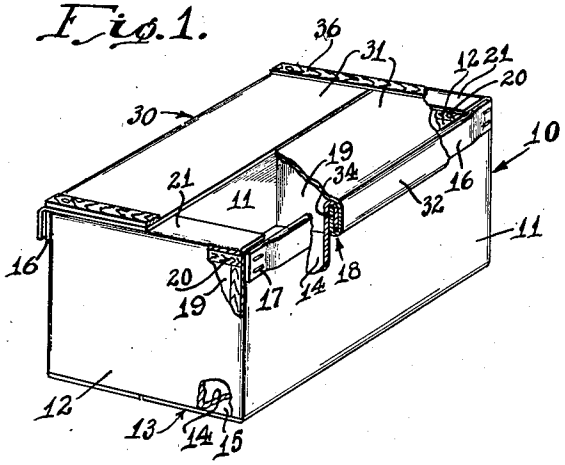
Jan. 14, 1941. W. F. LUCE 2,228,604

CARTON STRUCTURE

Filed Aug. 17, 1938 2 Sheets-Sheet 1

Fig. 1.



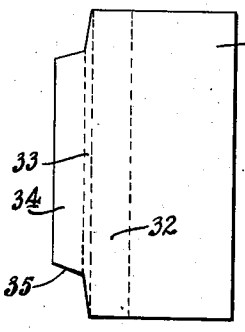


Fig. 2.

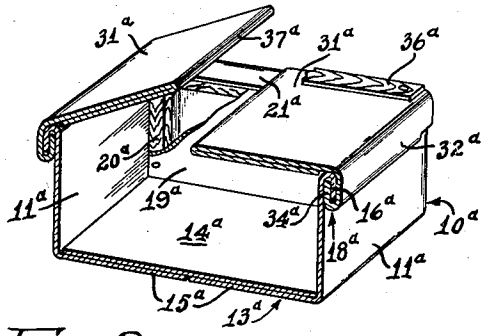


Fig. 3.

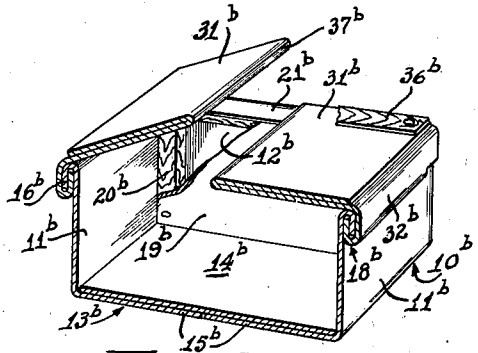


Fig. 4.

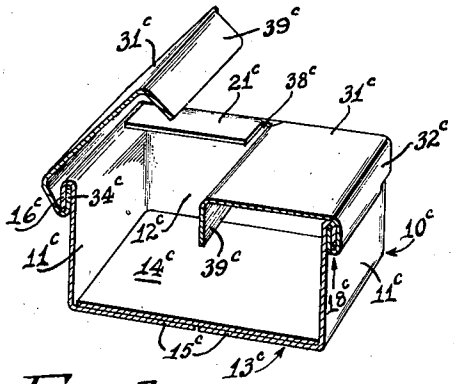


Fig. 5.

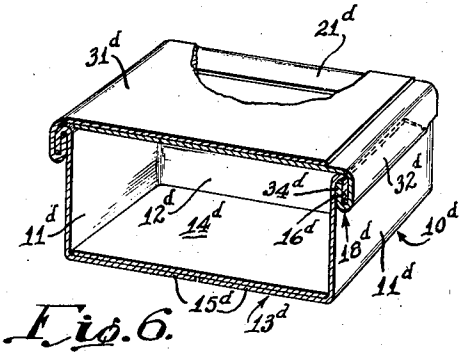


Fig. 6.

