

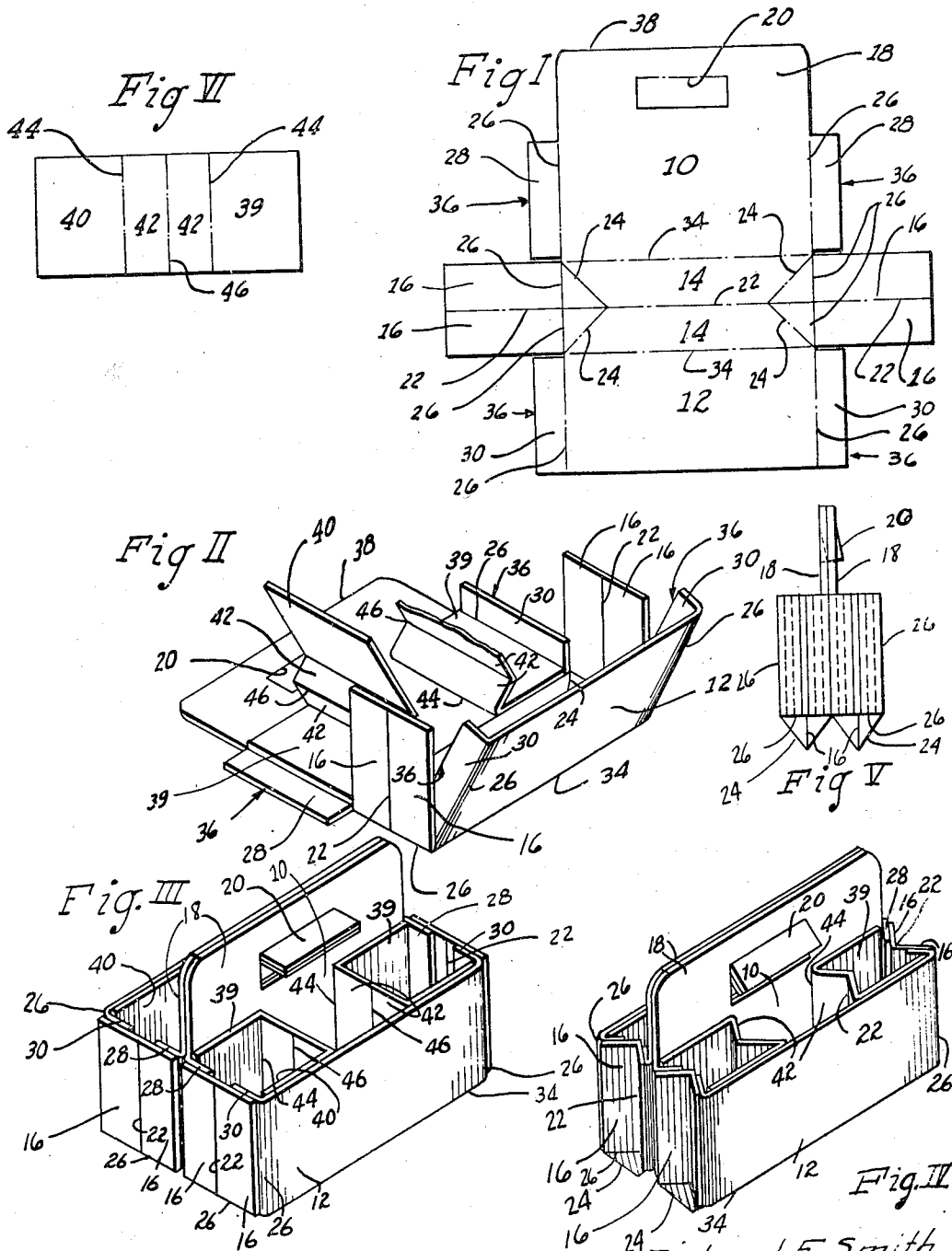
Jan. 25, 1949.

