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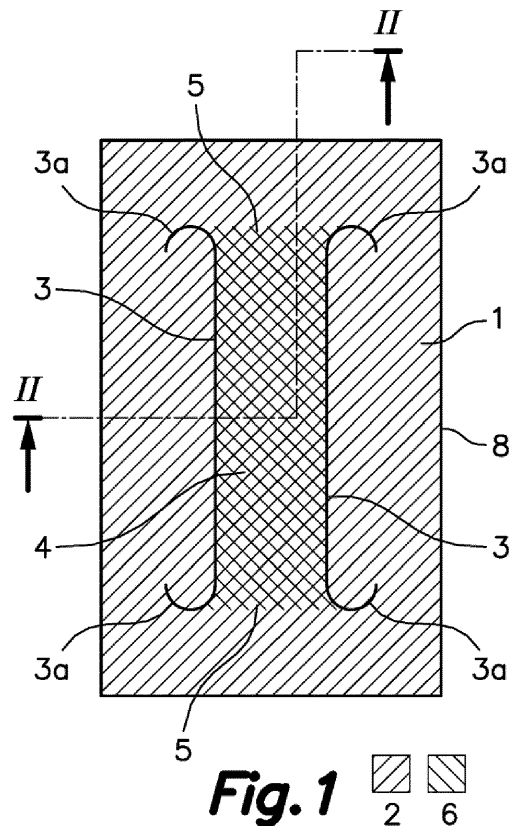
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(54) **ADHESIVE LABEL WITH HANDLE FOR TRANSPORT OF OBJECTS**

(57) The proposed adhesive label comprises a flexible sheet (1) bounded by a perimetric edge (8), an adhesive layer (2) coating one side of the flexible sheet (1) and at least one cut (3) formed in the flexible sheet (1) along a line that does not reach the perimetric edge (8), the at least one cut (3) defining a handle region which is integrally connected to the flexible sheet (1) by two opposing ends integrally connected to the flexible sheet (1) by at least one connecting portion (5). An area of the adhesive layer (2) on the handle region between the two connecting portions (5) has an adhesive capacity thereof inhibited by an inhibiting treatment. The handle region of the label forms a handle (4) that, when the label is adhered to an object, may be separated from the object and manually gripped.



Description

Field of the art

[0001] The present invention relates to an adhesive label with handle for carrying objects. The adhesive label can be adhered to an object and the handle integrated in the adhesive label can be manually gripped and used to carry and handle the object.

[0002] The adhesive label with handle of the present invention is generally useful in the field of packaged products, and more in particular in the field of products packaged in bags made of a flexible plastic sheet material.

Background of the invention

[0003] Many consumer objects generally including packaged products, and more particularly products packaged in bags made of a flexible plastic sheet material, such as bags for dog or cat food, which can weigh up to 15 kg, turn out to be uncomfortable and tiring to handle and carry because they do not have a handle.

[0004] Some of such products include a handle built into the packaging, for example made from the flexible plastic sheet material which constitutes the bag, but these built-in handles are expensive to produce, they increase the cost of the final product and this makes them less competitive compared to other bags lacking a handle.

[0005] US 5145108 A describes a ribbon for the formation of handles to carry objects, wherein the ribbon is covered by an adhesive layer on one of its sides, and a covering sheet is adhered to a central portion of the adhesive layer, so that this central portion constitutes a handle intended to be gripped. The ends of the ribbon, which have the adhesive layer exposed, are adhered to the object to be carried.

[0006] A drawback of the handle described in the referred document US 5145108 A is that, since the width of the ribbon is the same in the central portion, which constitutes the handle, and the ends intended to be adhered to the object, the areas of the adhesive ends may be insufficient to support the object's weight unless the adhesive ends are very long, which may not adapt to the shape of the object. On the other hand, the need to protect the handle-constituting central portion with a covering sheet involves an increase in the final cost of the product.

[0007] US 2011147239 A1 discloses a unifying adhesive label that has a handle for carrying objects, which comprises a flexible sheet bounded by a perimeter edge, an adhesive layer that covers a side of the flexible sheet for the attachment of the flexible sheet to a plurality of identical objects so as to unify them in a single package, and a cut formed on the flexible sheet along a line that does not reach the perimeter edge. The cut defines a handle that is integrally connected to the flexible sheet by at least one connecting portion. The handle can be folded with respect to the rest of the flexible sheet along

the connecting portion and can be manually gripped to carry the plurality of objects. The handle can include holes to facilitate manual gripping.

