

March 19, 1935.

H. C. ATKINS

1,994,803

PAPER BOX

Filed May 8, 1934

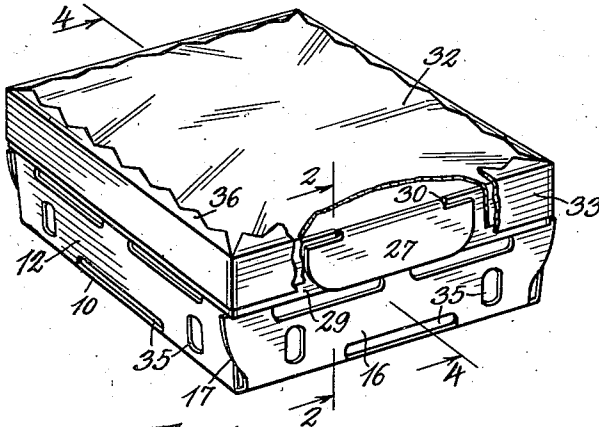


Fig. 1.

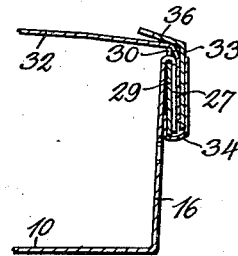


Fig. 2.

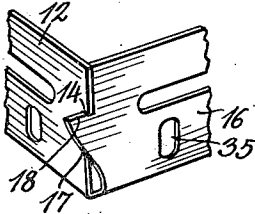


Fig. 3.

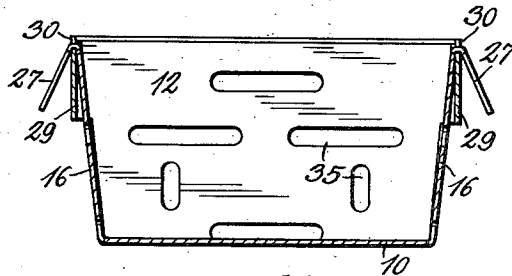


Fig. 4.

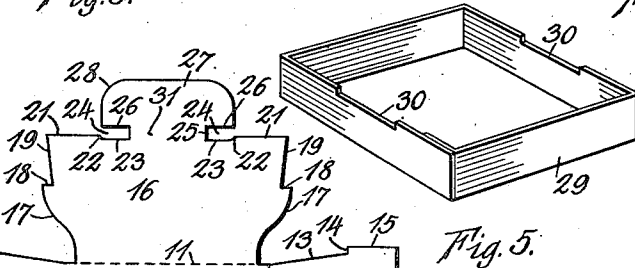


Fig. 5.

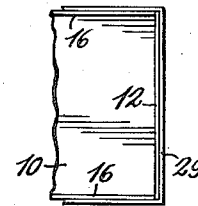


Fig. 7.

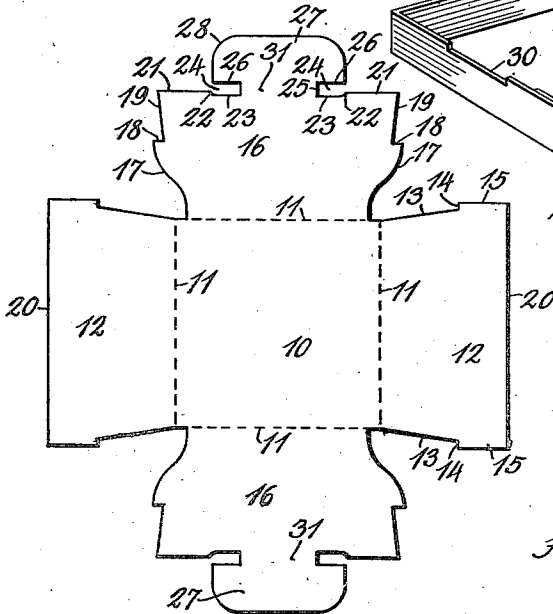


Fig. 6.

