

March 19, 1935.

H. C. ATKINS

1,994,804

PAPER CARTON

Filed July 2, 1934

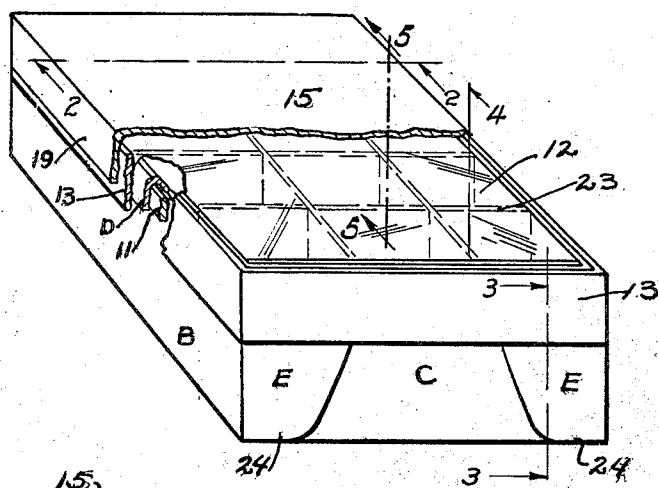


Fig. 1

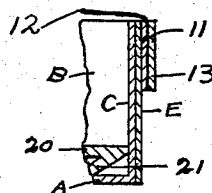


Fig. 3

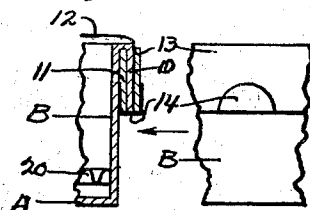


Fig. 4

Fig. 4a

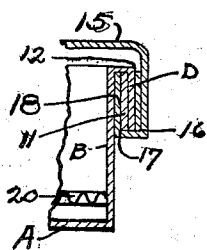


Fig. 5

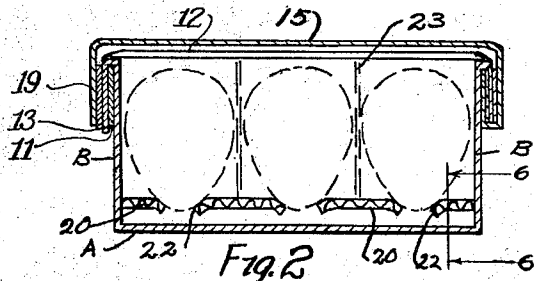


Fig. 2

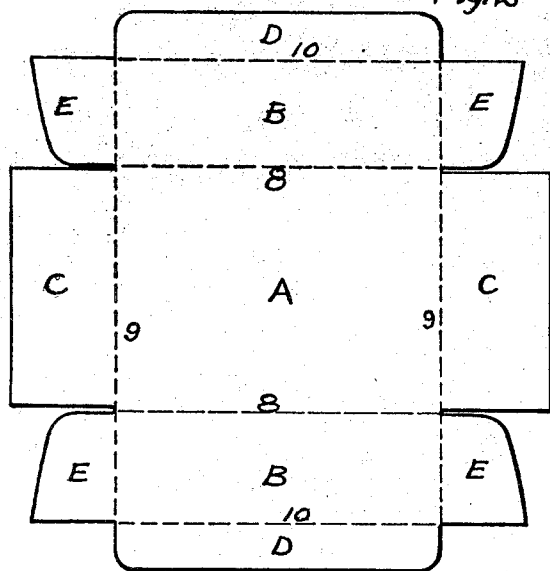


Fig. 7

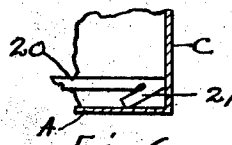


Fig. 6

Inventor
Harry C. Atkins

By

A. J. O'Brien

Attorney

UNITED STATES PATENT OFFICE

1,994,804

PAPER CARTON

Harry C. Atkins, Denver, Colo.

Application July 2, 1934, Serial No. 733,423

6 Claims. (Cl. 229—32)

This invention relates to improvements in paper cartons and has reference more particularly to cartons designed for use in connection with the transportation and dispensing of eggs, but which can also be employed in connection with bacon, candies, fruit, etc.

It is the object of this invention to produce a simple inexpensive and substantial carton that shall be formed from a single piece of cardboard cut into such shape that it can be easily folded into the form of a box having side and end walls and which is provided with an endless band for holding the parts in assembled position.

Another object of the invention is to produce a carton in which means is provided for holding the endless band against accidental removal and with means for reenforcing the corners of the box so as to increase its strength and rigidity.