[0008] A drawback of the adhesive label described in the referred document US 2011147239 A1 is that it provides a handle that turns out to be hard and/or uncomfortable to grip even in the case that it has holes, and the fact that the handle is connected to the rest of the flexible sheet by a single connecting portion makes it only fit for relatively light objects, such as wet wipes packages, since there is a risk of tearing of the flexible sheet on the ends of the cut if the objects to be carried are relatively heavy.

15 Disclosure of the invention

[0009] The present invention contributes to alleviate the above and other drawbacks by providing an adhesive label with handle for carrying objects which comprises a flexible sheet bounded by a perimeter edge, an adhesive layer covering one side of the flexible sheet for the attachment of the flexible sheet to an object, and one or more cuts formed on the flexible sheet along a line that does not reach the perimeter edge. These one or more cuts define a handle region that has two opposite ends integrally connected to the flexible sheet by two respective connecting portions. Furthermore, an area of the adhesive layer in the handle region, which spans an area of the handle region between the two connecting portions, has its adherent capacity inhibited by an inhibition treatment.

[0010] So, when the label is adhered to an object, the handle region, in which the adhesive layer has its adherent capacity inhibited, forms a handle that can be separated from the object and manually gripped to carry and handle the object.

[0011] By way of example, two alternative inhibition treatments can be mentioned. According to a first inhibition treatment, said area of the adhesive layer corresponding to the handle is covered with a preservation layer made of a non-adhesive printed material. According to a second inhibition treatment, the adhesive layer in the area corresponding to the handle is thermally treated to inhibit its adherent capacity.

[0012] In an embodiment, the flexible sheet includes two cuts formed along two respective lines that do not reach the perimeter edge, in which case the handle is defined between these two cuts and between the two connecting portions. Preferably, each of the cuts has on opposite ends thereof anti-tear cut portions curved towards each other and towards a side opposite the other cut.

[0013] In either case, the adhesive layer preferably comprises a high performance permanent adhesive that has an adhesive force equal to or greater than 5 N/cm². Thus, the adhesive label of the present invention may be designed and sized to support loads of up to 15 kg without exceeding, for example, the dimensions of an area of a

side wall of the object to be carried available for the attachment of the adhesive label with handle. The preservation layer that covers the adhesive layer in an area of the handle, or the thermal treatment that inhibits the adherent capacity of the adhesive layer in an area of the handle, prevents the handle from adhering to the object, which facilitates the grip and simultaneously prevents the handle from adhering to the user's hand and/or from leaving sticky residues on the user's hand.

[0014] For marketing, the adhesive labels with handle of the present invention are preferably supplied with a removable protection sheet, such as, for example, silicone paper, covering the whole area of the flexible sheet, including both the adhesive layer and the preservation layer or the area where the adhesive layer has its adherent capacity inhibited by a thermal treatment.

[0015] In a preferred embodiment, the flexible sheet comprises a first layer and a second layer joined together by an adhesive, and the adhesive layer is applied over an outer side of the first layer. Preferably, the first layer and the second layer of the flexible sheet present anisotropy as regards their mechanical tensile behaviour in respective crossed directions.

[0016] For example, the first and second layers of the flexible sheet are made of polyester or polypropylene, and are preferably clear, so that the preservation layer can optionally include graphic or written information.

[0017] Alternatively, the first and second layers of the flexible sheet can be made of any other clear, translucent or opaque plastic material, and the adhesive label with handle can comprise graphic or written information printed on an outer side of the second layer of the flexible sheet. In the case when the material of the first and second layers is clear, the graphic or written information printed on an outer side of the second layer is compatible with the graphic or written information included on the preservation layer.

[0018] The preservation layer preferably includes an ink or lacquer layer applied by printing on a selected area of the adhesive layer. The ink or lacquer, once dried, hardened or cured, does not have adhesive properties and deactivates the operation of the adhesive layer in the area where it has been applied.

