

June 28, 1927.

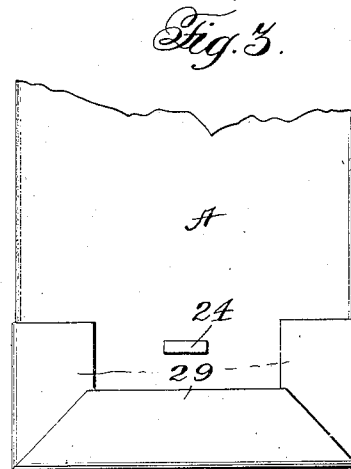
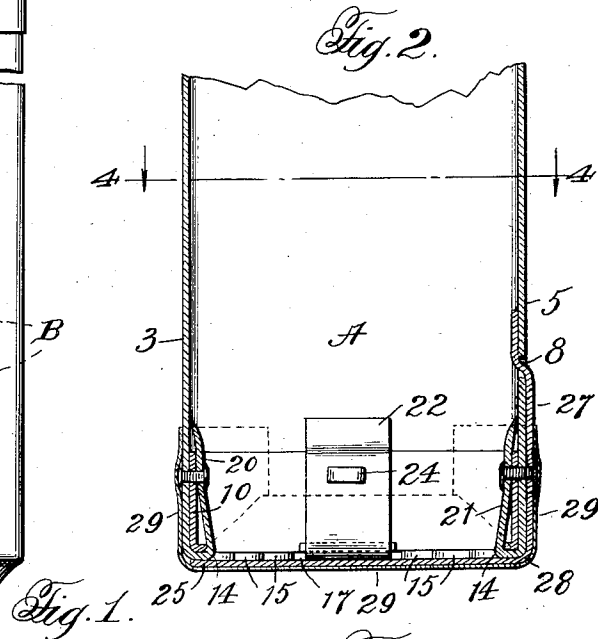
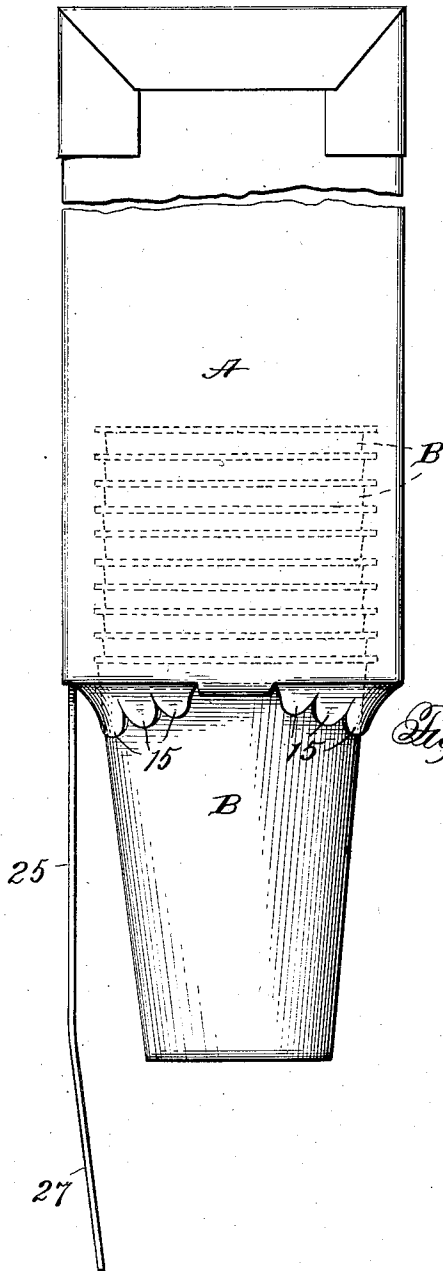
C. F. DAWSON ET AL

1,633,983

DISPENSING CUP CARTON

Filed Nov. 5, 1920

3 Sheets-Sheet 1



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Fig. 4.

