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(54) **METAL PACKAGING CONTAINER WITH LABEL**

(57) The present invention relates to a metal packaging container with a label comprising a hollow cylindrical body (3) made of sheet metal, a label (2) made of a suitable substrate, two end closure components (T), wherein said end closure components (T) are fastened to said hollow body by double crimps (double lock seam), carried out by folding the respective walls, both of said components (T) and said body (3), wherein said label (2) is applied to the outer surface of the hollow body (3) of said container, after the body (3) has been transformed into a hollow cylinder and prior to double crimping of said components (T), wherein the edges (2) are inserted between the crimping hooks (4) of the wall of said body (3) and the crimping hooks (6) of the walls of said components (T), i.e. said double crimping.

The present invention is applicable in the packaging industry.

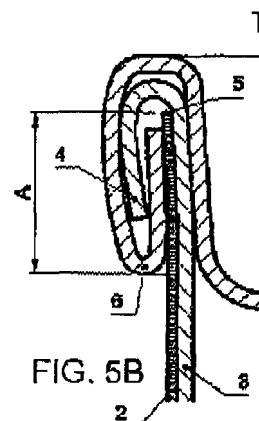


FIG. 5B

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Description

[0001] The present invention relates to a metal packaging container with a label, serving as a label for the decoration of containers and/or for indicating the product brand, quality, quantity, destination, value, geographical origin, season or the means of production of the product or other characteristics thereof.

[0002] The label is applied, during the manufacturing process of the package, prior to the finishing of said metallic packaging container by means of a double crimping process, wherein the label edges are inside the crimp hooks, which guarantees 100% coverage of the visible surface of the body. This ensures an improved label fastening, which will reduce the likelihood of its detachment from the package. Accordingly the present invention also provides for the improvement of the overall aesthetics of labeled metal containers.

[0003] The present invention relates to metal packaging containers with labels, which comprise a right, but not necessarily cylindrical, right wall hollow body and two end closure components. Metal packaging containers with labels are generally but not exclusively used to contain products such as paints and coatings, food products, household products, technical products or products for personal use.

[0004] Metal packaging containers with labels are well known in the art and are generally used for economic purposes or to benefit from the advantages of customization at a later stage of the production cycle. However, there are some drawbacks inherent in the use of labels as a means for decorating of containers and/or for indication of the product brand, quality, quantity, destination, value, geographical origin, time or means of production of the product or other characteristics thereof.

[0005] In metal packaging containers with labels, the label is typically applied after the container finishing process. Due to the variability of the labeling process, vertical positioning varies, which often causes the surface of the container body to become visible, as shown in Fig. 1.

[0006] Further, because the top and bottom edges of the label are exposed, it becomes very easy to remove the label. Sometimes a simple gradient of temperature or humidity is sufficient to initiate a self-detachment of the label.

[0007] All traditional labeling processes give an unattractive appearance, which can affect product sales and the corresponding brand image.

[0008] The object of the invention is to solve the above problems.

[0009] According to the invention such object is achieved by means of a metal packaging container with label comprising a hollow cylindrical body made of sheet metal, a label made on a suitable substrate, two end closure components in which the end closure component are fixed to said hollow body by double crimps (double lock seam), wherein said label is applied on the outer surface of the hollow body of the container, after the body

has been transformed into a hollow cylinder and prior to the double crimping fastening of said end closure components, wherein the edges of the label are inserted between the crimping hook of said hollow body and the crimping hooks of said end closure components, i.e., between said double crimps.

[0010] The cylindrical body can be made of tinplate, electrolytic chrome/chromium oxide plated steel, aluminum or any other suitable metal alloy, the cylindrical shape being obtained by the union of the edges by welding parallel to the main axis of the body.

[0011] End closure components may be made of tinplate, electrolytic chromium plated steel/chromium oxide, aluminum or any other metal alloy.

[0012] The label may be made of polypropylene, polyethylene, polyethylene terephthalate also called PET, paper, or any other suitable material.

[0013] The label can be a self-adhesive label.

