March 29, 1927. 1,622,525

R. L. LEMON

CONTAINER

Filed July 14, 1922

Fig. 1.

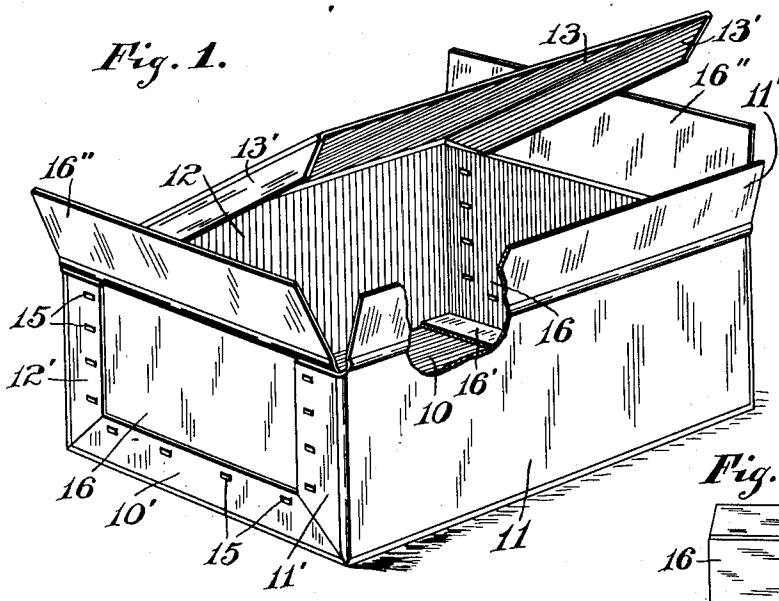


Fig. 4.

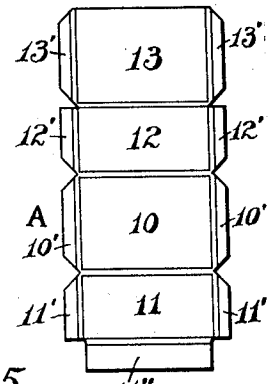


Fig. 5.

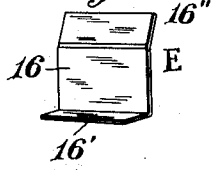


Fig. 2.

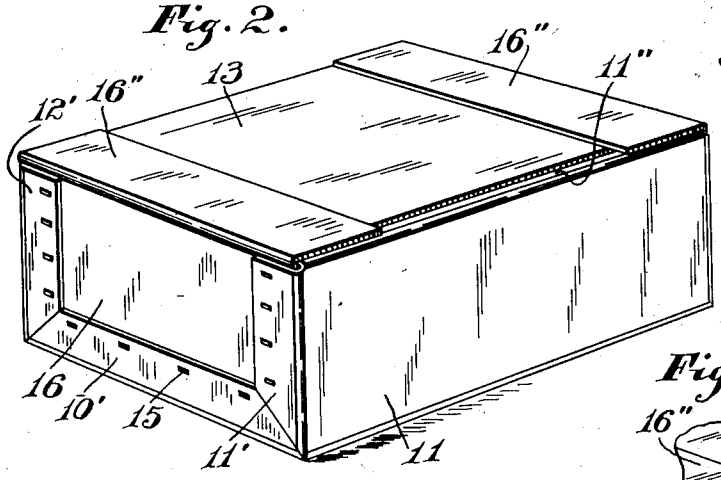


Fig. 6.

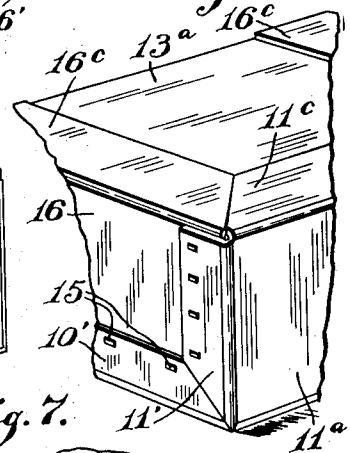


Fig. 7.

