

M. T. ASH.
 CARTON.

APPLICATION FILED JAN. 6, 1916.

1,223,232.

Patented Apr. 17, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

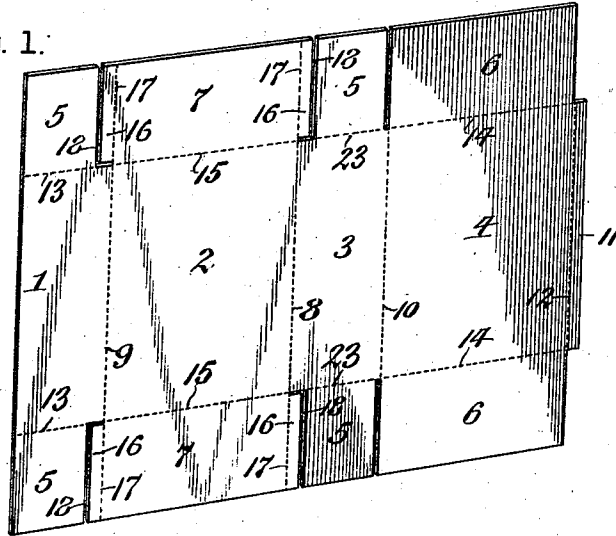


Fig. 2.

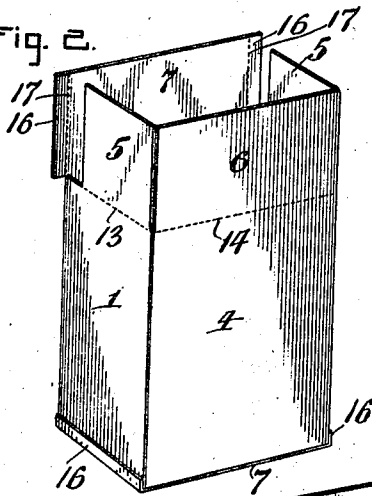


Fig. 3.

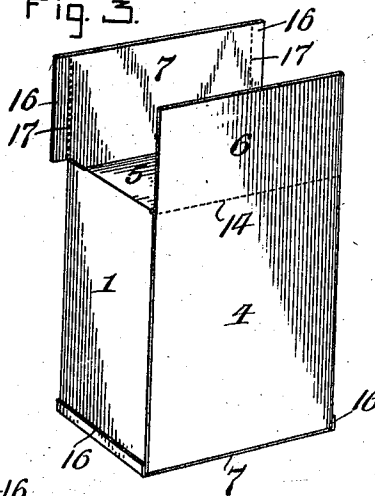
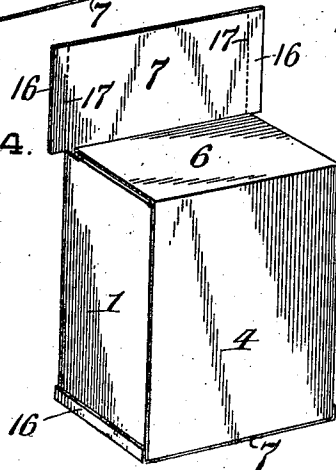


Fig. 4.



INVENTOR

Marselius T. Ash

BY *James & Pepp*

ATTORNEYS.

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2 SHEETS—SHEET 2.

Fig. 5.

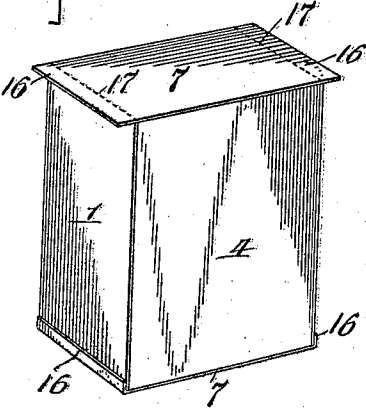


Fig. 6.

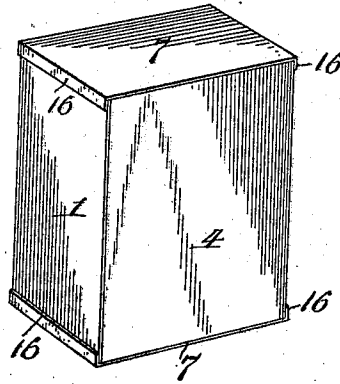


Fig. 7.

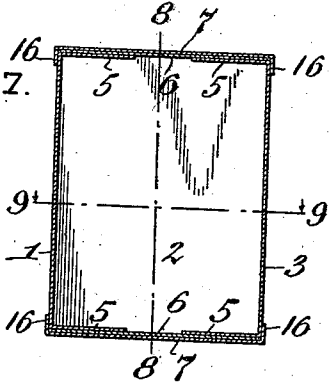


Fig. 8.

