Oct. 21, 1941. E. C. HOLLINGSWORTH 2,260,181

SPACER FOR CARTONS AND THE LIKE

Filed April 8, 1940 2 Sheets-Sheet 1

FIG.1.

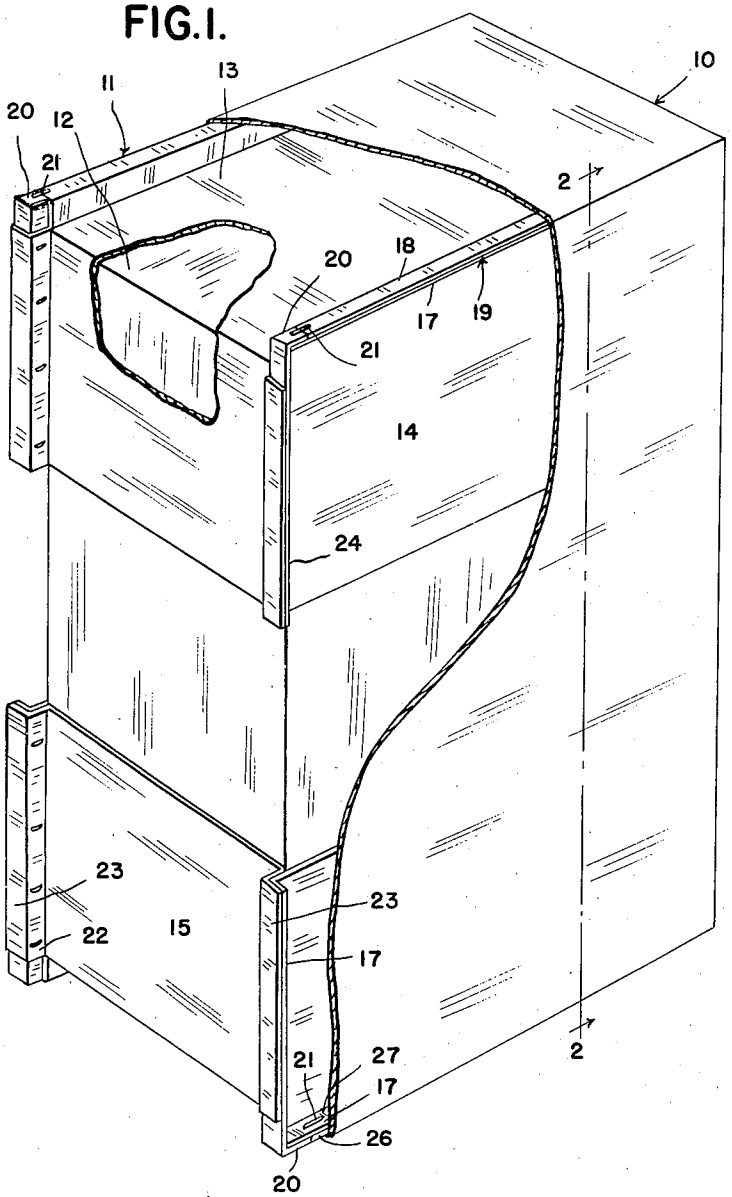


FIG.4.

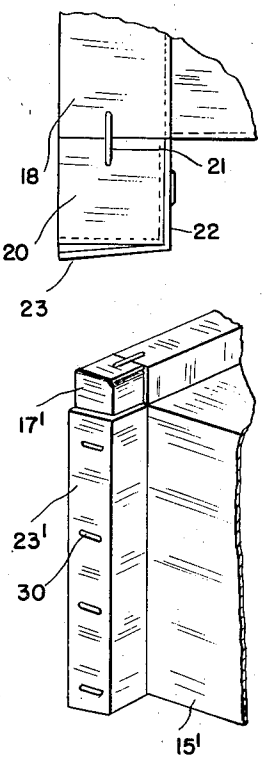


FIG.5.

