Dec. 27, 1927. 1,654,140

W. A. MORRIS

CARTON

Filed April 22, 1924

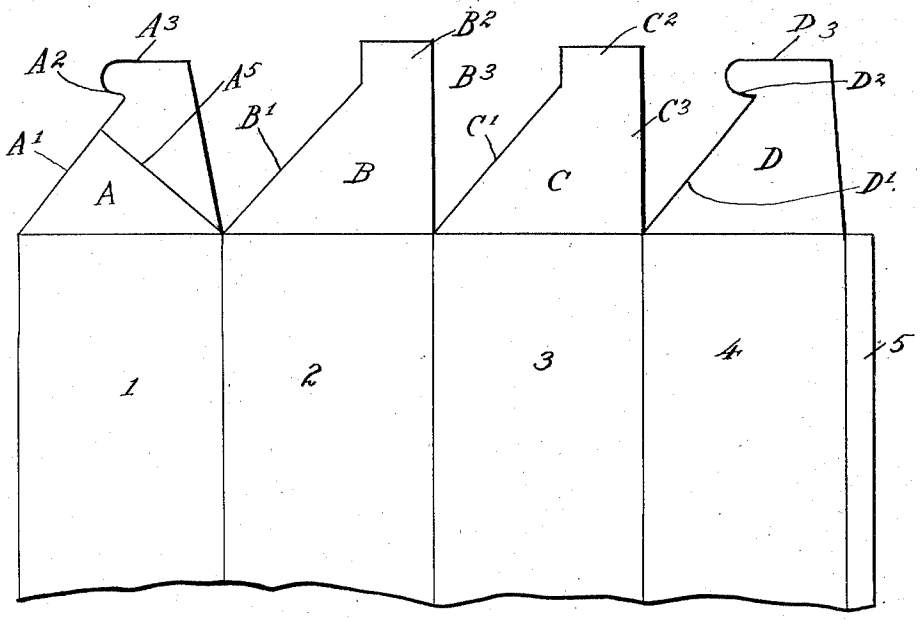


Fig. 1.

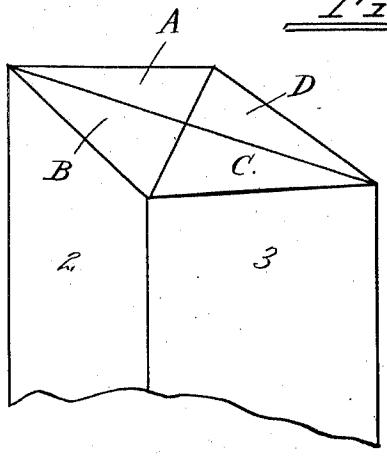


Fig. 2.

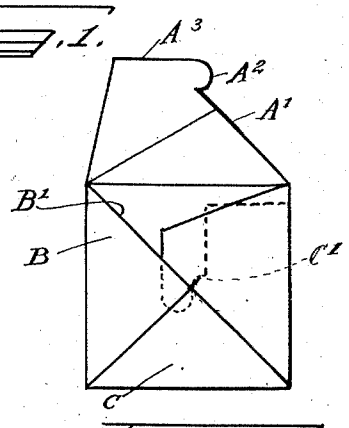


Fig. 3.

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UNITED STATES PATENT OFFICE.

WARREN A. MORRIS, OF CINCINNATI, OHIO, ASSIGNOR TO THE RICHARDSON COMPANY, OF LOCKLAND, OHIO, A CORPORATION OF OHIO.

CARTON.

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My invention relates to cartons, and more particularly to closing flaps therefor, adapted to provide an interlocked closure for the carton, without requiring the sealing thereof.

In cartons made from heavy stock, it is difficult to provide an interlocking end flap structure, which can be closed in over the goods within the carton, and secured without taping or cement, by means of interengaging hooks or the like on the ends of the flaps.

There is a type of cartons in which the flaps may be secured together in interlocked relation by arranging them and then depressing all flaps well into the box so that the interlocking can take place. This form of setting up a closing arrangement for a carton is not possible where there are goods within the carton.

It is the object of my invention to provide a simple flap structure which will permit of an interlocked closure, without interference with the contents of the carton, or shipping case.

This object I accomplish by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawing:

Figure 1 is a plan view of the one end of a carton or shipping package.

Figure 2 is a perspective of the carton fully closed.

Figure 3 is a plan view showing three of the flaps closed and the fourth flap still open.

The carton as illustrated has body sections 1, 2, 3 and 4, and a glue or stitch flap 5, which when secured to section 1, will form a tubular structure for the carton, to be closed by the end flaps.

The end flaps are shown at but one end of the carton and are lettered A, B, C and D.

Flaps B and C are alike, and have edges B^1 and C^1, formed at a slant from the score lines defining the sections 2 and 3. When closed these two edges form diagonal lines from the corners of the carton, crossing each other at the center. Beyond the point where the edges B^1 and C^1 cross each other, the flaps B and C are extended at C^2 and B^2 to form rectangular ends, from which ends the edges C^3 and B^3 extend back in substantial alignment with the score lines defining section 3 of the carton.

The flaps A and D are substantially the same and have edges A^1 and D^1 which form diagonals as in the instance of edges B^1 and C^1. The two flaps are then formed in curves A^2 and D^2, forming hooks. The tips of the two flaps extend straight across as at A^3 and D^3, and the remaining edges extend substantially in alignment with the score lines from which these edges extend, but at a slight slant.

In setting up the carton flaps for closing the end of the box, flaps B and C are closed by bending down B and then bending C over the top of it. Flap D is then bent down, and the hook portion thereof will engage under the diagonal edge of flap B. Flap A is then bent down. I provide a score line A^5 across this flap, which will permit the flap to be bent so that the portion segregated by the score line can be thrust under the diagonal edge of flap B. When this is done and the flap A is pressed down against the three flaps already in place, the hook A^2 will engage with hook D^2, and both flaps A and D will hold down the flaps B and C.

Thus the entire carton end is closed and locked shut without use of tapes, cement or other added means of security.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a carton having a plurality of locking closure flaps, a blank formed into four walls, adapted to form a rectangular enclosure, and having end flaps to form an end closure, said flaps being formed of triangular shape with one edge adapted to lie diagonally part way across the box, and the other edge adapted to lie substantially in alignment with the top of an adjacent wall of the carton and with more than one of the flaps when the flaps are folded at right angles to the side walls of the carton, having a portion of their diagonal edges extended only sufficiently beyond the diagonal lines from corner to corner of the box to form interlocking abutments at the center of the box, and one of said closing flaps provided with means for interlocking the other three flaps while the other three flaps are held in a position of interlocked engagement by the extended portion of one of the other of said closing flaps.

2. In a carton having a plurality of lock-

ing closure flaps, a blank formed into four walls, adapted to form a rectangular enclosure, and having end flaps to form an end closure, said flaps being formed of triangular shape with one edge adapted to lie diagonally part way across the box, and the other edge adapted to lie substantially in alignment with the top of an adjacent wall of the carton and with more than one of the flaps when the flaps are folded at right angles to the side walls of the carton, having a portion of their diagonal edges extended only sufficiently beyond the diagonal lines from corner to corner of the box to form interlocking abutments at the center of the box, and one of said closing flaps provided with means for interlocking the other three flaps while the other three flaps are held in a position of interlocked engagement by the extended portion of one of the other of said closing flaps, said last closing flap having a crosswise extending score line for the easy insertion of said flap into locked engagement.

WARREN A. MORRIS.