

SINGAPORE

1.115.638

PATENT SPECIFICATION

1.115.638



DRAWINGS ATTACHED

Date of Application and filing Complete Specification: 19 Aug., 1965.

No. 35670/65.

Application made in United States of America (No. 390,601) on 19 Aug., 1964.

Complete Specification Published: 29 May, 1968.

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Index at acceptance:—B8 C(12D2, 24B5, 25E, 26, 29A)

Int. Cl.:—B 65 d 65/24

COMPLETE SPECIFICATION

Can Wrapper

5 We, THE MEAD CORPORATION, of 118 West First Street, Dayton, Ohio, United States of America, a corporation organized and existing under the laws of the State of Ohio, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to can wrappers and more particularly to a wrapper for packaging two rows of chimed cans.

Many segments of the canning industry currently are using metal of a lighter weight and which is thinner than that which has been used previously. This trend toward lighter weight metal tends to render the cans more vulnerable to damage when the chimes of one can engage the chimes of another can and particularly when relative vertical movement takes place between adjacent cans. It is desirable, therefore, to prevent relative vertical movement of packaged cans.

25 According to the present invention there is provided a wrapper for packaging two rows of chimed cans whose axes are disposed in substantially parallel relation, said wrapper comprising generally parallel top and bottom walls interconnected by spaced side walls to form a tubular structure, the parallel top and bottom walls being approximately as wide as twice the diameter of the cans to accommodate the two rows and being disposable in contacting generally parallel relation to the ends of the cans, 35 a main tab foldably joined to one of said parallel walls along a medial hinge line and foldable inwardly of the wrapper and between a pair of adjacent cans each of which is in a different one of said rows of cans, said main tab being doubled back on itself along a transverse fold line for engagement of its end edge with the chime of one of said pair of cans so as to hold the adjacent end thereof against said one parallel wall, and an auxiliary tab struck out of said main tab and arranged for engagement 45

of its end edge with the chime of the other of said pair of cans so as to hold the adjacent end thereof against said one parallel wall.

The invention is hereinafter more particularly described by way of example only with reference to the accompanying drawings, in which:—

Fig. 1 is a perspective view of a wrapper constructed in accordance with the invention;

Fig. 2 is an end view of the wrapper depicted in perspective in Fig. 1 and showing the cans in place; Fig. 3 is an enlarged perspective view of a portion of the top panel depicted in Fig. 1;

Figs. 4 and 5 are fragmentary plan views of portions of the blank depicted in Fig. 6; and

Fig. 6 is a plan view of the blank from which the wrapper depicted in Figs. 1 and 2 is formed.

With reference to Figs. 1 and 2, the numeral 1 is used to designate generally the top panel of the wrapper while the numerals 2 and 3 are used to designate the sidewalls of the wrapper. The bottom wall of the wrapper is designated generally by the numeral 4 and preferably is a composite wall made up of a pair of lap panels as is well understood in the art. In Fig. 2 the wrapper is depicted in conjunction with two rows of cans designated individually by the letter C.

As is best shown in Fig. 6 the top panel 1 is defined on one side by a fold line 5 which interconnects sidewall 2 with top wall 1. Sidewall 3 is foldably joined along an edge of top panel 1 by the fold line 6. A pair of openings 7 are formed in top panel 1 and are finger gripping apertures whereby the package is carried. Also formed in top panel 1 is a plurality of tabs 8 which are constructed as disclosed in our British Patent Specification No. 1,041,305. Needless to say these tabs 8 engage the chimes of the packaged cans at the ends of the wrapper and serve to prevent dislodgement of the cans through the ends of the wrap-

[Price 4s. 6d.]

per when folded along their hinge lines inwardly of the wrapper.

As explained, the bottom panel 4 is made up of a pair of lap panels 9 and 10.

- 5 Lap panel 9 is foldably joined to the bottom edge of side panel 2 along fold line 11 while lap panel 10 is foldably joined to the bottom edge of side panel 3 along a fold line 12. A pair of tabs 13 are formed in lap panel 9 and similar tabs 14 are formed in lap panel 10. These tabs 13 and 14 are constructed in a manner identical to the tabs 8 formed in the top panel 1.