INVENTOR.
EDWARD C. HOLLINGSWORTH

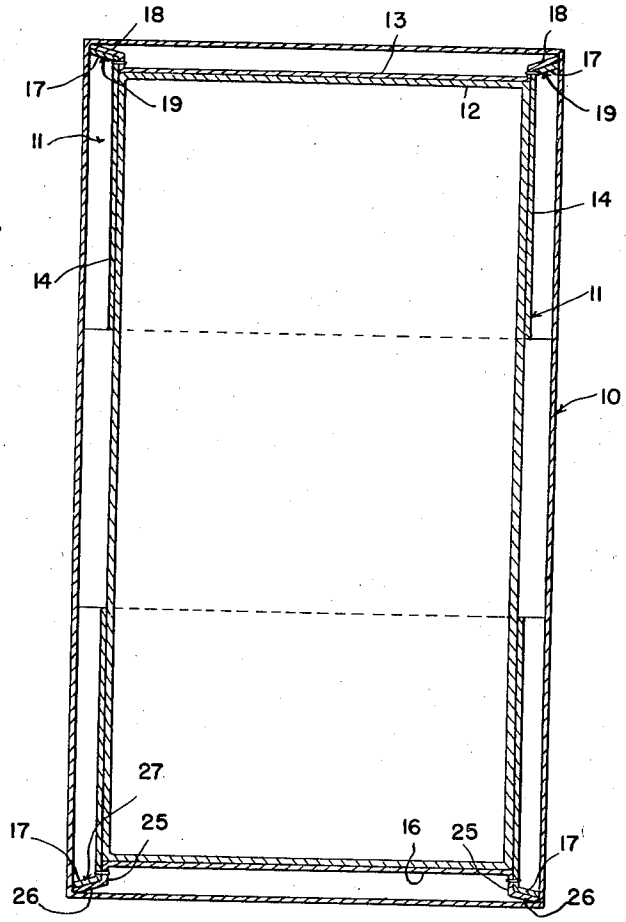
BY Whittemore Hulbert & Belknap
ATTORNEYS

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Filed April 8, 1940 2 Sheets-Sheet 2

FIG.2.



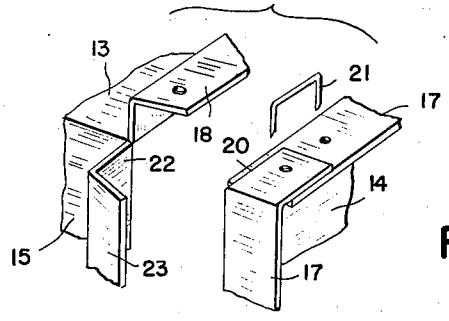


FIG.3.

INVENTOR.
EDWARD C. HOLLINGSWORTH

BY Whittemore Hulbert & Belknap
ATTORNEYS

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UNITED STATES PATENT OFFICE

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SPACER FOR CARTONS AND THE LIKE

Edward C. Hollingsworth, Monroe, Mich., assignor to River Raisin Paper Company, Monroe, Mich., a corporation of Michigan

Application April 8, 1940, Serial No. 328,584

14 Claims. (Cl. 229—14)

This invention relates generally to packages of the type used to ship articles and refers more particularly to improved means for protecting the articles from damage either during transportation or handling.

It is one of the principal objects of this invention to provide simple, inexpensive spacing means capable of being readily inserted into a carton or the like and having portions engageable with the carton in a manner to support an article to be shipped in suspension in the carton with the sides of the article spaced from the walls of the carton. The construction is such as to thoroughly protect the article from damage during shipping or handling and, accordingly, is especially useful for transporting or shipping articles, such, for example, as relatively thin sheet metal cabinets which are easily damaged by improper handling.

Another object of this invention is to provide spacing means in the form of a container comprising two interchangeable sections capable of being readily inserted into a shipping carton in assembled relationship with the article and having flanges engageable with the carton to not only hold the sections in position on the article, but to also space the walls of the sections from the walls of the carton. The formation of the spacer of two interchangeable sections simplifies the construction of the spacer and renders it possible to readily pack the article to be shipped in the container.

