Aug. 11, 1959 P. D. BECKER 2,898,654

FASTENING DEVICE

Filed Nov. 26, 1954

FIG. 1.

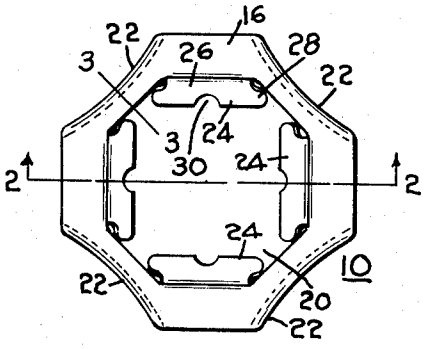


FIG. 2.

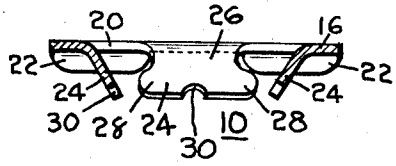


FIG. 3.

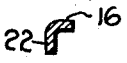


FIG. 4.

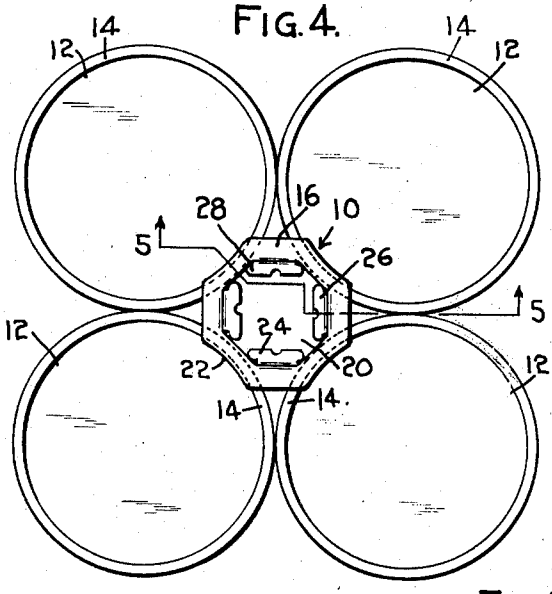


FIG. 5.

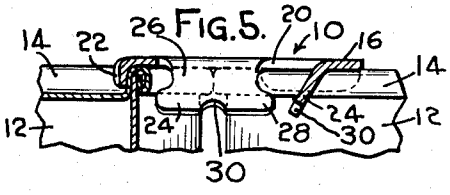


FIG. 6.

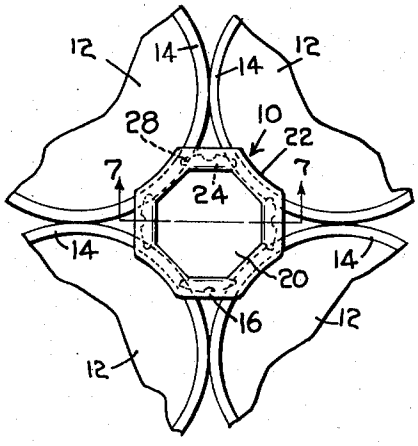


FIG. 8.

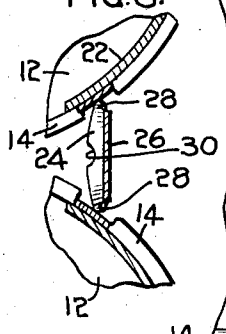
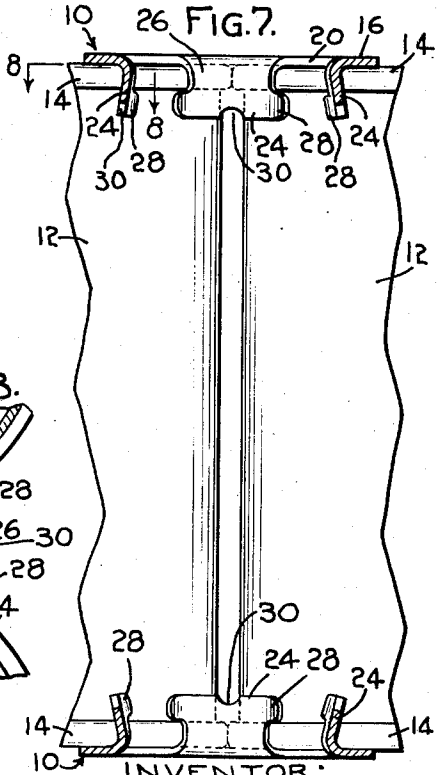


FIG. 7.



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United States Patent Office 2,898,654 Patented Aug. 11, 1959

2,898,654

FASTENING DEVICE

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Application November 26, 1954, Serial No. 471,285

2 Claims. (Cl. 24—81)

This invention relates generally to fastening devices, and has particular reference to a fastening device for securing together a group of cylindrical containers of the type having a peripheral bead or rim at each end.

