Feb. 2, 1960 O. J. POUPITCH 2,923,405

CONTAINER CARRIER

Original Filed Oct. 30, 1950

Fig. 1.

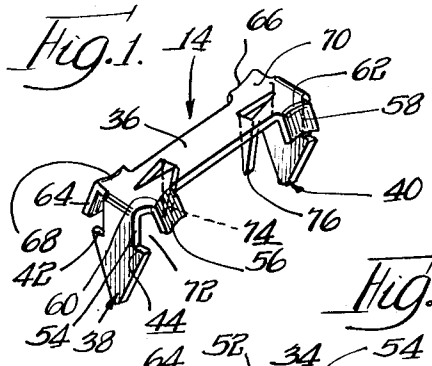


Fig. 2.

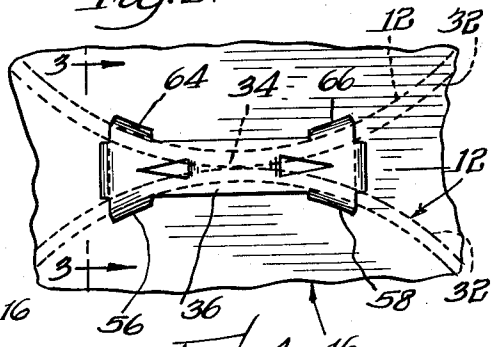


Fig. 3.

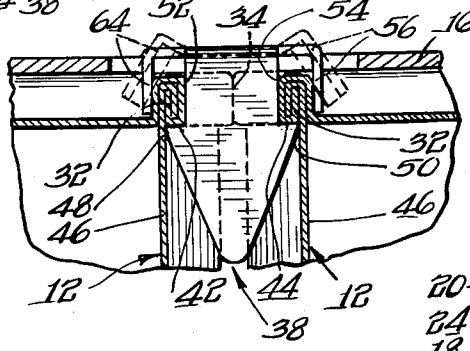


Fig. 4.

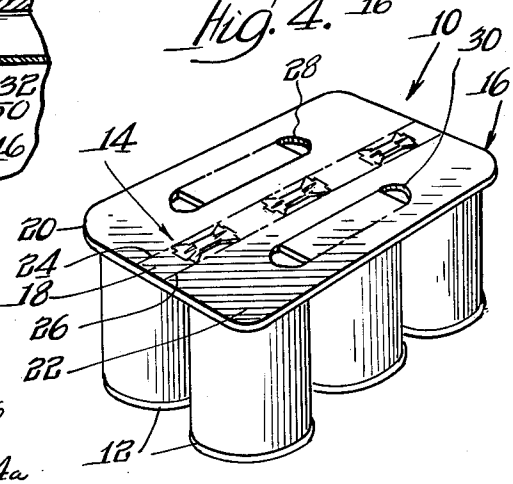


Fig. 5.

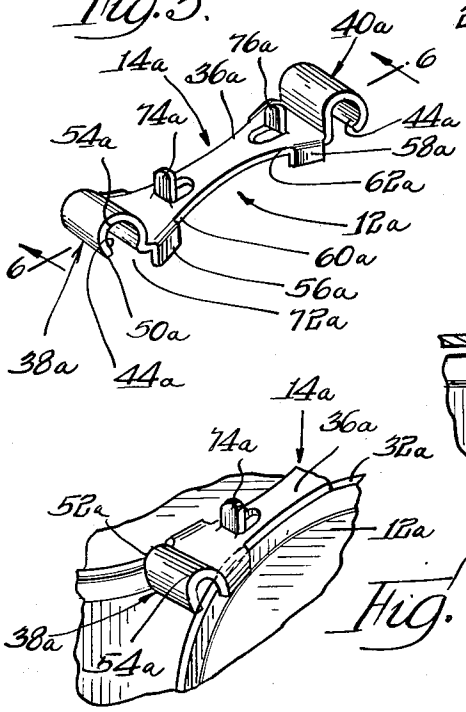


Fig. 6.