[0014] The invention will now be described in more detail with the aid of an embodiment thereof, given by way of non-limiting example, and with reference to the accompanying drawings, in which:

Fig. 1 shows the application of a label 2 on the hollow body 3 of a finished metal packaging container 1 according to the prior art;

Figs. 2A to 2D show in detail the application of a label on the hollow body of a metal packaging container, wherein the size of the label in the direction of the main axis of said package is less than the size of the hollow body in the same direction;

Figs. 3A to 3D show in detail the application of a label on the body of a metal packaging container, the size of the label in the direction of the main axis of said package being equal to the size of the hollow body in the same direction;

Figs. 4A-4D show respectively a side view of a finished metal container according to the invention, longitudinal cross-sectional views of the details A and B of the double crimps of a metal packaging container with the label, a sectional view in perspective through the upper hollow body along section line C-C;

Figs. 5A-5E respectively show a side view of a finished metal container according to a further variant of the invention, longitudinal cross-sectional views of the details A and B of the double crimps of a metal packaging container with the label, a sectional view in perspective through the upper hollow body along section line C-C and an axial cross-sectional view of the detail D;

Figs. 6A-6E respectively show a side view of a finished metal container according to yet another var-

variant of the invention, longitudinal cross-sectional views of the details A and B of the double crimps of a metal packaging container with the label, a sectional view in perspective through the upper hollow body along section line C-C and an axial cross-sectional view of the detail D.

[0015] The invention will now be described based on the figures and referring only and when applicable to the top of the container since the bottom is in all identical.

[0016] Fig. 2A shows a top and side view of the hollow body 3 of the metal packaging container, in Fig. 2B there is shown a top view and a side view of the label 2 prior to its application on the surface of the body. In Fig. 2C there is shown a top and side view of the hollow body 3 with a label 2 applied on its surface, the size of the label in the direction of the main axis of said package being smaller than the dimension of the hollow body in the same direction, in Fig. 2D the final appearance of the assembly after the double crimping process of the components T.

[0017] Figs. 2A to 2D correspond to the variants of the present invention shown in Figs. 4A through 4D and Figs. 5A to 5E.

[0018] Fig. 3A shows a top view and side view of the hollow body 3 with a label 2 applied on its surface, the size of the label in the direction of the main axis of said package being smaller than the size of the hollow body in the same direction; Fig. 3B shows the detail B of Fig. 3A, Fig. 3C shows a top view and a side view of the label 2 prior to its application on the surface of the hollow body 3, in Fig. 3D the final appearance of the assembly after the double crimping process of the T components.

[0019] The label 2 is applied on the outer surface of the hollow body 3 and positioned so that the dimensions A and B indicated in Figs. 4A to 4D, Figs. 5A to 5E and Figs. 6A to 6E are greater than 0 mm.

[0020] In order to obtain this dimensional arrangement the label 2 has to be applied during a phase in which the container is not finished (Figs. 2C and 3A). Upon completion of said container 1, the edges 5 of the label 2 will always be disposed within the double crimps of the container 1, between the crimping hooks 4 of the hollow body 3 and the crimping hooks 6 of the end closure components T, as shown in the cross-sectional details shown in Figs. 4B to 4C, Figs. 5B through 5C and Figs. 6B to 6C.

[0021] In making said double crimps, the edges 5 of the label 2 are inserted into the crimp hooks, which makes it more difficult to separate the label from the package than in the case of conventional labels. Furthermore, this method of applying the label 2 ensures a coverage of 100% of the visible surface of the container body.

joint of the edges by welding parallel to the main axis of said hollow cylindrical body (3), a label (2) made on a suitable substrate, two end closure components (T), wherein said end closure components (T) are fastened to said hollow body by double crimping, carried out by folding the respective walls of both the (3), wherein said label (2) is applied to the outer surface of the hollow body (3) of said container (1), after the body (3) has been transformed into a hollow cylinder and before the fastening by double crimping of said components (T) **characterized in that** the edges (5) of said components (T) of the label (2) of said label (2) are inserted between the crimping hooks (4) of said body (3) and the crimping hooks (6) of said components (T), that is, in said double crimps (double lock seam).

2. Container (1) according to claim 1, **characterized in that** said body (3) is made of tinplate, electrolytic chrome/chromium oxide plated steel, aluminum or any other suitable metal alloy.
3. A container (1) according to claim 1, **characterized in that** said components (T) are made of tinplate, chrome/chromium oxide electrolytic steel, aluminum or any other alloy.
4. A metal packaging container according to claim 1, **characterized in that** said label (2) is made of polypropylene, polyethylene, polyethylene terephthalate also referred to as PET, paper, or any other suitable material.
5. A container (1) according to claim 1, **characterized in that** the dimensions A and B are greater than 0 mm.
6. A container (1) according to claim 1, **characterized in that** said label (2) is a self-adhesive label.

