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J. S. SAYLOR

2,179,731

BOX

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Fig. 1

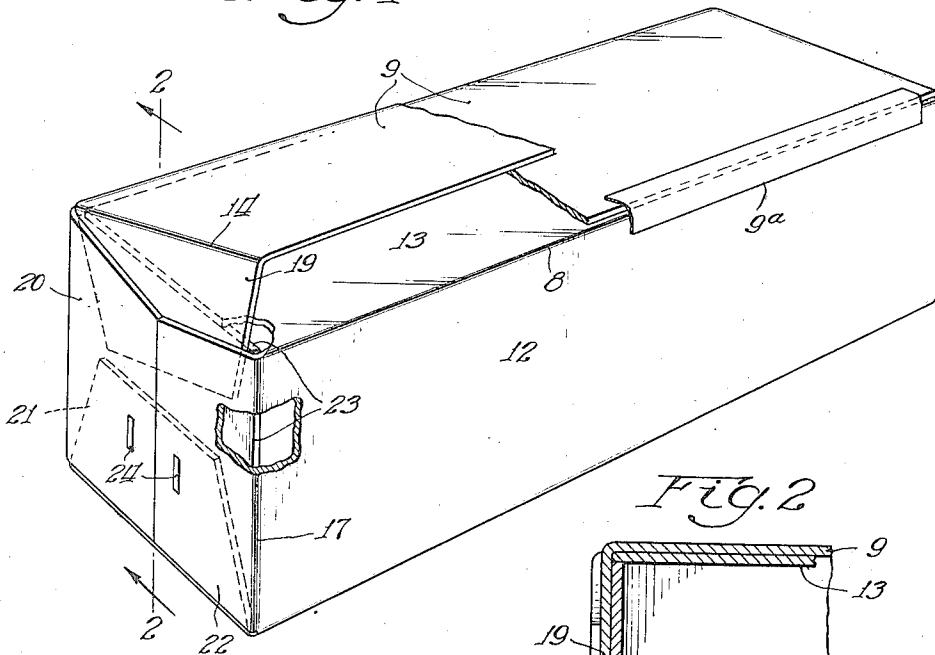


Fig. 2

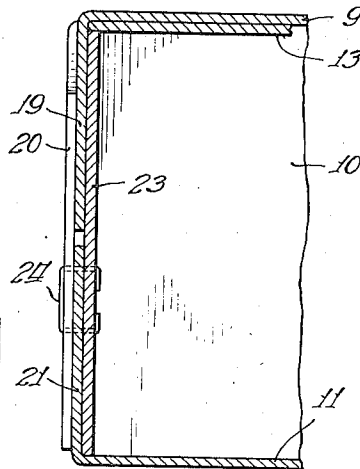


Fig. 3

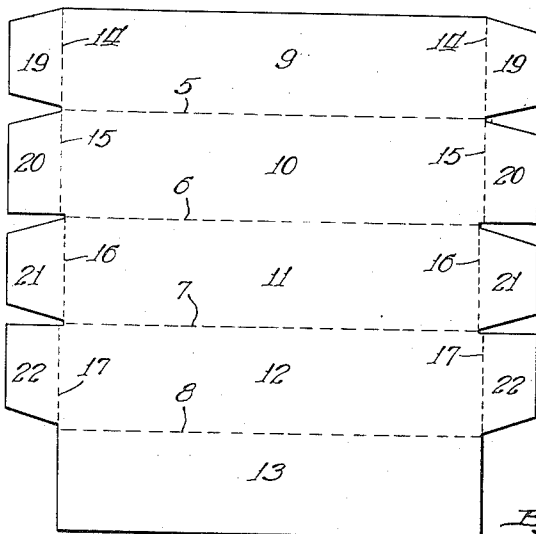
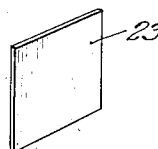


Fig. 4



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UNITED STATES PATENT OFFICE

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BOX

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3 Claims. (Cl. 229—33)

This invention relates to the construction of boxes composed of paper, cardboard, fiber board and the like and, more particularly, to boxes specially constructed for the packaging of such materials as cheese, butter, lard and other commodities of a similar nature which may be poured or molded within and to the interior shape of the box or which may be pre-formed before being placed in the box, the box then preserving the the shape of the contents during shipment and handling.

