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2,708,545

END-CLOSING, TOP-OPENING SHIPPING CONTAINER

Filed Jan. 3, 1950

2 Sheets-Sheet 1

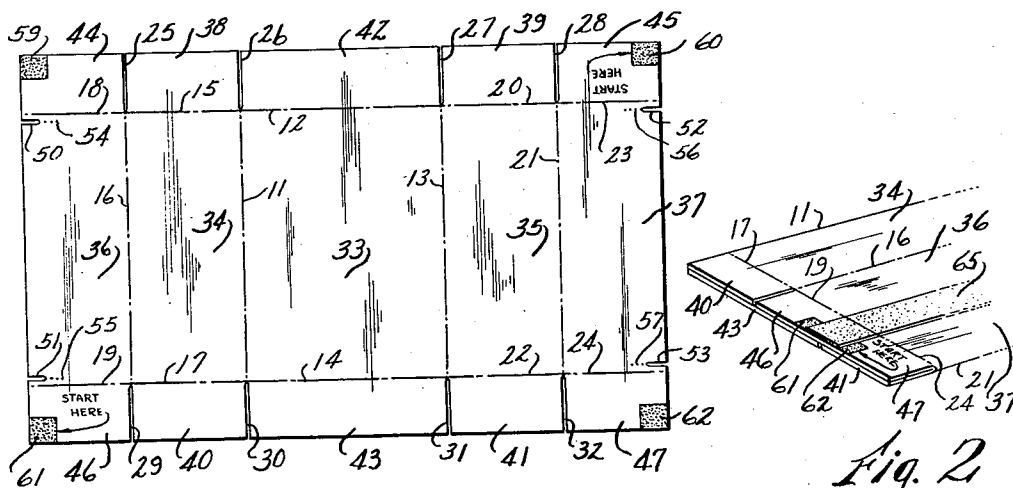


Fig. 1

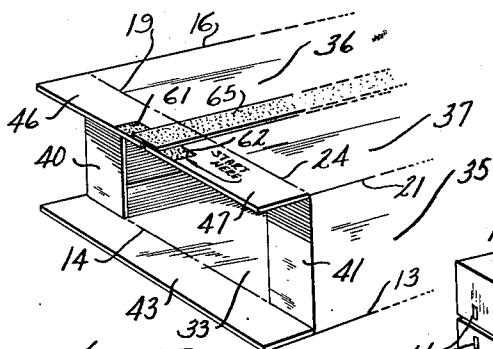


Fig. 3

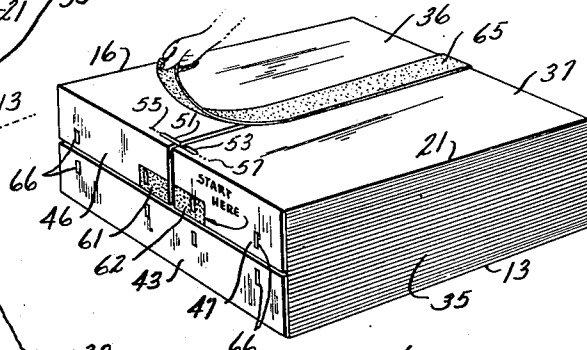


Fig. 4

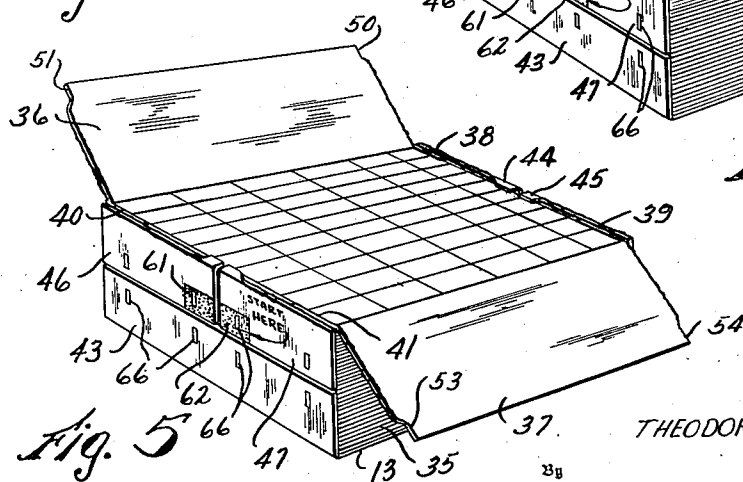


Fig. 5

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2 Sheets-Sheet 2

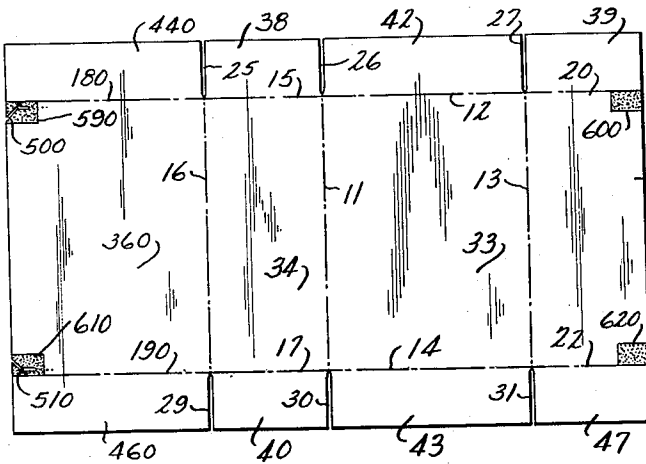


Fig. 6

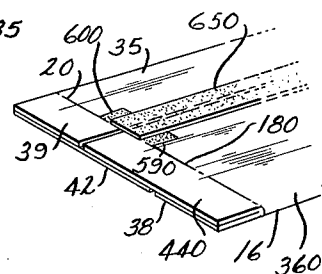


Fig. 7

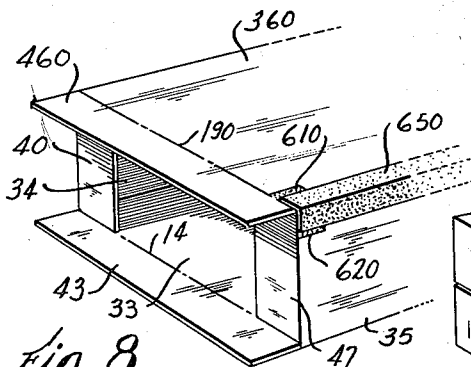


Fig. 8

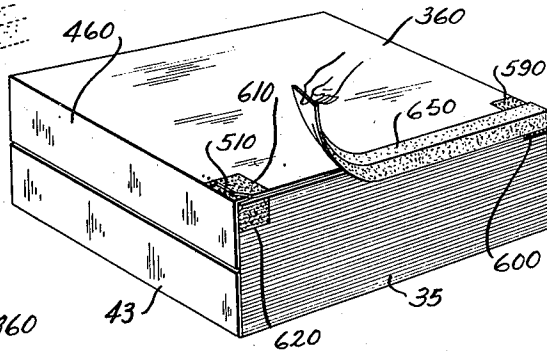


Fig. 9

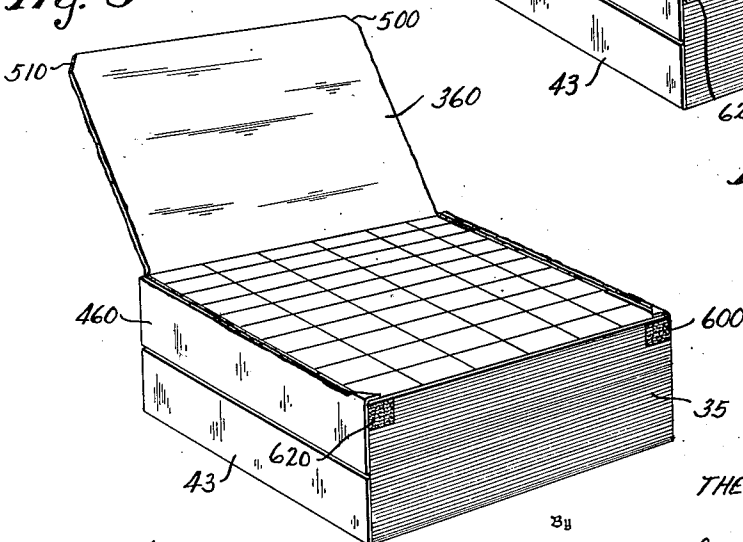


Fig. 10

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END-CLOSING, TOP-OPENING SHIPPING CONTAINER

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Application January 3, 1950, Serial No. 136,588

2 Claims. (Cl. 229—51)

This invention relates to an end-closing, top-opening shipping container.

Shipping containers of the conventional type having lapping flaps which are either glued or stapled together are materially less expensive when such flaps are provided at the end of the container than when such flaps are provided on one of the faces, the reason being that the larger area of the flaps, when these are provided on the faces of the container, requires considerably more stock than is required when the lapping flaps are at the ends.