[0019] The adhesive labels with handle of the present invention can be produced using as starting material an initial wound web material that includes a continuous flexible sheet, a continuous adhesive layer over one side of the flexible sheet and a continuous removable protection sheet that covers the adhesive layer. This type of initial wound web material is commercially available from several manufacturers of adhesive sheets.

[0020] A method to produce the adhesive labels with handle of the present invention comprises, for example, the following steps:

- a) providing an initial wound web material with the features defined hereinabove;
- b) momentarily removing the removable protection

sheet from the wound web material;

c) applying an inhibition treatment over the plurality of specific areas of the adhesive layer situated in selected positions to inhibit the adherent capacity thereof;

d) replacing the removable protection layer covering the adhesive layer and the areas of the adhesive layer that have the adherent capacity thereof inhibited by the inhibition treatment; and

e) die-cutting the perimeter edges and the one or more cuts of the labels in selected positions to match the positions corresponding to the handles with the specific areas where the adhesive layer has its adherent capacity inhibited by the inhibition treatment.

[0021] Step c) of application of the inhibition treatment may comprise printing a preservation layer made of a non-adhesive printed material over said plurality of specific areas of the adhesive layer, or alternatively applying a thermal treatment over said plurality of specific areas of the adhesive layer to inhibit the adherent capacity thereof.

[0022] For an industrial use, it is preferred that the die-cutting only affects the flexible sheet and not the removable protection sheet, so that the adhesive labels with handle may be supplied in reels of multiple-label wound web material. However, alternatively, and preferably for a particular use, the die-cutting may affect both the flexible sheet and the removable protection sheet, whereby individually separated adhesive labels with handle are obtained.

Brief description of the drawings

[0023] The above and other features and advantages will be more fully understood from the following detailed description of exemplary embodiments, which have a merely illustrative and non-limiting character, with reference to the attached drawings, in which:

Fig. 1 is a plan view of an adhesive label with handle for carrying objects according to an embodiment of the present invention;

Fig. 2 is a cross-sectional view taken along the plane 11-11 of Fig. 1;

Fig. 3 is a cross-sectional view similar to Fig. 2 that includes an additional removable protection sheet; and

Fig. 4 is a plan view of an adhesive label with handle for carrying objects according to another embodiment of the present invention.

Detailed description of exemplary embodiments

[0024] Referring first to Figs. 1 and 2, there is shown an adhesive label with handle for carrying objects according to an embodiment of the present invention which comprises a flexible sheet 1 bounded by the rectangular

perimeter edge 8, and two opposing cuts 3 formed along respective parallel lines that do not reach the perimeter edge 8. Each of the cuts 3 has in opposite ends thereof anti-tear cut portions 3a curved towards each other and towards a side opposite the other cut 3. Both cuts 3 define an elongated handle 4 that has two opposite ends integrally connected to the flexible sheet 1 by two respective connecting portions 5. Thus, the handle 4 is defined between both cuts 3 and between both connecting portions 5.

[0025] A side of the flexible sheet 1 is completely covered by an adhesive layer 2 (shown by a hatch tilted in a first direction in Fig. 1), which is for the attachment of the flexible sheet 1 to an object to be carried. Furthermore, in an area of the handle 4 comprised between both connecting portions 5, the adhesive layer 2 is covered with a preservation layer 6 (shown by a hatch tilted in a second direction in Fig. 1). The preservation layer 6 is made of a non-adhesive printed material, such as ink or lacquer applied by a printing technique.

[0026] Alternatively, instead of being covered by the preservation layer (6), the adhesive layer 2 in the area of the handle 4 comprised between both connecting portions 5 may be thermally treated to inhibit its adherent capacity.

[0027] Thus, in the area of the handle 4, the adhesive action of the adhesive layer 2 is deactivated by the preservation layer 6 or by the thermal treatment, which facilitates the manual gripping of the handle and avoids the handle from adhering to the object to be carried and to the user's hand. The adhesive layer 2 comprises, for example, a high performance permanent adhesive that has an adhesive force equal to or greater than 5 N/cm².

[0028] Fig. 2 shows in cross-section the flexible sheet 1, one of the cuts 3 that define the handle 4, the adhesive layer 2 and the preservation layer 6. The thicknesses of the different layers have been exaggerated in Fig. 2 for greater clarity of the drawing.