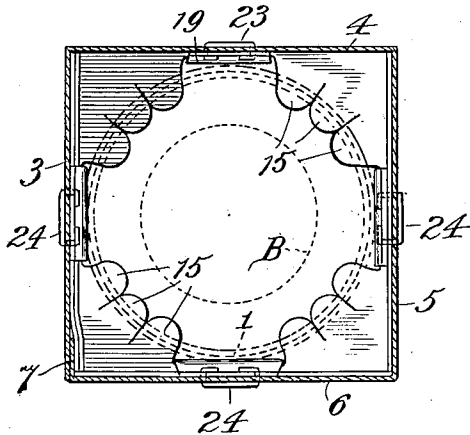


Fig. 5.

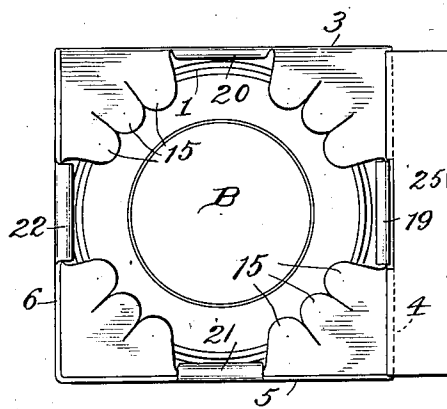


Fig. 8.

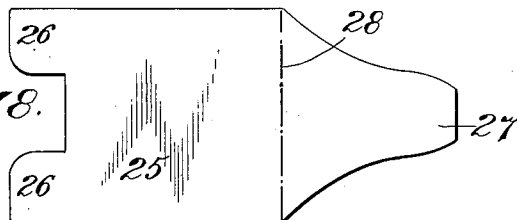
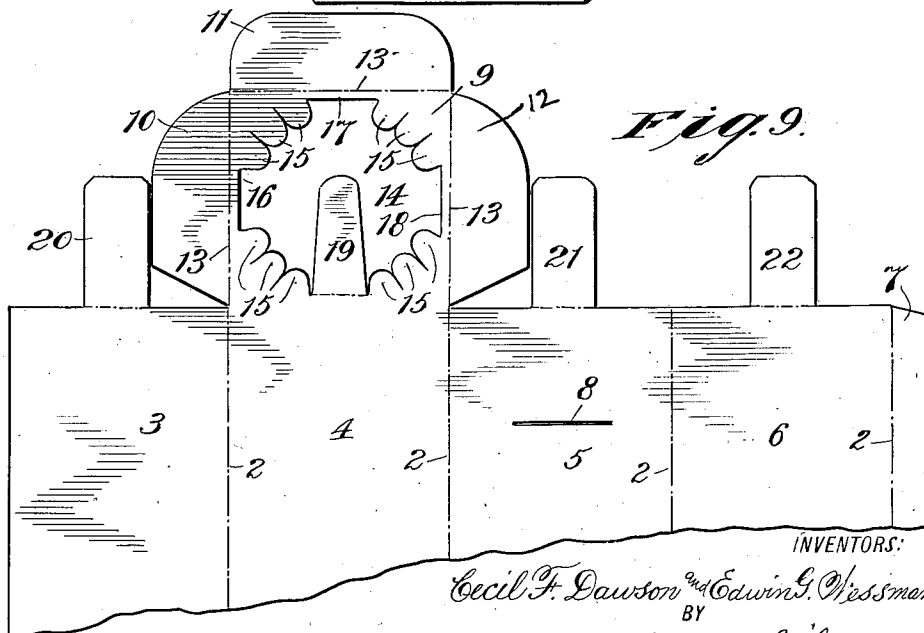


Fig. 9.



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Fig. 6.

