

April 26, 1960

J. A. WICKSTROM

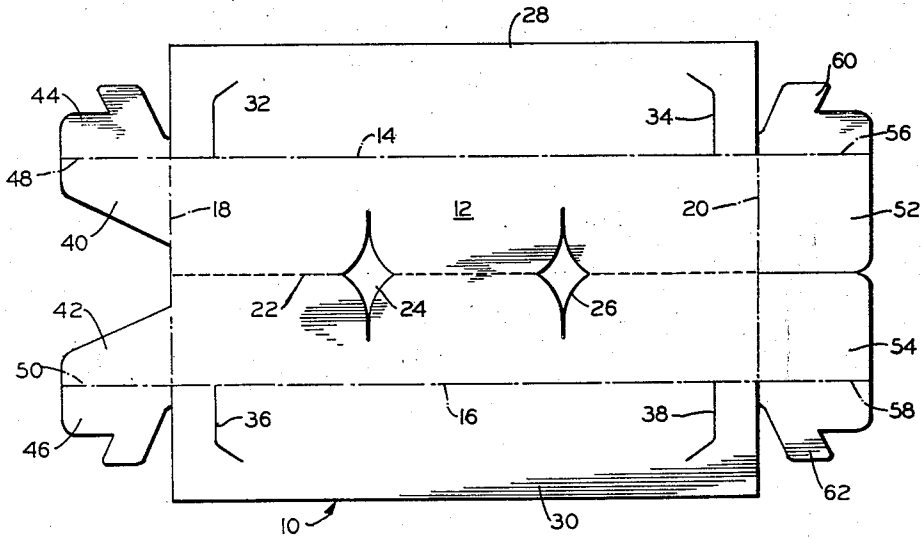
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TRAY INSERT FOR PACKAGES