Yet, for certain purposes, it is not acceptable to the trade to provide a container which is end-opening. As an example, reference is made to containers in which a number of small parcels are packaged for shipment, the nature of the parcels being such that the retail merchant may desire to expose them all simultaneously for marking, without removing them from the container. If the container must be opened at its end, it may be that only one, or at best, a few, of the parcels therein will be exposed when the end flaps are opened. Hence, for bags or other parcels which are to be price marked in the container, it has been conventional practice to use containers of the top flap closure type, despite the greater cost of such containers.

The present invention has for its object the provision of a container which, without sacrifice of strength, and without increase in cost, will provide a combination of end flap closures and top opening, thereby yielding the convenience of a container having a top flap closure at the cost of a container having an end flap closure.

It is a further object of the invention to provide a container which can be manufactured on a standard machine and erected, filled and end sealed in accordance with conventional practice and may nevertheless be opened with greater facility than the ordinary container with glued or stapled top flaps to expose the entire area of its contents.

In the drawings:

Fig. 1 is a plan view of a container blank embodying a preferred form of my invention.

Fig. 2 is a fragmentary view showing in perspective the end of the blank as closed for shipment to the user.

Fig. 3 is a fragmentary view showing in perspective the end of the blank as it appears when erected for use.

Fig. 4 is a view in perspective on a somewhat reduced scale showing a complete container embodying the invention as it appears when the tape is being stripped therefrom for opening purposes.

Fig. 5 is a view in perspective showing the container as it appears when open.

Fig. 6 is a plan view of a blank used in a modified embodiment of the invention.

Figs. 7, 8, 9 and 10 are views similar to Figs. 2, 3, 4 and 5, respectively, and showing the modified embodiment of the invention.

It is broadly immaterial what stock is used. Cardboard, fiberboard and corrugated board are all suitable. With slight changes hereinafter noted, the blank is con-

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ventional, being subdivided by score lines 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24 and marginal slits at 25, 26, 27, 28, 29, 30, 31 and 32 to provide a bottom panel 33, side panels 34, 35, top panels 36, 37, internal end flaps 38, 39, 40 and 41 and external end flaps 42, 43, 44, 45, 46 and 47.

For the purposes of the present invention, the top panels 36 and 37 are provided with means for facilitating the initiation of tears in such flaps, as by means of slits 50, 51, 52 and 53 or rows of perforations 54, 55, 56 and 57, both being shown, but either being usable without the other if desired. These means for facilitating the initiation of tearing can conveniently be made on the conventional box-making machinery through the use of added dies. In order that they may be thus made, without a separate operation, and for no other reason, the said means is desirably spaced inwardly from the respective score lines 18, 19, 23 and 24. It is unnecessary that the means for facilitating the initiation of tearing shall extend for any substantial distance inwardly from the ends of the blank.

It is also desirable, though not essential to the invention, to provide at the four corners of the blank upon the flaps 44, 45, 46 and 47 thereof, areas 59, 60, 61 and 62 which are printed or otherwise coated with ink, wax, paint, varnish, shellac or the like to provide a smooth surface to which the adhesive of the sealing tape 65 will not adhere as intimately as it does to the paper surfaces of the blank. Since most such blanks are printed with advertising or identifying material in the course of their manufacture, it involves no extra operation to provide the coated surfaces as indicated.

The blank is now completed in readiness for shipping by folding it upon scorelines 11 and 21 to bring its free end margins of panels 36 and 37 into proximity, and joining these margins by applying the adhesively coated tape 65 thereto in the usual way.

The shipper supplied with such a folded blank erects it in the usual manner for use as shown in Fig. 3 and fills it through the open end or ends. These will then be closed by gluing or stapling the flaps 44, 45 and 42 to flaps 38, 39, staples being shown at 66 in the container of Figs. 1 to 5, and the closure flaps of the container of Figs. 6 to 10 being glued.

Regardless of whether the lapping flaps are stapled or glued, and regardless of whether they are located at the ends or the top, the opening of the containers by the separation of such flaps is a difficult task. If the common opening knife is used, it may also be a dangerous task. The present container, however, is designed to be opened elsewhere.

The adhesion of the gummed tape 65 to the uncoated portions of the blank is so tight that the tape can only be removed by tearing away with it the side of the paper stock to which it is adherent. Consequently, it would be difficult to remove the tape but for the provision of the coated surfaces at 59, 60, 61 and 62 to which the ends of the tape adhere. The adhesion to such surfaces is sufficiently less than the adhesion of the tape to the uncoated surfaces so that the operator can readily dislodge the extreme end of the tape and can obtain a secure grasp thereof for the purpose of stripping the entire tape from the container, the initiation of this operation being portrayed in Fig. 4.

