Aug. 6, 1946. W. E. AMBERG 2,405,107

RECEPTACLE DISPENSING CARTON

Filed April 8, 1943

Fig. 1

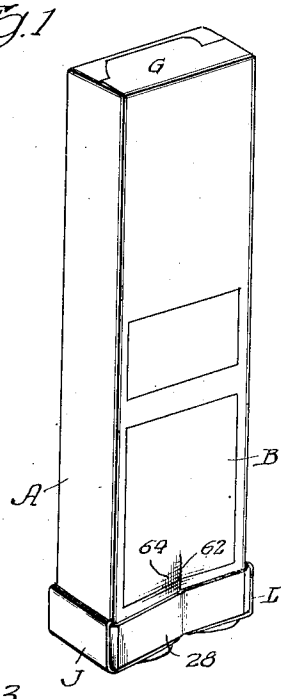


Fig. 2

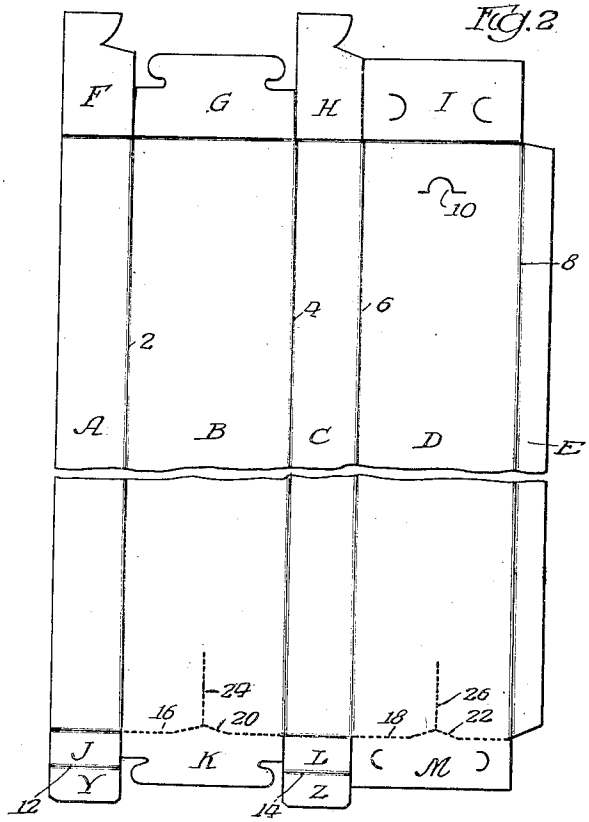


Fig. 3

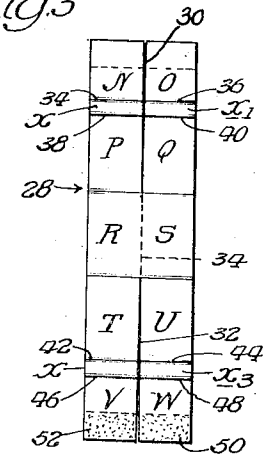


Fig. 5

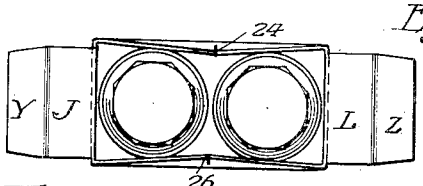


Fig. 6

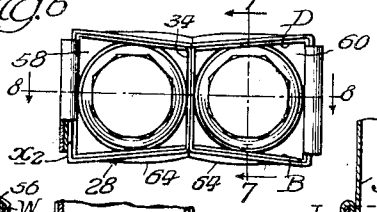


Fig. 8

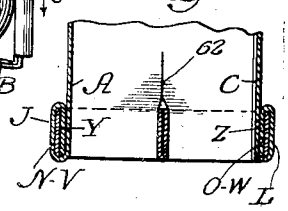


Fig. 4

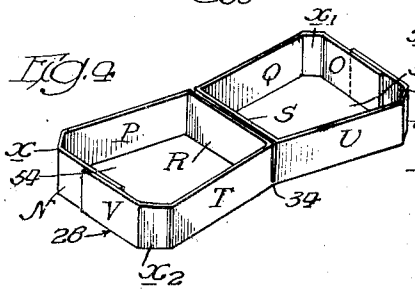
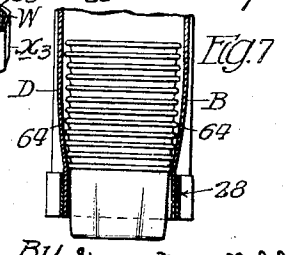


Fig. 7



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RECEPTACLE DISPENSING CARTON

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Application April 8, 1943, Serial No. 482,268

9 Claims. (Cl. 206—56)

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This invention relates to a receptacle dispensing carton of the type adapted to dispense nested receptacle, such as paper cups, soufflé cups, and the like, and more particularly to a new and improved multiple stack dispensing carton suitable for use as a shipping container and convertible to a cup dispensing carton by the user.