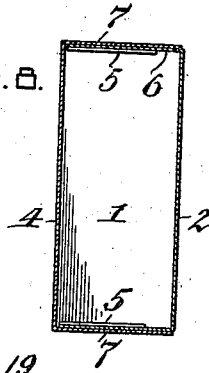


Fig. 9.

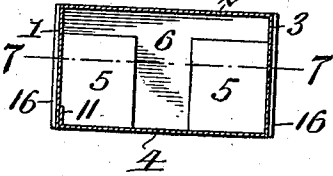
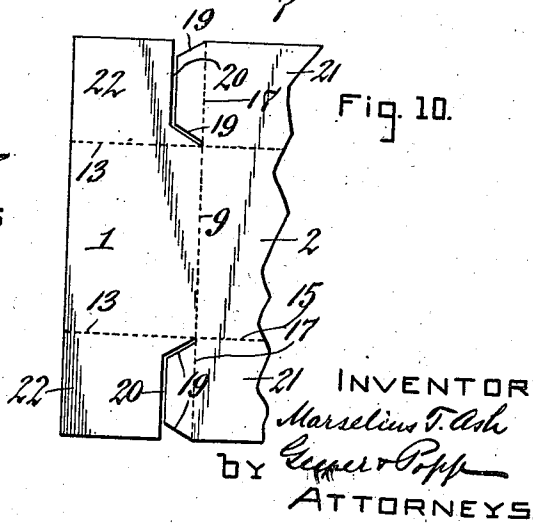


Fig. 10.



INVENTOR
Marselius T. Ash
BY *Super & Papp*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MARSELIOUS T. ASH, OF BUFFALO, NEW YORK.

CARTON.

1,223,232.

Specification of Letters Patent.

Patented Apr. 17, 1917.

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To all whom it may concern:

Be it known that I, MARSELIOUS T. ASH, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Cartons, of which the following is a specification.

This invention relates to cartons or boxes which are usually made of paste board or card board for packing cereal or breakfast foods although the same may also be used for other purposes. In cartons of this character as heretofore constructed the joint between the several parts thereof would not be effectually closed upon folding the same one over another so that the same were not dust or insect proof. It is the purpose of this invention to provide a carton which does not require any more stock than those heretofore used but which permits of effectively closing the joints between the several members of the carton and excluding dust and insects from the interior thereof.

In the accompanying drawings:

Figure 1 is a perspective view of a blank from which my improved carton is made. Figs. 2-6 are similar views showing successive stages in the operation of folding the blank to produce the carton. Fig. 7 is a vertical longitudinal section of the completed carton taken in line 7-7, Fig. 9. Fig. 8 is a vertical transverse section of the same taken in line 8-8, Fig. 7. Fig. 9 is a horizontal section thereof taken in line 9-9, Fig. 7. Fig. 10 is a fragmentary plan view of a modified form of the blank from which my improved carton may be constructed.

Similar characters of reference indicate corresponding parts throughout the several views.

In its general organization this carton comprises four longitudinal side walls 1, 2, 3, 4 which are arranged to form a tubular body of rectangular cross section, and two end walls or heads which close opposite ends of the tubular body and each of which comprises an inner ply composed of two sections 5, 5, an intermediate ply 6, and an outer ply 7.

The several side walls form a continuous row circumferentially of the carton, the two intermediate walls 2, 3 having their opposing longitudinal edges connected and bent relatively to each other along a longitudinal line 8, the terminal wall 1 being connected at its inner longitudinal edge with the adja-

cent corresponding edge of the intermediate wall 2 and bent relatively thereto along a longitudinal line 9 and the other terminal wall 4 being connected at its inner longitudinal edge with the corresponding edge of the other intermediate wall 3 and bent relatively thereto along a longitudinal line 10. The outer longitudinal edges of the terminal walls 1, 4 are preferably connected with each other by means of a sealing flap 11 connected with the outer longitudinal edge of the terminal wall 4 and bent relatively thereto along the longitudinal line 12 and secured to the inner side of the outer longitudinal edge portion of the other terminal wall 1 by means of a suitable adhesive, as shown in Fig. 9.

The sections 5, 5 of the inner ply of each end head or wall are connected at their outer edges with the corresponding transverse edges of the terminal wall 1 and the intermediate wall 3 and bent along transverse lines 13, 23 while their inner ends are arranged opposite each other, as shown in Fig. 7.