[0029] As shown in Fig. 2, in this embodiment the flexible sheet 1 comprises a first layer 1 a and a second layer 1 b joined together by an adhesive 9, and the adhesive layer 2 is applied over an outer side of the first layer 1 a of the flexible sheet 1. Preferably, the first layer 1 a and the second layer 1 b of the flexible sheet 1 present anisotropy as regards its mechanical tensile behaviour in a specific direction, and they are arranged so that their respective specific directions of anisotropy are crossed so as to confer greater tensile strength to the flexible sheet 1 in all directions.

[0030] A suitable plastic material for the first and second layers 1 a, 1 b which make up the flexible sheet 1 is polyester or polypropylene, optionally clear. When the first and second layers 1 a, 1 b are clear, the preservation layer 6 may optionally include graphic or written information, which is visible through the flexible sheet 1 from an outer side of the handle 4. Whether the first and second layers 1 a, 1 b of the flexible sheet are clear or translucent or opaque, the label can include graphic or written infor-

mation printed on an outer side of the second layer 1 b of the flexible sheet 1.

[0031] However, it must be pointed out that, for the purposes of the present invention, the flexible sheet 1 is not limited to the first and second layers 1 a, 1 b, but can rather include one single layer or any number of layers overlaid and joined together by means of an adhesive.

[0032] Fig. 3 shows the same adhesive label with handle of Fig. 2, to which a removable protection sheet 7 has been added, made, for example, of silicone paper, that covers the adhesive layer 2 and the preservation layer 6 in all the area of the flexible sheet 1. This removable protection sheet 7 provisionally deactivates the adhesive action of the adhesive layer 2, which allows to store and handle the adhesive labels without these sticking to each other or to other non-desired surfaces, and it can be manually removed when it is desired to permanently adhere the adhesive label to a desired surface of an object to be carried.

[0033] Fig. 4 shows an adhesive label with handle according to another embodiment of the invention, which differs from the one described above in relation to Figs. 1 and 2 only in that the perimeter edge 8 of the flexible sheet 1 has an oval instead of rectangular shape. Obviously, other shapes of the perimeter edge 8 different from the rectangular and the oval ones are also within the scope of the present invention.

30 Claims

1. An adhesive label with handle for carrying objects, comprising a flexible sheet (1) bounded by a perimeter edge (8), an adhesive layer (2) covering one side of said flexible sheet (1) for the attachment of the flexible sheet (1) to an object, and at least one cut (3) formed on the flexible sheet (1) along a line that does not reach said perimeter edge (8), said at least one cut (3) defining a handle region that is integrally connected to the flexible sheet (1) by at least one connecting portion (5), **characterised in that:**

said handle region has two opposite ends integrally connected to the flexible sheet (1) by two respective connecting portions (5);
an area of said adhesive layer (2) in the handle region between said two connecting portions (5) has an adherent capacity thereof inhibited by means of an inhibition treatment; and
said handle region of the label forms a handle (4) that, when the label is adhered to an object, may be separated from the object and manually gripped.

2. An adhesive label with handle according to claim 1 wherein said area of the adhesive layer (2) that has the adherent capacity thereof inhibited is covered with a preservation layer (6) made of a non-adhesive

