering openings 25^a and 26^a and between the outer end flap 27 and adjacent inner flap 26. The locking ear 27^c obviously resists withdrawal of the tongue 27^b from locked position, and hence the bottom wall flaps are effectively locked in assembled, overlapping relation.

In Figs. 4 and 5, I have illustrated a modified form of lock for preventing accidental withdrawal of the tongue 27^b. In this form, the tongue 27^b is provided with projections 27^m which serve to increase the width of the tongue in excess of the corresponding dimension of the opening through which it is passed. In this construction, the end flap 25 is provided with an opening 29, the length of which is approximately the same as the dimension indicated at 30 of the neck part of the tongue 27^b. The flap 26 is provided with an enlarged opening 30, the length of which is greater than the over-all width of the tongue 27^b. The tongue 27^b is split, as indicated at 31, so that it may be collapsed. In assembling this modified construction, the flap 25 overlies the flap 30 and the tongue 27^b is collapsed and inserted through the opening 29, after which it is permitted to expand to its normal width. When so expanded, the tongue is positioned in the enlarged opening 30 and the projections 27^m hook behind the corners of the opening 29, as clearly shown in Fig. 4, to prevent withdrawal of the tongue. By providing the intermediate flap 26 with an enlarged opening 30, it will be seen that the thickness of the tongue is not added to the thickness of the end wall, inasmuch as the tongue's thickness is received within the thickness of the flap 26. Of course, this feature may be incorporated in the structure shown in Figs. 1, 2, 3, 8 and 9, if desired, by simply enlarging the opening 26^a to receive the tongue part 27^b within the thickness of the flap 26.

A suitable score line is provided for facilitating folding of the lip 28 into its laterally extending position, as shown in Fig. 2, and the extension 27^a is provided with a score line 27^c which facilitates folding of the extension around the lip in close-fitting position, as shown in Fig. 2. The score line 24^c in the extension 24^a of the upper closure flap 24 may be located at any convenient distance from the main folding line 24^a along which the extension is folded around the flaps 22 and 23.

By reference to Fig. 8, it will be seen that the flaps 22 and 23 are recessed at their front edges as indicated at 22^b and 23^b, respectively. By thus recessing the front edges of the end flaps 22 and 23, the front edge of the folded flap 24 and its extension 24^a will be

flush with the front edges of the side walls 20 and 21, as clearly shown in Fig. 2.

The outer box or cover is formed of a blank shown in Fig. 6, which includes a front wall 35, a back wall 36, side walls 37 and 38, and a uniting lip 39. Suitable score lines are provided, as indicated in broken lines, for facilitating folding of the blank into the form of a tubular box body, the lip 39 being designed to overlap the marginal portion of the adjacent side wall and to be glued or otherwise secured thereto. For closing the top of the tubular, outer box, I provide an end flap 36^a which extends from the back wall 36 and which is designed to be folded forwardly over the upper end of the tubular body, as shown in Fig. 7. The front end of the flap 36^a is provided with a tongue 36^b which may be inserted into the box body between the front wall 35 thereof and the front edge of the top wall of the inner box, as clearly shown in Fig. 2. A flap 35^a is also provided as an extension on the upper end of the front wall 35, this flap being desirably shaped and provided with other matter to constitute an attractive display or advertisement of the goods contained in the carton. This flap 35^a normally extends upwardly, as indicated in Figs. 1, 2 and 7, but for shipping purposes may be folded down flat on the end wall 36^a. Suitable score lines or the like are provided for facilitating folding of the flaps 35^a and 36^a at the upper ends of the respective walls from which they project, and similar provision may be made for facilitating folding of the tongue 36^b.

A bottom closure for the outer box body may be provided in the form of flaps 37^a and 38^a which project from the bottom ends of the respective side walls 37 and 38.

When the outer box blank is folded to form the tubular body, the flaps 37^a and 38^a may be folded in opposite directions into overlapping relation as clearly shown in Fig. 7, and suitable provision may be made for maintaining the flap in such overlapped position. In this instance, I provide a tongue 38^b on the flap 38^a which is designed to be inserted through a slit or slot 37^b in the corner between the side wall 37 and flap 37^a.