The expression "multiple stack dispensing carton" is used herein to describe a receptacle dispensing carton containing a plurality of stacks of nested articles, such as paper cups, soufflé cups, or the like. It will be understood that certain phases of the invention may also be applicable to single stack cup dispensing cartons.

One of the object of the invention is to provide a new and improved type of shipping container which will hold two or more stacks of nested receptacles side by side and which can readily be converted by the user to a dispenser for said receptacles.

Another object of the invention is to provide a multiple receptacle dispensing carton of the type described which when converted to a receptacle dispensing carton has dispensing means associated with each of the stacks therein whereby receptacles can be withdrawn simultaneously from two or more stacks.

An additional object of the invention is to provide a new and improved device for dispensing nested receptacles from a carton made of substantially flexible material characterized by an auxiliary member at one end of the carton adapted to reinforce the dispensing end of the carton and at the same time convert it to a dispenser which will hold the stacks of receptacles therein or permit the lowermost receptacles to be withdrawn one at a time.

Another object of the invention is to provide a new and improved type of shipping container for nested receptacles.

Still a further object of the invention is to provide a new and improved dispensing means for a shipping container of the type described capable of compressing the container intermediately of the stacks contained therein to form a plurality of dispensing openings sufficiently constricted to keep the stacks from falling therethrough while permitting removal of the lowermost cups of the stacks one at a time.

Other objects and advantages of the invention will be apparent by reference to the following description in conjunction with the accompanying drawing, in which

Figure 1 is a perspective view of a multiple stack receptacle dispensing carton representing

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a preferred embodiment of the invention after the carton has been converted to a dispenser;

Figure 2 is an elevational view of a carton of the type shown in Figure 1 prior to assembly of the carton as a shipping container, showing the various crease lines which define the walls and end closures of the carton, and also weakened or perforated lines bounding certain portions of the carton which are to be removed when it is converted to a dispenser;

Figure 3 is a flat view showing an auxiliary member prior to assembly which, when assembled and positioned in the end of the carton as illustrated in Figure 1, converts it to a receptacle dispensing carton, as hereinafter described;

Figure 4 is an assembled view in perspective of the auxiliary dispensing element shown in Figure 3;

Figure 5 is a bottom view of the assembled carton of Figure 2 with certain flaps removed preparatory to the placement of the dispensing band shown in Figure 4;

Figure 6 is a bottom view of the dispensing carton shown in Figure 1 with the dispensing band of Figure 4 in operative position;

Figure 7 is a sectional view taken along the line 7—7 of Figure 6; and

Figure 8 is a sectional view taken along the line 8—8 of Figure 6.

Referring to Figure 2, it will be observed that the receptacle dispensing carton is formed from a flat piece of sheet material, such as cardboard, which is divided by fold lines 2, 4, 6, and 8 into wall panels A, B, C, and D. The carton is assembled by gluing the outer surface of the panel E to the inner surface of the panel A. The upper end closure of the carton is formed in a customary manner with flaps F, G, H, and I. A slit or perforated portion 10 is preferably provided in order that the carton may be hung from a nail or other suitable support after it has been converted to a dispenser.

The lower end closure of the carton is formed by flaps J, K, L, and M. As will be observed, the carton when assembled has a rectangular cross-section in which the width, that is the distance between fold lines 2 and 4, is greater than the depth, that is the distance between fold lines 4 and 6, although it will be understood that this may be varied depending upon the type of receptacle being dispensed. Nevertheless, the carton as shown provides for the shipment of two or more stacks of nested receptacles in a side by side relationship.

One of the features of the invention resides in

the simple manner in which the carton is converted from a shipping container to a dispenser. It will be observed that the end closure flaps J and L are provided with fold lines 12 and 14 and that the end closures K and M are bounded along one edge by weakened or perforated lines 16 and 18. The weakened or perforated lines 16 and 18 preferably have an indentation or recessed portion 20 and 22, respectively, and intersect a vertically disposed weakened, perforated or cut line 24 and 26, respectively. As will be observed, the flaps K and M are readily removable by tearing them along the lines 16 and 18, thereby providing a slight indentation at the recessed portions 20 and 22. Likewise, it is a simple matter to separate or cut the weakened lines 24 and 26 if they have not previously been cut, thereby forming vertical slits in the wall panels B and D.