The foregoing, as well as other objects, will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings, wherein:

Figure 1 is a perspective view, partly in section, of a package having a spacer constructed in accordance with this invention;

Figure 2 is a sectional view taken substantially on the plane indicated by the line 2—2 of Figure 1;

Figure 3 is a disconnected perspective view of a portion of the spacer;

Figure 4 is a fragmentary plan view of a part of the spacer;

Figure 5 is a fragmentary perspective view illustrating a slightly modified form of spacer.

The spacer, forming the subject matter of this invention, may be advantageously used for shipping various different types of articles which are easily damaged by handling and, of course, the shape, as well as the size of the spacer, will vary in accordance with the article to be shipped. However, for the purpose of illustrating the invention, I have shown a spacer particularly designed to ship metal cabinets of the type having relatively thin metal side walls. Articles of this general character are frequently seriously damaged during transportation or shipping and care must be taken to protect the articles to such an extent that they will not be damaged during shipment, regardless of the way they are handled.

In Figure 1 of the drawings, I have shown a package of relatively simple, inexpensive construction having a carton 10 and having a spacer 11 in the form of a container comprising two parts suspended within the carton 10 with the walls thereof spaced laterally from the walls of the carton. In the present instance, the spacer 11 is readily insertable into the carton 10 through an opening (not shown) in one end wall of the carton and the two container parts are of a size predetermined to receive opposite end portions of a sheet metal cabinet 12. The spacer 11 is preferably formed of an inexpensive, bendable material, such as paper board, and the two parts of the spacer are interchangeable to facilitate manufacture and assembly.

The container part forming the upper end of the spacer in Figure 1 opens downwardly and is fashioned with top, side and end walls 13, 14 and 15, respectively. The container part forming the lower end of the spacer in Figure 1 opens upwardly and is identical in construction to the upper container part with the exception that the wall 13 forms the bottom of the lower container part instead of the top wall. Inasmuch as both parts are the same in construction, the same reference characters are used to indicate corresponding portions of the two spacer parts. The marginal edge portions of the opposite side walls 14 of each spacer part extend beyond the walls 13 and 15 of the spacer parts and terminate in laterally outwardly flared portions 17. The opposite side edges of the walls 13 of both the spacer parts are also formed with outwardly extending portions stitched or otherwise secured to the marginal portions of the opposite side walls and having laterally outwardly flared portions 18 cooperating with the adjacent flared portions 17 to form flexible spacing flanges 19. Upon reference to Figure 3, it will be noted tht the ends of the flared portions 17 extending along the front and rear edges of the side walls 14, of both spacer parts are provided with extensions 20 folded over the ends of the flared portions 17 extending along the adjacent edges of the side walls 14. The folded extensions 20 are stitched or otherwise secured to the adjacent

ends of the flared portions 17 by stitches 21 which perform the additional function of securing the opposite ends of the flared portions 18 to the adjacent flared portions 17.

The opposite vertical marginal edge portions of the end walls 15 of both spacer parts are folded to form outwardly extending portions 22 having flared portions 23 which cooperate with the adjacent flared portions 17 on the side walls to form flexible spacing flanges 24. In this embodiment of the invention, the portions 22 on the end walls 15 are stitched or otherwise suitably secured to the corresponding portions on the opposite side walls 14.

As stated above, the spacer 11 is formed of two container sections which are preferably interchangeable for convenience in manufacture and assembly. The construction is such as to permit the sections to be readily slipped over opposite ends of the metal cabinet 12 and inserted into the carton as a unit with the cabinet. When the cabinet 12 with the spacer sections thereon is assembled in the carton, the free marginal edges of the flexible spacing flanges at opposite sides of the spacer engage the opposite sides of the carton at the juncture of the latter sides with the top and bottom walls of the carton in the manner clearly shown in Figure 2. The construction is preferably such that the flexible marginal spacing flanges are flexed to some extent upon inserting the spacer in the carton and thereby support the spacer in suspension in the carton with the walls of the cabinet 12 or article spaced a substantial distance from the walls of the carton. As a result, there is very little likelihood of the metal cabinet in the carton becoming damaged by shocks or jars imparted to anyone of the walls of the carton.