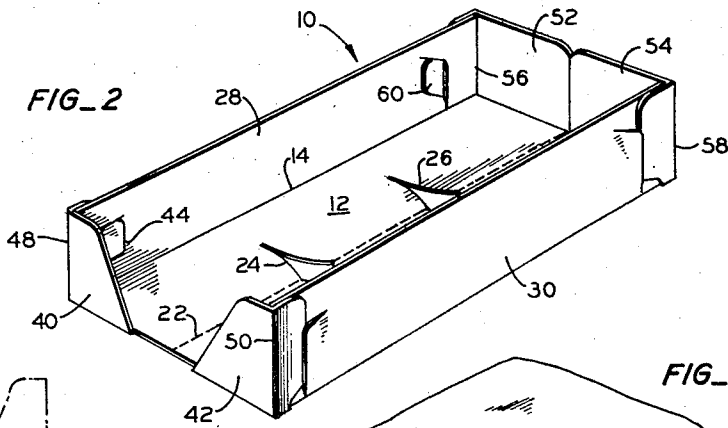
Filed May 11, 1959

2 Sheets-Sheet 1

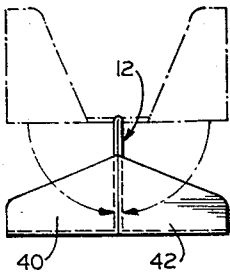
FIG\_1



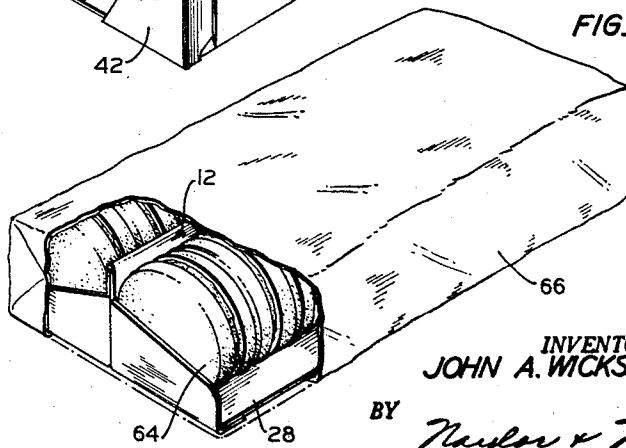
FIG\_2



FIG\_3



FIG\_4



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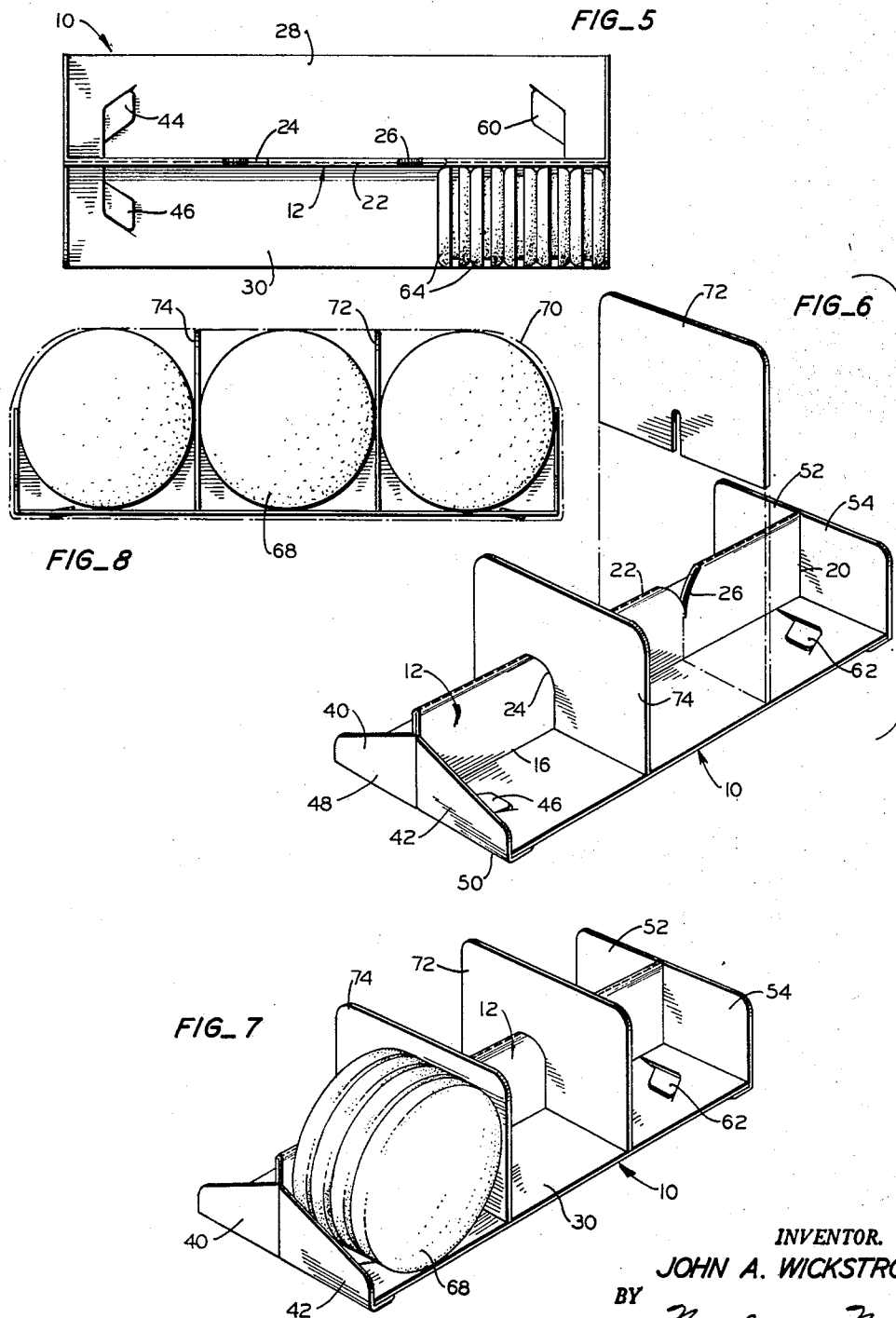
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2 Sheets-Sheet 2



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TRAY INSERT FOR PACKAGES

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Application May 11, 1959, Serial No. 812,168

6 Claims. (Cl. 229—35)

This invention relates to a tray formable from a pre-cut and scored blank which is particularly useful in the packaging of cookies and like articles requiring protection against breakage and chippage during handling after packaging.

It is an object of this invention to provide a tray insert for the support of articles such as cookies, which, while permitting a maximum of visibility of said articles for display purposes, is nevertheless rigid against bending, and through a relatively stiff backbone member prevents twisting or warping of the tray and the chipping or breakage of such articles, often incident thereto.

It is a further object of this invention to provide an insert of the character described, formable without the use of adhesives or fasteners from a paperboard blank, the central panel of which is folded upon itself to form the rigidifying backbone, which latter is maintained in its folded condition by the overwrapping material of the package or one or more partition members fitted over said backbone.

Yet another object of this invention is to provide a tray insert for packages which accommodate articles of a relatively wide variety of sizes, being particularly useful for the packaging of various sizes of cookies.

Additional objects of this invention will become apparent from the following description when taken in conjunction with the drawings in which:

Figure 1 is a view in plan of a blank pre-cut and scored for forming into a tray insert.

Figure 2 is a view in perspective of the insert in an intermediate stage of assembly.

Figure 3 is a view in end elevation of an assembled insert with the method of final assembly from the stage of Figure 2 being indicated in phantom.

Figure 4 is a view in perspective showing one manner of use of the insert with a transparent overwrap disposed thereabout.