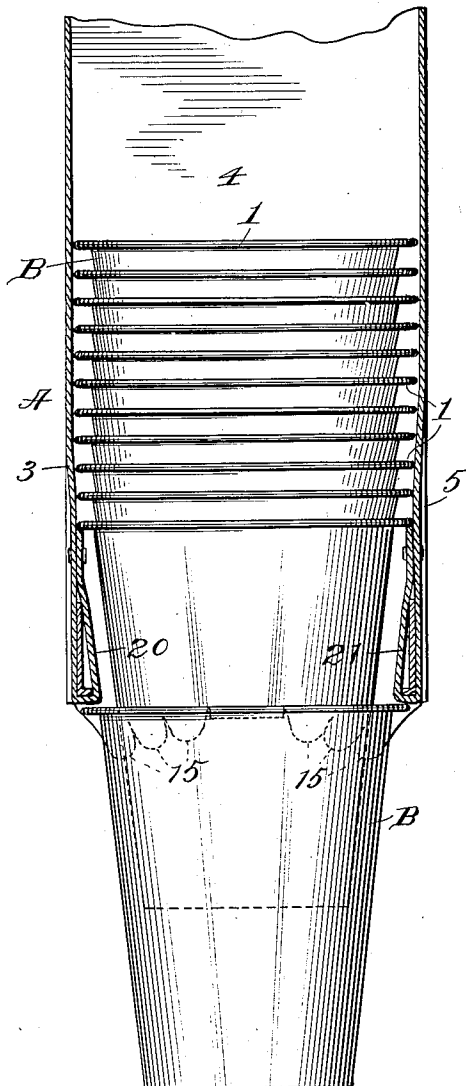


Fig. 7.

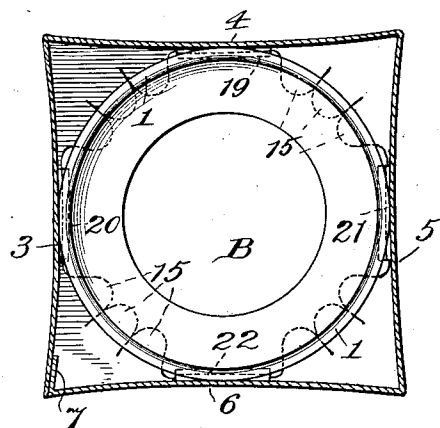
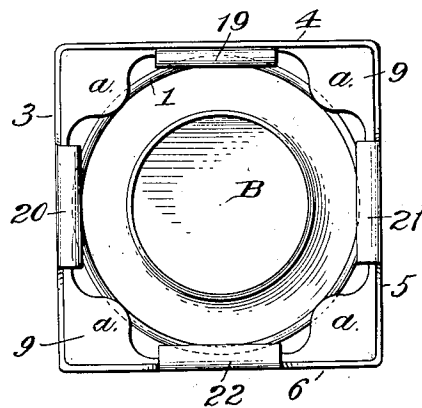


Fig. 10.



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UNITED STATES PATENT OFFICE.

CECIL F. DAWSON, OF EAST ORANGE, AND EDWIN G. WESSMAN, OF BOONTON, NEW JERSEY, ASSIGNORS, BY MESNE ASSIGNMENTS, TO INDIVIDUAL DRINKING CUP CO. INC., OF EASTON, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DISPENSING-CUP CARTON.

Application filed November 5, 1920. Serial No. 421,981.

Our invention relates to cartons and more particularly to cartons for containing and dispensing paper drinking cups.

The principal object of the invention resides in the construction of the carton in such a manner that it will receive a number of nested drinking cups and can be opened for dispensing one cup at a time.

Another object consists in the provision of means for holding the cups in the carton in such a manner that the lower portion of one cup will extend below the end of the carton, when open, in position to be grasped for removing.

It has for a further object the provision of means for supporting the cups in such a manner that when one is withdrawn the others will remain in the carton and be fed to the end of the carton in such a manner that one will always be in position to be grasped.