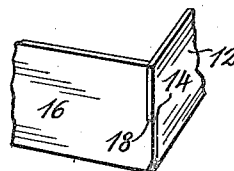


Fig. 8.

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UNITED STATES PATENT OFFICE

1,994,803

PAPER BOX

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8 Claims. (Cl. 229—30)

This invention relates to improvements in paper boxes and has reference more particularly to a box suitable for general use, but which is also so constructed that a transparent cover can readily be applied thereto and held in place by means of a removable collar in the manner shown and described in Patent No. 1,956,819, granted to me May 1, 1934.

Cardboard boxes are used in dispensing goods of many different kinds and are now being introduced and recommended for use in dispensing fruits and berries, such as strawberries and raspberries, and it is the object of this invention to produce a berry box that can be cut from cardboard prepared in such a way that it can be very readily assembled and when transported can be shipped in unfolded condition so as to occupy but very little space, thereby reducing freight and transportation charges.

Another object is to provide a box that shall be especially well adapted for use in transporting and dispensing berries and which shall have a well ventilated receptacle combined with a substantially air and moisture proof cover which serves to prevent the escape of moisture.

The ordinary paper boxes, as is well known, are usually glued at the corners or stapled and this must be done at the factory, because otherwise the purchaser would have to provide himself with special apparatus for assembling boxes.

The construction of my box, which will be described in detail hereinafter, is such that no special apparatus is needed for assembling boxes and this makes it practical to sell them in "knocked down" condition, whereby space and consequently freight and express charges are kept as low as possible as above intimated.

Another object of this invention is to provide a box that shall be so designed and constructed that a transparent cover can be applied to it and held in place by a collar and means is also provided to prevent the collar from moving downwardly or upwardly when in place.

Having thus given a general outline of the objects of this invention, the box that forms the subject thereof will now be described in detail, and for this purpose reference will be had to the accompanying drawing in which the preferred embodiment of the invention has been illustrated and in which:

Fig. 1 is a perspective view of my improved box showing the transparent cover in place thereon, portions being broken away to better disclose the construction;

Fig. 2 is a section taken on line 2—2, Fig. 1;

Fig. 3 is a perspective view of a corner of the box when in folded position, and before the band that holds the box in assembled position has been applied;

Fig. 4 is a section taken on line 4—4, Fig. 1, and shows the parts as they would appear in section if the transparent cover and its holding collar were removed;

Fig. 5 is a perspective view of the band that holds the box in assembled position;

Fig. 6 is a view of the blank employed in the formation of the box, the blank being flattened so as to lie in a plane;

Fig. 7 is a top plan view of a shallow box of the type employed for vending bacon; and

Fig. 8 is a perspective view of the end employed in the box shown in Fig. 7.

In the drawing the blank from which the box is formed has been shown in Fig. 6 from which it will be seen that it consists of a bottom 10, which has been shown as a square in the drawing, but which may be a polygon of any number of sides. Each side of the polygon is provided with an outwardly projecting integrally attached flap which is separated from the base by score lines 11, so that the flaps when they are bent will readily bend along the straight lines which delimit the area of the bottom. In the form illustrated in this drawing the bottom is a square, as above stated, and extending outwardly from opposite sides thereof are flaps 12 which have a width from the score line to the outer edge that equals the depth of the box. The ends are formed from a broken line edge which consists of a straight edge portion 13 that is inclined with respect to the transverse axis of symmetry and this is connected by a short line 14 with the straight edge line 15 that is parallel with the axis of symmetry. The opposite sides of the bottom are provided with flaps 16 that are of a somewhat different shape from those indicated by reference numeral 12 and the end edges have portions which are cut along a compound curve as indicated at 17, and the end of this curve is connected by means of a short portion 18 with a straight edge portion 19. The outer edge of the flap, instead of being straight as indicated at 20 in connection with the flaps 12, is provided with straight edge portions 21 that extend inwardly towards the center, a short distance and are then connected by short inclined edges 22 with the lower side 23 of the rectangular notch 24. The bottom edge 25 of the notch is connected by means of a straight edge portion 26 with the