R. E. SMITH ET AL

2,460,108

COLLAPSIBLE CARRIER

Filed Aug. 31, 1946



Richard E. Smith
Paul H. Musso.
INVENTORS

BY Louis Necho
ATTORNEY

UNITED STATES PATENT OFFICE

2,460,108

COLLAPSIBLE CARRIER

Richard E. Smith, Rydall, Pa., and Paul A. Musso, Riverton, N. J., assignors to C. Schmidt & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania, and Kleckhefer Container Company, Camden, N. J., a corporation of Delaware

Application August 31, 1946, Serial No. 694,322

1 Claim. (Cl. 229—28)

1

This invention relates to a collapsible carrier for carrying a plurality of containers such as cans, bottles or the like.

In order to promote the sales of bottled or canned goods, such as beer, soft drinks and other packaged products, it is desirable to supply carriers in which a plurality of cans or bottles can be conveniently transported from the place of purchase to the place of consumption.

One object of the invention is to produce an improved carrier of the type set forth.

A further object is to devise an improved collapsible carrier which is inexpensive to produce, which is compact when collapsed, and which is easily and expeditiously erected or set up for use.

A still further object is to devise a carrier which will, once it is set up, remain in this condition even though it is not loaded, whereby automatic or mechanical loading of the carrier is made practical.

These and other objects are attained by the invention as set forth in the following specification and illustrated in the accompanying drawings in which:

Fig. 1 is a top plan view of one of two identical blanks from which a finished carrier, such as that shown in Fig. 3, can be made.

Fig. 2 is a perspective view illustrating the manner of erecting or setting up the blank of Fig. 1 to form one side of the carrier of Fig. 3.

Fig. 3 is a perspective view of a finished carrier embodying the invention, the same being made of two of the blanks shown in Figs. 1 and 2.

Fig. 4 is a perspective view of the carrier shown in Fig. 3 after it is partly collapsed.

Fig. 5 is an end view of the carrier of Fig. 3 shown fully collapsed.

Fig. 6 is a top plan view showing one of the partitions which coacts with the blanks of Fig. 1 to form separate pockets or compartments as shown in Fig. 3.

In Fig. 1 there is shown one of two identical blanks from which the finished multiple carrier of our invention is formed, and, since these blanks are identical, only one of them will be described in detail.

The blank shown in Fig. 1 includes two main portions adapted to form the side walls 10 and 12 of the carrier, and an intermediate portion adapted to form the bottom 14 and end walls 16 of the carrier. The side wall 10 is considerably longer, or higher, than the side wall 12, so as to provide an upper handle portion 18, as shown in Fig. 3. The upper handle portion 18 is preferably punched out to provide a finger hole 20.

2

The bottom wall 14 is longitudinally foldable along a central crease 22, and the end portions thereof are foldable along the angularly disposed, intersecting creases 24. The end walls 16 are also longitudinally foldable along the crease 22, and are foldable relative to the side walls 10 and 12 along creases 26.

The side walls 10 and 12 are provided with side wings 28 and 30 which are separated from the end walls 16 and which are foldable along the creases 26. The side walls themselves are foldable relative to the bottom wall 14 along the creases 34.

To erect or assemble the blank shown in Fig. 1, the side walls 10 and 12 are moved, about the creases 34 as axes, from the position shown in Fig. 1, in which they lie in the plane of the bottom wall 14, to the position shown in Fig. 3, in which they are parallel to each other and normal to the bottom wall. The side wings 28 and 30 are then moved, about the creases 26 as axes, from the position of Fig. 1, in which they lie in the plane of the side walls 10 and 12, to the position shown in Fig. 3 in which they are normal to said side walls, with their outer edges 36 in juxtaposition. The end walls 16 are now moved about the creases 26 from the position of Fig. 1 in which they lie in the plane of the bottom wall 14, to the position of Fig. 3 in which they are normal to the bottom wall and are parallel to and abut the wings 28 and 30 on the respective sides of the blank. The end walls 16 are secured to the adjacent wings 28 and 30 by cement or by other suitable means.