A still further object resides in means for sealing the carton, with all cups therein, so that the cups will be protected and kept in a sanitary condition when shipping or before being placed in position for use.

With these and other objects in view our invention consists in the novel details of construction and arrangement of parts which will be more clearly understood from the following specification and drawings, in which:—

Figure 1 is a side elevation showing the carton open ready for use.

Figure 2 is a transverse vertical section through the carton before the seal is broken.

Figure 3 is a side elevation of one end of the carton showing the manner of sealing.

Figure 4 is a horizontal section on the line 4—4 of Fig. 2 looking in the direction of the arrows without the sealing strip.

Figure 5 is a bottom plan of the carton, when open, showing a cup in position for withdrawal.

Figure 6 is a transverse vertical section showing a cup in the act of being withdrawn.

Figure 7 is a horizontal section showing the manner in which the sides will curve when withdrawing a cup.

Figure 8 is a plan of a blank from which the closure is made.

Figure 9 is a plan of a blank from which the body of the carton is made.

Figure 10 is a bottom plan view of a slight-

ly modified construction of carton, when open.

In carrying out our invention we provide a carton indicated generally at A which is adapted for containing and dispensing paper drinking cups shown at B. The cups are tapered, so that they are of less diameter at the bottom than at the top, and are provided with a bead 1 around the upper edge. When placed in the carton the cups will be nested, as shown, and by this arrangement a number of cups can be placed in a carton of comparatively small size. The carton is made from the blanks shown in Figs. 8 and 9, of the drawings, the blank shown in Fig. 9 being folded to form the body of the carton and the blank shown in Fig. 8 being folded, and connected to the body, for forming a closure for the dispensing end of the carton. The upper end of the carton may be closed by a cap or other suitable closure, or if desired, an extra flap may be formed on the blank to be folded to form a top closure.

The blank shown in Fig. 9 is adapted to be folded on the lines 2 to form the four sides 3, 4, 5 and 6 and the flap 7. The flap 7 is adapted to be pasted to the inner face of the side 3 so as to hold the carton in proper shape. When the blank is folded it will form a carton which is square in cross section, as more clearly shown in Figs. 4 and 5. The side 5 is provided with a transverse-ly extending slot 8, adjacent one end, for a purpose to be later described.

An extension 9 is formed on one end of the side 4 and flaps 10, 11 and 12 are formed on the edges of the extension and are adapted to be folded on the lines 13 and inserted into the body of the carton formed by the sides 3, 4, 5 and 6. The extension 9 when folded at right angles to the side 4 will form the bottom of the carton. This extension 9 is provided with an opening 14, and a plurality of series of inwardly projecting fingers 15 is formed on the edge of the opening, as more particularly shown in Fig. 9, and when the parts are folded these fingers will be arranged at the corners of the carton for a purpose to be later described. Spaces 16, 17 and 18 are formed between the series of fingers and a tongue 19 is formed on that edge of the opening adjacent the side 4. As shown in Fig. 9, this tongue projects towards the center of the opening and is arranged be-

tween two of the series of fingers. Tongues 20, 21 and 22 are formed on the faces of the sides 3, 5 and 6, respectively, and are preferably of the same length as the tongue 19.

5 As previously stated, the blank shown in Fig. 9 will be folded on the lines 2 and forms a square carton with the sides 3, 4, 5 and 6. The flap 7 will be folded and pasted to the inner face of the side 3 adjacent one longitudinal edge thereof. The flanges 10, 11 and 12 are then folded on the lines 13 so as to extend at right angles to the extension 9 and then the extension is folded to form the end or bottom of the carton with the flaps 15 10, 11 and 12 extending into the end of the carton. The tongue 19 is bent to engage the inner face of the side 4 and is secured in position by a staple 23 or other suitable fastening means. The tongues 20, 21 and 22 are bent to extend through the spaces 16, 17 and 18, upon the edge of the opening 14 in the extension 9 and are secured to the sides 3, 5 and 6, respectively, by means of staples 24 or other suitable fastening means. When the parts are folded as above described, the series of fingers 15 will be arranged at the corners of the carton and extend towards the center of the opening 14.