- 15 For the purpose of securing the lap panels 9 and 10 together, a pair of locking tabs 15 are formed in lap panel 10 and cooperating retaining tabs 16 are formed in lap panel 9 and define apertures for respectively receiving the locking tabs 15 thereby to secure the lap panel 9 and 10 together. The structure and function of the locking arrangement comprising locking tabs 15 and retaining tabs 16 are described in our British Patent Specification No. 790815.

- 25 In order to adapt the wrapper depicted in Fig. 6 to receive machine tightening elements, a pair of spaced tightening apertures 17 are formed in lap panel 9 while the lap panel 10 is provided with a pair of spaced tightening apertures 18. As is explained in our British Patent Specification No. 790815, the wrapper is tightened by suitable machine elements which enter the tightening apertures 17 and 18 as the wrapper is disposed about the cans and which are then moved toward each other. In this way lap panels 9 and 10 are drawn tightly across the bottom of the package. Thereafter, the package is securely formed when the locking tabs 15 are driven through the openings defined by retaining tabs 16.

- 40 In order to provide for stable stacking of one package on top of another and to prevent the chimes of the cans in one row from damaging the adjacent cans in the other row due to relative vertical movement of the cans, a plurality of tabs are struck out of top panel 1. For example, main tabs 19, 20 and 21 are struck out of top panel 1 and are foldable inwardly thereof along medial fold lines 22, 23 and 24. The tabs 19, 20 and 21 are respectively provided with transverse fold lines 25, 26 and 27 by which the tabs are doubled back on themselves as best shown in the enlarged perspective view designated as Fig. 3. Thus from Figs. 2, 3 and 4 it is apparent that the outer edge 28 of tab 19 engages the upper chime of the right hand cans as viewed in Fig. 2. An auxiliary tab 29 is struck out of the main tab 19 and secured thereto along fold line 30. The fold line 30 is disposed between the transverse fold line 25 and the end edge 28 of the main tab 19. Thus when the main tab 19 is doubled back on itself as depicted for example in Figs. 1, 2 and 3, the auxiliary tab 29 is biased outwardly to engage the upper

chime of the left hand can as viewed in Fig. 2. Thus as depicted in the drawing and as described thus far, the upper ends of the cans in each row are held securely against the top panel 1 by the main and auxiliary tabs. Since the transverse fold line 30 of the auxiliary tab 29 is disposed between the end edge 28 and the transverse fold line 25, it is apparent that the auxiliary tab will swing outwardly and toward the left when the main tab is doubled back on itself as depicted very clearly in Fig. 3. Of course when the cans are positioned as shown in Fig. 2 the tab 29 is folded along its transverse fold line 30.

The main and auxiliary tabs may be formed as shown in the bottom lap panel 9 and as designated by the numerals 31, 32 and 33. As is best shown for example in Fig. 5 the tab such as 31 is provided with a transverse fold line 34 while the tabs 32 and 33 are provided respectively with transverse fold lines 35 and 36. Auxiliary tabs are provided in each of the main tabs 31, 32 and 33 and only one such tab is described in connection with Fig. 5. In Fig. 5 an auxiliary tab 37 is shown as being disposed within the portion of the main tab 31 which lies between its transverse fold line 34 and its medial hinge line 36. The auxiliary tab 37 is biased outwardly toward the left as viewed for example in Figs. 1 and 2. Preferably the tab such as 31 should be folded against the score 34. It will be understood that all the auxiliary tabs 37, 38 and 39 in lap panel 9 as depicted are identical. The auxiliary tabs 37, 38 and 39 are biased toward engagement with the left hand can as viewed for example in Figs. 1 and 2 due to the stress set up in the main tab along the transverse fold lines 34, 35 and 36. If desired the auxiliary tabs 37, 38 and 39 could be disposed in a single main tab instead of the plural main tabs 31, 32 and 33. Such a main tab would extend across the panel 9 for substantially the entire length thereof.