The intermediate ply 6 of each head is equal in length to the width of the terminal ply 4 and connected at its inner edge with the adjacent transverse edge of this wall and bent along the transverse line 14 between these parts so that this ply overlaps both sections of the inner ply.

The outer ply 7 of each end head or wall is connected at its inner edge to the adjacent transverse edge of the intermediate wall 2 and bent relatively thereto along the transverse line 15 so as to overlap the companion intermediate ply 6, as shown in Figs. 7 and 8, this outer ply and intermediate ply being secured together upon completing the carton by an adhesive such as glue or cement.

In order to effectually close the joints between the transverse edges of each outer ply 7 and the adjacent parts of the terminal and intermediate walls 1, 3, two transverse sealing flaps 16, 16 are arranged at opposite transverse edges of the respective outer ply 7 and bent relatively thereto along the transverse lines 17, 17 and secured to the outer sides of the terminal and intermediate walls 1, 3 by cement or otherwise. The stock for producing these transverse sealing flaps is obtained by forming L-shaped slits 18 in the blank from which the carton is made between opposite transverse ends of the outer ply and the adjacent parts of the terminal and inter-

mediate walls 1, 3, and inner flap sections which slits extend inwardly from the edge of the blank parallel with the bending lines 17, 17 and then laterally along the bending lines 13 to the junctions of the bending lines 15, 8 and 9, so that the inner ply sections of the respective head are narrowed to an extent equal to the width of said transverse sealing flaps. It will be apparent that by this means the necessary stock for making the transverse sealing flaps is obtained by a reduction in the width of the inner ply sections of each head without affecting the strength or security of the head and without requiring any increase in the dimension of the blank for this purpose.

In the operation of making the carton the blank for the same is first cut into the form shown in Fig. 1. The same is then bent along the longitudinal lines 8, 9 and 10 to form the tubular body the walls of which are retained in position by fastening the longitudinal sealing flap of one terminal wall to the other terminal wall. The several plies of each end head are then folded relatively to each other. In Figs. 2-5 it is assumed that the lower head has already been completed. In order to complete the upper head also the inner ply sections of the same are first bent inwardly from the position shown in Fig. 2 to the position shown in Fig. 3. The intermediate ply is then bent inwardly, as shown in Fig. 4, followed by inwardly bending the outer ply, as shown in Fig. 5. Finally the transverse sealing flaps of the upper head are bent downwardly and secured to the outer sides of the terminal and intermediate walls, as shown in Figs. 8 and 9, thereby completing the carton. By this means a perfectly tight package is obtained which reliably protects the contents of the same without any increase in cost.

If desired the ply section 5, 5 of each head may be arranged between the plies 6 and 7, instead of placing the ply 6 between the plies 5, 5 and 7.

In Figs. 1-6, the opposite ends of the transverse sealing flaps are square but the same may be beveled, as shown at 19 in Fig. 10, for which purpose the slit 20 separating

each outer ply 21 from the adjacent ply section 22 is made of corresponding form.

I claim as my invention:

1. A carton having a plurality of longitudinal walls which together form a tubular body and a head for said body comprising a plurality of plies which are connected with said walls and bent inwardly relatively thereto so that the several plies overlap one another, the outermost ply having sealing flaps at opposite edges thereof which are secured to the outer side of the adjacent body walls and another of said plies being made of sections which are bent toward each other from opposite walls of the body and are reduced in width equal to the width of said sealing flaps the stock of which is removed from said ply sections.

2. A carton having four longitudinal side walls, and a transverse end wall, each side wall consisting of a single ply and the several side walls being constructed from a continuous sheet to form two intermediate side walls which have their opposing longitudinal edges connected with each other and two terminal side walls which meet at their outer longitudinal edges, one of said terminal side walls being provided on its outer longitudinal edge with a sealing flap which is secured to the corresponding longitudinal edge of the other terminal side wall, and said end wall comprising inner, intermediate and outer plies, said inner ply being composed of two sections which are connected at their outer edges, respectively, with adjacent transverse edges of diametrically opposite side walls while their inner edges are arranged opposite each other, said intermediate ply being connected at one of its longitudinal edges with the transverse edge of one of the other pair of diametrically opposite side walls, and said outer ply being connected at one of its longitudinal edges with the corresponding transverse edge of the other side wall of the last mentioned pair, and said outer ply being provided at its opposite transverse edges with transverse sealing flaps which are secured to the outer side of one of the intermediate and one of the terminal side walls.

MARSELIOUS T. ASH.