Dec. 30, 1930. M. FEYBUSCH 1,786,743

BOX

Filed April 6, 1929

Fig. 1.

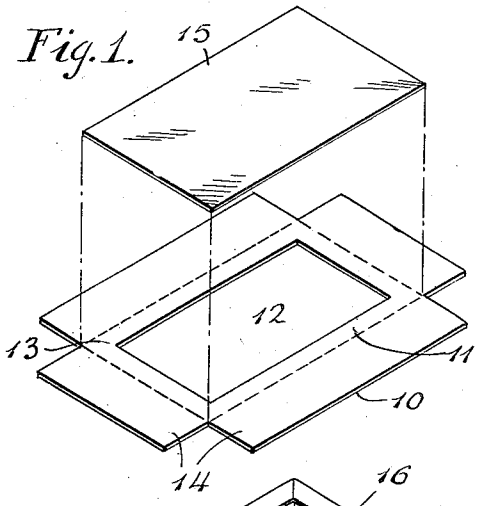


Fig. 2.

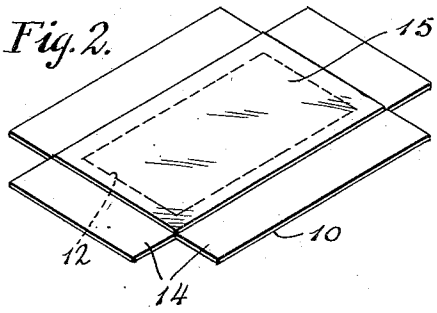


Fig. 3.

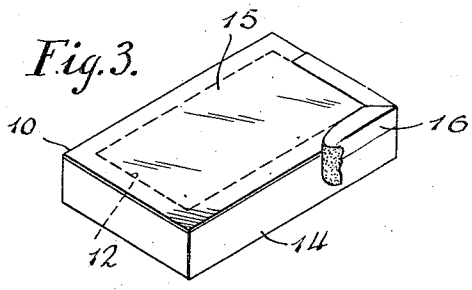


Fig. 4

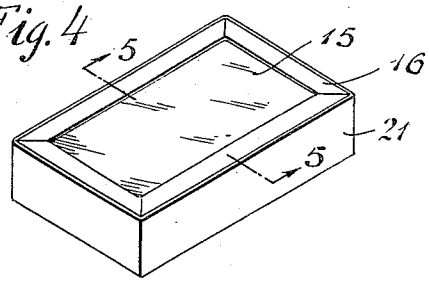


Fig. 6.

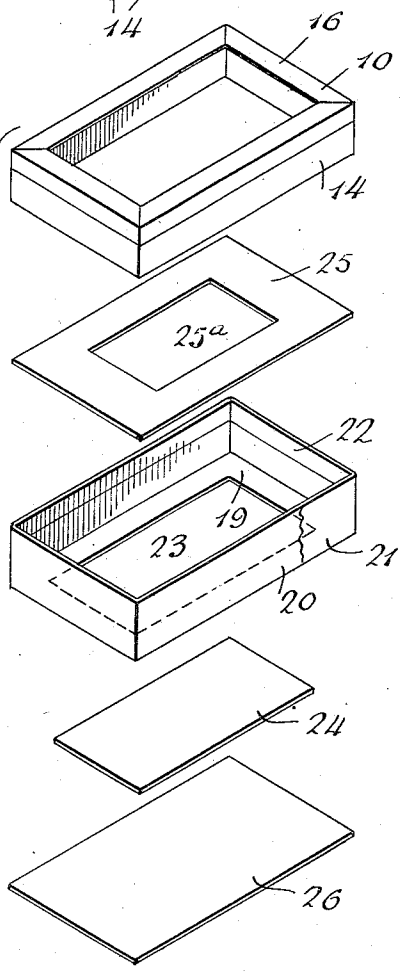
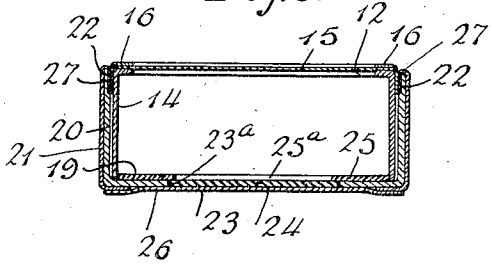


Fig. 5.



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BY
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1,786,743

UNITED STATES PATENT OFFICE

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BOX

Application filed April 6, 1929. Serial No. 352,938.

This invention relates to boxes and particularly to boxes made of paper or similar material and having the top of the box cut out to provide a sight opening closed by a sheet of transparent material.

Although boxes provided with sight openings have heretofore been constructed and used in comparatively large quantities their use has undoubtedly been restricted because of the fact that as they were heretofore constructed almost entirely by hand, the cost of manufacture thereof was found, in some cases, to be practically prohibitive. Furthermore, as heretofore manufactured, such boxes were of the folding box type, thus making it necessary for the packer or purchaser of such boxes to set up or fold the boxes before packing or filling them and, in addition, the so-called "folding boxes" can not readily, nor usually be filled by standard filling or sealing machines.