outer edge of the flap 27 which is preferably formed with rounded corners as indicated at 28. When the box is to be assembled, the sides 12 and 16 are bent upwardly along the score lines in the manner shown in Fig. 3 until the edges 14 and 18 interlock in the manner shown. A band 29 like that shown in Fig. 5 and which consists of an endless strip of paper bent into the form of a square or rectangle or into any other polygonal shape required, and which has two oppositely located sides provided with notches 30, is slipped over the box from below until its lower edge rests on the edges 18 which serve as stops that prevent the band from being moved downwardly. The band is so arranged that the notches 30 cooperate with the sides 16 and when the band is in place, the locking lugs or tabs 27 are bent downwardly as shown in Fig. 4. The neck 31 of the locking tabs fit into the notches 30 as shown in the drawing and these serve to prevent the band from being moved upwardly. As soon as the band is in the position shown in Fig. 4, the box is fully assembled and unless a cover is to be applied to it, as shown in Figs. 1 and 2, the box is now ready to receive the merchandise which it is to contain. The locking flaps 27 can be attached to the band 29 by means of gummed pieces of paper or they can be left loose as shown in Fig. 4, as may best suit the conditions under which the box is to be used. If the box is to contain fresh berries, such as strawberries, raspberries or blackberries, or the like, it is desirable to cover the berries with "Cellophane" covers, and when this is to be done, a piece of a transparent cover such as a regenerated cellulose sheeting, transparent material of the type indicated and which has been designated by reference numeral 32, is placed over the top of the box and must be sufficiently large to permit the edges to be bent downwardly on all sides, substantially to the bottom of the band 29. A collar 33 like that shown in my patent above identified, is now pressed downwardly and holds the edges of the cellophane against the band 29 in the manner shown quite clearly in Figs. 1 and 2. After the collar is in place, a gummed sticker 34 can be applied to the band 29 and to the collar and this prevents the collar and cover from being removed while permitting the contents of the box to be inspected through the transparent cover, and through the openings 35 in the sides of the box. It is to be understood that the openings 35 are optional and can be used whenever desired, but when the box is to be employed for merchandise that does not require ventilation, the openings in the sides may be dispensed with.

When the box is to be employed for the sale of berries, the sides are provided with a number of slots or openings 35 like those shown in Figs. 1, 3 and 4 and with a transparent, substantially moisture proof cover. The cover prevents the moisture from escaping and the openings permit air to enter the interstices between the berries.

In the above parts of this specification I have called attention to the fact that the box may be of any desired shape and it may also be of any required depth and in Figs. 7 and 8 a construction has been shown that is intended more particularly for use in dispensing sliced bacon, and since these boxes are quite shallow, the sides 18 do not have to project beyond the end of the box for the reason that the band 29 is preferably made as wide as the sides of the box and therefore the ends of the side portions should not

project outwardly so as to interfere with the application of the band. The interlocking feature provided by the short sides 14 and 18 is employed in the construction shown in Figs. 7 and 8, as well as in the construction of the larger boxes.

The cardboard employed in the construction of this box can be of any grade and any weight that is found necessary for the purposes under consideration, but where berries or other moist material is sold, the paper is preferably coated with wax on either or both sides so as to prevent the absorption of moisture. It is to be understood that this box is for general use, although the specific example shown in the drawing is a berry box, it can be employed with equal success for the dispensing of candies, nuts and any other form of merchandise that is usually sold in boxes. The intumed edges 36 of the collar 33 serve as a stop that limits the downward movement of the collar.

