Feb. 4, 1936. H. L. METZGER 2,029,888

BOX

Filed Feb. 13, 1935

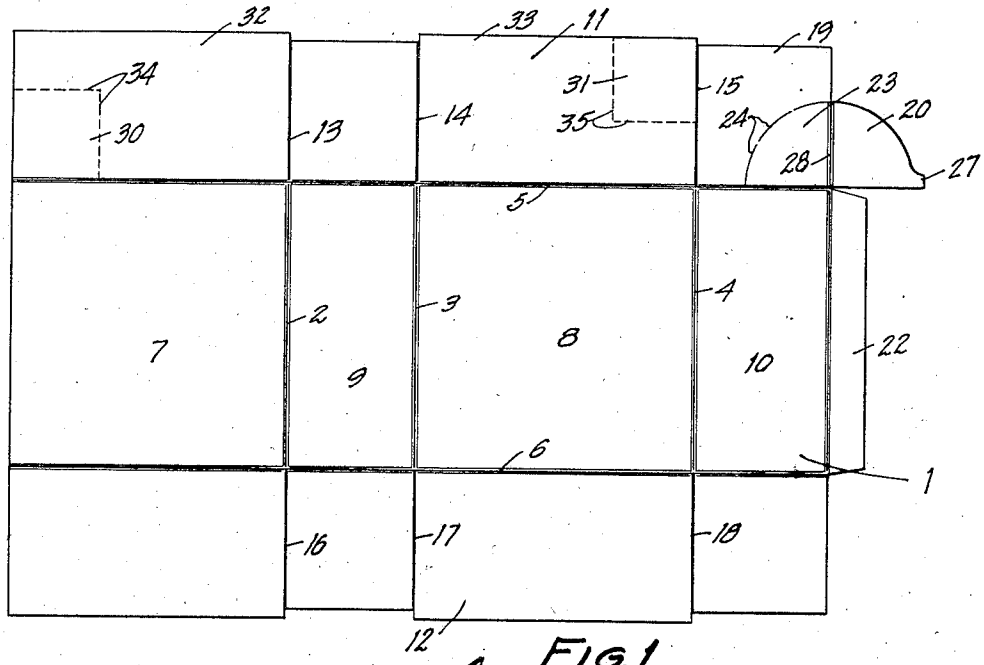

FIG. 1

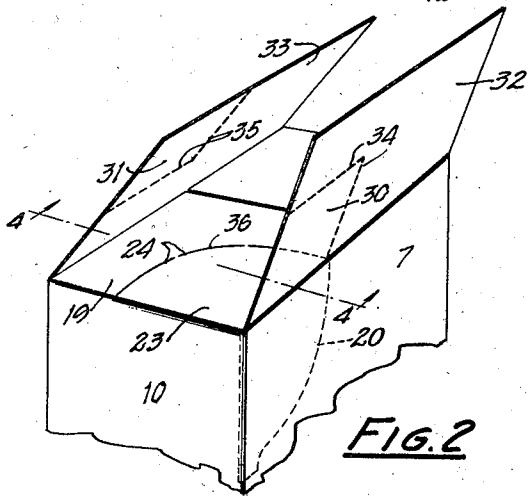

FIG. 2

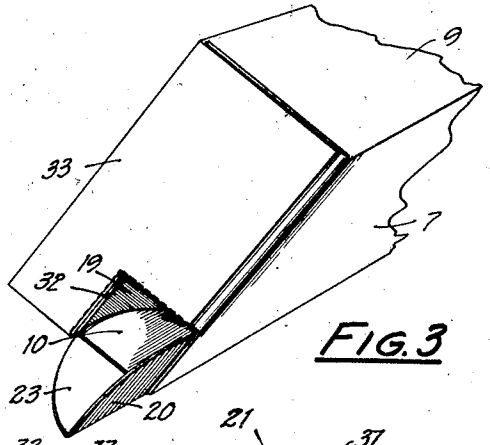

FIG. 3

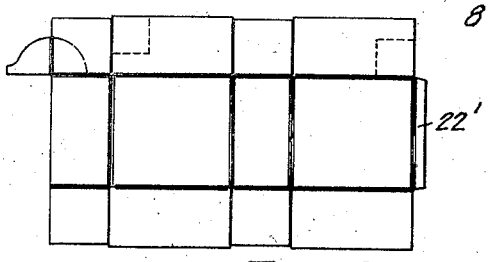

FIG. 6

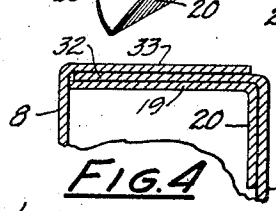

FIG. 4

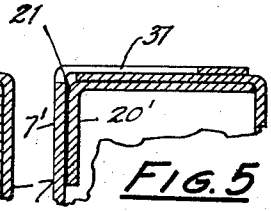

FIG. 5

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BOX

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Application February 13, 1935, Serial No. 6,296

3 Claims. (Cl. 229—17)

My invention relates to boxes or cartons and more particularly to devices of this character intended to contain materials which can be discharged or poured through a spout.

Many containers of this general type have heretofore been proposed. Typical examples of one class are shown in Patent No. 807,418 granted to Cavanagh on December 12, 1905; Patent No. 1,426,439 granted to Zalkind on August 22, 1922; and Patent No. 1,954,576 granted to Read on April 10, 1934. These boxes have not been generally accepted by the trade because, due to the fact that the entire pouring spout is cut or formed from the flaps which are infolded to close the end of the box, the box is not entirely sealed when these flaps are infolded. In order to seal it completely, it must be placed in another wrapper or the crack which exists at one side of the pouring spout must be covered by an additional means.

Another type of box having a pouring spout is shown in Patent No. 1,203,924 granted to Snyder on November 7, 1916. When a box of the Snyder type is closed by infolding the flaps at the end the box is sealed, to the extent that there is no crack between the side panel and the pouring spout, but it is necessary to fold a portion of the pouring spout upon itself which not only requires special packing machinery but the folded portions of the spout stick up beyond the general level of the top of the box and must be secured in place by means of a paster or otherwise.

