Nov. 25, 1930. J. R. WEIDNER 1,782,915

BOX INSERT

Filed March 8, 1929

FIG. 1.

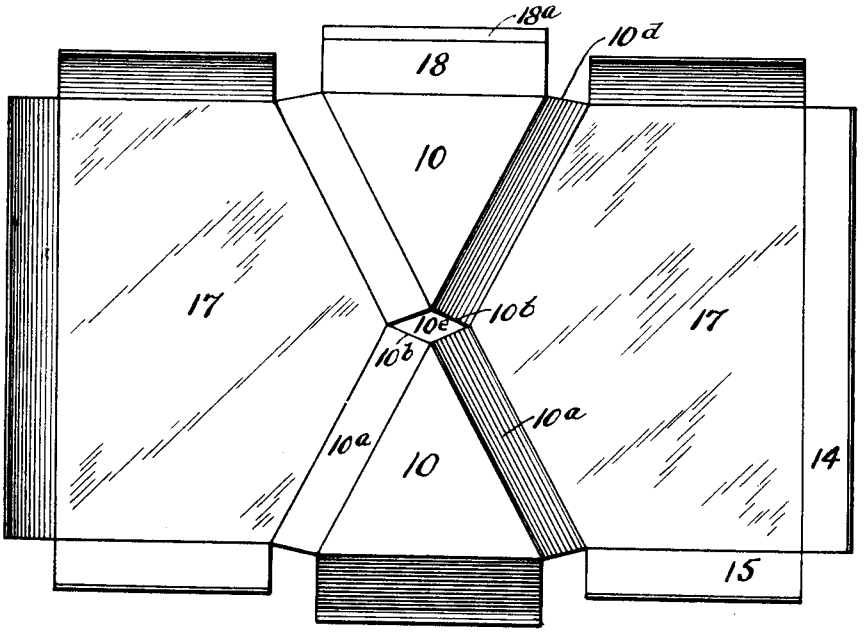



FIG. 2.

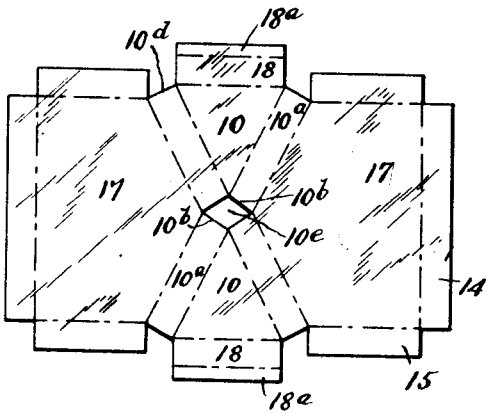
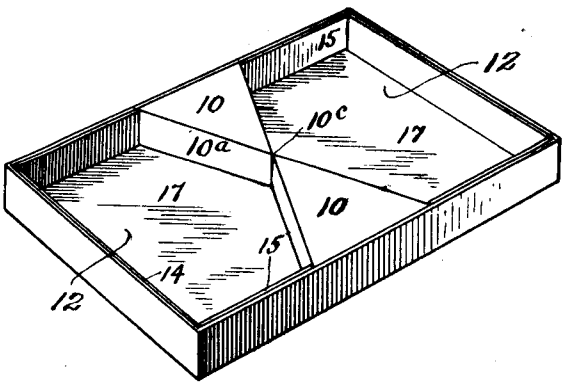



FIG. 3.




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# UNITED STATES PATENT OFFICE

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## BOX INSERT

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This invention relates to box inserts or so-called "frogs" adapted to form determined receiving compartments, in paste board boxes particularly, for proper reception of goods to be packed therein; and it consists in the improved foldable blank and insert device hereinafter fully described in connection with the accompanying drawings, the novel features of which are clearly pointed out in the subjoined claims.

Fig. 1 is a plan view of a partially folded blank embodying my complete invention; the required bendings for shaping the insert to the rectangular box to which it is adapted, being only sufficiently made to indicate clearly the final form of the shaped insert.

Fig. 2 is a reduced flattened-out view of the blank, indicating the required scorings or bending-lines upon which the partial bends indicated in Fig. 1 are made.

Fig. 3 is a perspective view showing the shaped insert applied to a box.

As indicated in the drawings the improved insert is arranged to provide a complete box lining covering the bottom and side walls of the box, as well as to provide two laterally converging V-shaped platforms 10, 10, midway of the length of the box, whereby separated compartments 12, 12 are formed as required for correspondingly shaped or folded goods; it being readily understood however that the indicated provision for wall-lining extensions of the bottom portions of the blank may be omitted or modified as the box construction calls for.

