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(54) **Method for producing and applying synthetic labels**

Verfahren zum Herstellen und Anbringen von synthetischen Etiketten

Procédé de produire et d'appliquer des étiquettes synthétiques

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Description

[0001] The present invention relates to a method for manufacturing plastic labels with self-adhesive pattern, and attaching such labels such that they are enfolding a can, in accordance with the preamble of claim 1 and as known from DE 10 2006 038 249 A1.

[0002] Methods that are already known comprise the step of printing a plastic foil by using an analogue contact pressing technique and using plates or rolls that are pressed against the foil, for example in a relief printing, flexographic print and/or offset and intaglio print.

[0003] In such methods the plastic foil is formed as a wide band, whereby prints are printed successively on the wide band along the widthwise direction of this wide band, similar to the method for a label, and whereby the side edges of the label prints are aligned along the lengthwise direction of the band.

[0004] Because preparing the plates for printing is expensive and time-consuming, in practice, such a known method is only economically viable when manufacturing intermediate and large numbers of labels, provided that these labels all have the same print.

[0005] Moreover, printing intermediate and large series is expensive and labour intensive.

[0006] Therefore, a first disadvantage of such known method is that it is not very suitable to manufacture a smaller number of labels or labels of which the print is variable, for example, because each label has to be provided with a separate serial number, batch number, variable code, or the like.

[0007] Furthermore, to attach the labels to a can, or the like, using known methods, each time a label has to be torn or cut off from the wide band, and both edges of the label have to be interconnected forming a closed band or flexible cover shaped band, better known as stretch sleeve or sleeve.

[0008] Mostly, interconnecting or sealing is carried out in an extra production line requiring extra processing time and thus incurring extra costs.

[0009] This band is radially pulled open in order to slide the band over the can in the axial direction, after which the band again returns to its original form, due to its elasticity, and stretches around the can.

[0010] Moreover, the way of attaching the labels is fairly complicated and requires specially suited equipment that is laborious and expensive.

[0011] Furthermore, these known methods usually provide the can with a pair of circular ridges on a height each corresponding to the height of a label, in between which the label will be attached, which ridges function to guarantee that the label will remain at its position. Alternatively, sometimes the can is provided with a recessed surface for that reason The present invention aims to offer a solution to said and other disadvantages.

[0012] Therefore, the present invention relates to a method for manufacturing plastic labels with a self-adhesive pattern, and attaching such labels around a can, whereby, after attaching a label around a can, a side edge of the label is overlapped by another part of the label, the method further comprising at least the following steps:

- printing a plastic foil, formed as an elongated strip, using a digital printing technique, the prints being printed successively along the lengthwise direction of the strip corresponding to a label, the prints being positioned in a consecutive order in the lengthwise direction of the strip, and the side edges of the consecutive label prints being situated on the strip at right angles, in the crosswise direction of the strip;
- applying an adhesive to the plastic foil, either to the whole surface of the plastic foil, or to only a part of it, forming a self-adhesive plastic foil;
- enfolding a can by means of a free end of the plastic foil having a length of at least the length of the circumference of the can, or the like, whereby after enfolding an aforementioned side edge of a label print is overlapped by another part of the plastic foil, and whereby the part of the foil enfolding the can adheres to the can by means of said adhesive; and,
  cutting off the concerning part from the plastic foil corresponding to the length of a label; characterized in that the label is cut off at a certain distance from the overlapping part and the side edge of the plastic foil, providing a flap at the label.

[0013] A first advantage of this method according to the invention is that a digital printing technique is used.

[0014] Such printing techniques, without printing plates or printing cylinders, are cheaper and allow the print on the labels to be adjusted in a very flexible way, without having to use long lasting and expensive procedures, due to the fact that the print can be adjusted softwarewise.

[0015] Another advantage of a method according to the invention is that it is suitable for very small to intermediate numbers of labels, because there is no need to produce plates, or the like, for printing.

[0016] Printing digitally is less expensive compared to printing traditionally.

[0017] Moreover, welding to make a closed band (sleeve) is not required.

[0018] Furthermore, the method according to the invention for attaching the labels to a can is carried out in a far more efficient way.

[0019] The method according to the invention allows the labels to be attached to a can in a practical, continuous and quick way.

[0020] After all, it suffices to enfold a can with the plastic foil and to cut the latter at the correct length, after which another can may be delivered and the process may be repeated.