One of the objects of the invention is to provide a box constructed in such manner that commodities of the character of those mentioned may be packaged therein in either of the ways specified for shipment and handling with a minimum chance of injury to shape or quality of the contents, the box or container, in a preferred form, also being so arranged and constructed that the contents may be removed as a whole or in severed parts in a predetermined shape or shapes.

Another object is to provide a simple and economical type of box from the standpoint of forming or cutting the blanks and from the standpoint of assembly or folding into final shape from the preformed blank. In this connection the invention contemplates the use of reenforcing members at the opposite ends of the box, the members also serving to assist the shaping of the interior of the box to more or less predetermined dimensions, to maintain uniformity as between two or more boxes, to provide, with other parts, a slot or recess into which tuck flaps on a top or cover may be received, to protect the box and contents from deformation or injury under rough handling or shipping conditions, to provide a smooth and regular interior end wall for various purposes and to provide numerous other advantages as may become apparent.

Other objects as well as the advantages and use of the invention will be appreciated and understood by those skilled in the art after reading the following description and claims and after viewing the accompanying drawing of a preferred embodiment. In the drawing:

Fig. 1 is a perspective view of a box constructed to contain brick cheese.

Fig. 2 is a section thereof taken along the line 2—2 of Fig. 1.

Fig. 3 is a developed view of the box of Fig. 1 showing the blank as cut and scored ready for folding, and

Fig. 4 is a perspective view of one of the relatively stiff members used to reinforce the ends, to align the sides and so forth.

The box shown in Fig. 1 is formed from a single sheet of material such as paper, cardboard, fiber board or the like cut and scored as illustrated in Fig. 3. The sheet after or while being cut to the shape and proportions shown, is scored along parallel score lines, 5, 6, 7 and 8 to segregate the same into what may be termed wall sections or panels 9, 10, 11, 12 and 13. Also score lines 14, 15, 16 and 17 segregate or define end closure flaps 19, 20, 21 and 22 which are separated from one another during the cutting of the blank as will be understood. It will be noted that score lines 16 are off-set inwardly a short distance from score lines 14, 15 and 17.

The panel or section 11 is to form the bottom wall, the immediately adjacent panels or sections 10 and 12 are to form the side walls and the other panels or sections 9 and 13 are to form the double top wall or closure element of the box illustrated. In forming the box the side wall sections 10 and 12 may be folded first by bending the blank along score lines 6 and 7 to bring the side walls perpendicular to the bottom wall section 11. The end flaps 21 will also be folded upwardly along score lines 16 to bring them to positions perpendicular to the bottom. Thereafter the top wall section 13 will be folded over along score line 8 to dispose the section at right angles to side wall section 12 and, similarly, the top wall section 9 is folded down on score line 5 to a position at right angles to side wall section 10 and overlapping section 13.

The top wall section 9 may be retained in closed position by any convenient means such as gummed tape 9^a disposed to overlap the upper portion of side wall 12 and an adjacent portion of top wall section 9, thereby sealing the box.

As sections 10 and 12 are folded into position the end closure flaps 20 and 22 are folded toward one another on score lines 15 and 17, respectively, into positions overlapping the outside faces of bottom flaps 21, as indicated in Fig. 1. The flaps 20, 22 are shown as proportioned substantially to abut one another when in final position but may be constructed to overlap one another as will be appreciated. When the flaps 20, 21 and 22 are in their properly related positions, a relatively stiff fiber board or other material member or platelike reenforcing counter 23, the size and shape of which preferably exactly conforms to the final interior size and shape of the box cross-section, is disposed against the interior face of each flap 21, whereupon one or more suitable fasteners, such as staples 24 are passed through member 23 and clinched to hold them to-

gether in their proper positions. Of course, gum, glue or other adhesive substance or other means may be substituted for the staple or staples and the portions of staples 24 which are disposed in the box interior may be depressed or counter-sunk to lie flush with the surface of member 23.