The closure for the end of the carton, that has the opening 14, is shown in Fig. 8. This comprises a blank 25 having the spaced ears 26 formed on one end and the tongue 27 formed on the opposite end. As shown, the tongue is tapered, so that the outer end will be of considerably less width than the inner end. When in use the blank 25 will extend across the opening 14, in the extension 9, and the ears 26 will be bent at right angles to extend into the end of the carton between the side 3 and flap 10. The space between the ears 26 will allow the ears to straddle the tongue 20. The tongue 27 will be folded, on the line 28, to extend upwardly parallel with the side 5 and the narrow end of the tongue will be inserted through the slot 8 in the side 5, as more particularly shown in Fig. 2 of the drawings. The blank 25 forming the closure will be sealed or secured in position by means of a sealing strip 29 which will be passed around the end of the carton, as more particularly shown in Figs. 2 and 3 of the drawings.

In Fig. 10 of the drawings, is illustrated a slight modification, in this instance the yieldable cup-engaging means extending inwardly from the lower marginal edge of the delivery portion of the carton and at the corner portions of the delivery end portion taking the form of single fingers or portions *a*, instead of groups of fingers as in the construction illustrated in Figs. 1 to 9, inclusive, this modified construction being shown for use in connection with smaller-sized cups.

The carton will be filled with the nested drinking cups B and when shipping, or be-

fore being used, are entirely housed within the carton and kept in a perfectly sanitary condition. When it is desired to use the carton of cups, the end of the tongue 27 is withdrawn from the slot 8 and by pulling downwardly the sealing strip 29 will be broken. The ears 26 of the blank 25 may be either withdrawn from the end of the carton or, if desired, may be allowed to hang as shown in Fig. 1 and used as an aid for supporting the carton. The carton may be secured to a wall, or other support, in any desired manner, or may be used in connection with some form of container. After the closure blank 25 is removed from across the opening 14 the cups will drop into the position shown in Fig. 1, with the ends of the lowermost cups extending through the opening 14 and some distance beyond the bottom end of the carton. The bead 1 of the lowermost cup will rest upon the tops of the fingers 15 which are bent downwardly at an angle when the cups pass through the opening 14. This is clearly shown in Fig. 1. When it is desired to remove a cup, it is grasped and drawn downwardly, the fingers 15 yielding sufficiently to allow the bead 1, of the cup, to pass through the opening. The fingers 15 being in the corners, as the cup is withdrawn, the slides 3, 4, 5, and 6 will be curved inwardly slightly, as more particularly shown in Figs. 6 and 7, so that the upturned tongues 19, 20, 21 and 22 will engage the cups not being withdrawn and will hold them in the carton. As shown in Fig. 6 the upper ends of the tongues 19, 20, 21 and 22 will engage under the bead of one of the cups and the beads of the cups thereunder will be engaged and held by the sides of the tongues. After the lowermost cup has been withdrawn the tongues 15 and sides 3, 4, 5 and 6 will return to their original position, thereby allowing the cups to drop and be fed through the opening.

If desired, at night, or other period, when the cups are not being used, the lowermost cups may be forced back into the carton and the closure strip 25 again extended over the opening 14 with the tongue 27 thereof inserted in the slot 8. Of course when temporarily closed the sealing strip 29 will not be used.

From the above, it will be seen that we have provided a carton for sealing the cups as well as for dispensing the same. The cups are held in such a manner that only one may be withdrawn at a time, and we wish to lay particular stress on the functions of the fingers 15 for curving the sides inwardly intermediate the marginal portions, as the cup is withdrawn, so that the tongues 19, 20, 21 and 22 act as spring arms for engaging the cups, above the one being withdrawn, to prevent them from passing through the opening.