[0021] In order to better explain the characteristics of the invention, hereafter, by means of example only, without being limitative in any way, a preferred method ac-

cording to the invention for characterized in that manufacturing self-adhesive plastic labels, and attaching such labels to a can is explained in detail with reference to individual figures, in which:

figures 1 to 4 show consecutive steps of a known method; and,
figures 5 to 9 show steps of a method according to the invention.

[0022] In figure 1 a first step of a known method for manufacturing plastic labels, and attaching such labels to a can is shown schematically.

[0023] Hereby, an analogue contact printing technique is used, whereby prints 3 corresponding to a label are printed on the wide band 2 by the contact between a printing cylinder 1 and a plastic foil in the form of a wide band 2.

[0024] Hereby, the side edges 4 of the consecutive label prints 3 on the foil 2 are aligned according to the lengthwise direction L of the wide band 2.

[0025] In this text the side edges 4 of a label 5 are defined as the edges 4 of the label 5 meant to be extended along the axial direction AA' of a can 6, with regular use use of the label 5, and after attaching the label 5 to the can 6.

[0026] Figure 2 shows schematically that with the known methods, after cutting off or tearing away a label 5 of the foil 2, a following step comprises interconnecting said side edges 4 of the label 5, for example by glueing or melting them together, such that a label 5 in the form of a closed band is obtained.

[0027] As is represented in figure 3, according to the known methods, after that, the label 5, in the form of a band, will be stretched in the radial direction RR', in order to move it in the axial direction AA' over the can 6.

[0028] Hereby, the label 5 is positioned between two annular ridges 7, and then the step of stretching the label 5 radially is ended due to its elasticity, and the label 5 again returns to its original dimensions due to its elasticity and is thus tightened around the can 6.

[0029] This condition is represented in figure 4.

[0030] As an alternative for the ridges 7 sometimes a recessed plane in the can 6 is used, in which the label 5 is positioned.

[0031] The disadvantages of such a method were already discussed extensively in the introduction.

[0032] Hereafter, with reference to figures 5 to 9, a method according to the invention will be described for manufacturing self-adhesive plastic labels 5, and attaching such labels 5 such that they are enfolding a can 6, which method offers numerous advantages in relation to the known method described above, as also already cited in the introduction.

[0033] A first step of a method according to the invention is represented in figure 5 and comprises imprinting a plastic foil in the form of a elongated strip 8 using a digital printing technique.

[0034] To this end, for example, a digital printer 9 controlled by a controlling system 10 may be used.

[0035] Moreover, according to the invention, it is preferred that a contactless printing technique is used for printing the plastic foil 8, for example by means of an inkjet-printer 9.

[0036] An advantage of using a digital printing technique is that the images to be printed on the labels 5 are able to be prepared and adjusted using software of the controlling system 10, as a result of which a lot of time can be saved and the costs can be lowered strongly.

[0037] Moreover, it is a very efficient method which also allows to realise small and intermediate series of labels 5 in an economically viable way.

[0038] As is represented in figure 5, using a method according to the invention, prints 3 corresponding to a label 5 are printed successively along the lengthwise direction L' of the strip 8.

[0039] Hereby, the side edges 4 of consecutive label prints 3 on the strip 8 are situated at right angles, along the direction P crosswise to the lengthwise direction L' of the strip.

[0040] As represented schematically in figure 5, using a method according to the invention, an adhesive 11 is applied on the plastic foil 8, in order to obtain self-adhesive labels 5.

[0041] Preferably, this adhesive 11 is applied to parts of the plastic foil 8 that are not imprinted or not be imprinted.

[0042] Applying the adhesive 11 may be carried out before printing the foil 8, but also after the foil 8 has been printed.

[0043] Preferably, according to the invention, said adhesive 11 is a detachable thermoplastic adhesive substance 11.

[0044] Preferably, the adhesive 11 is also such that a good adherence is obtained between the plastic foil 8 and a can 6, while the plastic foil 8 may be removed easily from the can 6 without leaving traces of adhesive 11 on the can 6.

[0045] Of course, these features depend on the material that is used to produce the foil 8, as well as the can 6.

[0046] Furthermore, according to the invention, it is not required to provide the entire parts of the foil 8 that are not imprinted or not be imprinted with adhesive 11.

[0047] After all, it may suffice to apply such adhesive patterns 11 that allow adherence of the foil 8 to the can 6, as well as removal of the foil 8 from the can 6 without leaving traces.

[0048] Preferably, a method according to the invention also comprises an additional step, comprising, after printing, applying a layer on at least one part of the prints 3, in order to avoid adherence of the adhesive 11 to the prints 3.

[0049] For example, for such a layer a silicone or wax layer 12 may be used.

