United States Patent [19]

Zinkgraf et al.

[11] **3,776,419**

[45] **Dec. 4, 1973**

[54] **CONTAINER AND RACK FOR PRESENTING ARTICLES**

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[73] Assignee: **Krafto Corporation,** Glenview, Ill.

[22] Filed: **Sept. 17, 1971**

[21] Appl. No.: **181,614**

[52] **U.S. Cl.** **221/197,** 206/44.12, 221/311, 312/35

[51] **Int. Cl.** **B65h 1/06**

[58] **Field of Search** ..... 229/17 B, 38; 206/44.12, 56 AC; 312/35, 42, 45; 221/311, 197; 222/457; 211/49 D, 71

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[57] **ABSTRACT**

Apparatus for dispensing articles which includes a container and a rack to hold the container in an inverted position. The rack cooperates with the container to support the container in a predetermined manner so as to allow articles to move from the container through an opening in the container.

1 Claim, 4 Drawing Figures

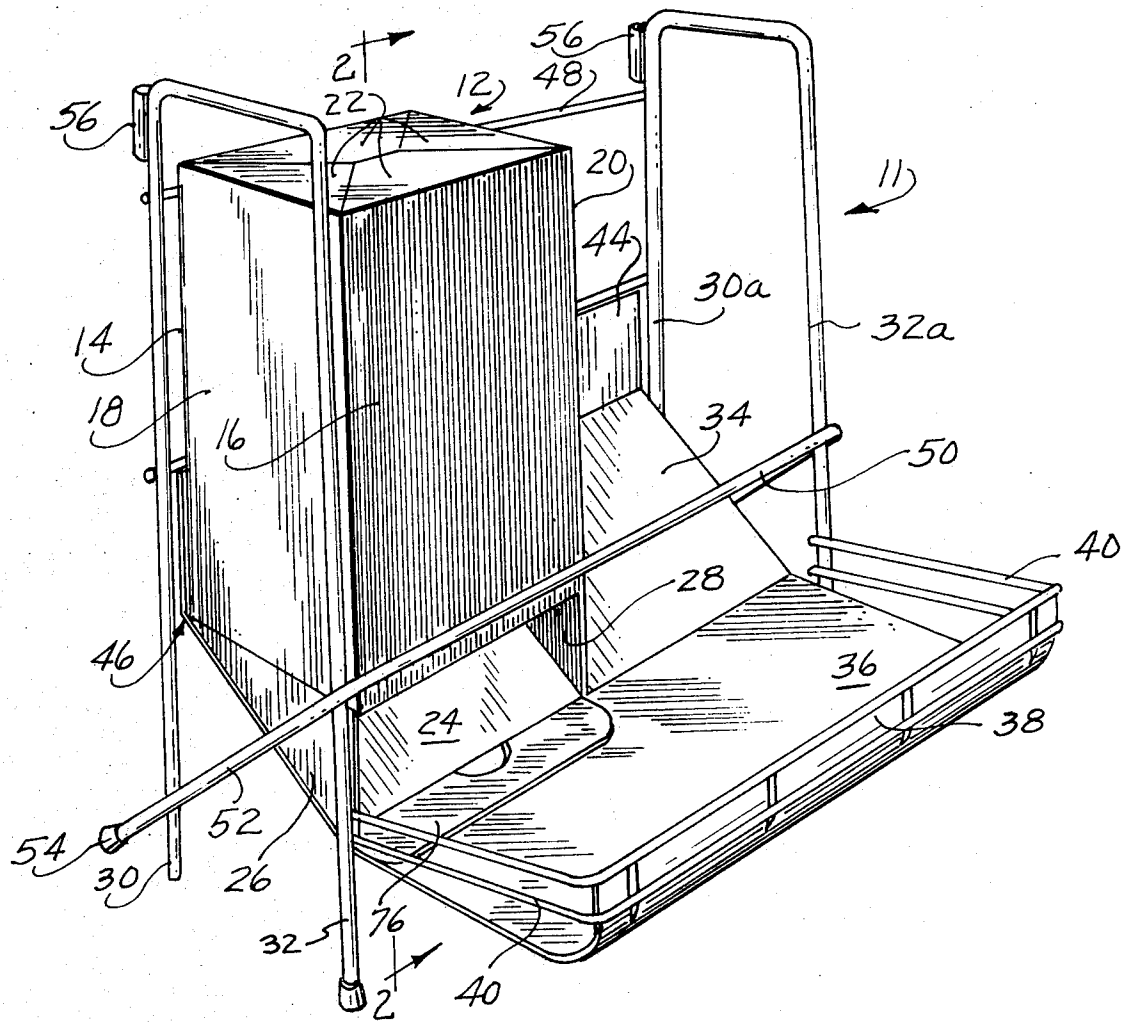


FIG. 1