While we have illustrated in the drawings a specific embodiment of the invention, it will, of course, be understood that changes and variations in the particular construction shown and the embodiment of the invention in other forms, as will appeal to those skilled in the art and falling within the scope of the appended claims, may be practiced without departing from the spirit of the invention.

What we claim is:—

1. A container for a stack of nested paper cups having a delivery end part provided with a lower expansible throat portion, and portions above said throat portion that are pressed inwardly to grip a cup when said throat portion is expanded to release a cup.

2. A container for a stack of nested paper cups having a delivery end part provided with a lower expansible throat portion, and separate cup retaining means above said throat portion constructed and arranged to be pressed inwardly to engage a cup when the throat portion is expanded to release a cup.

3. A container for a stack of nested paper cups having lower yieldable cup retaining means, and separate cup retaining means above the first mentioned retaining means constructed and arranged to be pressed inwardly to grip a cup when the first mentioned lower retaining means is forced outwardly to release a cup.

4. A carton having a delivery end portion constructed of flexible material and having angularly related walls, and parts connected with the corner portions and the adjoining portions at each side thereof, said parts being provided with groups of yieldable fingers, portions of the delivery end portion above the yieldable fingers and intermediate said corner portions being drawn inwardly to hold a cup when the yielding fingers are expanded to release a cup.

5. A carton having a delivery end portion square in cross section, and yieldable fingers extending inwardly from the corner portions at the lower marginal edges of said delivery end portion.

6. A carton having a delivery end portion constructed of flexible material and square in cross section, yieldable fingers extending inwardly from the corner portions of said delivery end portion, parts of the delivery end portion above the yieldable fingers and intermediate the corner portions being drawn inwardly to hold the cup when the yieldable fingers are expanded to release a cup.

7. A carton having a delivery end part constructed of flexible material and having angularly related walls, yieldable fingers extending inwardly from the lower corner portions of said delivery end part, and cup holding portions on the walls of the delivery end part above said yieldable fingers.

8. A carton having a delivery end part constructed of flexible material and having angularly related walls, yieldable fingers extending inwardly from the lower corner portions of said delivery end part, and cup holding portions on the walls of the delivery end part above said yieldable fingers and located intermediate the corner portions.

9. A carton having a delivery end part constructed of flexible material and having angularly related walls, yieldable fingers extending inwardly from the lower corner portions of said delivery end part, and longitudinally extending cup holding portions on the walls of the delivery end part extending above and located intermediate said yieldable fingers.

10. A carton having a delivery end portion constructed of flexible material and having angularly related walls, and groups of yieldable fingers connected with and extending inwardly from the corner portions of the delivery end part.

11. A carton having a dispensing opening therein, yieldable fingers formed on the edge of the opening and extending towards the center thereof, and tongues extending along the inner faces of the sides of the carton above the yieldable fingers.

12. A carton having a dispensing opening therein, yieldable fingers formed on the edge of the opening, tongues formed on the end of the carton and adapted to be folded through the dispensing opening and to extend along the sides of the carton, and means for securing the tongues in position.

13. A carton having a dispensing opening therein, yieldable fingers formed at spaced intervals around the edge of the opening, tongues formed on the carton and adapted to be folded through the opening and between the spaced fingers to extend along the sides of the carton, and means for securing the tongues in position.

14. A carton having a dispensing opening therein, yieldable fingers formed at spaced intervals around the edge of the opening, tongues formed on the carton and adapted to be folded through the opening and between the spaced fingers to extend along the sides of the carton, means for securing the tongues in position, and means for closing the dispensing opening.

15. A carton having a dispensing opening therein, yieldable fingers formed at spaced intervals around the edge of the opening, tongues formed on the carton and adapted to be folded through the opening and between the spaced fingers to extend along the sides of the carton, means for securing the tongues in position, and means detachably secured to the carton for closing the dispensing opening.