The flattened-out blank illustrated in Fig. 2, is formed by suitable dies, with scorings as indicated by long-and-short-dotted lines for facilitating the required bendings shown in Figs. 1 and 3; the upturnable wall-lining extensions 14, 15 being added if desired to the essential blank form required for the covering of the box-bottom and the providing of the V-shaped division platforms 10, 10.

For these essential purposes the end portions 17, 17 of the blank are made to correspond in width with the interior of the box, while the intermediate portion is made of increased width to provide for forming the V-shaped platforms; thus incidentally effecting a lengthening of the blank as hereinafter described.

This widened intermediate portion of the blank is adapted for bending-up on the scored lines so as to raise the V-shaped platforms 10, 10 substantially to a level with the top edges of the box; and it comprises in addition to the V-shapes 10, parallelogram extensions $10^a$, $10^a$ thereto, which are adapted to provide edge-wise vertical supports therefor as shown in Fig. 3. The inner ends $10^b$, $10^b$ of these vertical supports $10^a$, $10^a$ must converge, with the V-shaped platforms 10, 10, to a vertical line $10^c$ (Fig. 3) at the middle of the folded blank, and the outer ends $10^d$ thereof, together with the base of the raised V-shaped platforms must aline with the side edges of bottom portions 17; and to attain these results the stamping-out blank is formed as follows:

At the middle portion of the blank a portion of the sheet is cut away to provide a rhombic-shaped aperture $10^e$, the opposite parallel edges of which are requiredly greater in length than the height to which the V-shaped platform portions 10, 10 are to be elevated as determined by the width of the parallelograms extensions $10^a$, $10^a$; the angled inner ends $10^b$, $10^b$ of the latter, when diagonally folded-up as shown, thus coming snugly together with the points of the V-shaped platforms 10, 10, on the middle vertical line $10^c$; and the parallel outer ends $10^d$, $10^d$ of the bent-up parallelogram extensions likewise rising vertically and locating the base edges of the V-shaped platforms in the vertical planes of the box sides, all as clearly shown in Fig. 3.

To provide for rigidly supporting these base edges of the V-shaped platforms 10, 10, I preferably form the blank with down-bending extensions 18, 18 adapted to closely contact with the inner walls of the fitted box and effectively support the platform the outer portions $18^a$ of these extensions, as shown, being bent inward so as to seat upon the box bottom. The similar up-turning stiffening extensions 14, 15 formed upon the end and side edges of the blank as shown, may be made to correspond in height with the depth of the box so as to provide inner-wall linings

for the latter integral with the insert. The compartments 12, 12 thus separately formed by the V-shaped platforms 10, 10, are adapted to snugly receive and satisfactorily display the particular goods packed therein.

What I claim is:

1. A sheet-material box-fitting insert consisting of a supplementary box bottom having portions thereof elevated to form V-shaped platforms converging laterally at a point intermediate the length thereof; each of said platform portions having vertical marginal supports formed by bent-up connecting portions of the bottom.

2. A sheet-material box-fitting insert consisting of a supplementary box bottom having portions thereof elevated to form V-shaped platforms converging laterally at a point intermediate the length thereof; each of said platform portions having a downwardly-turned end-stiffening flange and vertical marginal supports formed by converging bent-up connecting portions of the bottom.

3. A sheet-material box-fitting insert consisting of a supplementary box bottom having portions thereof elevated to form V-shaped platforms converging laterally at a point intermediate the length thereof; each of said platform portions having a downwardly-turned end-stiffening flange, and vertical marginal supports formed by converging bent-up connecting portions of the bottom, and said bottom having upwardly turned marginal flanges arranged in the same planes as said downwardly-turned platform flanges and adapted to coact with the latter in forming vertical-wall linings for an enclosing box.

4. A rectangular box liner and platform insert blank having a rhombic middle aperture, and a widened midway portion comprising V-shaped platform sections diverging laterally from the opposite midway angles of said aperture and parallelogram extensions of said V-shaped sections each having the inner one of its parallel ends formed by one side of said rhombic aperture; said extensions being adapted to form vertical edge-supports for the bent-up platform sections with their inner ends gathered together at the middle of the shaped insert.

In testimony whereof I affix my signature.

JOHN RUSSELL WEIDNER.