[0050] This step is also represented schematically in figure 5.

[0051] The intention of attaching such layer 12 is that it is possible to roll the long strip 8, after applying the adhesive 11, into a roll 13, as represented in figure 6.

[0052] Hereby, said layer 12 avoids that the adjacent parts forming the roll 13 will start to adhere to each other.

[0053] The actual attachment of a label 5 to a can 6, according to a method according to the invention, is illustrated with reference to the figures 7 to 9.

[0054] A first step, represented schematically in the top view of figure 7, comprises to unroll a free end of the plastic foil 8 of the roll 13 to enfold the can 6 with at least a length corresponding to the circumference of the can 6.

[0055] Consequently the length E of a label 5 is therefore larger than the circumference of the can 6.

[0056] As is represented also in figure 7, the intention of the invention in fact is that after enfolding the can 6 using this part of the foil 8 with length E an aforementioned side edge 4 of a label print 3 is overlapped by another part 14 of the plastic foil.

[0057] Of course, during enfolding the can 6 care is taken that the side of the foil 8 provided with adhesive 11 is directed towards the can 6.

[0058] According to the invention it is the intention that during enfolding the can 6 said free end of the plastic foil 8 is glued to this can 6 by means of the adhesive 11.

[0059] Furthermore, according to the invention, the side edge 4 and the overlapping part 14 of the plastic foil 8 are preferably interconnected in one movement during enfolding by means of this adhesive 11.

[0060] Finally, a label 5 is cut off from the roll 13 using cutting means 15, for example in the form of a knife or a laser, or the like, whereby a part of the plastic foil 8 is cut off corresponding to the length E of a label 5.

[0061] As is represented clearly in figure 8, according to the invention the label 5 is cut off at a certain distance F from the overlapping part 14 and the side edge 4 of the plastic foil 8, whereby initially the label 5 is provided with a flap 16.

[0062] Besides, it is preferred that this flap 16 at its free edge 17 is provided with an adhesive-free strip or an adhesive-free part, such that the flap 16 can be teared-off easily from the rest of the label 5 or the label 5 can be teared-off easily from the can 6.

[0063] According a preferred method according to the invention this flap 16 may be provided on one side or on both sides with a print, as represented schematically in figure 9.

[0064] For example, this could be useful for providing a text, like instructions, and the like.

[0065] Another interesting step of a method according to the invention is the application of perforations through the plastic foil 8 forming a tear-out strip 18 in a label 5.

[0066] Such a tear-out strip 18 is also represented in figure 9 and may for example be used for the traceability of the product in the tins 6 or of empty tins 6.

[0067] As an alternative, a tear-away strip may be used that, for example, can be formed as a flap 16 and whereby a perforation line 19 is provided at the side edge of the flap 16 in order to tear away the flap 16 easily.

[0068] Such a perforation line 19 is represented in figure 8 by way of example.

[0069] Another preferred aspect of the invention is that the plastic foil 8 is stretchable in order to be able to follow expansion and shrinkage of a can 6 onto which the plastic foil 8 is adhered when temperature changes.

[0070] The present invention is by no means limited to the exemplary, and with reference to the figures illustrated, embodiment of a method according to the invention, however, a method according to the invention may be accomplished in various forms and dimensions while still remaining within the scope of the appended claims.

Claims

1. Method for manufacturing plastic labels (5) with a self-adhesive pattern, and attaching such labels (5) such that they are enfolding a can (6), whereby it comprises the step of overlapping a side edge (4) of the label (5) by another part (14) of the label (5) after attaching said label (5) such that it is enfolding a can (6), and that it comprises at least the following steps:

   - Printing a plastic foil (8) in the form of an elongated strip (8) using a digital printing technique, whereby successively along the lengthwise direction (L') of the strip (8) prints (3) are being printed corresponding to a label (5), whereby the prints (3) follow each other in the lengthwise direction (L') of the strip (8), and whereby the side edges (4) of consecutive label prints (3) on the strip (8) are situated at right angles, along the direction (P) crosswise to the lengthwise direction (L') of the strip (8);
   - Applying adhesive (11) on the plastic foil (8), either on the whole surface of the plastic foil (8), or on only a part of it, forming a self-adhesive plastic foil (8);
   - Enfolding a can (6) by means of a free end of the plastic foil (8) with a length (E) at least corresponding to the circumference of the can (6), or the like, whereby, after enfolding, an aforementioned side edge (4) of a label print (3) is overlapped by another part (14) of the plastic foil (8) and whereby the part of the foil (14) that is enfolding the can (6) adheres to the can (6) by means of said adhesive (11); and,
   - Cutting off the concerning part of the plastic foil (8) corresponding to the length (E) of a label (5); **characterized in that** the label (5) is cut off at a certain distance (F) from the overlapping part (14) and the side edge (4) of the plastic foil (8), providing a flap (16) at the label (5).