- printed material.
3. An adhesive label with handle according to claim 1 wherein said area of the adhesive layer (2) that has the adherent capacity thereof inhibited has the adhesive layer (2) thermally treated to inhibit its adherent capacity. 5
 4. An adhesive label with handle according to claim 1, 2 or 3 wherein the flexible sheet (1) comprises two of said cuts (3) formed along respective lines that do not reach the perimeter edge (8), the handle region that forms the handle (4) being defined between both cuts (3) and between both connecting portions (5). 10
 5. An adhesive label with handle according to claim 4 wherein each of the cuts (3) has in its opposite ends anti-tear cut portions (3a) curved towards each other and towards a side opposite the other cut (3). 15
 6. An adhesive label with handle according to any of the preceding claims wherein the adhesive layer (2) comprises a high-performance permanent adhesive that has an adhesive force equal to or greater than 5 N/cm². 20
 7. An adhesive label with handle according to any of the preceding claims wherein the adhesive layer (2) and said preservation layer (6) are covered by a removable protection sheet (7) throughout the area of the flexible sheet (1). 25
 8. An adhesive label with handle according to claim 7 wherein said removable protection sheet (7) is made of silicone paper. 30
 9. An adhesive label with handle according to any of the preceding claims wherein the flexible sheet (1) comprises a first layer (1 a) and a second layer (1 b) joined together by an adhesive (9), the adhesive layer (2) being applied over an outer side of said first layer (1 a) of the flexible sheet (1). 35
 10. An adhesive label with handle according to claim 9 wherein said first layer (1a) and said second layer (1 b) of the flexible sheet (1) present anisotropy in their mechanical tensile behaviour in respective crossed directions. 40
 11. An adhesive label with handle according to claim 10 wherein the first and second layers (1 a, 1 b) of the flexible sheet (1) are made of polyester or polypropylene. 45
 12. An adhesive label with handle according to claim 11 wherein the first and second layers (1 a, 1 b) of the flexible sheet (1) are clear. 50
 13. An adhesive label with handle according to claim 12 wherein the preservation layer (6) includes graphic or written information. 55
 14. An adhesive label with handle according to any of claims 9 to 13, further comprising graphic or written information on an outer side of said second layer (1 b) of the flexible sheet (1).