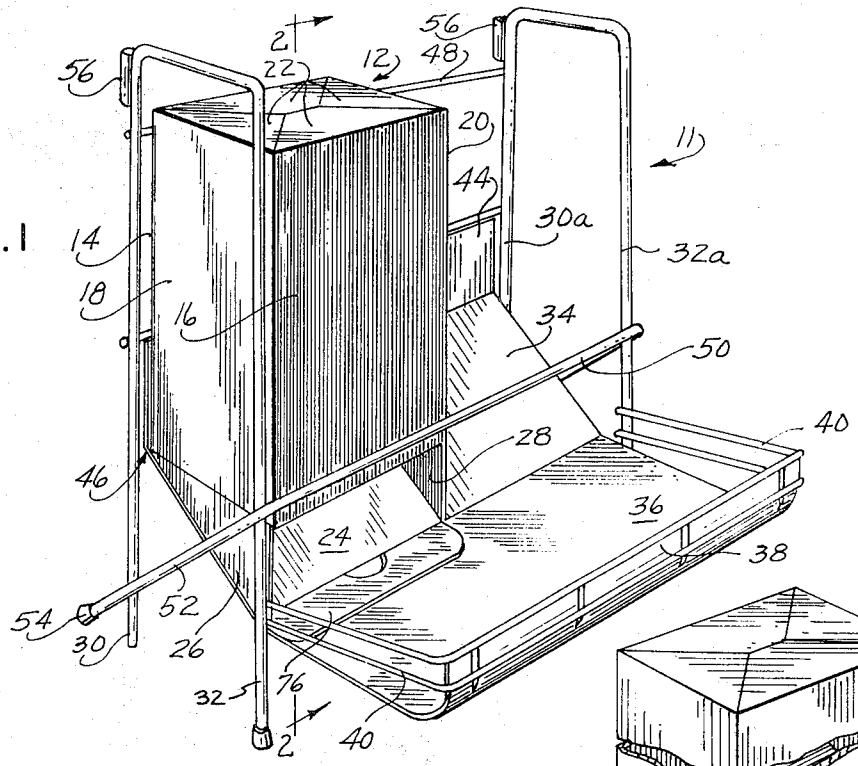


FIG. 2

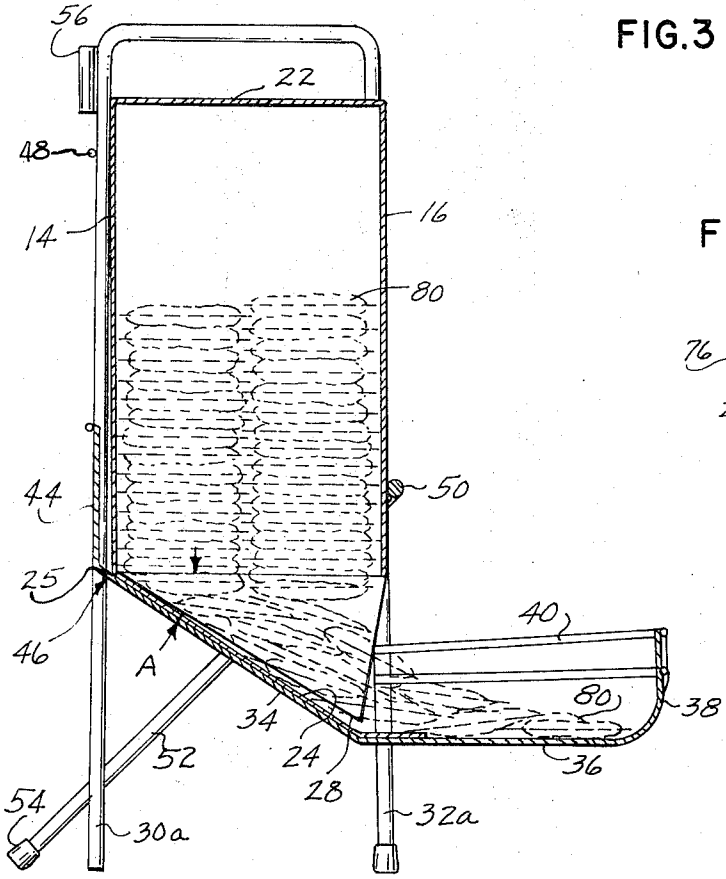


FIG. 3

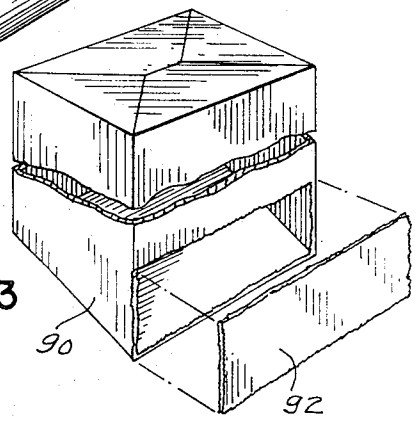
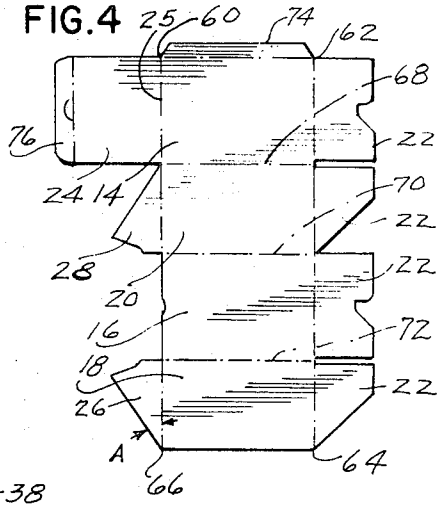


FIG. 4



CONTAINER AND RACK FOR PRESENTING ARTICLES

The present invention relates generally to apparatus for dispensing packaged articles, with a particular application being an apparatus for dispensing portion packaged condiments.

Portion packaged condiments have become popular, but there remains a need for more efficient means for dispensing such items. At present, a common means for dispensing condiments is a rigid container into which the packaged condiments are placed by hand for subsequent removal by the user. If the container is not filled properly the packages may become bound against one another inside the container.

Therefore, the primary object of the present invention is to provide an article dispenser apparatus.

It is another object of this invention to provide dispenser apparatus which is aesthetically pleasing in its appearance.

Still another object of this invention is to provide a dispenser apparatus which is economical to mass produce.

These and other objects and advantages of the invention are more particularly set forth in the following detailed description and in the accompanying drawings of which:

FIG. 1 is a perspective view of a dispenser apparatus showing a container and rack in accordance with the present invention.

FIG. 2 is a section view of the apparatus of FIG. 1 containing packaged articles taken along line 2—2 in FIG. 1.

FIG. 3 is an alternative embodiment, partially broken away, of the container shown in FIG. 1.

FIG. 4 is a blank from which the container of FIG. 1 may be constructed.

While the invention will be described in connection with certain preferred embodiments, it will be understood that it is not intended to limit the invention to these particular embodiments.