Claims

1. A metal packaging container (1) with a label comprising a hollow cylindrical body (3) made of sheet metal, the cylindrical shape being obtained by the

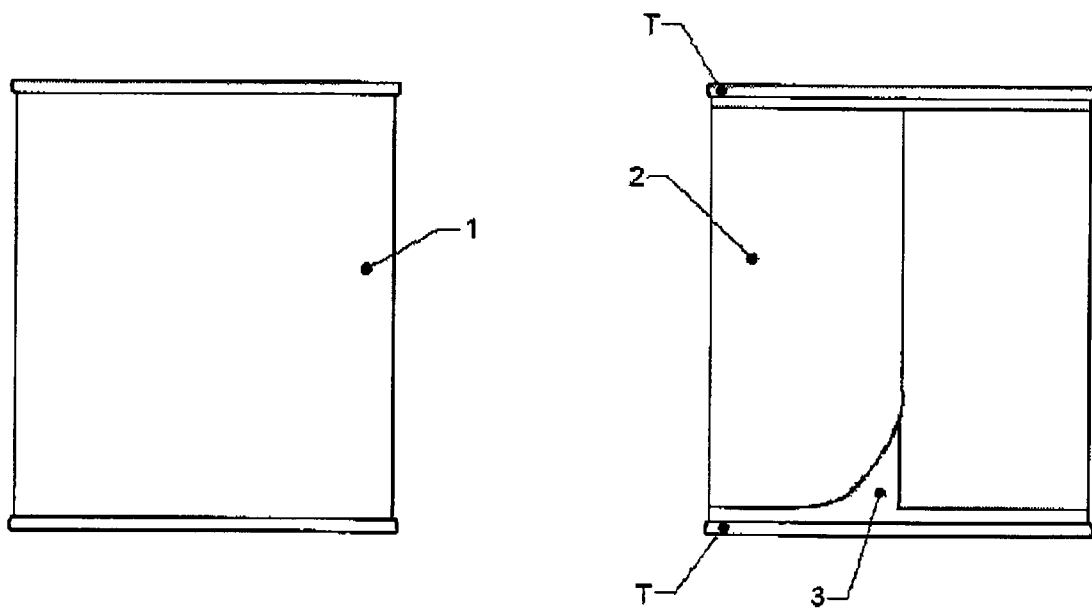


FIG. 1

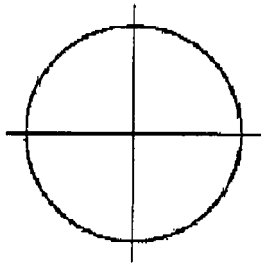


FIG. 2A

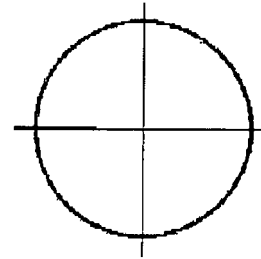


FIG. 2C

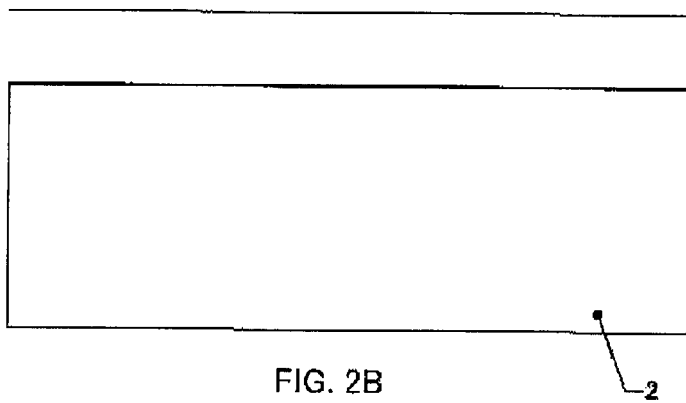
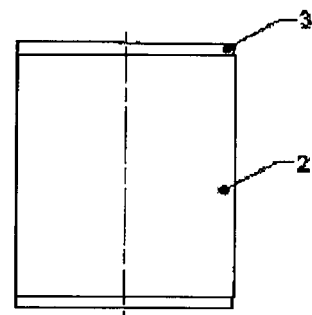
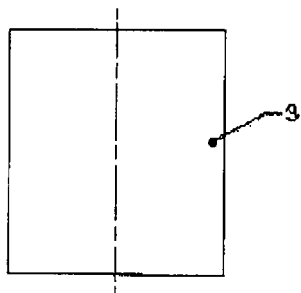