In the arrangement shown tabs such as are disclosed in Figs. 3 and 4 are depicted in the top panel and the tabs such as are illustrated in Fig. 5 are shown in the bottom panel. It will be understood that the invention is not limited to this particular arrangement and that tabs such as are shown in Fig. 5 could be disposed in the top panel and those such as are shown in Figs. 3 and 4 could be utilized in both the top and bottom panels and likewise tabs such as are shown in Fig. 5 could be formed in both the top and bottom panels.

It will be seen that we have provided a wrapper for packaging two rows of chimed cans in such a way as to prevent relative vertical movement of the cans in the two rows and also to provide level and stable stacking characteristics where one package is stacked on top of another. The wrapper has panels which are in contacting relation to the can ends, at least one being provided with means for securing

the cans in position with respect to the respective panel, and by so doing to separate the cans in one row from the cans in the other row and in addition to prevent relative sliding vertical movement of the cans. The separating tab, as described, has a single main tab arranged to hold a can against the top or bottom of the wrapper and an auxiliary tab arranged to engage an adjacent can in another row of cans.

WHAT WE CLAIM IS:—

1. A wrapper for packaging two rows of chimed cans whose axes are disposed in substantially parallel relation, said wrapper comprising generally parallel top and bottom walls interconnected by spaced side walls to form a tubular structure, the parallel top and bottom walls being approximately as wide as twice the diameter of the cans to accommodate the two rows and being disposable in contacting generally parallel relation to the ends of the cans, a main tab foldably joined to one of said parallel walls along a medial hinge line and foldable inwardly of the wrapper and between a pair of adjacent cans each of which is in a different one of said rows of cans, said main tab being doubled back on itself along a transverse fold line for engagement of its end edge with the chime of one of said pair of cans so as to

hold the adjacent end thereof against said one parallel wall, and an auxiliary tab struck out of said main tab and arranged for engagement of its end edge with the chime of the other of said pair of cans so as to hold the adjacent end thereof against said one parallel wall.

2. A wrapper according to claim 1 wherein said auxiliary tab is foldably joined to said main tab along a hinge line which is generally parallel to said transverse fold line and which is disposed between said transverse fold line and the end edge of said main tab.

3. A wrapper according to claim 1 wherein said auxiliary tab is disposed entirely between said transverse fold line and said medial hinge line.

4. A wrapper for packing two rows of chimed cans whose axes are disposed in substantially parallel relation, substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

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Reference has been directed in pursuance of Section 9, subsection (1) of the Patents Act 1949, to patent No. 959,988.

the cans in position with respect to the respective panel, and by so doing to separate the cans in one row from the cans in the other row and in addition to prevent relative sliding vertical movement of the cans. The separating tab, as described, has a single main tab arranged to hold a can against the top or bottom of the wrapper and an auxiliary tab arranged to engage an adjacent can in another row of cans.

WHAT WE CLAIM IS:—

1. A wrapper for packaging two rows of chimed cans whose axes are disposed in substantially parallel relation, said wrapper comprising generally parallel top and bottom walls interconnected by spaced side walls to form a tubular structure, the parallel top and bottom walls being approximately as wide as twice the diameter of the cans to accommodate the two rows and being disposable in contacting generally parallel relation to the ends of the cans, a main tab foldably joined to one of said parallel walls along a medial hinge line and foldable inwardly of the wrapper and between a pair of adjacent cans each of which is in a different one of said rows of cans, said main tab being doubled back on itself along a transverse fold line for engagement of its end edge with the chime of one of said pair of cans so as to

hold the adjacent end thereof against said one parallel wall, and an auxiliary tab struck out of said main tab and arranged for engagement of its end edge with the chime of the other of said pair of cans so as to hold the adjacent end thereof against said one parallel wall.

2. A wrapper according to claim 1 wherein said auxiliary tab is foldably joined to said main tab along a hinge line which is generally parallel to said transverse fold line and which is disposed between said transverse fold line and the end edge of said main tab.

3. A wrapper according to claim 1 wherein said auxiliary tab is disposed entirely between said transverse fold line and said medial hinge line.

4. A wrapper for packing two rows of chimed cans whose axes are disposed in substantially parallel relation, substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

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