Another object of this invention is to produce a box or carton that shall be so constructed that a transparent "Cellophane" cover can be applied to the top and held in place by another endless band which serves also to strengthen and reinforce the carton.

A still further object is to provide a carton having a separate cover that can be easily applied and which will serve the usual function of a cover and also provide space for printed matter to be applied thereto for display or advertising purposes.

A still further object of the invention is to produce an egg carton having a resilient cardboard supporting cushion above its bottom and on which the eggs rest so as to cushion any shock to which the carton may be subjected while in use.

The above and other objects that may appear as the description proceeds are attained by means of a construction and an arrangement of parts that will now be described in detail, and for this purpose reference will be had to the accompanying drawing in which the preferred embodiment thereof has been illustrated, and in which:

Fig. 1 is a perspective view of the improved carton, portions being broken away so as to better disclose the construction;

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

Fig. 3 is a section taken on line 3—3, Fig. 1;

Fig. 4 is a section taken on line 4, Fig. 1;

Fig. 4a is a side elevation looking in the direction of the arrow in Fig. 4 and shows the position of the seal;

Fig. 5 is a section taken on line 5—5, Fig. 1; Fig. 6 is a section taken on line 6—6, Fig. 2; and

Fig. 7 is a drawing showing the form of the blank employed in the construction of the carton.

The carton is formed from a single piece of cardboard cut into the form shown in Fig. 7, and has a central rectangular portion A which forms the bottom, two rectangular portions B, which form the sides and two rectangular portions C that form the ends thereof. The sides B have extensions D to which reference will be made hereafter, and they are also provided at their ends with extensions E. The central area A is separated from the areas B by means of score lines 8 and from the areas C by means of score lines 9. The areas B and D are separated by score lines 10 and the sides B are separated from the projections E by extensions of the score lines 9. The blank cut as shown in Fig. 7 is bent into the form of a box or carton by first turning the end walls C about the score lines 9 until they extend in a direction substantially at right-angles to the bottom. The side walls B and the projections D and E are now bent at right-angles to the bottom A so as to fit against the ends of the end walls after which the projections E are bent over against the outer surfaces of the end walls C in the manner shown in Fig. 1 or the projection E may be put on the inside if desired. The extensions D are now bent downwardly as indicated in Fig. 1. For the purpose of holding the parts in the position into which they have been placed an endless band 11 is placed around the carton and positioned near the top in the space between the side walls B and the downwardly extending flanges D, the latter serving to prevent the band from being pulled off from the carton in an upward direction. The carton is now in assembled position and can be employed in a manner similar to that in which any other carton or box is employed.

It is often desirable to cover a carton with a transparent cover member such as a piece of transparent "Cellophane" and this has been indicated in the drawing and the "Cellophane" cover has been identified by reference numeral 12. The transparent cover is cut larger than the top of the carton and is bent downwardly over the sides and ends, after which an endless band 13 is pressed downwardly over the edges of the cover and over the box, the band being positioned as shown in Fig. 1. The band 13, in addition to

holding the transparent cover in place also serves to hold the flanges D from bending upwardly. For the purpose of preventing the band 13 from being accidentally removed, seals formed from gummed pieces of paper are applied about the lower edges of the bands 11 and 13, and the lower edge of the flange D in the manner shown in Figs. 4 and 4a where the sticker or seal has been designated by reference numeral 14. Ordinary paper-fastening staples may be used instead of the seals, if desired. After the seals or staples are in place the carton can be handled without any fear of the bands being displaced and the several plies of paper about the upper edges of the carton assure the latter of sufficient rigidity to prevent accidental collapsing while being handled.

When it is desirable to cover the carton with a cardboard cover, a separate cover like that indicated by reference numeral 15 can be applied. The cover 15 is substantially rectangular and is provided with score lines at points 16 and 17 (Fig. 5). The end of the cover which has been designated by reference numeral 18 in Fig. 5 is inserted between the side B and the inner surface of the band 11 and this serves to hold one side of the cover attached to the box. The cover is then draped over the top of the box and bent downwardly on the other side as indicated by reference numeral 19 in Fig. 1. The cover can be held in place by means of a gummed sticker, or seal, similar to that shown in Figs. 4 and 4a, or by a staple and it is preferable to have these sealing devices at the center of the side, as this makes it possible to use only a single seal on each side.