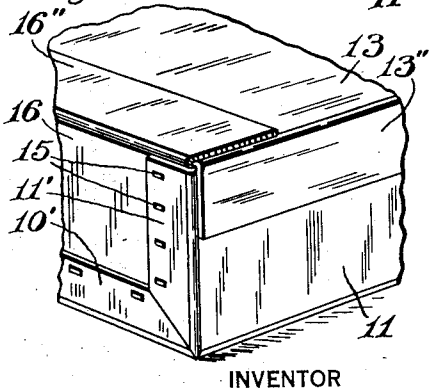
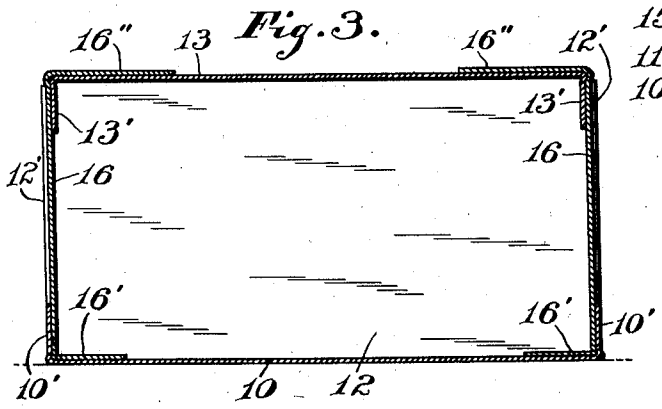


Fig. 3.



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Patented Mar. 29, 1927. 1,622,525

UNITED STATES PATENT OFFICE.

ROBERT L. LEMON, OF INDIANAPOLIS, INDIANA.

CONTAINER.

Application filed July 14, 1922. Serial No. 574,897.

In the utilization of fibre-board containers, in the shipment of canned goods, it has been found that the weakest points have been the fold lines along the tops and bottoms of the end walls. By end wall, I mean the vertical wall of shorter dimension. Boxes of this character, in shipment, generally give way along these short dimension fold lines and apparently the result is due to a cutting action of the edges of the can ends.

The object of my present invention is, therefore, to so form the blank material, from which a package may be folded, that by utilizing material which has heretofore been wasted, and without substantial increase of material the above mentioned weak points in fibre containers may be reinforced to a very substantial extent, the resulting package being many times stronger and fully complying with the requirements of common carriers.

The accompanying drawings illustrate my invention. Fig. 1 is a perspective of a package embodying my improvements, a small portion of one side being broken away to show the interior construction; Fig. 2, a perspective view of the package shown in Fig. 1 in closed condition; Fig. 3, a longitudinal vertical section of the box shown in Figs. 1 and 2; Fig. 4, a plan of the blank used in Fig. 1 to form the bottom, two sides and top; Fig. 5, a perspective view of one of the end walls of the box shown in Fig. 1; Fig. 6, a fragmentary perspective of a slight modification and Fig. 7 a fragmentary perspective of another modification.

In the drawings, A indicates the main body blank comprising the bottom 10, side walls 11 and 12 and top 13. The side wall 11 is provided with end flaps 11′, 11′ and a side flap 11″; bottom 10 is provided with end flaps 10′, 10′; side 12 is provided with end flaps 12′, 12′, and cover 13 is provided with end flaps 13′, 13′. The several flaps and wall elements are defined by fold lines, as indicated in Fig. 4, in the well-known manner.

The end flaps 10′, 11′ and 12′ are so proportioned that, when the side walls 11 and 12 are folded at right angles to the bottom 10, they may be stitched or stapled by suitable fasteners 15 to the main body 16 of the end wall E, the bottom flap 16′ of the end wall lying upon bottom 10 so as to reinforce the lower short corner of the bottom of the package.

Each end wall is provided with a cover or top flap 16″.

When the package is ready for loading, it is in the condition shown in Fig. 1 and, after loading, the cover end flaps 13′ are folded down inside the end walls 16 between the end walls and the contents of the package, the flap 11″ being preferably folded down upon the contents and the cover 13 then folded down upon the contents and flap 11″. The end wall cover flaps 16″ are then folded down upon the cover 13 as clearly shown in Fig. 2.

It will be noted that by the above construction and arrangement, the short dimension of the bottom, where the edges of the lower end rows of the cans will come, will be formed by the end walls 16 and the lower flaps 16′, and that this corner will be reinforced by the embracing bottom and adjacent end flap 10′; also that the upper short line of the package will be of double thickness formed by the cover 13 and its end flap 13′, and the embracing end wall 16 and its cover flap 16″.

Heretofore, the ordinary package of this general type, has been formed with end walls which lacked the lower flap 16′ and cover flaps of substantially equal width carried by the top edges of the two side walls and lacking the end flaps, the material of the end flaps, however, being necessarily wasted because of the formation of the rest of the blank. The end walls in such packages, have had top flaps which, however, were folded down first and then overlaid by the two cover wings.