16. A carton having a dispensing opening therein, yieldable fingers formed at spaced

intervals around the edge of the opening, tongues formed on the carton and adapted to be folded through the opening and between the spaced fingers to extend along the sides of the carton, means for securing the tongues in position, and a flexible strip detachably connected to the carton for closing the dispensing opening.

17. A carton formed from a blank folded to form sides and ends, one of said ends having a dispensing opening therein, yieldable fingers formed at spaced intervals around the edge of the opening, tongues extending exteriorly of the carton and along the sides thereof above the yieldable fingers, and means for closing the dispensing opening, said means comprising a blank having ears formed on one end and a tongue on the opposite end, the ears adapted to be bent and inserted in the end of the carton and the tongue being bent and connected to one side of the carton.

18. A carton formed from a blank folded to form sides and ends, the carton being square in cross section, one of said ends having a dispensing opening therein, yieldable fingers formed at the corners, tongues extending interiorly of the carton and along the sides thereof, and means for closing the dispensing opening, said means comprising a blank having ears formed on one end, a tongue on the opposite end, the ears adapted to be bent and inserted in the end of the carton, straddling one of the tongues which extend interiorly of the carton, and the tongue of the closing means being bent and connected to one side of the carton.

19. A carton having a dispensing opening therein, said carton being square in cross section and adapted to contain drinking cups with a portion of one cup extending through the dispensing opening, and fingers at the corners of the carton, said fingers being flexed as the cup is withdrawn and drawing the sides of the carton inwardly to engage the cups above the one being withdrawn.

20. A carton having a dispensing opening therein, said carton being square in cross section and adapted to contain drinking cups with a portion of one cup extending through the dispensing opening, tongues extending into the carton and parallel with the sides thereof, and fingers in the corners of the carton, said fingers being engaged by the cup when withdrawn and curving the sides of the carton inwardly so that the tongues engage those cups above the one being withdrawn.

21. A container for a stack of nested cups having lower yieldable cup-retaining means and separate cup-retaining means above the first mentioned cup-retaining means con-

structed and arranged to be moved to engage and support a cup when the first mentioned lower retaining means is moved to release a cup.

22. A carton having a delivery end part provided with yieldable cup retaining fingers arranged at intervals thereabout, and separate cup holding means intermediate said yieldable fingers, said means being constructed and arranged to engage and support a cup when said fingers are moved to release a cup.

23. A carton having a delivery end part provided with integral tongue portions folded to extend within the same and secured near their free portions to the side walls thereof, said tongue portions constituting cup holding means, the upper ends of said tongues being adapted to engage the under side of the beads of the cups, and the sides of the tongue portions being adapted to engage the beads of the cups at the sides thereof.

24. A carton having a delivery end part provided with integral tongue portions folded to extend within the same, and secured near their free end portions to the side walls thereof with inner portions of the tongues spaced from the side walls, said tongue portions constituting cup holding means, the upper ends of the tongues being adapted to engage the underside of the beads of the cups, and the sides of the tongues being adapted to engage the beads of the cups at the sides thereof.

25. A carton having a dispensing opening at one end, an inwardly extending flange on the end portion of the carton at the delivery opening, and integral tongue portions folded over said marginal flange inwardly through the dispensing opening within the carton and secured to the side walls thereof beyond said flange, said tongue portions constituting cup holding means.

26. A carton having a dispensing opening at one end, an integral flap extension on the carton at one side of the opening adapted to be folded over the open end of the carton, said flap having a central opening and providing inwardly extending portions on the end portions of the carton, and said delivery end part being provided with integral tongue portions folded through the opening in said flap over said inwardly extending portions within the carton and secured to the side walls thereof beyond said inwardly extending portions, said tongue portions constituting cup-holding means.

In testimony whereof we hereunto affix our signatures.

CECIL F. DAWSON.
EDWIN G. WESSMAN.