I desire to call particular attention to the flaps 27 that serve as means for locking the band 29 in place on the box and also to the function of the short sides 18 that serve to prevent the band from being moved downwardly. It will also be noticed that the compound curve 17 makes it easy to apply the band as it will slide over the edges thus produced.

Having described the invention what is claimed as new is:

1. A paper box comprising, a blank having a polygonal bottom, each side of the polygon having a side member extending outwardly therefrom, the bottom and the sides being separated by score lines, the adjacent edges of the sides having interlocking projections one of which is below the other, the lower projections being longer than the thickness of the material whereby they will project beyond the outside of the box, and an endless band of the proper size to surround the sides when they are in operative position and resting on the upper edges of the lower projections which serve as means for holding the band from moving downwardly along the sides of the box.

2. A paper box comprising, a blank having a polygonal bottom, each side of the polygon having a side member extending outwardly therefrom, the bottom and the sides being separated by score lines, the adjacent edges of the sides having interlocking projections one of which is below the other, the lower projections being longer than the thickness of the material of the box whereby they will project beyond the outside of the box, the lower projections being substantially right-triangular in shape with the right-angle corner at the top an endless band of the proper size to surround the sides when they are in operative position, the tops of the right triangular projections serving as means for holding the band from moving downwardly along the sides of the box.

3. A paper box comprising, a blank having a polygonal bottom, each side of the polygon having a side member extending outwardly therefrom, the bottom and the sides being separated by score lines, the adjacent edges of the sides having interlocking projections, an endless band of the proper size to surround the sides when they are in operative position, some of the side members having outwardly extending projections which serve as stops for preventing the band from moving downwardly along the sides.

4. A paper box comprising, a blank having a

5 polygonal bottom, each side of the polygon having a side member extending outwardly therefrom, the bottom and the sides being separated by score lines, the adjacent edges of the sides having interlocking projections, an endless band
10 of the proper size to surround the sides when they are in operative position, some of the sides having outwardly extending projections which serve as means for holding the band from moving downwardly, and a flap extending downwardly from two of the sides for engaging the upper edge of the band and serve as a stop for holding the band against upward movement.

15 5. A paper box comprising, a blank having a polygonal bottom, each side of the polygon having a side member extending outwardly therefrom, the bottom and the sides being separated by score lines, the adjacent edges of the sides having interlocking projections, an endless band
20 of the proper size to surround the sides when they are in operative position, some of the sides having outwardly extending projections which serve as means for holding the band from moving downwardly, the band having its upper edge provided with notches, and some of the sides having each a flap that is connected with the side by a part of somewhat restricted width, the width of the restricted portion being substantially the same as the width of the corresponding notch
25 in the band whereby the flaps will serve as means for interlocking the band and the sides of the box to prevent the band from being moved upwardly.

30 6. A paper box comprising a blank having a polygonal bottom, each side of the polygon hav-

ing a side member extending outwardly therefrom, the outwardly extending sides being separated from the bottom by score lines, the sides being so formed that when the blank lies in a plane there will be a substantially triangular notch between the edges of the side members, the adjacent edges of the sides having interlocking projections, two opposed side members having T-shaped projecting lugs, and an endless band surrounding the box at its upper edge, said band having notches in one edge for receiving the T-shaped lugs for interlocking the band and the box.

7. A container for transporting and dispensing berries comprising a receptacle having upwardly and outwardly inclined walls, and a band surrounding the box near its top, the band having vertical sides whereby a tapering space is provided between the inner surface of the band and the outer surface of the box, the side walls of the box having ventilating openings located above the lower edge of the band.

8. A container for transporting and dispensing berries comprising a receptacle having upwardly and outwardly inclined walls, and a band surrounding the box near its top, the band having vertical sides whereby a tapering space is provided between the inner surface of the band and the outer surface of the box, the side walls of the box having ventilating openings located above the lower edge of the band, a transparent moisture-proof cover over the top of the box and a collar for holding the cover in place.

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