The lower portion of the front wall 35 is cut away as indicated at 39, and the adjacent lower front portions of the side walls 37 and 38 are cut away as indicated at 37^c and 38^c to form an open-ended dispensing opening in the front of the outer box and at the bottom thereof.

The inner box 16 is of such size that it may be inserted endwise into the outer box from either the top or bottom of the outer box, and the lower front portions of the sides or side walls 20 and 21 are cut away as indicated at 20^a and 21^a, respectively, to register with the cut-away side portions 37^c and 38^c of the outer box sides. It will be seen that the dis-

pensing opening thus formed in the lower front of the carton is provided with open ends or finger recesses which facilitate withdrawal of the articles from the carton through the dispensing opening.

As shown in the drawings, the vertical dimension of the dispensing opening, i. e., the distance between the bottom edge of the front wall 35 of the outer box and the highest point of the guard 27^a is slightly less than the diameter of the articles dispensed. Hence, in withdrawing one of the packages or articles from the carton through the dispensing opening, it is necessary to slightly compress the guard to enlarge the opening. If desired, the opening may be made approximately the same or slightly greater than the diameter of the articles dispensed so that it will not be necessary to compress the guard in withdrawing the articles. It will, of course, be understood that the guard 27^a is more or less resiliently maintained in operative position by the resiliency of the paper of which the box is formed and by the resiliency of the lip 28. Hence, the guard may yield to permit withdrawal of one of the articles should the article be of greater diameter than the dispensing opening.

The single blank or single box construction shown in Figs. 10 and 11 is formed from a blank such as shown in Fig. 12. This blank includes a front wall member 45, a back wall member 46, side members 47 and 48, and a lip or ear 49. The blank is suitably scored, as indicated in broken lines, to facilitate folding thereof so as to form a tubular box body, the lip 49 being suitably secured to the inside of the adjacent marginal portion of the side wall member 47. The top of the tubular box body is closed by means of end flaps 47^a and 48^a which project from the upper ends of the side walls 47 and 48, respectively, and a flap 46^a which projects from the top of the back wall 46. The flaps 47^a and 48^a are designed to be folded into mutually overlapping relation, and the flap 46^a is designed to be folded forwardly over the flaps 47^a and 48^a, the said flap 46^a being provided with a tongue 46^b which may be inserted between the front edges of the flaps 47^a and 48^a and the inside of the front wall 45, as clearly shown in Fig. 11. One of the flaps 50 or 51, in this instance, the flap 50, is provided with a lip 50^b which is adapted to be folded along a suitable score line into laterally extending position relative to the flap 50 and substantially in the same manner as the lip 28 is folded and positioned in the structure shown in Fig. 2.

The back wall 46 is also provided at its lower end with an end closure flap 52 having an extension 53 provided with tongues 53^a and 53^b. The extension 53 is suitably scored and arranged to be folded around the upwardly extending lip 50^b, and the tongue

53^a may be passed through the registering openings 50^a and 51^a and inserted between the outer flap and the adjacent flap, as clearly shown in Fig. 11. The tongue 53^a may also be provided with a locking ear 53^c designed to be passed through the registering openings 50^a and 51^a and inserted forwardly between the outer flap 52 and the adjacent flap 50 to prevent accidental withdrawal of the rebent extension 53. As clearly shown in Fig. 11, the rebent extension and tongue structure, in cooperation with the laterally extending lip 50^b, constitutes a guard for preventing unassisted discharge of the articles from the carton.

The front wall 45 of the carton is cut away at its lower end, as indicated at 54, and the adjacent front portions of the side walls 47 and 48 are recessed as shown at 55 and 56 to provide an open-ended dispensing opening, the open ends of the opening serving as finger recesses to facilitate the withdrawal of an article from the carton. The front wall may also be provided with a display opening 56 which is narrower than the width of the box and the length of the articles to be dispensed therefrom.