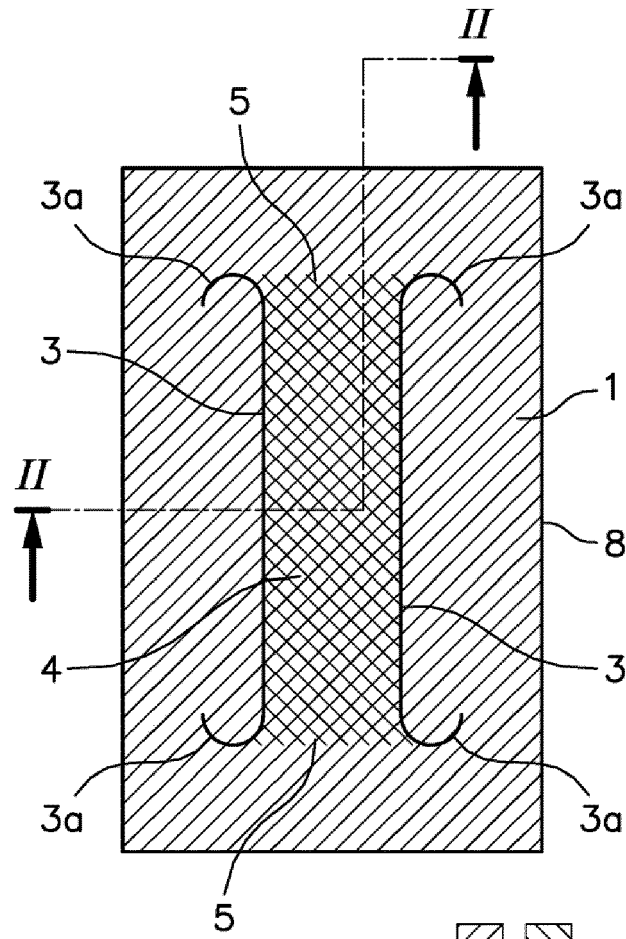


Fig. 1

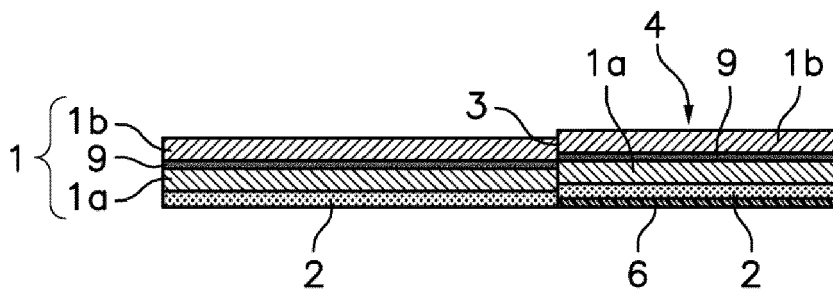


Fig. 2

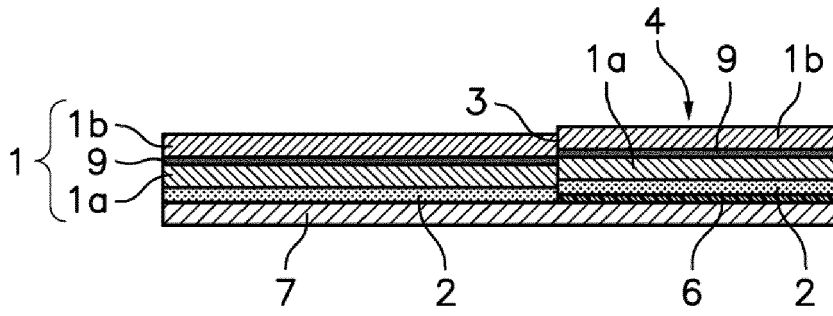


Fig.3

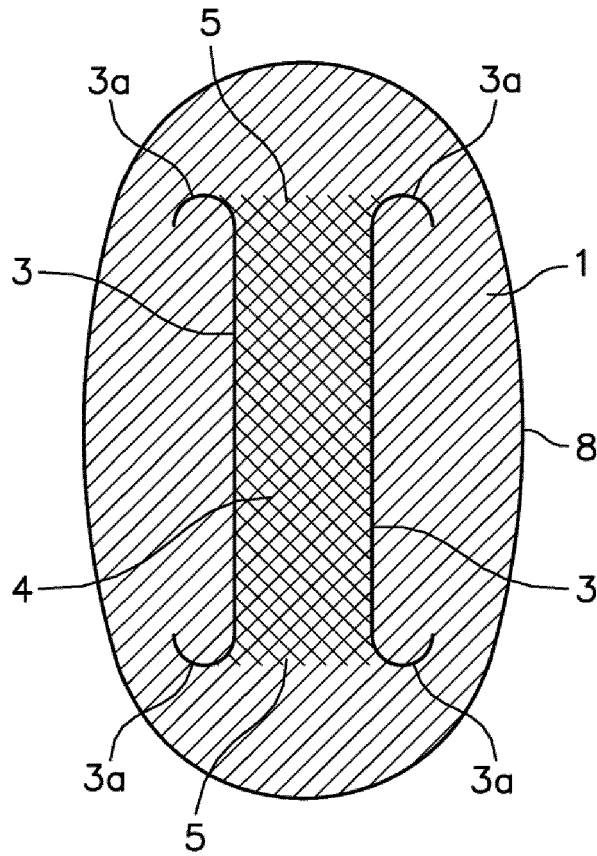
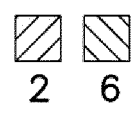


Fig.4





EUROPEAN SEARCH REPORT

Application Number
EP 17 38 2117

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 485 911 A (KNAUF INSULATION [BE]) 30 May 2012 (2012-05-30) * page 2, line 10 - line 15 * * page 2, line 29 - page 3, line 3 * * page 3, line 17 - line 22 * * page 7, line 24 - line 13 * * figures 4-7 *	1-14	INV. G09F3/02 G09F3/00 G09F3/10 B65B61/14 B65D75/56
X	----- WO 92/15081 A1 (TAPECON [US]) 3 September 1992 (1992-09-03) * page 7, line 11 - page 8, line 35 * * figures *	1-14	
X	----- EP 2 246 266 A1 (PILOT ITALIA [IT]) 3 November 2010 (2010-11-03) * paragraphs [0018] - [0023] * * figures *	1-14	
			----- TECHNICAL FIELDS SEARCHED (IPC) G09F B65B B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 23 May 2017	Examiner Lechanteux, Alice
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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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 17 38 2117

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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23-05-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2485911 A	30-05-2012	CA 2819046 A1	07-06-2012
		EP 2646340 A2	09-10-2013
		GB 2485911 A	30-05-2012
		WO 2012072600 A2	07-06-2012

WO 9215081 A1	03-09-1992	CA 2103726 C	27-06-1995
		DE 69214129 D1	31-10-1996
		DE 69214129 T2	27-02-1997
		EP 0571559 A1	01-12-1993
		US 5135125 A	04-08-1992
		WO 9215081 A1	03-09-1992

EP 2246266 A1	03-11-2010	EP 2246266 A1	03-11-2010
		IT 1396174 B1	16-11-2012

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 5145108 A [0005] [0006]
- US 2011147239 A1 [0007] [0008]