One of the objects of my invention is to provide a box having a pouring spout which, when the end flaps thereof are infolded to close the box, will be tightly sealed and no portions will project beyond the general surface of the box. Another object is to provide a box of this kind in which, although tightly sealed, the pouring spout is readily accessible to the consumer. Another object is to provide a box having no projecting portions extending partially across the bottom or sides of the spout to obstruct the free flow of the contents therethrough. A further object is to provide a container of this type which can be packed and sealed with the present equipment used for ordinary containers without spouts.

With these objects in view, my invention includes the novel box and the blank therefor described below and illustrated in the accompanying drawing in which—

Fig. 1 is a plan view of one form of blank;

Fig. 2 is a fragmentary perspective view showing the closure flaps associated with the spout end of the box partially infolded;

Fig. 3 is a fragmentary perspective view of the box with the pouring spout drawn out;

Fig. 4 is a fragmentary section of the box when sealed taken substantially in the plane 4—4 of Fig. 2;

Fig. 5 is a fragmentary section similar to Fig. 4 taken through a closed box of the Zalkind, Cavanagh or Read type; and

Fig. 6 is a plan view of a modified form of blank.

Referring to the drawing, my blank comprises a generally rectangular sheet of material 1, usually of paper or box board. The central portion of the blank is divided by transverse scoring lines 2, 3 and 4 and longitudinal scoring lines 5 and 6 into panels 7 and 8 forming the front and back of the box and panels 9 and 10 forming the sides of the box. The edge portions 11 and 12 of the blank are cut inwardly to the panels along the lines 13, 14 and 15 at the top and 16, 17 and 18 at the bottom to form flaps, associated with each panel and adapted to be infolded to form closures for the top and bottom of the box. In passing it will be noted that the flaps are connected throughout their extent to the panels with which they are associated.

