June 24, 1947. S. B. HOGDAL 2,422,899

PACKAGE

Filed March 26, 1945

FIG. 1.

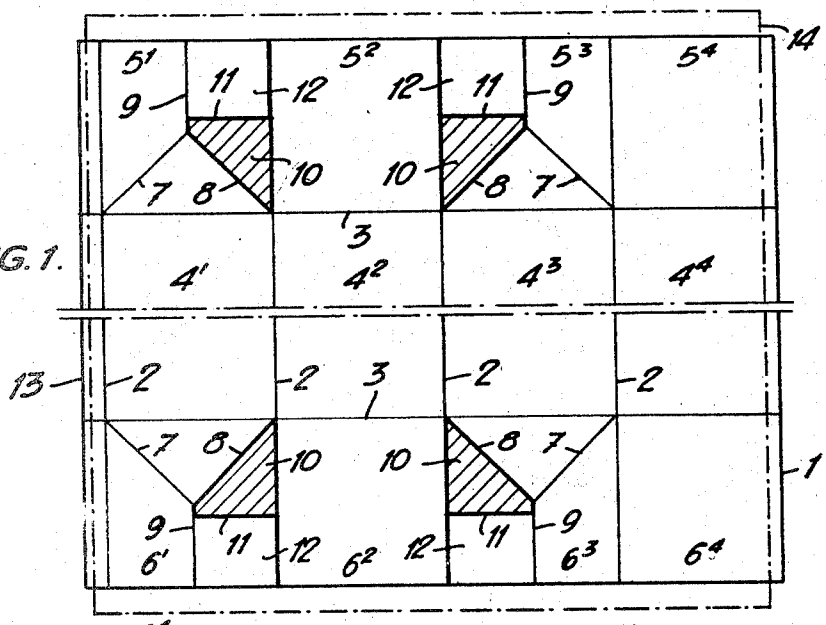


FIG. 2.

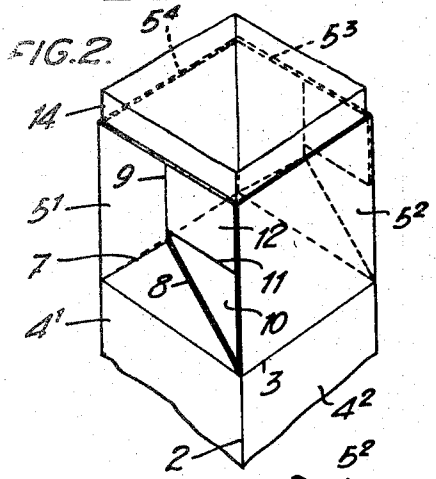


FIG. 3.

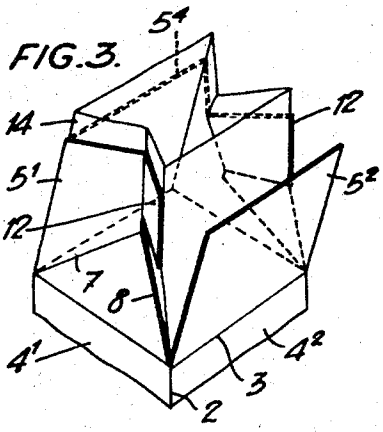


FIG. 4.

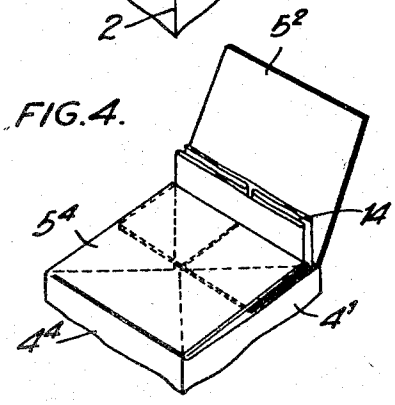
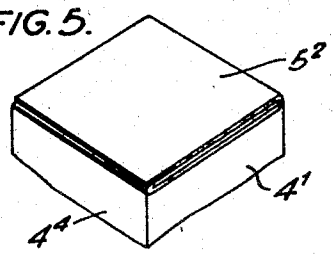


FIG. 5.



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UNITED STATES PATENT OFFICE

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PACKAGE

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2 Claims. (Cl. 229—14)

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This invention relates to packages, especially for finely divided material, of the type which includes a box of stiff material, as cardboard, and an unslitted lining of easily foldable material, as paper, inserted therein. More particularly, the invention relates to packages of the said type in which the side panels of the box are formed, at least at one end, with end panels foldably connected with the respective side panels for closing the package, one of said end panels being a separate closing flap, while the remaining end panels are joined with each other at the corners of the box. According to the invention the two opposite ones of said joined end panels are each formed with oblique fold lines extending from the bottom corners of the end flaps to the centres thereof as well as with a fold line extending longitudinally from the centre of the flap to the top edge thereof. Furthermore, a piece of the panel is cut away, said piece being bounded by the free lateral edge thereof, the adjacent oblique fold line and a line extending from the centre of the panel to said lateral edge parallel with the top edge of the panel. As a result, the piece of the panel remaining between said cut away portion and the top edge of the panel will form a flap foldable around the longitudinal fold line of the panel. These flaps together with the adjacent portions of the respective end panels afford handy grips for the fingers in folding the panels to close the box. With the lining pasted to said flaps and the respective end panels the lining is automatically folded accordingly without wrinkling or creasing.