It will be noted that the differences in my construction and the common practice of similar type are not very great and reside in the utilization of the portions heretofore wasted and their assembly in a slightly different relation. Nevertheless, in actual practice, I have found that the package constructed in accordance with the above description withstands, without rupture, a very much greater amount of handling and abuse than could possibly be withstood by the packages which have heretofore been on the market.

I therefore find that I am able to construct a package having a given required amount of strength of much lighter material than has heretofore been possible and that with a given weight of material, I can carry much greater loads than have heretofore been per-

missible under the rules of the Interstate Commerce Commission.

It will, of course, be readily understood that various modifications may be made without departing from the spirit of my invention. For instance, in some cases where additional strength is not needed along the top lines, the flaps 16″ or 13′ may be omitted, preferably flaps 16″ because their omission would result in a saving of material, whereas the omission of the flaps 13′ would not result in saving of material.

The flap 11″ may, if desired, be omitted and the corresponding flap 13″, carried at the end of blank A along the free side of cover 13, as illustrated in Fig. 7.

If desired, the arrangement shown in Fig. 6 may be utilized. In this instance, the side wall 11^a has its cover flap 11^c folded outside of the cover 13^a and, therefore has its ends mitered so as to register with correspondingly mitered ends of the end cover flaps 16^c.

Of course, it will be understod that if a strengthening of the transverse corners is only desired at one portion of the box, a very satisfactory arrangement can be accomplished by omitting the flaps 16′ and retaining the flaps 13′ and 16″. By this arrangement there will be the resultant saving of material due to the omission of flaps 16′ and yet the maintenance of sealing facility due to the presence of the end flaps 16″. The package, after being filled, will be inverted so that its "top" would actually form the bottom during shipment.

I claim as my invention:

1. A shipping case made of fibre board or similar material, comprising a main body blank forming side and bottom walls and a cover wing, end blanks provided with top flaps folded at right angles to present reinforcing corners, said flaps being secured to the outside of the cover wing to complete the case, and flaps forming part of said cover wing and positioned parallel and adjacent to said end blanks to form corners of double thickness.

2. A shipping case made of fibre board or similar material, comprising a main body blank forming side and bottom walls and a cover wing, end blanks provided with flaps folded at right angles to present reinforcing corners, said flaps being secured to the outside of the cover wing to complete the case, flaps forming part of said cover wing and positioned parallel and adjacent to said end blanks to form corners of double thickness at the top, and flaps at the other end of said blanks and turned at right angles thereto inside the case to form corners of double thickness at the bottom.

3. A shipping case made of fibre board or similar material, comprising a main body blank forming side and bottom walls and a top, each having end flaps, end blanks secured to the end flaps of the bottom and sides and each provided with top and bottom flaps lying adjacent to and parallel with the top and bottom of the case, one of said flaps being inside of the case and the other outside, said end flaps of the top being positioned parallel and adjacent to said end blanks to form corners of double thickness.

4. A shipping case made of fibre board or similar material, comprising a main body blank forming side and bottom walls, the bottom wall having end flaps, and end blanks secured to the side and bottom walls of said main body blank, said end blanks being provided with flaps at the bottom and extending at right angles thereto, said bottom flaps being positioned adjacent said end flaps and freely within the case to form corners of double thickness at the bottom of the case.

5. A shipping case made of fibre board, or similar material, comprising a body blank forming side, bottom and top walls, each being provided with end flaps, separate end blanks secured to the end flaps of the sides, said end blanks being provided with top and bottom flaps lying adjacent to the end flaps and bottom and top to form corners of double thickness, one of the flaps of said separate end blanks being secured to the outside of of the case.

6. A shipping case made of fibre board or similar material, comprising a plurality of blanks folded to form a rectangular case, having side, end, bottom and top walls, one of the blanks forming the bottom and side walls and cooperating with the end walls to form overlapping corners, and a loose flap forming part of one of said blanks and extending inwardly of the case and lying adjacent and parallel to one of the walls therein and at right angles to the overlapping part of one of said corners to form a reinforcing corner of double thickness.

7. A shipping case made of fibre board or similar material, comprising blanks secured together to form a rectangular case having side, bottom and end walls and a cover wing therefor, a relatively short flap secured to the side wall opposite the cover wing and folded inwardly at right angles, said cover wing being provided with flaps at each end thereof and folded inwardly at right angles thereto, said flaps being freely positioned parallel and adjacent to the end walls to form inside reinforcing corners, and flaps forming part of the end walls, folded at angles thereto and secured to the outside of the cover wing to complete the case.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 10th day of July, A. D. one thousand nine hundred and twenty two.

ROBERT L. LEMON.