FIG. 2B

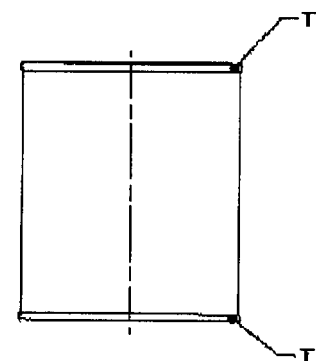
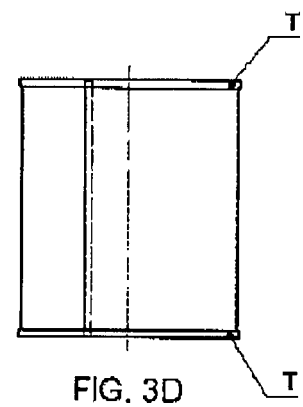
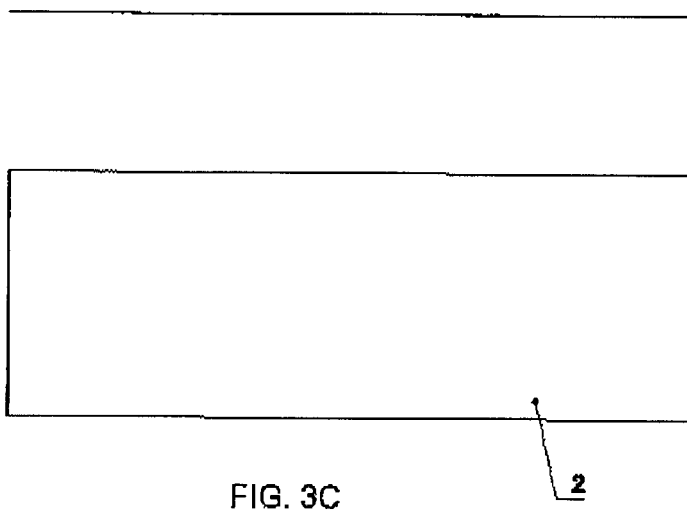
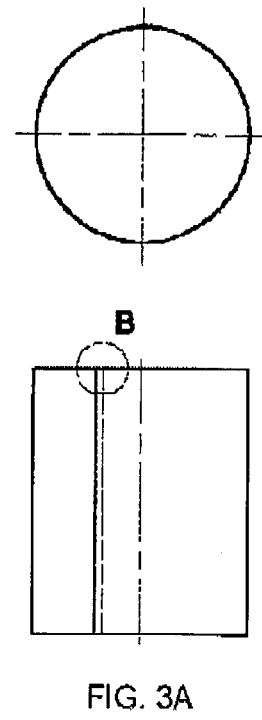
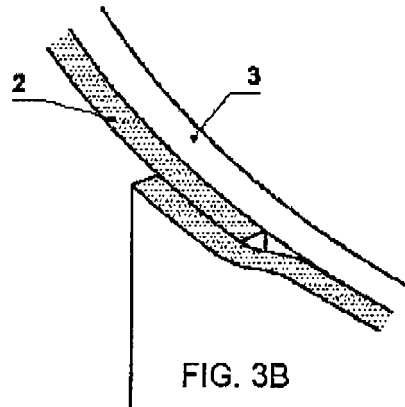
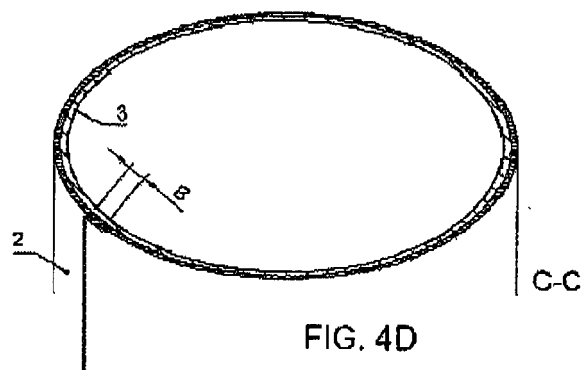
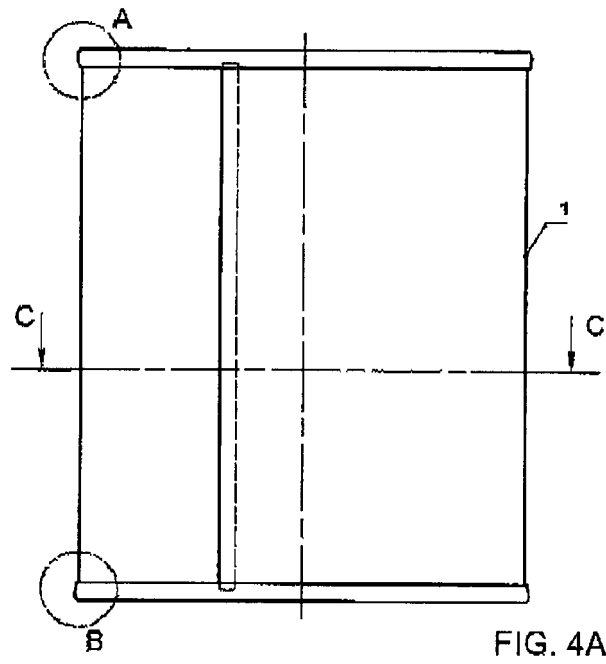
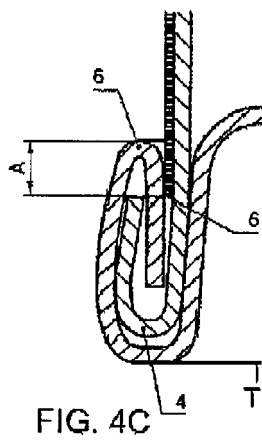
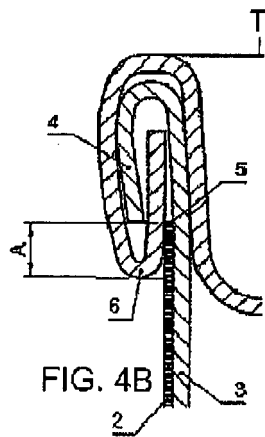