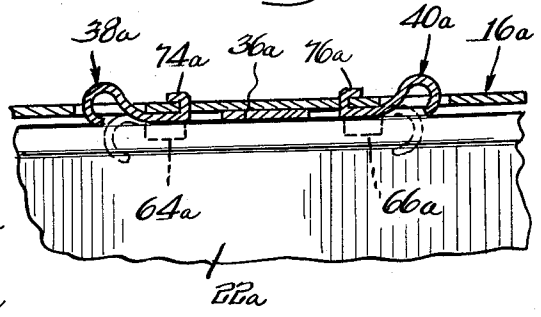


Fig. 7.

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CONTAINER CARRIER

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Original application October 30, 1950, Serial No. 192,921. Divided and this application September 19, 1956, Serial No. 610,771

3 Claims. (Cl. 206—65)

The present invention relates generally to carriers, and more particularly to novel carriers adapted for association with the beaded extremity of cans or the like, such as those commonly in use for beverages, foodstuffs or other canned goods of various types. This application is a division of my co-pending application Serial No. 192,921, filed October 30, 1950, now abandoned.

It is an important object of the present invention to provide carriers of the type referred to above which incorporate a novel clip formed from sheet stock such, for example, as sheet metal, which clip may be readily applied to a plurality of containers disposed in substantially side-by-side parallel relationship and is adapted securely to grip and retain the containers in a package.

A more specific object of the present invention is to provide a simple one-piece sheet material clip having a novel construction so that it is adapted to be connected to adjacent bead or rim portions of a plurality of substantially abutting and parallel cans or the like in a manner so that relatively broad portions of the clip securely engage the can rims at least at areas spaced substantially circumferentially of the cans, which clip is also constructed so that portions thereof must be deflected for securely connecting the clip to the cans and also reversely deflected for subsequently permitting removal of the cans from the clip.

More specific objects of the present invention are to provide novel clip structures of the above described type which may be readily applied to a plurality of cans disposed in adjacent parallel relationship without substantially disturbing the parallel relationship of the cans and which clips when fully applied to a plurality of cans or the like retain the cans securely in a manner which resists any tendency of the cans to turn or twist relatively to each other and to the clips.

Still another object of the present invention is to provide a package including a plurality of cans or the like which are retained together securely only by clips of the above described type so that the package may be easily handled or carried, transported and stacked with other similar packages without the cans coming apart in an unauthorized manner.

Other objects and advantages of the present invention will become apparent from the following description and the accompanying drawings wherein:

Fig. 1 is a perspective view showing a clip structure incorporating features of the present invention;

Fig. 2 is a fragmentary plan view of a package formed in accordance with the present invention wherein a clip is applied to the rims of a pair of abutting cans;

Fig. 3 is an enlarged fragmentary sectional view taken along line 3—3 in Fig. 2 and further shows in broken lines the position of locking sections of the clip before they have been deformed to the solid line can locking or gripping positions;

Fig. 4 is a perspective view showing a package incorporating the features of the present invention;

Fig. 5 is a perspective view showing a modified form of the present invention;

Fig. 6 is a sectional view taken along line 6—6 in Fig. 5 and further shows the clip applied to a sheet material handle member and in position to be connected with the rim of a can or container; and

Fig. 7 is a fragmentary perspective view showing the clip structure of Figs. 5 and 6 partially applied to a pair of adjacent cans.

Referring particularly to Figs. 1 through 4 wherein like elements are designated by identical numerals, there is shown a package 10 comprising a plurality of cans 12 of known construction, adjacent pairs of said cans being connected by novel clip members 14 incorporating features of the present invention, which clip members are, in turn, connected to a sheet material handle member 16. The handle member which may be made from any suitable sheet material such, for example, as cardboard, heavy paper and the like includes a central body portion 18 to which the clips are attached in the manner described below and a pair of handle portions 20 and 22 extending laterally from score or bend lines 24 and 26 respectively. Finger receiving slots 28 and 30 are respectively provided in the handle portions 20 and 22. The handle member 16 is initially formed in the flat condition shown in Fig. 4 and it is preferably left in this condition while the package is being shipped or stored or displayed so as to conserve space and to enable a plurality of the packages to be stacked one upon the other. When the handle member is to be used for carrying the package, it is merely necessary to fold the handle portions 20 and 22 along the lines 24 and 26 into generally upright positions so that the slots 28 and 30 are aligned for receiving the fingers of a purchaser or other person who desires to carry the package. It is to be understood that the package may be formed so that the number of pairs of cans therein is different from the number of pairs shown in Fig. 4.