After the removal of the end closures K and M, the lower part of the carton containing two stacks of nested receptacles, such as soufflé cups, has the appearance shown in Figure 5. It will be understood, of course, that the stacks of receptacles would fall through the end of the carton if it were allowed to remain open in a vertical position with the flaps K and M removed, as shown in Figure 5. However, merely by affixing to the bottom of the carton an auxiliary dispensing element or band of the type shown in Figure 4, the carton is converted to a cup dispenser.

The auxiliary dispensing element 28 as shown in Figure 4 is formed from a flat sheet of material, preferably cardboard or other suitable material, which may be relatively flexible but is sufficiently stiff in combination with the shipping container or carton to reinforce the latter and assist in holding the stacks of nested receptacles in place, while at the same time permitting the removal of receptacles therefrom one at a time. As will be seen by reference to Figure 3, the auxiliary dispensing member 28 is formed from a flat sheet of material by cuts or lines of severance 30 and 32, each of which terminates at a hinge line 34. The panels or sections formed by the cuts 30 and 32 are further divided by fold lines 34, 36, 38, 40, 42, 44, 46, and 48, thus forming a number of panel portions N, O, P, Q, R, S, T, U, V, and W. The dispensing element is assembled by adhesively uniting the area 50 of the panel W to the under side of one end of the panel O and, in a similar manner, by adhesively uniting the area 52 of the panel V to the under side of one end of the panel N. This forms a tubular member, the walls of which are completely severed due to the lines of severance 30 and 32 except at the hinge line 34. This member is then opened up as shown in Figure 4, so that the panel S faces the panel R.

The dispensing element 28 is now ready to be placed in operative position on the shipping container. This is accomplished by inserting the end closure flaps J and L, as shown in Figure 5, through the openings 54 and 56 of the dispensing element 28. The panels R and S, which together form a central partition or bridge, are then pressed into the slits or openings 24 and 26 of the carton and the ends Y and Z of the flaps J and L, respectively, are bent backward along the fold lines 12 and 14 and over the upper edges of the panels N—V and O—W of dispensing element 28, thereafter being seated against the wall panels A and C of the carton in the manner shown by the cross-sectional view in Figure 8. Thus, it will be seen that the dispensing element 28 is locked into the end of the carton by the flaps J—Y and L—Z.

The auxiliary dispensing element 28 is preferably mounted or assembled in the dispensing carton with the hinge line 34 at the bottom, as shown in Figure 8. In this way the downward pressure of the stacks causes the panels R and S to press against each other.

It is important to note that the distance along the central or hinged portions 34 of the dispensing element 28 is somewhat less than the distance along the opposite sides when the collar or band 28 is combined with the carton although the panels R and S are of equal length to the panels N—V and O—W. The difference in length between the bridge member panels and the opposite sides is due to intermediate hinges or fold lines which form the intermediate panels x, x_1, x_2, and x_3. While it is possible to form the dispensing band or collar without these intermediate panels, they permit the bands to be formed in a flat folded state and to be shipped in this form. Vice versa, they permit the conversion of the dispensing member shown in Figure 4 to one or more flat folded states. It will be understood that only one auxiliary panel, rather than two as shown, is necessary to compensate for the irregularity of each of the polygonal openings. The other panels P, Q, T, and U of the dispensing element 28 are of the same length, the net result being the formation of two 4-sided irregular polygonal dispensing or emerging areas which compress the dispensing carton intermediately of the stacks contained therein, as shown in Figure 6. This compression of the side walls of the carton gradually constricts the lower end thereof and prevents the stacks from falling through when the carton is placed in a vertically disposed position. At the same time, when the carton is placed in a vertical position, the dispensing openings 58 and 60 are sufficiently large to permit the lowermost cup of each stack to extend therethrough, as shown in Figure 7, and thereby permit the user to grasp the cup and remove it. The arrangement is such that the user may grasp a cup from each stack and remove two cups at a time, either with the same hand or one in each hand.

In forming the auxiliary dispensing element 28, it will be understood that it may be formed in other ways than that previously described, for example, it can be formed by first making a flattened tube of the proper polygonal cross section, then severing the tube intermediate of its ends through all of the sides except one, and finally opening the severed sides along the unsevered side as a hinge line, whereby the adjacent parts of the original side wall of the tube become the panel members R and S of Figure 4 and form a bridge member between the two polygonal openings 54 and 56.