The principal object of the present invention is to provide a new and improved construction for a box having a transparent sight opening whereby a set up box of this type may be readily manufactured on standard high speed automatic machinery, thereby reducing the production costs of such boxes.

Another object is to so construct the box that it can be shipped to the buyer in set up condition and in addition can be readily filled by him on a standard filling machine.

A further object is to so construct the box that it may be completely sealed after being filled and particularly so that the sealing can be accomplished in an exceptionally easy manner by the application of a commonly employed flat label to the bottom of the box.

The above and other objects of the invention will appear more fully from the following more detailed description and by reference to the accompanying drawings forming a part hereof, wherein Fig. 1 is a perspective view showing the cover blank in its flat form with the transparent element located above the blank to illustrate the manner in which the parts are placed together in assembled position; Fig. 2 is a similar perspective view showing the parts of Fig. 1 in assembled condition; Fig. 3 is a perspective view of the cover blank of Figs. 1 and 2 in set up condition with the binding strip partly applied thereto; Fig. 4 is a perspective view of the cover blank and box body blank in assembled condition; Fig. 5 is a cross sectional view taken on the line 5—5 of Fig. 4 and Fig. 6 is a perspective view of all of the members which compose the completely assembled box, the parts thereof being shown in separated spaced relationship to illustrate clearly the manner in which the box is assembled.

Referring specifically to Figs. 1 to 3 of the drawings inclusive, the numeral 10 indicates a cover blank which, as shown in Figs. 1 and 2, is cut from a flat sheet of suitable material. This cover blank is so cut as to provide a top portion 11 having a central cut out portion or aperture 12 which forms a sight opening. This opening has been shown in the drawings as of rectangular shape. It will be understood however that said opening may be of any shape or size as long as a margin portion, such as indicated by the reference character 13, is retained. In addition to the top portion 11 the cover blank also includes the side wings or flaps 14, which as will presently be described, are bent at right angles to form the side walls of the box cover. The sight opening 12 is covered by a sheet 15 of any suitable transparent material which, as indicated in Figs. 1 and 2, is preferably of approximately the same size and shape as the top portion 11 of the cover blank. The transparent sheet 15 is adhesively secured to the marginal portion 13 of the cover blank 10 in such a manner as to close the sight opening 12.

After the transparent sheet 15 has been secured to the marginal portion 13 of the top of the cover blank the side flaps 14 of the blank are bent to extend at right angles to the top portion 11 of said blank, it being understood that the blank is furnished with score lines to facilitate this bending operation. While the flaps 14 are held at right angles to the top 11, a binding strip 16 is adhesively applied to the said flaps. In accordance with the usual practice the strip 16 is so applied to the flaps or side walls that a marginal portion of the strip extends upwardly beyond

the top portion 11. After the binding strip 16 has been wrapped completely around the side wall portion of the cover blank the marginally extending portion of the strip is then folded down over the edges of the top portion and pressed down upon the transparent sheet 15. As indicated at Fig. 3 a sufficient width of the binding strip 16 is pressed into engagement with the transparent sheet 15 to bring the edges of the strip and of the sight opening 12 into alignment in order to secure a finished product of neat appearance. It will be understood that the binding strip 16 has its underside coated with suitable adhesive and that the adhesively coated side is securely pressed into engagement with the cover blank. After the application of the binding strip as above described the box cover will be held securely in set-up condition with the transparent sheet 15 firmly secured to the cover and covering the sight opening.

In actual commercial practice the operations of manufacturing the box cover above described are preferably performed upon an automatic machine of the type disclosed in the co-pending application for Letters Patent of the United States #583,502.

The body portion of the box is constructed in a manner somewhat similar to that described above in connection with the manufacture of the box cover. The body of the box also consists of a flat portion 19 and side wall portions 20, the portion 19 forming the bottom of the box. The side wall portions 20 are bent up from a flat sheet at right angles to the bottom 19 and a binding strip 21 is wrapped about the side walls to hold the box in set-up condition. In manufacturing the body of the box the binding strip 21 is so applied to the side walls that a marginal portion thereof extends beyond the outer edges of the side walls. This marginal portion is then turned over said edges and pressed into contact with the inner faces of said side walls as indicated by the reference character 22. It will be understood that the binding strip 21 is supplied with an adhesive coating prior to the placing of said strip about the box body. The operation of producing the body portion is carried out on an automatic machine of the type disclosed in Letters Patent of the United States #1,468,146 granted to Martin Feybusch and Sigurd Severson on the 18th day of September, 1923.

In order that the box may be readily filled in a standard type filling machine the bottom portion 19 of the box body is cut out to provide a filling opening 23, shown most clearly in Fig. 6 of the drawings. This opening is closed by means of a flat closing piece 24 of cardboard or other suitable material. This piece may either be made as a separate member, in which case it will be cut to a size such that it will fit neatly within the opening 23 of the box, or in cutting the filling opening 23 from the box blank a portion of the blank may be only partially cut loose so as to provide a hinged flap. This closing piece 24 is held within the opening 23 after the box is assembled between a false bottom piece 25 and a sealing strip or label 26. The piece 25 fits neatly within the box body and has an opening 25^a therein which is slightly smaller than the filling opening 23.