2. Method according to claim 1, **characterised in that** a contactless printing technique is used for printing

the plastic foil (8).

3. Method according to any of the preceding claims, **characterised in that** perforations are provided through the plastic foil (8) forming a tear-out strip (18) in a label (5) or a perforation line (19) is provided at a side edge of a flap (16) forming a tear-away strip.

4. Method according to any of the preceding claims, **characterised in that** said adhesive (11) is a detachable thermoplastic adhesive substance (11).

5. Method according to any of the preceding claims, **characterised in that** it comprises the step of using such an adhesive (11) that is able to provide a good adherence between the plastic foil (8) and the can (6), and also to make it possible to tear off the plastic foil (8) from the can (6) easily without leaving traces of adhesive (11) on the can (6).

6. Method according to claims 4 or 5, **characterised in that** it additionally comprises the step of, applying a layer (12) to at least one part of the prints (3), after printing, in order to avoid adherence of the adhesive (11) to the prints (3).

7. Method according to claim 6, **characterised in that** said layer (12) is a silicone (12) or wax layer.

8. Method according to any one of claims 4 to 7, **characterised in that** after enfolding the can (6) with the foil (8), the side edge (4) and the overlapping part (14) are at least partially interconnected.

9. Method according to claim 8, **characterised in that** the side edge (4) and the overlapping part (14) of the plastic foil (8) are at least partially interconnected by means of said adhesive (11).

10. Method according to any of the preceding claims, **characterised in that** the flap (16) at its free edge (17) is provided with an adhesive-free strip (11) or adhesive-free part.

11. Method according to any of the preceding claims, **characterised in that** the flap (16) on one of the sides or on both sides is provided with a print (3).

12. Method according to any of the preceding claims, **characterised in that** the plastic foil (8) is stretchable in order to be able to follow expansions and shrinkage of a can (6) onto which the plastic foil (8) is adhered when temperature changes.

Patentansprüche

1. Verfahren zur Herstellung von Kunststoffetiketten (5) mit einem selbstklebenden Muster und derart Anbringen solcher Etiketten (5), dass sie eine Dose (6) einhüllen, wobei es den Schritt des Überlappens einer Seitenkante (4) des Etiketts (5) durch einen anderen Teil (14) des Etiketts (5) nach dem Anbringen besagten Etiketts (5), sodass es eine Dose (6) einhüllt, umfasst, und wobei es mindestens die folgenden Schritte umfasst:

   - Bedrucken einer Kunststofffolie (8) in Form eines länglichen Streifens (8) unter Anwendung einer digitalen Drucktechnik, wobei in der Längsrichtung (L') des Streifens (8) aufeinanderfolgend Aufdrucke (3) entsprechend einem Etikett (5) gedruckt werden, wobei die Aufdrucke (3) einander in der Längsrichtung (L') des Streifens (8) folgen und wobei sich die Seitenränder (4) aufeinanderfolgender Etikettenäufdrucke (3) auf dem Streifen (8) rechtwinklig zu der Richtung (P) quer zur Längsrichtung (L') des Streifens (8) befinden;
   - Anbringen von Klebstoff (11) auf der Kunststofffolie (8), entweder auf der gesamten Oberfläche der Kunststofffolie (8) oder nur auf einem Teil davon, wodurch eine selbstklebende Kunststofffolie (8) gebildet wird;
   - Einhüllen einer Dose (6) mittels' eines freien Endes der Kunststofffolie (8) mit mindestens einer dem Umfang der Dose (6) oder dergleichen entsprechenden Länge (E), wobei nach dem Einhüllen eine vorgenannte Seitenkante (4) eines Etikettenaufdrucks (3) durch einen anderen Teil (14) der Kunststofffolie (8) überlappt wird, und wobei derjenige Teil der Folie (14), der die Dose (6) einhüllt, mittels besagten Klebstoffs (11) an der Dose (6) haftet; und
   - Abschneiden des betreffenden Teils der Kunststofffolie (8) entsprechend der Länge (E) eines Etiketts (5); **dadurch gekennzeichnet, dass** das Etikett (5) in einem bestimmten Abstand (F) von dem überlappenden Teil (14) und der Seitenkante (4) der Kunststofffolie (8) abgeschnitten wird, wodurch eine Lasche (16) an dem Etikett (5) vorgesehen wird.

2. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** zum Bedrucken der Kunststofffolie (8) eine kontaktlose Drucktechnik angewendet wird.

3. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** Perforationen durch die Kunststofffolie (8) angebracht werden, die einen Ausrissstreifen (18) in einem Etikett (5) bilden, oder eine Perforationslinie (19) an einer Seitenkante einer Lasche (16) angebracht wird, die einen Abrissstreifen bildet.

4. Verfahren nach einem der vorhergehenden Ansprü-

che, **dadurch gekennzeichnet, dass** besagter Klebstoff (11) eine abnehmbare thermoplastische Haftsubstanz (11) ist.

5. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** es den Schritt der Anwendung eines solchen Klebstoffs (11) umfasst, der fähig ist, eine gute Haftung zwischen der Kunststofffolie (8) und der Dose (6) bereitzustellen und es auch zu ermöglichen, die Kunststofffolie (8) leicht von der Dose (6) abzureißen, ohne Spuren von Klebstoff (11) auf der Dose (6) zu hinterlassen.

6. Verfahren nach Ansprüchen 4 oder 5, **dadurch gekennzeichnet, dass** es zusätzlich den Schritt umfasst des nach dem Bedrucken Anbringens einer Schicht (12) auf mindestens einem Teil der Aufdrucke (3), um ein Haften des Klebstoffs (11) auf den Aufdrucken (3) zu vermeiden.

7. Verfahren nach Anspruch 6, **dadurch gekennzeichnet, dass** besagte Schicht (12) eine Silikon (12)- oder Wachsschicht ist.

8. Verfahren nach einem der Ansprüche 4 bis 7, **dadurch gekennzeichnet, dass** nach dem Einhüllen der Dose (6) mit der Folie (8) die Seitenkante (4) und der überlappende Teil (14) mindestens teilweise miteinander verbunden werden.

9. Verfahren nach Anspruch 8, **dadurch gekennzeichnet, dass** die Seitenkante (4) und der überlappende Teil (14) der Kunststofffolie (8) mittels besagten Klebstoffs (11) mindestens teilweise miteinander verbunden werden.

10. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Lasche (16) an ihrem freien Rand (17) mit einem klebstofffreien Streifen (11) oder klebstofffreien Teil versehen ist.

11. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Lasche (16) auf einer der Seiten oder auf beiden Seiten mit einem Aufdruck (3) versehen wird.

12. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Kunststofffolie (8) dehnbar ist, um der Ausdehnung und Schrumpfung einer Dose (6), auf die die Kunststofffolie (8) geklebt ist, bei Temperaturänderungen folgen zu können.

Revendications

1. Procédé pour fabriquer des étiquettes en matière plastique (5) possédant un motif auto-adhésif, et pour fixer lesdites étiquettes (5) de manière telle qu'elles enveloppent une boîte (6), le procédé comprenant l'étape consistant à faire en sorte qu'un bord latéral (4) de l'étiquette (5) soit chevauché par une autre partie (14) de l'étiquette (5) après la fixation de ladite étiquette (5) de manière telle qu'elle enveloppe une boîte (6), et qui comprend au moins les étapes suivantes consistant à :

- imprimer un film de plastique (8) sous la forme d'une bande allongée (8) en utilisant une technique d'impression numérique, de telle sorte que l'on applique successivement dans la direction longitudinale (L') de la bande (8) des imprimés (3) de manière correspondante à une étiquette (5), les imprimés (3) se suivant les uns les autres dans la direction longitudinale (L') de la bande (8), et les bords latéraux (4) d'imprimés d'étiquettes successifs (3) sur la bande (8) étant disposés à angle droit dans la direction (P) transversale par rapport à la direction longitudinale (L') de la bande (8) ;
- appliquer un adhésif (11) sur le film de plastique (8), que ce soit sur toute la surface du film de plastique (8) ou sur seulement une partie de celle-ci, pour obtenir un film de plastique autoadhésif (8) ;
- envelopper une boîte (6) au moyen d'une extrémité libre du film de plastique (8) sur une longueur (E) qui correspond au moins à la circonférence de la boîte (6) ou analogue, procédé par lequel, après l'enveloppement, on fait en sorte qu'un bord latéral susmentionné (4) d'un imprimé d'étiquette (3) est chevauché par une autre partie (14) du film de plastique (8), et par lequel la partie du film (14) qui enveloppe la boîte (6) adhère à la boîte (6) au moyen dudit adhésif (11) ; et
- découper la partie concernée du film de plastique (8) qui correspond à la longueur (E) d'une étiquette (5) ;

caractérisé en ce qu'on découpe l'étiquette (5) à une certaine distance (F) de la partie chevauchante (14) et du bord latéral (4) du film de plastique (8) pour obtenir un rabat (16) à l'étiquette (5).