Where the box is to be employed for transporting and dispensing eggs, a cushion bottom 20 is placed in the carton. This cushion bottom is formed from corrugated cardboard having a paper cover on each side in the manner shown in Fig. 2. Cardboard of this type is well known and can be procured in any quantities desired in the open market. The ends of the cardboard cushion bottom are bent downwardly and inwardly as indicated by reference numeral 21 in Fig. 6 and these ends serve to support the bottom and also to space it from the bottom A of the carton. The cushion bottom is provided with openings 22 into which the ends of the eggs project in the manner shown in Fig. 2. Ordinary separators like those now usually employed in egg cartons and which have been designated by reference numeral 23 in Figs. 1 and 2, where they are shown by dotted lines, can be employed, if desired. Where other goods than eggs are to be transported and dispensed in cartons of this type, the cushion bottom 20 and the separators 23 are removed and the carton can then be employed in connection with candy, nuts, cookies, cakes or any other merchandise. This box is especially well suited for use in dispensing sliced bacon and link sausage, and when employed for this purpose the dimensions are slightly changed, but the construction remains as shown on the drawing and above described.

In Fig. 1 the cover 15 has been shown as merely overlapping the band 13 on one side, and when this construction is employed gummed stickers or staples are used to hold the edge of the cover in place, but both sides of the cover can be attached to the box in the manner shown in Fig. 5 and above described, and when so attached, the cross-section will be as shown in Fig. 2.

Attention is called at this point to the fact that

the extensions E of the sides B have their lower edges 24 on a line with the bottom of the box and therefore form with the sides B an angular structure that is very strong and offers a great resistance to crushing by weight applied to the top. This strengthening feature is in addition to the function ordinarily served by projections of this kind.

From the above description it will be seen that the carton which forms the subject of this invention is of a very simple construction and can be easily and quickly assembled at any place and is therefore suitable to being sold and shipped in knocked-down form and will therefore occupy comparatively little space and this in turn decreases the cost of freight or expressage. The carton can be assembled by bending the parts and applying the endless band 11 and is then ready for use and for some purposes this is sufficient. Where the band 13 is not employed a gummed sticker is applied to each of the flanges D to prevent them from bending upwardly and to serve as means for preventing the band 11 from moving downwardly. Where a transparent cover is employed the band 13 is used in the manner described and a gummed sticker 14 is then applied as shown in Figs. 4 and 4a. The seals or stickers can contain any printed matter desired and in addition to serving their function of securing the parts together, also serve as an advertising medium.

Having described the invention what I claim as new is:

1. A carton formed from a single piece of paper, said carton having a bottom of polygonal shape and a side wall member projecting from each side of the polygon, the side walls having their upper edges bent outwardly and downwardly, an endless band encircling the box near its top and positioned between the side walls and the downwardly bent edges which serve to hold the band against upward movement, and a second endless band encircling the box and positioned over the downwardly extending edges to hold the latter in place.

2. A carton formed from a single piece of paper, said carton having a substantially rectangular bottom, sides and end walls the side walls having their upper edges bent outwardly and downwardly, an endless band encircling the box near its top and positioned between the side walls and the downwardly bent edges which serve to hold the band in place, and a second endless band encircling the box and positioned over the first band and over the downwardly extending edges to hold the latter in place.

3. A carton formed from a single piece of paper, said carton having a substantially rectangular bottom, sides and end walls, the side walls having their upper edges bent outwardly and downwardly, an endless band encircling the box near its top and positioned between the side walls and the downwardly bent edges which serve to hold the band in place, a second endless band encircling the box and positioned over the first band and over the downwardly extending edges to hold the latter in place, and a removable cover having one end projecting into the space between the first endless band and the side of the carton.

4. A carton formed from a single piece of paper, said carton having a bottom of polygonal shape, a side wall member projecting from each side of the polygon, the side wall members having their upper edges bent outwardly and down-

wardly, means for holding the side walls in operative position, with their upper edges projecting downwardly, and a removable cover member of polygonal shape, one side of the cover member having an extension that can be inserted into the space between the downwardly extending edge of one side wall and the outer surface of the wall and means for attaching the cover to the other side of the carton.

- 10 5. A carton formed from a single piece of paper, said carton having a substantially rectangular bottom, sides and end walls, the side walls having their upper edges bent outwardly and downwardly, the ends of the side walls having extensions that can be bent so as to contact with the end walls, an endless band encircling the box near its top and positioned over the extensions

of the side walls to hold them in position, the band being located in the space between the side walls and the downwardly bent edges, the latter serving to hold the band in place, and a second endless band encircling the first and positioned on the outside of the downwardly extending edges of the side walls to make the box or carton secure.

6. A carton comprising, a paper receptacle having its upper end surrounded by an endless band, a cardboard cover having one side inserted between the band and the side of the box and adapted to be extended over the top of the receptacle, and means for securing the other end of the cover to the other side of the receptacle.

HARRY C. ATKINS.