Referring to FIGS. 1 & 2, there is depicted a dispensing apparatus embodying the present invention. The apparatus consists of a rack 11 which serves as a holding means for container 12. The container 12 is rectangular in shape and is constructed of any suitable material, such as paper, cardboard or metal foil. The container 12 has four rectangular body portions, a back portion 14, a front portion 16 and two side portions 18 and 20 with suitable closure flaps 22 provided on one end and the other end being provided with a hinged end flap 24 attached to edge 25 of the back rectangular body portion 14 and two hinged side flaps 26 and 28 attached to side body portions 18 and 20. The container is filled by any suitable means which is capable of placing articles, such as condiment packages, in an array within the container; the flaps are then closed for shipment.

The rack is provided with legs 30, 32, 30a and 32a which are generally spaced in a rectangular configuration and which extend vertically. The legs 32 and 32a provide a side restraint for container 12 by having the upper portion of legs 32 and 32a bearing against the container side portions.

To the legs there is attached an inclined container support means 34. The lower terminus of support means 34 projects frontwardly from the plane defined by legs 32 and 32a to form a horizontal tray portion 36. The tray portion 36 is provided with a front wall 38 and end walls 40 so as to form an enclosed area for receiving articles from the container 12 in a manner to be hereinafter described. The inclined support means may be projected rearwardly upward in the plane formed by legs 30 and 30a to provide a rear restraint 44 for the container. A portion 46 of the inclined support means 34 adjacent the upper terminus thereof serves as a bearing surface for a container side edge 25.

An optional rear cross member 48 may be affixed to legs 30 and 30a forming a horizontal member between the legs a predetermined distance above the rear restraint 44. The rear cross member 48 aids in preventing the container from tipping backwards and provides additional rigidity to the rack.

A horizontal cross member 50 is affixed to legs 32 and 32a between the legs a predetermined distance above the lower terminus of inclined support means 34. The cross member 50 restrains forward movement of the front portion 16 of a container 12 to prevent forward movement and downward rotation of container 12. The cross member 60 may be extended angularly downwardly along both sides of the rack toward legs 30 and 30a and may be affixed to legs 30 and 30a so as to form an angled side member 52 which provides further rigidity to the rack. The angled side member 52 may be further extended beyond legs 30 and 30a to provide rear support legs 54 thereby increasing the stance of the rack and providing a more stable rack base.

When it is desired to dispense articles from within the container, the container 12 is inverted and placed within the rack so as to cause the edge 25 of the back portion 14 to bear against portion 46 of the inclined support member 34. The container is then rotated slightly so as to bring the front portion 16 of the container in contact with horizontal cross member 50. Thus supported, the container is in an equilibrium position and does not fall forward or slide down the inclined support. With the container placed in its supported inverted position within the rack, the end flap 24 may be opened so as to come to rest on the inclined support means 34. The enclosed articles 80 will then move downwardly under the force of gravity from within the container 12 onto the tray 36 thereby causing the end flaps 26 and 28 to be forced outward. The flaps are forced outward until they bear against a portion of the leg 32a (or another container flap if a rack capable of supporting two or more containers is being employed). The end flaps 26 and 28 then serve to prevent the articles from spilling over the sides of the inclined support means 34.

The end flaps 26 and 28 are generally triangular in shape with an angle A, as shown in FIG. 2, which generally corresponds to the angular slope of the inclined support means 34. This allows the flaps to have a side which conforms to and may bear against the surface of the inclined support means 34. Thus, when the flaps are in their opened position they serve to aid in the support of container 12. In general, the inclined support means and the pre-formed angular side flaps are formed to provide an angle A as seen in FIG. 2 of from about 10° to about 60°. Preferably, the angle A is from about 20° to about 45°.

The unique construction of the apparatus of the invention provides a highly efficient article dispenser. The individual articles are delivered to the user in com-

pact containers which may be disposed of after use. To re-fill the dispenser apparatus one needs only to remove an empty container, invert a new container, place it in the rack as described and loosen the end flap. The articles will then pass through the opening that is formed and will fill the tray portion of the rack. As an individual article is removed by the user, another article will move from the container into the tray to replace the removed article. The individual articles may be loaded in the container by automated operation. They are neatly arranged within the container and flow smoothly into the tray portion of the rack.