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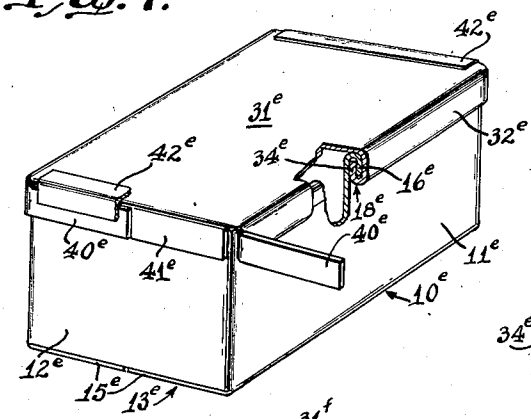
BY Rule & Hoge
ATTORNEYS.

Jan. 14, 1941. W. F. LUCE 2,228,604

CARTON STRUCTURE

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Fig. 7.



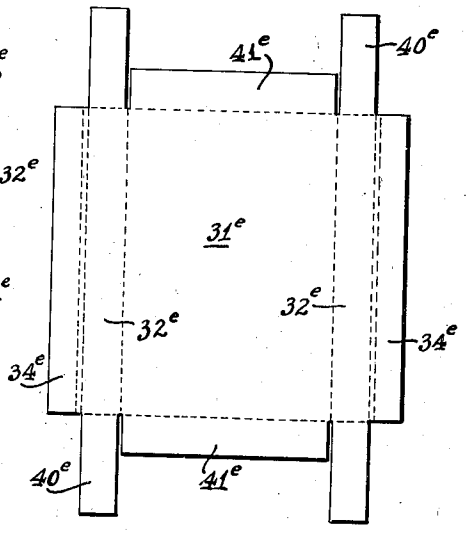


Fig. 8.

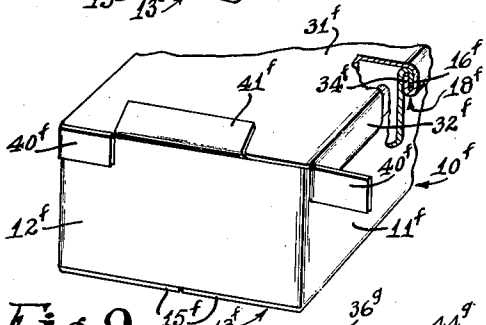


Fig. 9.

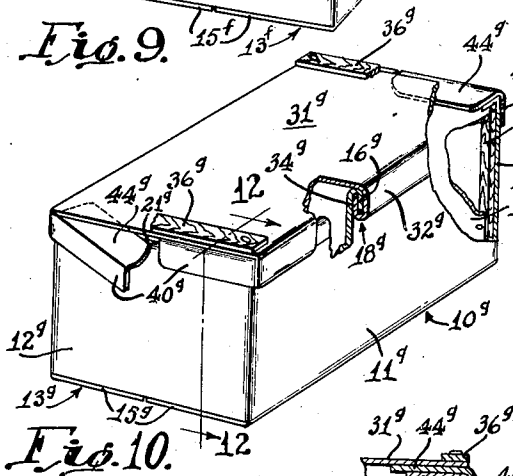


Fig. 10.

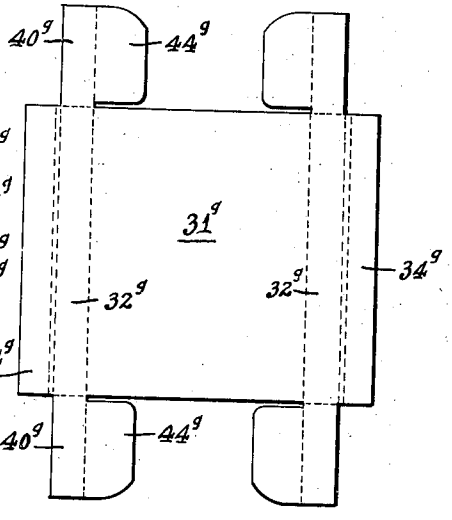


Fig. 11.

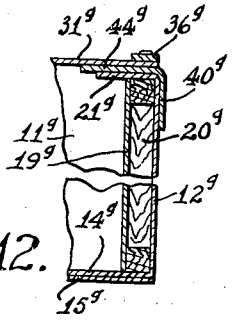


Fig. 12.