FIG. 2D





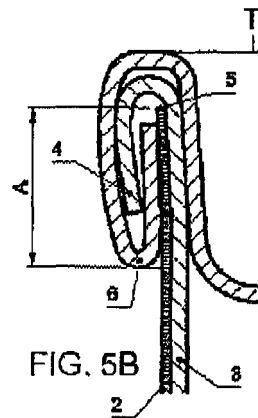


FIG. 5B

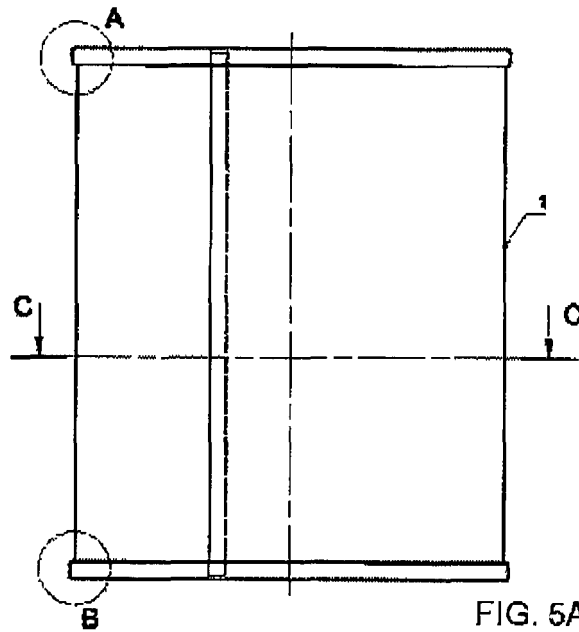


FIG. 5A

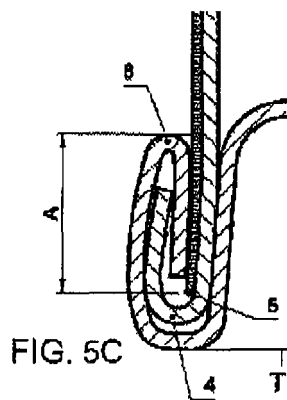


FIG. 5C

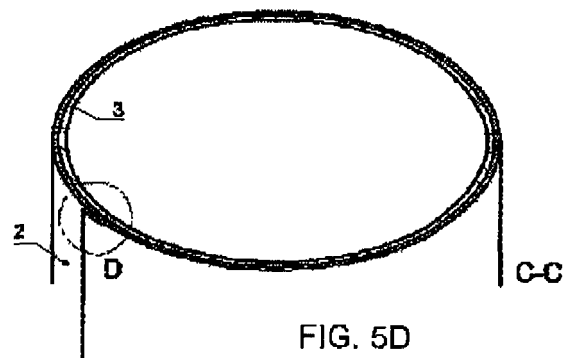


FIG. 5D

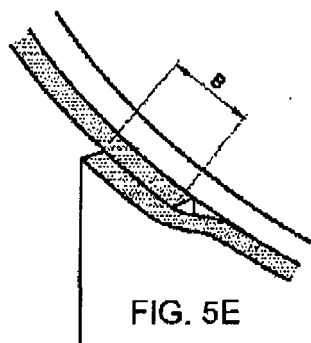
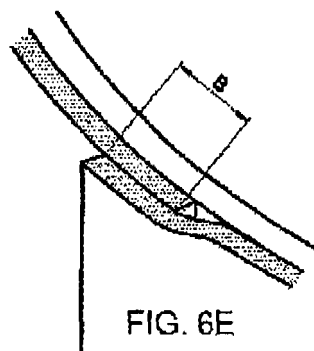
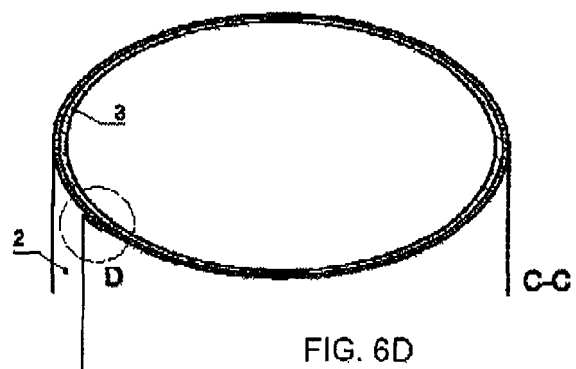
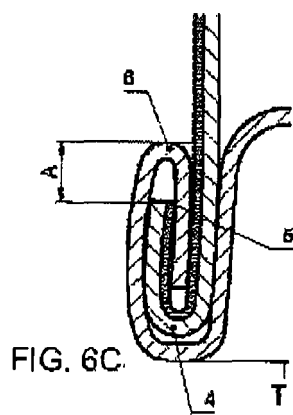