In the accompanying drawing an embodiment of the invention is illustrated. Fig. 1 is a development of the blanks for the box and lining. Fig. 2 is a perspective view of one end of the box in open state. Fig. 3 is a perspective view of said box end in a preliminary stage of closing. Fig. 4 is a perspective view of the box end prior to the last stage of closing. Fig. 5 is a view of the box end completely closed.

The blank of the box is cut out from a piece of cardboard or other stiff material. Its outline is represented by the receptacle 1 shown in heavy lines in Fig. 1. By means of a number of longitudinally extending fold lines 2 and two transversely extending fold lines 3 the blank is divided into four side panels 4^1, 4^2, 4^3, 4^4 and a corresponding set of end panels 5^1, 5^2, 5^3, 5^4 and 6^1, 6^2, 6^3, 6^4, outside each fold line 3. The end panels 5^2, 5^4 and 6^2, 6^4 have no fold lines. The end panels 5^1 and 5^3 on opposite sides of the end panel 5^2 and the panels 6^1 and 6^3 on opposite sides of the panel 6^2 are formed with oblique fold lines 7, 8

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extending from the bottom corners of the panels to about the centres thereof as well as with longitudinal fold lines 9 extending from the centres to the top edges of the panels. Each of the panels 5^1 and 5^2 is formed with a cut away portion 10 indicated by shading lines which is bounded by the fold line 8, the respective longitudinal fold line 2 and a transverse line 11 extending from a point of line 9 adjacent the centre of the panel to said longitudinal fold line 2.

The rectangular area 12 outside each cut away portion 10 which is bounded by the fold lines 9 and 2, line 11 and top edge of the panel is severed from the end panel 5^2 along the fold line 2. By this means, the panels 5^2 and 6^2 become separate closing flaps foldable around the respective transverse fold lines 3, while the areas 12 become lateral flaps foldable around the fold lines 9, but quite free at their other edges.

At one longer edge, i. e. the left hand edge of the box blank, is shown a pasting strip 13 foldable around the extreme left hand fold line 2.

The blank to form the lining is indicated by the dotted line 14 in Fig. 1. The lining projects to a certain extent beyond the ends of the cardboard blank 1. It is quite unslitted. It is preferred to paste the lining to the cardboard blank; this is due especially in case of the end panels 5^1, 5^3 and 5^4. It is to be noted, however, that the lining must not be pasted to the separate closing flaps 5^2 and 6^2.

To form a package of the composite blank shown in Fig. 1, the cardboard blank with the lining pasted thereto is folded around the longitudinal fold lines 2 and pasted along the strip 13 so as to form an open-ended "tube" of rectangular cross section, as shown in Fig. 2. To close the open end shown in this figure, I grasp the tube with my both hands and hold it, for instance, so that the separate closing flap 5^2 is on the side of the tube next to me. With my forefingers I then force the end panels 5^1 and 5^3 inwards, while at the same time pressing with my middle fingers against the end panel 5^4 remote from me. By this operation the end panels 5^1 and 5^3 are folded at the lines 3, 7, 9, while the end panel 5^4 remote from me is folded only at its base line 3. Because of the pasting of the lining to the cardboard blank the lining is caused to partake of the folding movements described, as will appear from Fig. 3. The folding operation thus started is continued until the end panel 5^4 lies flat upon the inwardly folded panels 5^1 and 5^3. In this position the triangular base portions of the end panels 5^1 and 5^3 extend at right angles

to the respective side panels 4^1 and 4^3 and the flaps 12 are embedded between said triangular portions and the remaining portions of panels 5^1, 5^3 the correspondingly folded lining upstanding between the folded down panels and the separate closing flap 5^2 still remaining in its upright position, as shown in Fig. 4. Then said separate flap is folded down to cover the end of the box and finally the portion of the end panel 5^2 extending beyond the lining is pasted to the underlying end panel 5^4.

Now the end is completely closed, the separate flap 5^2 covering the entire end surface as shown in Fig. 5.

The same operations are then made in respect of the other end of the box, not shown.

What I claim is:

1. A package for the purpose set forth, comprising a box of stiff material and an unslitted lining inserted therein, said box having side panels and, at least at one end, a set of end panels foldably connected with the respective side panels of the box for closing the package, one of said end panels being separate from the adjoining end panels, while the remaining end panels are joined with each other at the corners of the box, the two opposite ones of said joined end panels having oblique fold lines extending from their bottom corners to approximately their centres and longitudinal central fold lines extending from approximately said centres to the outer edges of the panels, each of said panels also having a portion cut away leaving outwardly thereof a flap-like portion foldable around the longitudinal central fold line of the respective panel.

2. A package for the purpose set forth, comprising a box of stiff material divided by fold

lines into side panels and, at least at one end, a set of end panels foldably connected with the respective side panels of the box for closing the package, one of said panels being a separate closing flap, while the remaining end panels are joined with each other at the corners of the box, the two opposite ones of said joined end panels having oblique fold lines extending from their bottom corners to about their centres and longitudinal central fold lines extending from said centres to the top edges of the panels, each of said panels having further a cut away portion bounded by the longitudinal free edge of the panel, the adjacent oblique fold line and a transverse fold line extending from about the centre of the panel to the free longitudinal edge thereof, so as to leave a flap-like portion foldable around the longitudinal central fold line of the panel, an unslitted lining being inserted in the box, said lining being pasted to the flap-like portions and the remaining portions of said oppositely positioned end panels but being quite free from the separate closing flap.

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