The manner in which the box cover and body are assembled is as follows: After the cover and box body have been manufactured in set-up condition as above described the false bottom piece 25 is placed in the bottom of the box body, a coating of adhesive is then applied to the inner surface of the box body wall near the top thereof as indicated in Fig. 5 of the drawings by the reference character 27. The box cover 10 is then inserted into the box body and the adhesive coating 27 will firmly secure the cover and body portions together. As shown in Fig. 5 of the drawings the edges of the side walls of the cover rest upon the bottom piece 25 to hold the latter in place.

The consumer receives the container with the box body and cover secured together. In a shipment of a plurality of boxes, the closing piece 24 for each box, may be associated with each box, by being inserted into the filling opening or obviously a pack or pile of such pieces, one for each box, may be sent disassociated from the particular boxes with which they are to be used. The filling and sealing operations are obviously simple and readily performed. The box is placed with the filling opening 23 in the bottom thereof facing upwardly. If the box has been shipped with the closing piece in the filling opening it is of course removed by the consumer. The contents are then placed in the box through the filling opening 23 and after the box has been filled the closing piece 24 is again put back in place. As the opening 25^a of the bottom piece 25 is smaller than the filling opening, a marginal portion of said bottom piece immediately adjacent to its opening 25^a will project inwardly past the edges of the filling opening 23 and will support the closing piece 24. After the closing piece has been inserted the box is completely sealed in its packed condition by means of the sealing piece 26 which is preferably constructed of paper and may be an ordinary printed label. The sealing piece 26 is preferably made of a size such as to completely cover the bottom portion of the box and as will be understood said piece is provided with a coating of adhesive before it is applied to the box.

It will be seen from the above that by constructing the box in the manner hereinbefore disclosed containers having sight openings may be readily produced in quantity production by means of automatic machin-

ery and that the cost of manufacturing such containers may therefore be considerably reduced over the hand methods heretofore employed for making such containers. It will also be seen that the construction disclosed enables the container to be readily filled by the use of standard filling machines and that the resultant product is of much more sturdy construction and of neater appearance than the folding type boxes. The manner in which the box is constructed also possesses the further advantage of enabling the box to be substantially hermetically sealed, thereby enabling the contents to be maintained in a fresh condition. The manner of sealing the box also insures that the purchaser will get the box in the condition in which it has been sent out by the manufacturer or distributor of the products as obviously it would be impossible with the construction shown for anyone to open the box or tamper with the contents thereof without it being immediately apparent to the purchaser that the box had been opened.

Although the construction disclosed forms a preferred and satisfactory constructional embodiment of the principles of the invention, it will be understood that the invention is not limited to a box of the particular size or shape shown in the drawings, that the size of the sight and filling openings may obviously be varied as desired and that many other changes, variations and modifications may be resorted to without departing from the principles of the invention.

I claim:

1. A container comprising a cover having a top and a side flange portion, said top being provided with a sight opening, a transparent element secured to the outer face of said top and closing said opening, and a relatively narrow binding strip secured to the outer face of said flange portion only along the upper edge portions thereof and to the marginal part of said transparent element in overlapping surface engagement therewith to hold the transparent element in position and to frame the same.

2. A container comprising a cover having a top and a side flange portion, said top being provided with a sight opening, a transparent element secured to the outer face of said top and closing said opening, and a binding strip secured to the outer face of said flange portion and to the marginal part of said transparent portion to hold the latter in position, a box body consisting of a base and a flange portion, said base being provided with an aperture, a binding strip secured to the flange portion of said box body, a marginal portion of said last named binding strip being secured to the inner face of the box body flange portion, and an adhesive coating between said flange portions of the box body and cover for holding them in securely assembled condition.

3. A container comprising a body and a cover, said body having a flat bottom provided with a filling opening, and a marginal portion surrounding said opening, and a side wall portion, a closing piece for closing said opening and a paper strip adhesively secured to said marginal portion and said closing piece to hold the latter securely in position, said cover having a top provided with a sight opening, a marginal portion surrounding said sight opening and side flanges, a transparent element secured to said last named marginal portion, a binding strip covering said side flanges and overlying the marginal portions of said transparent element and said top, and an adhesive coating between the side wall portion of said body and the side flanges of said cover for holding said body and cover in permanently assembled condition.

4. A container comprising a body and a cover adapted to be fitted into said body, both said body and said cover comprising flat end portions and side wall portions extending from such flat end portions, a paper strip attached to the cover at the edge of its end portion and also at the adjacent part of its side walls, another paper strip attached to the side walls of the body and to the end portion thereof and having its edge bent over the free ends of such side walls and against the inner surface of such side walls, and an adhesive coating connecting the said two paper strips at the side wall portions of the body and of the cover.

In testimony whereof I have hereunto set my hand.

MARTIN FEYBUSCH.