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Patented Jan. 14, 1941 2,228,604

UNITED STATES PATENT OFFICE

2,228,604

CARTON STRUCTURE

Willis F. Luce, San Francisco, Calif., assignor to Owens-Illinois Pacific Coast Company, a corporation of Delaware

Application August 17, 1938, Serial No. 225,361

2 Claims. (Cl. 229—43)

The present invention relates to carton structures and particularly to cartons constructed of paperboard, fiberboard or like material.

The principal object of the invention is to provide an open top carton including a container and cover therefor in which the cover is maintained in position on the container by means of a locking fit betwen the two. In carrying out the above mentioned object, the invention contemplates the provision of a container and cover in which the cover is maintained in position on the container by means of a pair of tongues formed on the former and fitting into respective pockets formed on the latter and held therein by means of a locking fit that is cinched by means of locking tabs, nailing strips, glue, or otherwise.

The provision of a carton which is adequately reinforced, particularly at the edges thereof and which consequently is capable of withstanding heavy superimposed loads; one which may be shipped to the user in a knocked down form and which may be assembled and erected with facility; one in which the interior thereof affords cushioned surfaces for the contents thereof; one in which the top edges thereof are smooth and rounded; and one which may be manufactured with a minimum of waste at a comparatively low cost, are further desirable features that have been borne in mind in the production and development of the present invention.

Other objects and advantages of the invention, not at this time enumerated, will become apparent as the following description ensues.

In the accompanying drawings:

Fig. 1 is a perspective view, partly in section, of an assembled carton manufactured in accordance with the principles of the present invention.

Fig. 2 is a plan view of a blank from which one of the cover sections of the carton shown in Fig. 1 is formed.

Fig. 3 is a fragmentary perspective view, in section, of a slightly modified form of carton.

Fig. 4 is a fragmentary perspective view, similar to Fig. 3, of another form of carton.

Fig. 5 is a view similar to Figs. 3 and 4 showing a further modified form of carton.

Fig. 6 is a like view of yet another modified form of carton.

Fig. 7 is a perspective view, partly in section, of another modified form of carton having a one-piece cover.

Fig. 8 is a plan view of the blank from which the cover shown in Fig. 7 is formed.

Fig. 9 is a fragmentary perspective view, partly in section, of another modified form of carton having a one-piece cover.

Fig. 10 is a perspective view, partly in section, of another form of carton with a one-piece cover.

Fig. 11 is a plan view of the blank from which the cover shown in Fig. 10 is formed, and

Fig. 12 is a sectional view taken on the plane indicated by the lines 12—12 in Fig. 10.

Referring to the drawings in detail, and particularly to Fig. 1, an open top carton container 10, preferably of one-piece construction, is provided with side walls 11, end walls 12, and a bottom 13, the latter being provided by inner inwardly directed end flaps 14 and outer inwardly directed side flaps 15. The material of the side walls 11 adjacent the upper longitudinal edges thereof is reversed upon itself to provide narrow strips 16 which are coextensive with these edges and which are stapled as at 17 or are otherwise secured near their ends firmly to the respective side walls and thus form elongated inverted pockets 18 the purpose of which will appear presently. Cushioning panels 19 which are nailed or glued to open wood frames or other nail receiving members 20 are fitted into the carton container at the ends thereof and are spaced from the end walls 12 a distance equal to the width of the frames 20. Short transverse inwardly directed end flaps 21 extend over the upper transverse sides of the frames 20 and conceal the same.

The cover 30 for the carton container 10 is of two-piece construction and is formed from a pair of identical blanks, one of which is shown in Fig. 2. Each section of the cover 30 includes an inwardly directed cover flap 31 adapted to close one-half of the open end of the carton container. A downwardly extending outer side strip 32 is adapted to lie against and conceal the strip 16 on one side of the container. A narrow edge strip 33 is adapted to underlie the bottom edge of the strip 16, and a tongue 34 is adapted to extend into the pocket 18. The length of the tongue 34 is slightly less than the length of the pocket 18 and the ends thereof are tapered as at 35 to facilitate insertion of the tongue thereinto. To seal the cover onto the carton container, wood nailing strips 36 may be applied as shown in Fig. 1, the nails extending through the strip 36, the cover flaps 31, the end flaps 21, and into the wood frames 20. If desired the nailing strips 36 may be dispensed with by gluing the cover flaps 31 directly to the end flaps 21 or by the use of adhesive tape.