The single-box structure just described has certain advantages over the double-box structure, particularly in respect of cost, while the double-box structure has certain advantages such as greater rigidity and, in some instances, a greater convenience in filling the inner box with the articles to be dispensed.

I am aware that changes may be made in the above described structures without departing from the spirit of the invention, the scope of which should be determined by reference to the following claims, the same being construed as broadly as possible consistent with the state of the art.

I claim as my invention:

1. In a paper carton of the class described, the combination of front, side and back walls forming a tubular body, and top and bottom closures for said body, the front wall being provided with a dispensing opening adjacent the bottom closure, one of said side walls being cut away at the adjacent end of said dispensing opening to provide a finger recess to facilitate withdrawal of an article from the carton through said dispensing opening, and means overlying said bottom wall for yieldingly resisting withdrawal of articles from the carton through said dispensing opening.

2. In a folded paper carton of the class described, the combination of a back wall, side walls projecting therefrom, an end closure comprising flaps projecting into mutually overlapping relation from said side walls, a flap projecting from said back wall and overlapping said side wall flaps on the outside thereof, and means for locking said flaps in said overlapping relation comprising a re-

bent, rearwardly extending tongue portion, integral with said back wall flap, overlapping the end closure on the inside thereof and having interlocking engagement therewith to hold said flaps in said mutually overlapping relation, and said rebent portion having forwardly facing means lockingly engaging said end wall to lock said rebent portion in said rebent, end-wall-overlapping position.

3. In a folded paper carton of the class described, the combination of a back wall, side walls projecting therefrom, an end closure comprising flaps projecting into mutually overlapping relation from said side walls, a flap projecting from said back wall and overlapping said side wall end flaps on the outside thereof, means for locking said flaps in said overlapping relation comprising a rebent tongue, integral with said back wall end flap, overlapping the end closure on the inside thereof and anchored thereto, and means for locking said tongue in said flap-locking position.

4. In a folded paper carton of the class described, the combination of a back wall, side walls projecting therefrom, an end closure comprising flaps projecting into mutually overlapping relation from said side walls, a flap projecting from said back wall and overlapping said side wall end flaps on the outside thereof, means for locking said flaps in said overlapping relation comprising a rebent, rearwardly extending tongue, integral with said back wall end flap, overlapping said side wall end flaps on the inside thereof and having interlocking engagement with one of the latter, and means for locking said tongue in said position comprising an ear integral with said tongue, projecting forwardly and having interlocking engagement with one of said side wall end flaps.

5. In a folded paper carton of the class described, the combination of a back wall, side walls projecting therefrom, an end closure comprising flaps projecting into mutually overlapping relation from said side walls, said overlapping side wall end flaps having registering openings therein, a flap projecting from said back wall and overlapping said side wall end flaps on the outside thereof, means for locking said end flaps in said overlapping relation comprising a rearwardly rebent tongue integral with said back wall end flap, overlapping said side wall end flaps on the inside thereof and extending through said registering openings and between the back wall end flap and the adjacent side wall end flap, and means for locking said tongue in said position comprising an ear integral with said tongue, projecting forwardly and inserted through said end flap openings and between the back wall end flap and the adjacent side wall end flap.

6. In a folded paper carton of the class described, the combination of a back wall, 130

side walls projecting therefrom, an end closure comprising flaps projecting into mutually overlapping relation from said back and side walls, the innermost of said end flaps having an opening therein and another of said flaps having an extension integral therewith, rebent upwardly and rearwardly so as to overlap said end closure on the inside thereof, said rebent extension having a portion extending through the opening in innermost wall end flap, and said portion being of greater width at its outer end than the corresponding dimension of said opening and being resiliently collapsible to reduced width to permit passage thereof through said opening, said greater width serving to resist withdrawal of said portion from said locking position.

7. In a folded paper carton of the class described, the combination of a back wall, side walls projecting therefrom, an end closure comprising flaps integral with said back and side walls and projecting therefrom into mutually overlapping relation, a lip extending laterally upwardly from the front edge of one of said flaps, an extension on another of said flaps folded around said lip to form a guard for engaging articles in the carton to retain such articles in the carton, said extension having a portion interlocking with the innermost end flap to maintain said flaps in said overlapping relation.