The apparatus as shown in FIG. **1** is capable of holding two containers in a side-by-side relationship. Alternative apparatus in accordance with the invention can include one, two, three or more containers in side-by-side relationship. Additionally, one or more racks and related containers can be placed in vertical relationship by suitable mounting means **56** located on the upper extremities of the rack legs **30** and **30***a* which cooperate with legs **32** and **32***a* to support the vertically positioned rack. The apparatus can also be provided with rigid side flaps along the side edges of the inclined support means thereby eliminating the need for the container side flaps.

In FIG. **4** there is shown a blank from which a container may be assembled in accordance with the preferred embodiment of the container portion of the invention. The blank consists of a rectangular body portion defined by corners **60, 62, 64,** and **66,** divided into a back wall **14,** two side walls **18** and **20** and a front wall **16** by the fold lines **68, 70** and **72.** By folding these walls inward a rectangular container, open at both ends, is formed. A tab **74** may be provided on wall **14** to facilitate affixing wall **14** to wall **18** by glue or other means. To close one end of the rectangular container there are provided closure flaps **22** attached to the sides of walls **14, 16, 18** and **20.** These flaps are merely folded inward until they are perpendicular to their respective walls and secured by glue or the like in that position.

At the other end of rectangular container there is provided on the blank an end flap **24** having a tab **76** attached to the back wall **14** and two generally triangular shaped side flaps **26** and **28** attached to side walls **18** and **20** respectively. To close the remaining open end of the container the side flaps **26** and **28** are folded inwardly until they are perpendicular to their respective walls. The end flap **24** is folded downwardly until it is directly over the side flaps **26** and **28.** The tab **76** is then tucked into place.

As shown in FIG. **3,** an alternative construction for the container **12** is provided for use with the rack of FIG. **1.** This container has one end **90** pre-formed to correspond with the angle of slope A of the inclined support menas **34** and cooperate with the rack to maintain the container in its proper alignment. A flap **92** is provided which may be removed by tearing along score lines or by other suitable means. When the flap **92** is removed an opening is provided through which the articles pass onto the tray **36.** The articles are loaded into the container by means of an opening at the opposite end of the container.

The dispensing apparatus described provides a highly efficient means for dispensing articles. The unique construction of the apparatus is well suited for economical mass production. The container may be constructed of various materials and various decorations or display advertising may be printed on the container.

While various features of the invention are particularly set forth in the disclosure, it is not intended to limit the scope of the invention which is defined in the following claims.

What is claimed is:

1. Apparatus for dispensing essentially flat articles, comprising a container and means holding said container in an inverted vertical position and restraining same from lateral and rotational movement, said container having a hinge-connected end flap provided on the end of one side thereof, said holding means having means cooperating with the hinged side providing support in the vertical direction for said container, and an inclined support shelf disposed on said holding means at an angle with respect to the horizontal downwardly from the hinge-connection restraining said hinged end flap in a position so as to provide an opening in said container for the dispensing of the articles from within said container, said container being further provided with hinge-connected side flaps on either side of said end flap, each of said side flaps having one side which extends from the corner of said container between said end flap and said side flap at an angle downwardly from the hinged side of said flap and essentially parallel with said inclined support shelf, and said means holding said container further including a horizontally extending tray adjacent the lower terminous of said shelf to hold the dispensed articles in an accessible disposition.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,776,419 Dated December 4, 1973

Inventor(s) Bernhard A. Zinkgraf et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

First page, the Assignee should be --Kraftco Corporation-- instead of "Krafto Corporation".

Column 2, line 23, "crossmember 60" should be --crossmember 50--.

Column 2, line 24, "downwardly" should be --downward--.

Column 4, line 7, "menas" should be --means--.

Column 4, line 44, "said flap" should be --said side flap--.

Signed and sealed this 10th day of September 1974.

(SEAL)
Attest:

McCOY M. GIBSON, JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

FORM PO-1050 (10-69)

USCOMM-DC 60376-P69
* U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334.