2. Procédé selon la revendication 1, **caractérisé en ce qu'**on utilise une technique d'impression sans contact pour l'impression du film de plastique (8).

3. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'**on procure des perforations à travers le film de plastique (8) pour obtenir une bande à déchirer (18) dans une étiquette (5) ou on procure une ligne de perforation (19) à un bord latéral d'un rabat (16) pour obtenir une bande

à déchirer.

4. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce que** ledit adhésif (11) est une substance adhésive thermoplastique détachable (11).

5. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'**il comprend l'étape consistant à utiliser un adhésif (11) qui est capable de procurer une bonne adhérence entre le film de plastique (8) et la boîte (6) et qui permet également de déchirer le film de plastique (8) aisément par rapport à la boîte (6) sans laisser de traces d'adhésif (11) sur la boîte (6).

6. Procédé selon la revendication 4 ou 5, **caractérisé en ce qu'**il comprend en outre l'étape consistant à appliquer une couche (12) sur au moins une partie des imprimés (3), après l'impression, afin d'éviter l'adhérence de l'adhésif (11) aux imprimés (3).

7. Procédé selon la revendication 6, **caractérisé en ce que** ladite couche (12) est une couche de silicone (12) ou de cire.

8. Procédé selon l'une quelconque des revendications 4 à 7, **caractérisé en ce que**, après l'enveloppement de la boîte (6) avec le film (8), le bord latéral (4) et la partie chevauchante (14) sont reliés l'un à l'autre au moins en partie.

9. Procédé selon la revendication 8, **caractérisé en ce que** le bord latéral (4) et la partie chevauchante (14) du film de plastique (8) sont reliés l'un à l'autre au moins en partie au moyen dudit adhésif (11).

10. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le rabat (16) à son bord libre (17) est muni d'une bande (11) exempte d'adhésif ou d'une partie exempte d'adhésif.

11. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le rabat (16), sur un de ses côtés ou sur ses deux côtés, est muni d'un imprimé (3).

12. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le film de plastique (8) est extensible pour pouvoir suivre des dilatations et des retraits d'une boîte (6) à laquelle adhère le film de plastique (8) lors de changements de température.