Application of the cover sections to the carton container is practically obvious. The tongues 34

are first inserted in the pockets 18 and the remainder of the sections are folded over the longitudinal edges of the container and are nailed in position by the strips 36.

In Fig. 3 a slightly modified form of cover section is shown. The material of the cover flap 31a of each section is folded inwardly upon itself as at 37a to provide a closure wall of double thickness. In Fig. 4 the material of the cover flap 31b is folded outwardly upon itself as at 37b to similarly provide a closure wall of double thickness. In the forms of the invention shown in Figs. 3 and 4, nailing strips 36a and 36b respectively are employed to lock the cover on the container.

In the modification shown in Fig. 5, the cushioning panels and frames are omitted from the carton container. The end flaps 21c are provided with aligned slots, one of which is shown at 38c. The cover flaps 31c of the cover sections are provided with tongues 39c which are adapted to be brought together in face-to-face abutting relationship and inserted into the slots 38c to maintain the cover on the container. In this form of the invention the nailing strips may if desired be omitted as the tongue and slot arrangement 39c, 38c, serves to lock the cover in position and prevent removal of the tongues 34c from the pockets 18c.

In the modification shown in Fig. 6, the cover flaps 31d are of substantially the width of the carton container 10d and overlap each other. Glue is employed to lock the cover in position.

In the modification shown in Fig. 7, a one-piece cover construction for the carton container is disclosed. The cover is formed from the blank shown in Fig. 8 and includes a cover panel 31e which is adapted to extend completely across the open end of the carton container 10e. The narrow strips 16e by means of which the pockets 18e are formed are not stapled or secured to the material of the container sides 11e and thus the tongues 34e extend the full length of the container. Extensions or tabs 40e are formed on the side strips 32e at the ends thereof and are adapted to be folded around the corners of the container and overlie respective flanges 41e which are folded downwardly from the cover panel 31e. The tabs 40e may be secured in position by means of tape 42e or the like, or if desired, these tabs 40e may be glued directly to the flanges 41e.

In assembling the cover shown in Fig. 7, the narrow strips 16e are extended laterally and the blank is superimposed on the container 10e with the tongues 34e extending over the edges of the strips 16e. The material of the blank is folded over the edge of the strips 16e and under the same, and the strips 16e are then bent downwardly. To lock the cover in position, the tabs 40e are folded into place and secured by adhesive or otherwise as set forth above.

In the modification shown in Fig. 9, the flanges 41f are of reduced length as well as are the tabs 40f. When the cover is assembled on the container 10f these flanges and tabs are moved into alignment in edge-to-edge relationship and are secured by gluing or by adhesive tape.

In the modification shown in Figs. 10, 11 and 12, tongues 44g are formed on the tabs 40g and are adapted to be inserted between the cover panel 31g and the end flaps 21g. Nailing strips 36g are employed to secure the cover in position and the nails thereof may extend through the tongues 44g and into the wood of the frames 20g to prevent withdrawal of the tongues and unfolding of the cover from the container 10g.

Modifications may be resorted to within the spirit and scope of the appended claims.

I claim:

1. A carton comprising a bottom, side and end walls rising therefrom, an extension on each side wall folded outwardly and downwardly in spaced relation to the wall proper and secured at its ends to the latter thereby to provide an elongated inverted pocket, a cover for the open upper side of the carton consisting of two separate bodily removable sheets each including a tongue adapted to be inserted in one of said pockets, a nailing strip at each end of each sheet externally thereof and a wood frame internally and at each end of the carton to which said strips are nailed.

2. A carton comprising a bottom, side and end walls rising therefrom, an extension on each side wall folded outwardly and downwardly in spaced relation to the wall proper and secured at its ends to the latter thereby to provide an elongated inverted pocket, a cover for the open upper side of the carton consisting of two separate bodily removable sheets each including a tongue adapted to be inserted in one of said pockets, a nailing strip at each end of each sheet externally thereof and a wood frame internally and at each end of the carton to which said strips are nailed, each sheet being of double wall thickness and comprising a single sheet folded upon itself, said nailing strips securing the sheets folded together.

WILLIS F. LUCE.