The removal of the tape will expose the means for defining the points of initiation of tearing, such means desirably comprising the slits at 50, 51, 52 and 53 which, solely for convenience of manufacture, are preferably spaced slightly inwardly from the top end margins of the container. The removal of the tape also leaves the margins of the cover panels 36 and 37 exposed so that the operator can readily manipulate his fingers between

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them, and, grasping one of such margins, can readily pull the central portions of the cover panels free from the respective end closure flaps with which they are integral. The slits at 50 and 51 will facilitate the initiation of tearing of the central portion of panel 36 from the extreme marginal portions thereof and from integral end flaps 44 and 46. Usually the tearing will proceed along the scorelines 18 and 19 which are adjacent to the points of initiation. Similarly, when the panel 37 is subjected to tension, it will start to tear upon the slits 52 and 53 and the tearing will usually proceed along the scorelines 23 and 24 to sever the panel from integral flaps 45 and 47. The panels, when torn free, readily open to the positions shown in Fig. 5, leaving the entire contents of the carton exposed throughout its area.

In the construction shown in Figs. 6 to 10, the general construction is conventional, differing from the construction previously described principally in the fact that the top of the container is made up of a single panel 360 which has continuous end flaps 440 and 460, as distinguished from the container top shown in Figs. 1 to 5 which is made up of two narrow panels 36 and 37 and correspondingly narrower end flaps. Thus, the joint required for the completion of the carton wall is located along one top side margin of the container instead of down the center of the top. A piece of fabric or other tape designated at 650 is used to connect the broad top panel 360 with the free margin of the side panel 35 which is contiguous thereto in the folded blank as shown in Fig. 7 and in the erected carton as shown in Figs. 8 to 10.

The means for defining the points of initiation of tearing may comprise the slits 500 and 510 which are located just within the scorelines 180 and 190 bounding panels 360. While these slits may be straight, as in the previously described embodiment, it is also possible, in either embodiment, to make them obliquely divergent as best shown in Fig. 6, at the points where they enter the margin, thereafter straightening out into substantial parallelism with, and immediate proximity to, the scorelines 180 and 190, along which tearing will usually proceed when the box is opened.

As in previous embodiments, it is deemed desirable to print at 590, 600, 610 and 620, coatings to which the adhesive of tape 650 will adhere relatively lightly so as to facilitate the initiation of the operation of stripping the tape from the container.

As in the previously described embodiment, the container is designed to be filled through its open end when it has been erected to the form shown in Fig. 8. It will then be sealed by adhesively coating flaps 40 and 47 and pressing flaps 43 and 460 into contact with the adhesive. Or these lapping flaps may be stapled as shown in Figs. 4 and 5, as above described. In either case, the type of connection made with the adhesive or staples is so permanent, and so difficult to open, and the amount of surface exposed when they are opened is so slight, that it becomes much more desirable to open the container elsewhere. Accordingly, the user will free one end of the tape 650 from the coated areas 590, 600 and, thereby acquiring a

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firm grasp on the end of the tape, will strip off the tape as shown in Fig. 9. This will expose one margin of the top panel 360 of the container. The user can readily thrust his fingers between panel 360 and the adjacent margin of the side wall panel 35. Thereupon the top panel will be pulled free, readily tearing at the points defined by the slits 500, 510. Thereupon, the entire cross sectional area, or substantially the entire area, is exposed as shown in Fig. 10, all of the small boxes, bags or other packages or units therein, across such area, being available for display or for the lettering of pricemarks thereon or other purposes.

I claim:

1. A container having wall portions in series connection and defined intermediate the end of the series by scorelines, the said wall portions being folded upon the scorelines to comprise a container body having lapping portions only at the end thereof, a tape connecting the wall portions at the ends of the series to complete such body, the tape having adhesive connection with said last mentioned wall portions, flaps on the several wall portions, opposing flaps at each end of the body comprising inner flaps, and other opposing flaps at each end of the body comprising outer flaps, the outer flaps being permanently sealed to the inner flaps to close the ends of the container, one of the wall portions with which said tape is connected being provided with marginal slits at opposite ends of the container defining points of initiation of tearing to facilitate the opening of the container by tearing the last mentioned wall portion therefrom, leaving the flaps originally part of such wall portion fixed in the ends of the remaining body of the container, the parts of the wall portions of the container to which said tape is adherent having coatings underlying at least one end of the tape and to which such tape end is less adherent than to uncoated wall portions of the container, whereby to facilitate stripping the tape from the container to expose said slits.

2. The device of claim 1 in which the slits extend obliquely toward the scorelines upon which said flaps are folded respecting the wall portions with which the tape is connected.

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