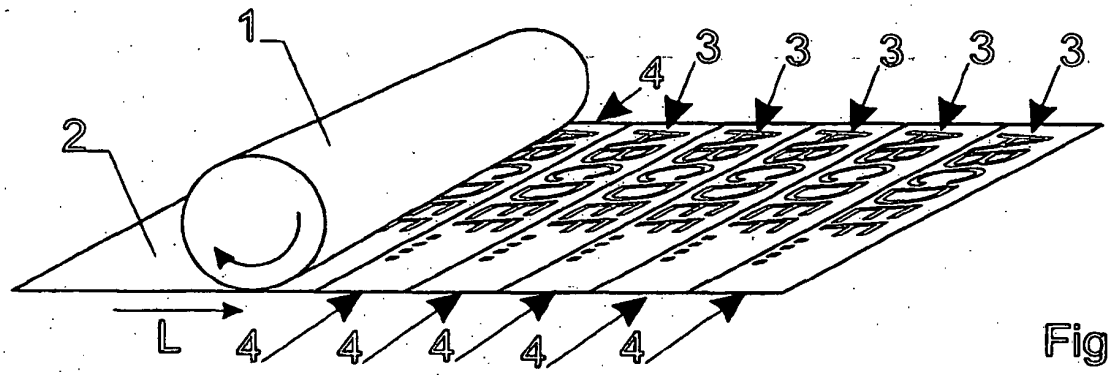

Fig. 1

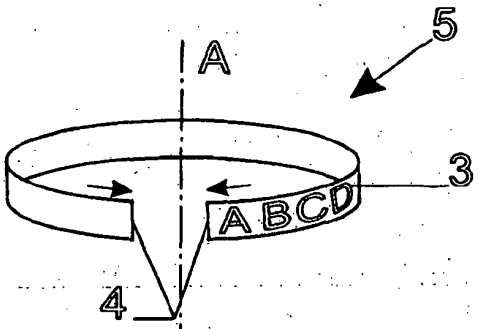

Fig. 2

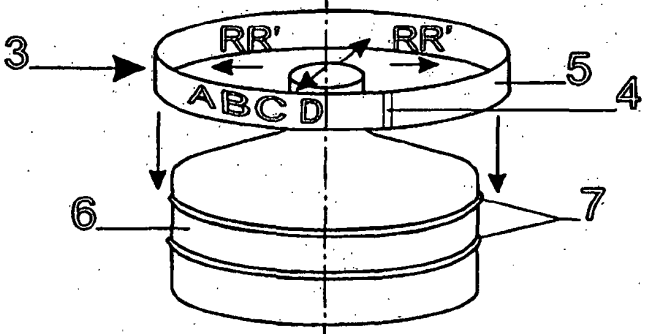

Fig. 3

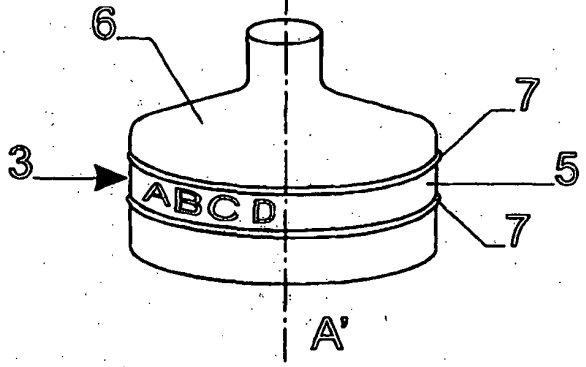

Fig. 4

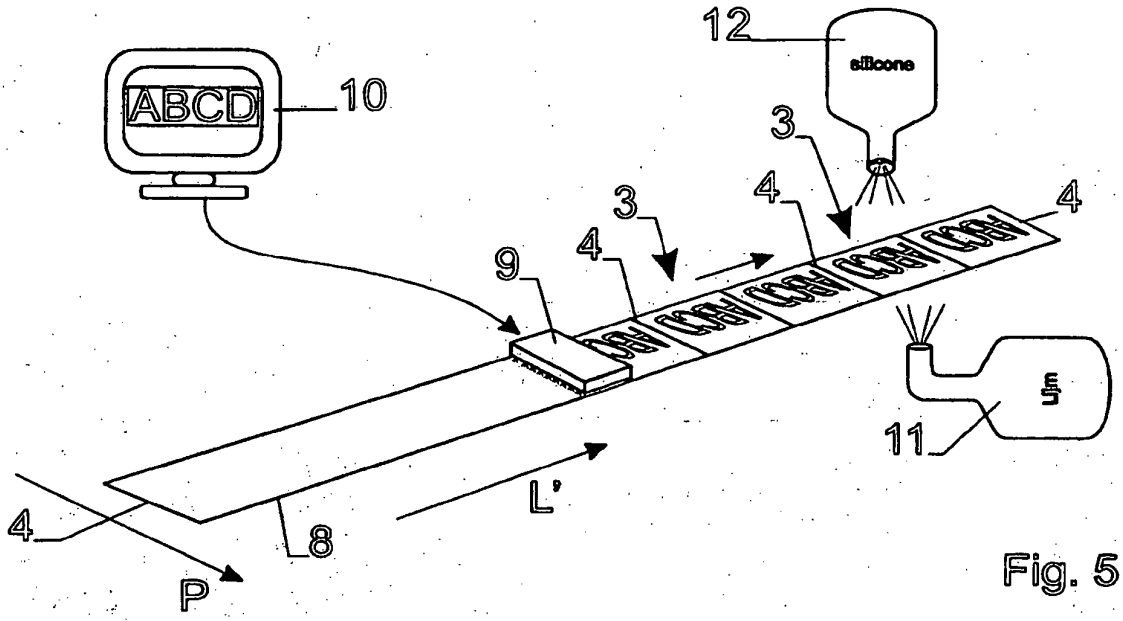

Fig. 5

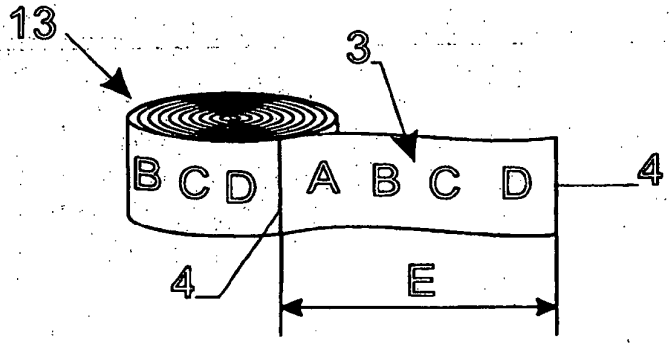