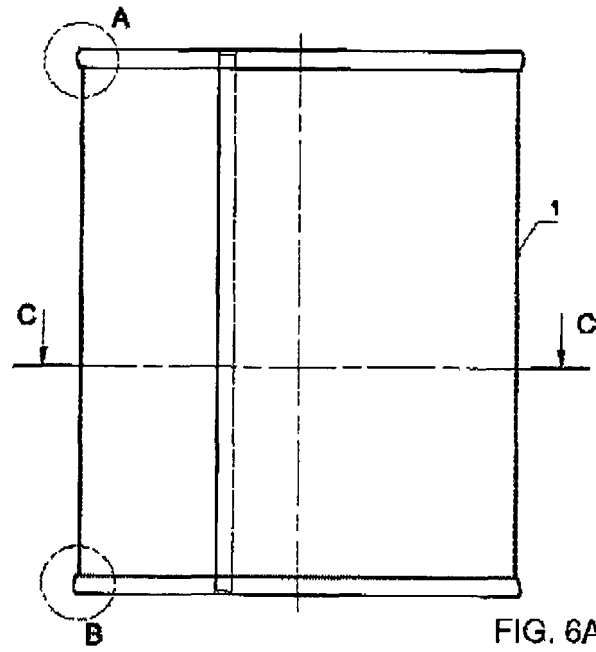
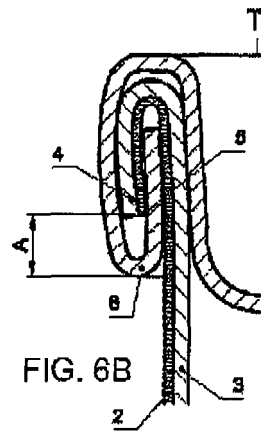


FIG. 5E





EUROPEAN SEARCH REPORT

 Application Number
 EP 19 00 0099

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
			B65C B21D B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 11 July 2019	Examiner Luepke, Erik
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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