As shown best in Figs. 2 and 3 the cans of each pair of cans in the package are disposed in side-by-side parallel relationship with their annular end rims 32 substantially abutting each other at the point indicated by the numeral 34. The clip 12, as shown best in Figs. 1, 2 and 3, comprises a generally flat body portion 36 which is adapted to traverse the space between diverging portions of the rims 32 laterally of the point 34 of substantial abutment.

First locking sections 38 and 40 integral with the body portion 36 extend from the body portion so that they are adapted to be located in the spaces between adjacent cans laterally of the point of abutment of the cans. Each of the elements 38 and 40 which are substantially identical provide locking portions or shoulders 42 and 44 adapted to project beneath and engage the downwardly facing surfaces of the rims 32 of adjacent cans or containers. These shoulders have a width substantially equal to the thickness or width of the rims projecting laterally beyond the outer surface of the can sides 46 so that the shoulders completely traverse the downwardly facing surfaces of the rims and the outermost margins or terminal ends 48 and 50 of the shoulders substantially engage the sides 46 of the cans when the clip is applied to the cans. The locking means or elements 38 and 40 also provide generally vertical edges or surfaces 52 and 54 which are substantially straight and are adapted to engage the generally upright flattened outer peripheral surfaces of the can rims as shown in Fig. 3 for the purpose mentioned below. In this embodiment, the locking means 38 and 40 are in the form of tabs depending from opposite ends of the body portion 56 and disposed in planes traversing the longitudinal axis of the body portion 36 so that the abutment or locking shoulders 48 and 50 and the abutment surfaces 52 and 54 are rigidly supported to prevent collapsing thereof toward each other. The clip 14 includes additional locking means cooperable with the

above described locking means provided by the elements **38** and **40**, which additional locking means comprises elements or tabs **56** and **58** extending from curved marginal portions **60** and **62** at one side of the body **36** and additional elements or tabs **64** and **66** extending from curved marginal portions **68** and **70** respectively at another side of the body portion **36**. These tabs, when the clip is fully applied to the cans, are adapted to extend over the rims and downwardly along and in engagement with the inner surfaces of the rims for substantially the full depth thereof as shown best in Fig. 3 whereby the rims are securely locked between the tabs and the shoulders of the locking means **38** and **40**. It is important to note that in this embodiment the tabs **56—58** and **64—66** are initially formed as shown in Fig. 1 and as shown in dotted liens in Fig. 3 so that they project laterally outwardly from the side marginal portions of the body **36**. As a result, a relatively wide downwardly and laterally outwardly opening throat is provided between the outermost margin or edge of each of the tabs and the outermost margin or edge of an associated shoulder of the locking means **38** and **40**. For example, the throat between the tab **56** and the shoulder **44** is indicated in Fig. 1 by the numeral **72**. This greatly facilitates initial assembly of the clip **12** with the cans since the rims of the cans may easily pass through the throats when the clip and the cans are relatively moved together while the cans are maintained in parallel relationship. After initial assembly of the clip and the cans has been accomplished, the tabs may be easily deformed and shifted by suitable tool means, not shown, from their dotted line positions shown in Fig. 3 to the solid line positions so that the cans are securely locked together and cannot be removed until the tabs have been reversely deformed or spread apart.

When the clip is fully applied to the cans as shown best in Figs. 2 and 3, it is seen that the relatively broad tabs **56—58** and **64—66** which have a curvature complementary to the curvature of the can rims engage the inner surfaces of the rims with relatively broad surface contact and at arcuately and circumferentially spaced areas of the rims. This arrangement not only provides a strong connection of the clip with the cans but also serves to restrain any tendency of the cans to twist in a plane parallel to the longitudinal axis of the clip. It is further to be noted that the tabs when in the inwardly folded or finally assembled condition provide upstanding surfaces engaging the upstanding inner surfaces of the rims which cooperate with the upstanding surfaces **52** and **54** engaging the outer surfaces of the rims and the abutting portions of the rims themselves to restrain any tendency of the cans to tilt in a plane disposed transversely of the longitudinal axis of the clip body.