The construction shown in Figure 5 of the drawings is identical to the arangement previously set forth with the exception that the flared portions 23' on the end walls 15' of the spacer parts are stitched to the adjacent flared portions 17' on the opposite side walls of the spacer parts by means of the stitches 30. It will, of course, be understood that the stitches described in connection with the first form of this invention as securing the marginal edge portions 22 of the end walls 15 to the adjacent marginal portions of the side walls 14 are eliminated.

What I claim as my invention is:

1. A package comprising a carton, a spacer part adapted to receive one end of an article to be packaged, said part having end walls and side walls secured together to form a unitary structure, said side walls projecting beyond the end walls to form flanges extending substantially perpendicular to the end walls, said flanges having outwardly flared marginal portions engageable with the carton at the junction of adjacent walls of the carton to suspend the spacer part in the carton.

2. A package comprising a carton, a spacer part adapted to receive one end of an article to be packaged and insertable as a unit with the article into the carton, said spacer part having end walls, side walls and an adjacent wall connecting said end and side walls, flanges projecting laterally outwardly from the opposite side edges of the end walls, additional flanges projecting laterally outwardly from the opposite side edges of the said adjacent connecting wall and joined to the adjacent ends of the flanges on the end walls by corner flanges to provide continuous marginal flanges around opposite side edges of the end walls and the opposite side edges of the adjacent connecting wall, said flanges adapted to engage adjacent portions of the carton to suspend the spacer part in said carton with the side walls of the former spaced laterally from the side walls of the latter.

3. A package comprising a carton, a spacer part adapted to receive one end of an article to be packaged and insertable into the carton, said spacer part having end walls, side walls and an adjacent wall connecting said end and side walls, said side walls having marginal portions projecting beyond the end walls and beyond the adjacent connecting wall to form flanges, said flanges having marginal portions flared outwardly at angles oblique to the flanges and engageable with the adjacent corner portions of the carton to suspend the spacer part in the carton with the side walls of the spacer part spaced laterally from adjacent side walls of the carton.

4. A package comprising a carton, a spacer part adapted to receive one end of an article to be packaged and insertable as a unit with the article into the carton, said spacer part having end walls, side walls and having an adjacent wall connecting the end and side walls, said side walls having marginal portions projecting beyond the end walls and the adjacent connecting wall to form flanges, said flanges having marginal portions flared outwardly at angles oblique to the flanges and having the adjacent ends thereof connected together by corner flanges also flared outwardly to form continuations of the flared portions aforesaid, the flared portions of the flanges aforesaid adapted to engage the carton at the junction of adjacent walls of the carton to suspend the spacer part in the carton with the side walls of the spacer part spaced laterally from adjacent side walls of the carton.

5. A package comprising a carton, a spacer part adapted to reecive one end of an article to be packaged and insertable as a unit with the article into the carton, said spacer part having end walls, side walls and having an adjacent wall connecting the end and side walls, said side walls having marginal portions projecting beyond said end walls and the said adjacent connecting wall, said end walls and said connecting wall also having marginal portions embracing the marginal projecting portions of the side walls to form with the latter portions flanges of double thickness of material, said flanges having the free edge portions engageable with the adjacent walls of the carton to suspend the spacer part in the carton with the side walls of the spacer part spaced laterally from adjacent side walls of the carton.

6. A package comprising a carton, a spacer part adapted to receive one end of an article to be packaged and insertable into the carton, said spacer part having end walls, side walls and having an adjacent wall connecting the end and side walls, said side walls having marginal portions projecting beyond said end walls and the said adjacent connecting wall, said end walls and said connecting wall also having marginal portions embracing the marginal projecting portions of the side walls to form with the latter portions flanges of double thickness of material, said flanges having outwardly flared portions engageable with the carton at the junction of adjacent walls of the carton to suspend the spacer part in the carton with the side walls of the spacer part spaced laterally from the adjacent side walls of the carton.

7. A package comprising a carton, a spacer comprising two separate parts, each part having end walls, side walls and having an adjacent wall connecting the end and side walls, said parts adapted to respectively receive opposite ends of an artcle to be packaged and insertable into the carton, the opposite side walls of each part having marginal portions projecting beyond the end walls and beyond the said adjacent connecting wall to form spacing flanges, the free edge edge portions of the spacing flanges on each spacer part being engageable with the adjacent walls of the carton to suspend the spacer parts in the carton with the walls of said parts spaced laterally from the adjacent walls of the carton.