8. In a folded paper carton of the class described, the combination of a pair of wall members, an end closure comprising a pair of end flaps integral with said wall members and projecting therefrom into mutually overlapping relation, a lip extending laterally from the front edge of one of said flaps, an extension on the other of said flaps folded around said lip to form a guard for engaging articles in the carton to retain the same in the carton, said extension having a portion secured to the first-mentioned flap to maintain said flaps in said overlapping relation.

9. In a folded paper, dispensing carton for cylindrical packages or like articles, the combination of a front wall having a dispensing opening at its lower end, and a bottom wall provided with an overlying guard extending inwardly and downwardly adjacent its front edge for resisting movement of the articles outwardly from the carton across said bottom wall.

10. In a folded paper carton for cylindrical packages and the like, the combination of a back wall, side walls extending therefrom and end flaps projecting from said back and side walls into mutually overlapping relation to form a bottom closure for one end of the carton, one of the end flaps having a lip extending laterally inwardly therefrom, the outer flap having an extension folded upwardly and inwardly around said lip into

overlapping position relative to said bottom closure, said overlapping extension being secured at its inner end to the bottom wall and being disposed at an angle to the plane of the latter, whereby said extension serves to prevent cylindrical articles contained in said carton from rolling outwardly over said bottom wall.

11. In a carton for cylindrical packages and the like, the combination of a back wall, side walls extending therefrom and end flaps projecting from said back and side walls into mutually overlapping relation to form a bottom wall for one end of the carton, one of the end flaps having an extension folded upwardly and inwardly into overlapping position relative to said bottom wall, said overlapping extension being anchored at its inner end to the bottom wall and being disposed in a downwardly and inwardly inclined position relative to the plane of the bottom wall, whereby said extension constitutes a guard for preventing cylindrical articles contained in said carton from rolling outwardly over said bottom wall, and means for yieldably maintaining said guard in said inclined position.

12. A folded paper carton for cylindrical packages and like articles comprising an inner box open at its front and having back and side walls and interlocking flaps at its upper and lower ends, and an outer enclosing box having connected front, side and back walls and foldable flaps forming upper and lower ends and the lower portion of the front wall of the outer box and the adjacent portions of the side walls of both the inner and outer boxes being cut away to provide an open-ended dispensing opening extending the full width of the box.

13. A folded paper carton for cylindrical packages and like articles comprising an inner box open at its front and having back and side walls and interlocking flaps at its upper and lower ends, and an outer enclosing box having connected front, side and back walls and foldable flaps forming upper and lower ends, the lower portion of the front wall of the outer box and the adjacent portions of the side walls of both the inner and outer boxes being cut away to provide an open-ended dispensing opening extending the full width of the box, and means overlying and integral with said interlocking flaps at the lower end of the inner box forming a guard for said dispensing opening.

14. A folded paper carton for cylindrical packages and like articles comprising an inner box open at its front and having back and side walls and interlocking flaps at its upper and lower ends, and an outer enclosing box having connected front, side and back walls and foldable flaps forming upper and lower ends, the lower portion of the front wall of the outer box and the adjacent por-

tions of the side walls of both the inner and outer boxes being cut away to provide an open-ended dispensing opening extending the full width of the box, and means overlying
5 and integral with the lower end of one of said boxes forming a guard for said dispensing opening.

15 15. In a folded paper carton of the class described, the combination of a back wall, side walls projecting therefrom, an end closure comprising flaps projecting into mutually overlapping relation from said walls, the innermost of said flaps having an opening therein, another of said flaps having an extension integral therewith, rebent upwardly
20 and rearwardly so as to overlap said end closure on the inside thereof, said rebent extension having a portion extending through the opening in said innermost end flap, and said rebent extension having an ear integral therewith, projecting forwardly and inserted through said opening for locking said rebent extension in said rebent position.

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