Certain foods and beverages marketed in cans are customarily sold in groups of three, four, or six, and for convenience in handling are frequently assembled into cardboard packages of various types. Such packages have been found to have a number of disadvantages, in that they require complicated and expensive machinery for assembly of the cans therein, they conceal the labels on the containers, and the cardboard is weakened by moisture.

This latter difficulty frequently interferes with the proper operation of the attaching machinery, prohibits the use of wet coolers for chilling the package containers, and requires special precautions during transportation and storage to prevent damage by dampness and moisture which would cause rupture of the containers during subsequent handling.

Various types of metal clips have been proposed for this purpose, but such clips have also been found to have disadvantages, such as being too expensive, too difficult to feed and attach by automatic machinery, or too difficult to remove by the purchaser.

The object of this invention is to provide an inexpensive fastening device for securing together a group of containers which is readily adapted to automatic feeding and attachment.

A further object of the invention is to provide a fastening device for the purpose described which securely retains the cans in assembly yet is readily removable by the purchaser.

Other objects of the invention will, in part, be obvious, and will, in part, appear hereinafter.

In the drawing:

Fig. 1 is a top plan view of a fastening device embodying the features of the invention;

Fig. 2 is a view in section taken on line 2—2 of Fig. 1;

Fig. 3 is a view in section taken on line 3—3 of Fig. 1;

Fig. 4 is a top plan view of the fastening device of Fig. 1 on a group of cans in position for assembly;

Fig. 5 is a view in section taken on line 5—5 of Fig. 4;

Fig. 6 is a top plan view of the fastening device on a group of cans after completion of the assembly operation;

Fig. 7 is a view in section taken on line 7—7 of Fig. 6; and

Fig. 8 is a view in section taken on line 8—8 of Fig. 7.

Referring to the drawing there is illustrated a fastening device 10 which is adapted for attachment onto a group of cans 12 to retain the cans in assembly.

The cans 12 are of the type which have a cylindrical body with a peripheral bead 14 at each end which extends radially and longitudinally from the body.

The fastening device 10 is preferably formed of a single piece of sheet metal and comprises generally a substantially flat body portion 16 having a central opening 20, a series of outer bead engaging lips 22 disposed about the periphery of the body, and a series of tongues 24 extending downwardly from the body about the central opening.

The lips 22 are disposed about the outer periphery of the body in uniform spaced relation and are of generally arcuate form to conform to the shape of the can bead to be received therein.

Each tongue 24 is disposed circumferentially between a pair of arcuate lip portions 22 and comprises a downwardly extending neck 26 having laterally extending portions 28 disposed on the end thereof, and a notch 30 centrally disposed in the end. Prior to assembly onto the cans, the tongues 24 extend downwardly and are inclined slightly inwardly.

To assembly the fastener onto the cans, the cans are positioned so that they are uniformly spaced about a central point with adjacent cans touching at the beads. The fastener 10 is then placed on the cans so that the arcuate lip portions 22 extend over the innermost portions of the can beads and the tongues 24 extend downwardly into the space between the cans (see Figs. 4 and 5).

The assembly is then completed by deforming the tongues outwardly by means of a suitable tool (not shown) so that the neck 26 extends between the beads of an adjacent pair of cans and the laterally extending portions seat under said beads. If desired, the end of the tongue may be deformed longitudinally during the attachment, so that it is bowed outwardly between the cans (see Figs. 6 through 8).

A similar fastener may be secured to the cans at the other end either simultaneously or subsequent to the attachment of the fastener 10.

In the illustrated embodiment the fastener 10 is designed for securing together a group of four cans, however, the fastener may be designed for use with a greater or lesser number of cans by providing an appropriate number of arcuate lip portions and tongues.

Since certain obvious modifications may be made in the device without departing from the scope of the invention, it is intended that all matter contained herein be interpreted in an illustrative and not in a limiting sense.

I claim:

1. A fastening device for securing together a group of cylindrical containers each having a peripheral bead at its end, said device being adapted for assembly into the multi-cusped shaped space at the end of a group of said containers uniformly spaced about a point, said device comprising a substantially flat body portion having a central opening, a series of downwardly extending arcuate portions disposed about the periphery of the body for bearing against the inside of the can beads, and a series of bead-engaging tongues extending downwardly from the body about the central opening, each tongue being disposed circumferentially of the central opening between a pair of arcuate portions and having a deformable neck portion and laterally extending portions on the end thereof for seating under the beads of a pair of adjacent cans.

2. A fastening device for securing together a group of cylindrical containers each having a peripheral bead at its end, said device being adapted for assembly into the multicusped space at the end of a group of said containers, uniformly spaced about a point, said device comprising a body portion having a central aperture, a series of bead engaging arcuate lip portions disposed about the periphery of the body and a series of tongues extending from the body generally into the central aperture, said tongues each being disposed circumferentially between adjacent lip portions and said tongues being deformable

at the junction with the body, said tongues extending downwardly from the body and having laterally extending portions spaced beyond the deformable portion for extending between and seating under the beads of an adjacent pair of containers.

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