Fig. 6

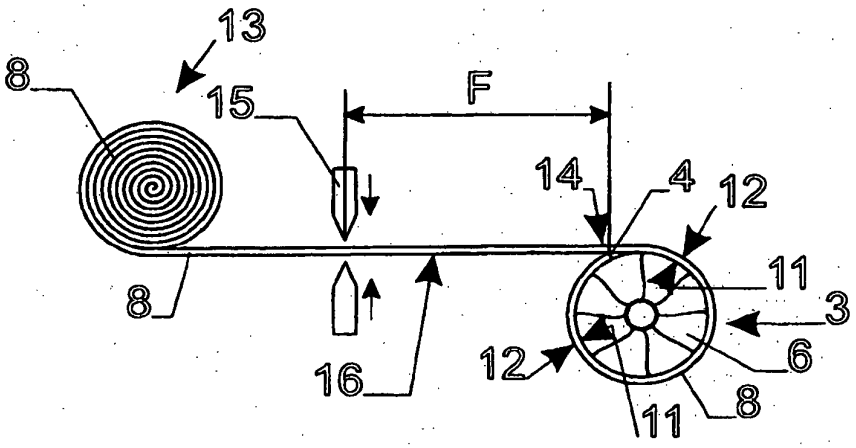

Fig. 7

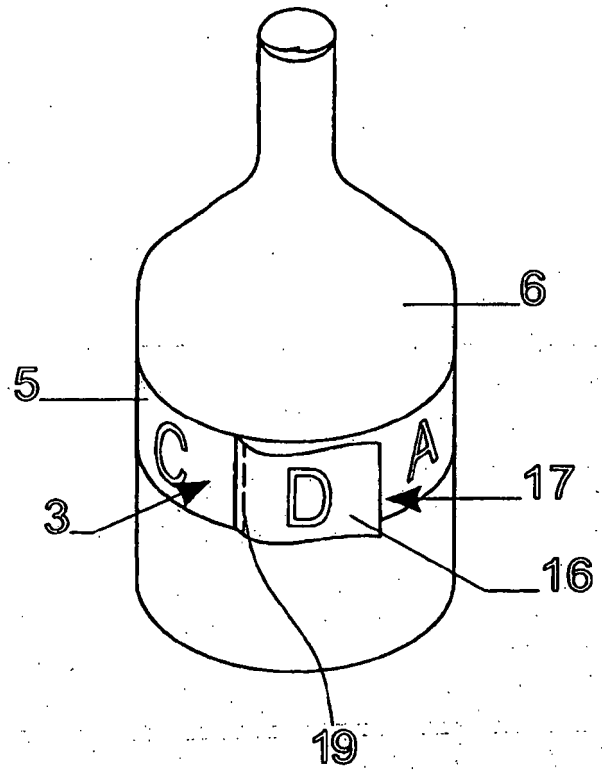

Fig. 8

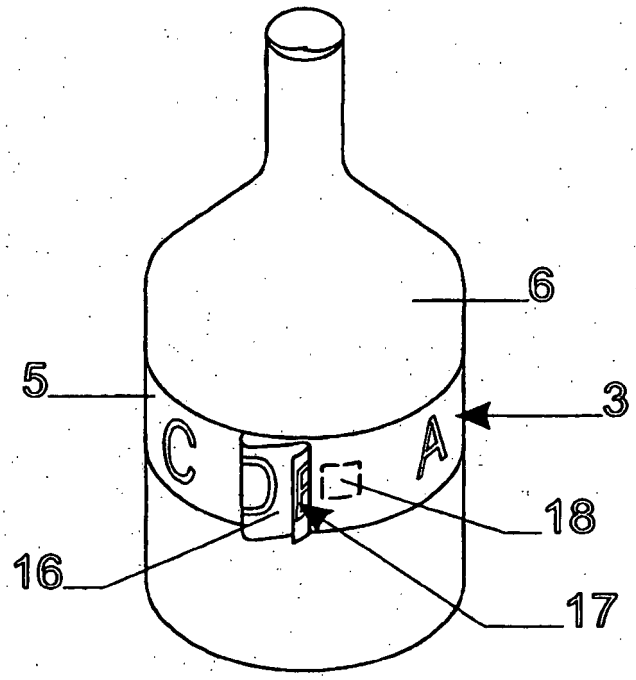

Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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