In order to secure the clip **14** to the handle member **16**, a pair of prongs **74** and **76** is struck from the body portion **36**. In this embodiment the clip is adapted to be assembled on top of the handle member **16** with the elements **38** and **40** projecting through suitable apertures formed in the handle member. The prongs **74** and **76** pierce the handle member and are folded laterally for retaining the clip and the handle member in assembled relationship.

Figs. 5, 6, and 7 show another embodiment of the present invention which is similar to the above described structure as indicated by the application of identical reference numerals with the suffix "*a*" added to corresponding elements. In this embodiment the tabs **56*a*—58*a*** and **64*a*—66*a*** are initially formed so that the portions thereof engageable with the inner surfaces of the can rims are substantially vertically disposed, and the locking elements **38*a*** and **40*a*** rather than the tabs are adapted to be deformed or folded in order to accomplish final assembly of the clip with the cans. More specifically, the elements **38*a*** and **40*a*** are hook shaped and extend outwardly from opposite extremities of the clip body portion **36*a*** as shown in Fig. 5 and as shown in solid lines in Fig. 6. After initial assembly of the clip **14*a*** with the cans as shown in solid lines in Fig. 6, the elements **38*a*** and **40*a*** are depressed by suitable means, not shown, so that they extend into the space between diverging portions of adjacent cans. When these elements are fully deformed or folded as shown in dotted lines in Fig. 6 and in Fig. 7, the shoulder means **42*a*** and **44*a*** provided by the free corner portions of the elements underlie and engage the downwardly facing surfaces of the can rims and the upstanding surfaces **52*a*** and **54*a*** provided by the opposite edges of the elements traverse and engage the outer peripheral surfaces of the rims. Thus, the clip **14*a*** is adapted to be interlocked with a pair of cans in much the same manner as the clip **14** described above. In this embodiment, the prongs **74*a*** and **76*a*** are adapted to extend upwardly through the handle member **16*a*** as shown in Fig. 6 for securing the clip to the handle member.

While the preferred embodiments of the present invention have been shown and described herein, it is obvious that many structural details may be changed without departing from the spirit and scope of the appended claims.

The invention is claimed as follows:

1. A package comprising a pair of cylindrical cans disposed in side by side substantially abutting and parallel relationship and having circular radially and axially projecting end rims of predetermined thickness and height, and a one-piece sheet material clip applied only to said end rims and retaining said cans in the package, said clip including a generally horizontal planar body substantially traversing spaces between said cans at opposite sides of an area of substantial abutment of the cans, a plurality of first locking means integral with said body and disposed between said cans and engaging beneath the rims of said cans, and a plurality of second locking means integral with said body and engaging inner surfaces of said can rims and respectively cooperating with said first locking means, each of said second locking means including broad tab means curved in transverse cross section and joined to a curved edge of said body and engaging a circular inner surface of a can rim with broad surface contact and extending for substantially the full depth of the can rims, each cooperable pair of said first and second locking means having margins spaced apart and defining a throat narrower than said can rim thickness for positively locking the cans with respect to said clip and preventing detachment of the cans, and one of each pair of said cooperable first and second locking means including portions engaging arcuately substantially spaced areas of a rim for resisting twisting of the cans relative to each other to the clip.

2. A package, as defined in claim 1, wherein said first locking means include a pair of elements respectively integral with and depending from opposite ends of said body and substantially traversing the spaces between the cans, each of said elements including a pair of oppositely projecting and upwardly facing shoulders respectively engaging beneath said can rims.

3. A package, as defined in claim 1, wherein said first locking means include a pair of hook-shaped elements extending from opposite ends of said body and respectively presenting opposite free corner portions beneath and in engagement with the can rims.

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