In order that my box may be tightly sealed around the spout, as shown in Fig. 4, it is essential that one of the flaps associated with an end panel of the blank such as flap 19 on panel 10, be provided with an extension 20 adapted to form one side of the pouring spout. Where the pouring spout in its entirety is cut from the flaps themselves, as has heretofore been the practice, either the box is not tightly sealed, as shown in Fig. 5 at 21, or the spout forming portion must be folded upon itself in a way which produces an unsightly lump or projection upon the box and which must be secured in folded position by an additional means.

One half of the pouring spout is formed by the extension 20 and the other half comprises the segmental portion 23 forming part of the flap 19 but which is preferably partially severed from the flap 19 along the arcuate line 24. The edge 25 of the extension 20 and the line 34 form a continuous semi-circle except that the extremity 27 of the extension is carried out somewhat beyond the limits of this semi-circle to provide a stop which will engage beneath the overlying flaps, as is well understood in the art, and prevent the spout from being pulled out further than is shown in Fig. 3. The central portion of the spout is provided with a score 28 coinciding with

the outer edge of the flap 19 whereby, when the box is closed, the extension 20 may be bent at right angles to the flap 19 and lie within the box as shown in Fig. 4.

It will be noted that all of the flaps on the box are substantially imperforate but that those portions 30 and 31 of the flaps 32 and 33 which overlie the spout forming portion 23 of flap 19 are provided with lines of weakness 34 and 35 whereby these portions may be torn from the main body of the flap, after the box is sealed, to provide access to the spout. Since the portion 23 of the spout is partially severed from the flap 19 it is only necessary to stick the finger nail into one of the cuts, as shown at 36 in Fig. 2, in order to draw the spout out into the box shown in Fig. 3.

From the foregoing it will be apparent that since the side 20 of the spout is not cut from the flap 33 that the box will be tightly sealed when flap 33 is infolded to close the box. Where substantially half of the spout is cut from one flap and substantially half from another flap, as in the prior art, a permanent opening 37 (see Fig. 5) is formed in the flap so that a crack 21 exists between the side 20' of the spout and the panel 7' of the box.

The blank shown in Fig. 6 is similar to the blank shown in Fig. 1 except that the spout is formed at the opposite end of the blank from the glue lap panel 22'. In this case when the blank is folded to form the box the glue lap should be on the outside of the box whereas when the blank is formed as in Fig. 1, the glue lap 22 may be on the inside of the box.

What I claim is:

1. A box of the character described comprising front, back and side panels and flaps connected to each of said panels and infolded to form closures for the ends of said box, one of said first infolded flaps being provided with a portion lying within the box in a plane substantially at right angles to said flap when the box is closed and adapted to be drawn out to form part of a pouring spout for the contents of said box; each of said flaps being substantially coextensive in width with its associated panel and connected to said panel throughout said width.

2. A box of the character described comprising front, back and side panels and flaps connected to each of said panels and infolded to form a closure for the end of said box, one of said first infolded flaps being provided with a first portion angularly disposed to the plane of the flap and lying within the box when said flap is infolded and a second portion connected to said first portion and adapted to be drawn out therewith to form a pouring spout for the contents of said box; each of said flaps being connected to its associated panel substantially throughout the width thereof, whereby the box is completely sealed along the edges; and the flaps overlying the spout-forming portions of said first infolded flap having lines of weakness therein along which they may be ruptured to provide access to said portions.

3. A box of the character described comprising front and back panels of equal width, side panels of equal width but less than the width of the front and back panels, infolded end flaps on said side panels coextensive in width therewith, and end flaps on said front and back panels coextensive in width with said panels and successively overfolded the end flaps of the side panels to form a closure for said box; all of said flaps being substantially imperforate; one of said first infolded flaps having a portion lying within the box in a plane substantially at right angles to said flap and a portion partially severable from said flap and connected to said first mentioned portion to form therewith a pouring spout for said box when said portions are swung out about the line of infold of said flap as an axis; and said overfolded end flaps being provided with lines of weakness whereby portions thereof overlying the spout forming portions of the underlying flap may be removed to provide access to said spout.

HENRY L. METZGER.