When the structure above set forth is erected in the manner described, an elongated trough having a handle 18 is produced. However, in order to double the capacity, and at the same time strengthen the construction, a blank identical to that of Fig. 1 is also erected to produce a corresponding trough and handle, and the handle portion 18 and the side walls 10 of both structures are secured in back-to-back relationship to produce the double-sided carrier of Fig. 3. The two blanks from which the carrier of Fig. 3 is made may be separate pieces or they may be punched out from a single piece of material, with the resultant blanks joined along the edges 38 of their respective handle portion. The junction of the handles will be creased so that the blanks may be folded into back-to-back relation, as shown in Fig. 3.

The trough thus far described is adapted for reception of bottled, canned, packaged or bulk goods. For example, cans or bottles of beer or

3

the like can be placed in each of the troughs defined by the side walls 10 and 12, the bottom wall 14 and the end walls 16.

In order to partition each of the troughs thus produced into three compartments, use is made of the wall structure best shown in Figs. 3 and 6. This structure is formed of a blank including two end portions 39 and 40 and an intermediate portion 42.

The end portions 39 and 40 are foldable along creases 44 and the intermediate portion is foldable along the crease 46. When used, the end walls 39 and 40 of the blank are cemented, or otherwise secured, to the side walls 10 and 12, with the intermediate wall 42 disposed parallel to the end walls 16 and connecting the side walls 10 and 12 as shown in Fig. 3.

When it is desired to collapse the carrier from the fully erected to the fully collapsed position, it is only necessary to exert pressure against the opposite sides 12, in the direction of the walls 10. To erect the carrier, upward pressure is exerted on the underside of the bottom walls, whereupon the carrier assumes the position illustrated in Fig. 3.

What we claim as new and desire to secure by Letters Patent is:

A single blank for forming a collapsible carrier, said blank being scored to form a first portion adapted to form a first side wall of the finished carrier, a second portion adapted to form a second side wall of said carrier, and a third portion intermediate of, and hinged to, said side walls and adapted to constitute a bottom wall for said carrier, said side walls being also scored along lines normal to their hinged connection with said bottom wall to form opposite marginal tabs which are movable to a first position in which they are substantially normal to the plane of said side and bottom walls and to a second position in which they lie in the plane of said side walls, end wall portions extending from opposite ends of said bottom wall and hinged thereto along scores

4

which are continuations, respectively, of the scores hinging said marginal tabs to said side walls, said end walls being movable to a first position in which they constitute extensions of said bottom wall and lie in the plane of said bottom and side walls, and to a second position in which they are substantially normal to said side and bottom walls, means for securing said end walls to said marginal tabs, said end and bottom walls being provided with a central score which is parallel to the scores between said side walls and said bottom wall, and the portions of said bottom wall adjacent said end walls being scored along inwardly converging lines which end at their intersection with said central score, and a pair of U-shaped members each having the limbs thereof secured, respectively, to said first and second side walls, with the bight portions of said U-shaped members being disposed inwardly of the edges of said first and second side walls and being scored so as to be foldable flat against, or between said first and second side walls, the marginal portions of the limbs of each of said U-shaped members being deflected toward each other and being secured, respectively, to the adjacent portions of said end walls.

RICHARD E. SMITH.
PAUL A. MUSSO.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,293,801	Kitt	Feb. 11, 1919
1,308,058	Evers	July 1, 1919
1,799,657	Tinsley	Apr. 7, 1931
2,026,525	Korte	Jan. 7, 1936
2,188,730	Swab	Jan. 30, 1940
2,326,648	Horr	Aug. 10, 1943
2,411,144	Bergstein	Nov. 19, 1946
2,416,725	Williamson	Mar. 4, 1947