Figure 5 is a view in plan of a partially filled insert, loaded as in Figure 4.

Figure 6 is a partially exploded view in perspective illustrating the manner of assembling partition members upon the tray backbone member for maintaining said backbone member in folded condition and for separating articles disposed with their faces parallel to said backbone member.

Figure 7 is a view similar to that of Figure 6, with a compartment of the insert loaded in typical fashion.

Figure 8 is a view in side elevation of an insert, assembled as in Figure 6, fully loaded with cookies and overwrapped with a material the contour of which is indicated in phantom outline.

Referring to Figure 1, there is shown a tray blank, generally designated 10, preferably of paperboard or similar easily foldable material, which is provided with a plurality of score lines to facilitate its assembly. Blank 10 is comprised of a rectangular central backbone panel 12 defined at either side by longitudinally extending score lines 14 and 16 and at its ends by transverse score

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lines 18 and 20. A score line 22 extends longitudinally of panel 12 mid-way between the score lines 14 and 16 bisecting star-shaped panel cut-outs 24 and 26, the mid-points of which latter trisect score line 22 permitting partitioning of central panel 12 into three equal portions as hereinafter described. Rectangular side support panels 28 and 30 extend outwardly from backbone member 12 being coextensive therewith and hingedly secured to said panel along score lines 14 and 16. At either end of panels 28 and 30, there are provided pairs of opposed angular end wall or hanger member locking slits 32 and 34, and 36 and 38 of biangular shape formed by transverse and oblique cuts.

Extending to the left of panel 12, as viewed in Figure 1, are a pair of tapered end wall or support panel hanger members 40 and 42, each hingedly secured to said panel along the score line 18 and astraddle the score line 22, as projected. Locking ears 44 and 46 are hingedly secured to members 40 and 42 along score lines 48 and 50, the latter respectively formed as extensions of score lines 14 and 16, and are slit along their edges adjacent side panels 28 and 30 to permit their free folding and insertion within slits 32 and 36, respectively, upon assembly of the blank into tray form.

At the opposite, or right end of panel 12, there extend end wall or support panel hanger members 52 and 54, of generally rectangular shape, hingedly secured to central panel 12 along score line 20 at either side of score line 22, as projected, and defined in part by score lines 56 and 58, formed as projections of score lines 14 and 16, respectively. Locking ears 60 and 62, similar in shape and function to opposed ears 42 and 46, are hingedly secured to members 52 and 54 along score lines 56 and 58, respectively, being slit adjacent side support panels 28 and 30 to permit their free folding and insertion into slits 34 and 38, respectively.

In assembling the blank 10 into the intermediate stage of Figure 2, side support panel members 28 and 30 and end wall members 40 and 42, and 52 and 54 are upfolded into vertical positions and their respective ears then folded about their defining score lines to lap the adjacent end portions of the panels 28 and 30 and inserted into the locking slits provided therein to lock the said panel members to their associated end wall members. As indicated in Figure 3, the final step in forming the insert consists of downfolding either side of the tray about score line 22. In so doing, central backbone panel 12 is folded upon itself and assumes an upstanding position, thus becoming a double thickness relatively stiff and strong backbone of the tray insert and an effective centrally disposed divider. The tray 10 is now ready for loading with the articles to be packaged in the manner of Figure 4, wherein, for purposes of illustration, are shown cream-filled cookies 64. As there shown, cookies 64 are disposed face to face with their diameters extending transversely of tray 10, and in tight fitting relationship between the end walls 40 and 42, and 52 and 54. In order that the cookies 64 may be adequately protected against edge chipping and breakage, it is preferable that they not project substantially beyond the outer margins of the tray 10 as defined by side support panels 28 and 30 and the coextensive transverse end wall, or panel support members. With cookies 64 thus positioned, the tray 12 is overwrapped, preferably with a transparent film 66 such as cellophane, which is rather tightly drawn thereabout serving to maintain such tray in fully assembled condition as well as to some extent rigidifying the tray.

As previously indicated, it is preferable that the diameters of the cookies 64 be of approximately the same dimension as the width of the side support panels 28 and 30, and further that such diameters be substantially

the same as the height of the folded backbone panel 12, thus facilitating the formation of an attractive substantially rectangular finished package when finally overwrapped with film 66. It should be noted that the tapered end walls 40 and 42 offer effective truss-like support for panels 28 and 30 while, by virtue of their taper, at the same time permitting end viewing of the tray contents for display purposes. The opposite end walls 52 and 54 similarly provide panel support, as well as defining one end of the package. When finally made up as in Figure 4, the package offers considerable resistance against warpage or twisting through the tightly packed rows of cookies and the coaction of the tightly wrapped film 66 with the relatively stiff backbone panel member 12 trussed at either end by members 40 and 42, and 52 and 54.