When the box ends have been formed as described, the flaps 20 and 22 are spaced from the adjacent members 23 by the thickness of a flap 21 which leaves slot pockets or slitlike recesses above flaps 21 into which the cover or top section flaps 19 may be tucked or slid when the cover is moved down into closing position. The members 23 not only perform the function mentioned immediately above but also serve to fix the limits to which the side wall sections and the top and bottom sections may be moved toward one another and, therefore, serve to maintain uniformity in size and shape of the box interiors. In addition members 23 reinforce the box and present a relatively smooth and even surface at each end for the purposes previously mentioned.

A box constructed in or after the manner described lends itself very readily for such purposes as the packaging of soft cheese, butter, lard and the like which may be flowed while soft or in a fluid or plastic state, into a paper or metal foil liner (not shown) already positioned and arranged within the box. After the cheese, lard or other commodity has set or hardened it will conform substantially to the shape of the interior of the box, the outline or surfaces and edges being sharply defined. Consequently the commodity in its paper or metal foil wrapper or liner, may be removed as a whole from the container very readily (as for instance in a brick-shape) or, if desired, may be cut into sections and dispensed in that form, each section substantially retaining a part of the sharp outline of the box wall.

While a preferred embodiment of the invention has been illustrated and described it will be apparent that many other embodiments and modifications may be devised by those skilled in the art without departing from the spirit of the invention and the scope of the appended claims.

I claim:

1. A box comprising a single sheet of material such as fiber board cut and scored to provide a bottom wall, side walls, a top wall and end closure flaps at each end of each of said walls, the flaps on the ends of the side walls being adapted to overlap the flaps on the ends of the bottom wall outwardly of the latter flaps, a relatively stiff

independent member of dimensions and shape corresponding to the interior dimensions and shape of the box at the ends thereof disposed at and across each end of the box and against the interior face of the bottom wall and flap, and means securing said end flaps and members in their relative positions, said top wall end flaps being adapted to be tucked into slots provided between said members and said side wall end flaps.

2. In a box construction, a single sheet of material such as fiber board and the like cut and scored to provide relatively rectangular bottom, side and top walls and end closure flaps at opposite ends of each of said walls, the end closure flaps at the respective ends of the side walls being folded toward one another over and against the outer faces of the respective end flaps of the bottom wall, said bottom wall end flaps extending upwardly toward the top wall a distance less than the box depth, a relatively stiff member of dimensions and shape corresponding to the interior cross sectional dimensions and shape of the box at an end thereof disposed across each end and against the interior face of said bottom wall end flaps, and means passing through said side and bottom wall end flaps and said member at each end for securing the same together, each of said members and the adjacent side wall end flaps being spaced adjacent to the box top whereby to provide a slot for the reception of a top wall end flap.

3. A box formed of foldable fibreboard comprising a bottom wall, side walls integral therewith, end closure flaps at the ends of each of said walls, the flaps on the ends of the side walls being adapted to overlap the flaps on the ends of the bottom wall outwardly of the latter flaps, a relatively stiff, independent member of dimensions and shape corresponding to the interior dimensions and shape of the box at the ends thereof disposed at and across each end of the box and against the interior face of the bottom wall end flap, means for securing said end flaps and members in their relative positions, said bottom wall end flaps extending upwardly a distance less than the box depth, whereby to provide a slot between said member and the side wall end flaps at each end of the box, a top closure for the box, including a top wall panel and end flaps at each end thereof, said flaps being adapted to be tucked into the slots between said independent members and the side wall end flaps.

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