It is further of importance to note that the lines of severance 24 and 26 are sufficiently long to extend above the shrinking collar or band 28 when the latter is combined with the carton, thereby forming auxiliary cuts or slits 62, as shown in Figures 1 and 8. The cuts or slits 62 weaken the sides of the carton and cause a slight bulge 64, shown somewhat accentuated in Figure 7. This permits the stacks to drop completely down to the dispensing openings rather sharply and without hindrance due to the side walls of the carton which might otherwise tend to bow inwardly or retard the movement of the receptacles at a point substantially above the dispensing

openings, especially when relatively light receptacles are being dispensed and when the stacks are almost empty.

As will be apparent, the invention provides means for holding the dispensing band or collar 28 in place by mechanically interlocking it with integral parts of the shipping tube or carton. In the particular embodiment shown, the mechanical interlocking is effected by using the flaps of the carton as interlocking members. However, it will be understood that the collar or band 28 may contain flaps, ears or projections which engage cuts or slits in the tube or carton to effect a mechanical interlock. Likewise, the shrinking collar or band may be adhesively united to the carton but it is preferable to effect the combination of the collar or band with the tube by some means whereby the former can be separated from the latter. In this way a single collar or band can be reused, and it is only necessary to furnish one collar with several tubes.

The invention provides a new and improved type of shipping carton adapted to be provided with an auxiliary member for dispensing cups therefrom, a new and improved type of dispensing member for use on shipping cartons, and a new and useful combination which permits the user of the receptacles to withdraw them directly from the shipping carton and avoids the necessity of employing a separate metal dispenser of the conventional type. Since the receptacles are retained in the original shipping tube, they are not exposed to dirt or other contamination by removal therefrom as is customary with the use of conventional metal dispensers. Furthermore, the provision of a shipping carton and means for readily converting it to a dispenser is a great convenience to the user. Other advantages will be apparent to those skilled in the art.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A device for dispensing nested receptacles compirsing a shipping tube made of substantially flexible material and adapted to hold a plurality of stacks of nested receptacles, and a shrinking band or collar of flexible sheet material around an end of said tube comprising a bridge member extending between opposite sides of said tube intermediately of said stacks, said band serving to constrict said sides and said bridge member forming with the sides of the tube a plurality of polygonal dispensing openings sufficiently small to hold the stacks while permitting the lowermost end of the stacks to protrude therethrough and allowing the lowermost receptacles to be grasped and removed one at a time.

2. A device as claimed in claim 1 in which the bridge member portion of said band is seated in slits formed in the opposite side walls of said tube.

3. A device as claimed in claim 1 comprising means to lock said band in place at the end of said tube.

4. A device as claimed in claim 1 in which the bridge member portion of said band is seated in lines of severance formed centrally in said opposite sides of said tube at said end thereof, said lines of severance extending farther within said sides than necessary to seat said bridge member, thereby weakening said tube above said band.

5. A device as claimed in claim 1 in which said band is held in place by being mechanically interlocked with integral parts of said tube.

6. A shipping carton for nested receptacles comprising end closure flaps hinged to an end thereof and removable therefrom, and lines of severance extending from the hinge lines of said flaps into the side walls of the carton and adapted to receive an auxiliary dispensing member.

7. A device as claimed in claim 6 in which said hinge lines are provided with indentations intersecting said lines of severance and serving to guide said auxiliary dispensing member into place when it is applied to said carton.

8. A dispensing member adapted to be placed over the end of a shipping tube of a type containing more than one stack of nested receptacles, said dispensing member comprising a band of sheet material obtainable by severing all but one side of a tube of polygonal cross section and opening the severed portions of the tube with the unsevered side as a hinge line, thereby forming a plurality of polygonal openings with panels of the sides of said tube forming a bridge member between said openings, said dispensing member being adapted to be placed in the end of a shipping carton for nested receptacles and being sufficiently constricted at said bridge member to form a dispensing opening in the end of said carton adapted to retain the stacks of receptacles therein while permitting removal of the lowermost receptacles one at a time.

9. A device as claimed in claim 8 in which at least one of the sides other than that forming said bridge member panel contains an intermediate hinge line spaced from the adjoining hinge lines a sufficient distance to permit said dispensing member to be converted to a flat folded form.

WALTER E. AMBERG.