An important feature of the tray insert of this invention is its ready adaptability to handling cookies of substantially different diameters while nevertheless offering good protection against breakage and chippage and visibility for display. Thus, in Figure 8 are illustrated relatively large cookies 68 as finally overwrapped in package film 70. The cookies 68 are disposed face to face with their diameters extending longitudinally of the tray, and centrally notched partition members 72 are provided for receipt in the notches in the upper edge of backbone panel member 12 formed by the star-shaped apertures 24 and 26 upon the folding of said backbone panel member. When assembled, partition members 72 and 74 extend transversely of tray 10, at their lower ends abutting the side support panels 28 and 30 and dividing the tray into six substantially similar compartments.

In addition to serving as dividers, members 72 and 74 serve to maintain the backbone panel 12 in folded condition and act as stiffeners adding rigidity to the tray and preventing the aforementioned undesirable tray warpage. The cookies 68, when positioned as in Figure 8, of course do not offer the resistance to tray warpage occasioned by their positioning as in Figure 4, and in fact, without the partition members 72 and 74 would be susceptible to edge breaking and chippage from twisting forces exerted upon the package tray. The protection offered by the members 72 and 74 is therefore readily apparent.

After setting up the tray in the manner previously described and thereafter assembling the partitions astraddle backbone member 12, the tray 10 is filled with cookies 68 in the fashion of Figure 7 and the filled tray then overwrapped with a preferably transparent film 70, such as cellophane, to assume the contour shown in phantom in Figure 8. It is preferable that the vertical dimensions of members 72 and 74 be substantially the same as the diameters of the upright cookies 68 to facilitate the forming of an attractive package with a relatively smooth top contour defined at either end in part by the end rows of cookies.

It is apparent that the package of Figure 8 is particularly satisfactory for display, since not only the edges, but the entire outer face of each of the outermost cookies in each compartment is visible through the transparent film 70.

It should be understood that the embodiment of my invention as above described may be altered, changed or modified without departing from the spirit or scope of the invention as herein claimed.

What is claimed is:

1. A tray insert for packages formed from an integral cut and scored foldable blank and comprising a longitudinal backbone of double thickness formed by folding a central panel about its longitudinal axis, a pair of side support panels hingedly secured to the lower end of the

backbone and extending outwardly and at right angles to either side thereof, said side support panels each having at either end a locking slit, opposed panel hanger members hingedly secured at either end of the backbone extending outwardly and at right angles thereto to embrace the ends of the side support panel members, supporting the same in truss-like fashion and being releasably secured to said side support panel members through ears received in the end disposed locking slits therein.

2. The combination of claim 1, wherein, the backbone is provided with one or more notches along its upper edge for reception therein of transverse notched partition members.

3. A tray insert for packages formed from an integral cut and scored foldable blank and comprising a centrally disposed longitudinal stiffening backbone of double thickness, a pair of side support panels having locking slits at either end and hingedly secured to the lower end of the backbone to extend laterally and at right angles thereto, pairs of opposed end wall members hingedly secured at either end of the backbone panel, each member of which is provided with a locking ear foldable about an axis normal to the backbone panel to fit in locking relationship within an associated locking slit of the side support panel to thereby provide underlying end support for said side support panel, tying the same in truss-like fashion to the backbone member.

4. A tray blank comprising a substantially rectangular central panel scored for folding upon itself and defined at its ends and sides by transverse and longitudinal score lines, a pair of rectangular side support panels hingedly secured at opposite sides of the central panel along said longitudinal score lines, said side support panels being provided at either end with ear-receiving slits, panel hanger members hingedly secured in pairs at either end of the central panel along the transverse score lines for independent folding thereabout, and locking ears hingedly secured to the outer ends of each of the hanger members along score lines formed as end-extensions of the longitudinal score lines.

5. The combination of claim 4, wherein one or more partition receiving cutouts are provided in the central panel intermediate the side margins and extending to either side of the central panel score line.

6. A tray blank comprising a substantially rectangular central panel foldable about its longitudinal axis upon itself, a pair of side support panels hingedly secured at either side of the central panel for folding about axes parallel to the longitudinal axis of the central panel, each of the side support panels having ear-receiving locking slits at either end, hanger members disposed in pairs and hingedly secured at either end of the central panel astraddle its longitudinal axis for independent folding about axes normal thereto, and ears hingedly secured to each of the hanger members foldable about axes aligned with the respective axes of folding of the side panel support members, said ears when folded being adapted to fit within associated locking slits in the side support panel members to hold said support panel members in folded condition and in right angle relationship with respect to those portions of the central panel adjacent thereto.

#### References Cited in the file of this patent

#### UNITED STATES PATENTS

2,152,079	Mott .....	Mar. 28, 1939
2,706,075	Battery .....	Apr. 12, 1955