8. A package comprising a carton, a spacer in the form of a container comprising two parts, each container part having end walls, side walls and having an adjacent wall connecting the end and side walls, said container parts adapted to respectively receive opposite ends of an article to be packaged and insertable into the carton, the side walls of each container part having marginal portions projecting beyond the end walls and beyond the adjacent connecting wall, said end walls and said connecting wall of each container part also having marginal portions embracing the marginal projecting portions of the opposite side walls to form with the latter portions spacing flanges of double thickness of material, the spacing flanges on each container part having the free edge portions engageable with the adjacent walls of the carton to suspend the container parts in the carton with the walls of the container parts spaced laterally from the adjacent walls of the carton.

9. A package comprising a carton, a spacer comprising separate container parts, each part consisting of a cover, side and end walls, adapted to be inserted into the carton and to respectively receive opposite ends of an article to be packaged, and flanges on each container part projecting outwardly from opposite edges of opposite side walls of each part and also projecting outwardly from the edges of said opposite side walls which connect the edges aforesaid, said flanges having marginal edge portions engageable with adjacent wall portions of the carton in a manner to suspend the container parts in the carton with all of the walls of the container parts spaced laterally from adjacent walls of the carton.

10. A package comprising a container, a spacer comprising two separate parts, each part having side walls connected together by end walls and having a wall connecting the side and end walls, said parts adapted to be inserted into the carton and adapted to respectively receive opposite end portions of an article to be packaged, and marginal spacing flanges carried by each part and projecting outwardly from the junction of the opposite side edges of the end walls of each part with the adjacent side edges of the side walls and also projecting outwardly from the junction of the opposite side edges of the said connecting wall of each part with the adjacent edges of the side walls of each part in a manner to engage the corner portions of the carton and thereby hold the spacer parts in the carton with all of the walls of the spacer parts spaced laterally from the adjacent walls of the carton.

11. A package comprising a carton, a spacer comprising separate parts, each part having side walls connected together by end walls and having a wall connecting said side and end walls, said parts adapted to receive opposite end portions of an article to be packaged and insertable into the carton, marginal flanges carried by each part and projecting outwardly from the opposite side edges of the end walls, and additional marginal flanges projecting outwardly from opposite side edges of the connecting wall of each part and cooperating with the first named marginal flanges to engage adjacent wall portions of the carton in a manner to support the spacer parts in the carton with all of the walls of the spacer parts spaced laterally from adjacent walls of the carton.

12. A package comprising a carton, a spacer comprising separate container parts adapted to be inserted into the carton and to respectively receive opposite ends of an article to be packaged, said container parts having a combined depth equal to or less than the corresponding dimension of the article to be packaged, and flanges on each of the container parts projecting outwardly from the intersection of opposite side walls of each container part with the adjacent walls and engageable with adjacent wall portions of the carton in a manner to suspend the container parts in the carton with all of the walls of the container parts spaced laterally from adjacent walls of the carton.

13. A package comprising a carton, a spacer comprising two like separate parts, each part having end walls, side walls and having an adjacent wall connecting the end and side walls, said parts adapted to respectively receive opposite ends of an article to be packaged and adapted to be inserted into the carton, the combined depth of the spacer parts being equal to or less than the corresponding dimension of the article to be packaged, and flanges on each spacer part projecting outwardly from the latter and engageable with adjacent walls of the carton in a manner to suspend the spacer parts in the carton with the walls of the latter spaced laterally from the adjacent walls of the carton.

14. A package comprising a carton, a spacer part adapted to receive one end of an article to be packaged, said part having end walls and side walls secured together to form a unitary structure, said side walls projecting beyond the end walls to form flanges extending substantially perpendicular to the end walls, said flanges having marginal portions engageable with the carton at the junction of adjacent walls of the carton to suspend the spacer part in the carton.

EDWARD C. HOLLINGSWORTH.