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54 **Label with a detachable part.**

57 The label according to the present invention comprises two parts, of which one part can be removed from the packing to which the label has been attached. The removed part can be stuck onto a container or onto a card to indicate that the contents of the packing have been used. Such a label is often used in the field of medicine, wherein the removed part of the label is stuck onto a card to indicate that a certain medicine has been used by a patient. To facilitate the removal of said part the adhesive force of the adhesive layer is reduced in comparison with the adhesive force of the second layer. Further a small area of said removable part does not comprise an adhesive layer, so that the removable part can easily be peeled off. Both parts of the label are separated by a perforation. To avoid peeling off the wrong label part, this label part contains two diagonally extending cuts, so that it is virtually impossible to remove said label part as a whole. A strip of said labels is produced by separation of the carrier paper from the label paper and the adhesive layer, and by application of a thin layer of silicone to the adhesive layer, and by rejoining the carrier paper.

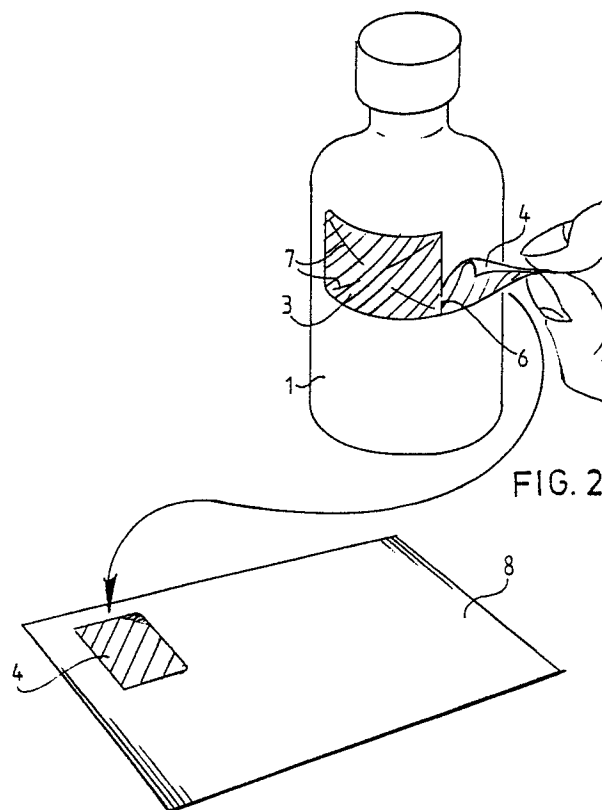


FIG. 2

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LABEL WITH A DETACHABLE PART

The present invention relates to a label, comprising two detachable parts and comprising an adhesive layer.

Such a label is known from the European patent application no. 0 140 420.

According to this label, known from said specification both parts of the label comprise an adhesive layer with a strong adhesive force.

In many hospitals and nursing homes it is common use to register the application of a medicine to a patient by sticking a part of the packing of the medicine onto a so called patient's card. When the medicine has been packed in a bottle, this often takes place by removing one part of the label from the bottle and by sticking this onto the patient's card.

To indicate what the contents of a syringe is the part of the label torn from the bottle is stuck to a syringe filled with the injection fluid to be applied. After injection the part of the label torn off is removed from the syringe and stuck onto the patient's card. Often additives are added to an infusion by means of a syringe. In this situation the syringe is also marked with the part of the label torn from the additive bottle. Later this part of the label is removed from the syringe and applied to the infusion bottle and after the emptying of the infusion bottle it may be applied to the patient's card.

When both parts of the label comprise an adhesive layer, as it the case with the known label, it is inconvenient to remove the part of the label from the bottle. Often this label part will tear so that a damaged part of the label is applied to the patient's card. When the label part has to be removed from a syringe or from an infusion bottle this problem presents itself as well.

Again according to said specification, the label part to be removed is applied with a covering sheet, so that said label part to be removed does not adhere to the bottle and can be removed easily. By removing the covering sheet later, the label part can be applied to the patient's card undamaged.

Nevertheless these labels comprise some disadvantages; these labels can only with the greatest difficulty be applied mechanically to bottles, as the part comprising a covering sheet does not adhere to the bottle and can disturb the proper working of the labelling machine.

When the label part has been stuck to an injection needle and has to be removed again the first mentioned problem arises again.

Also the parts comprising a covering sheet keep extending from the bottle like a flag during

the further processing of the bottles, so that this further processing, in particular the packing of said bottles into boxes is hampered.

The present invention tries to solve these problems. Accordingly the label is applied with such an adhesive layer, that the adhesive force of the adhesive layer applied to one label part is smaller than the adhesive force of the adhesive layer of the other label part. Accordingly such labels can be processed easily in a labelling machine without disturbing the proper working of said machine. Further the label part to be removed later keeps being adhered to the bottle, so that the further processing of the bottles is not hampered and the bottles can easily be packed into boxes.

Subsequently the present invention will be illustrated with the help of the embodiment shown in the annexed drawings, the drawings showing:

- Fig. 1: a medicine bottle, onto which a label according to the present invention has been applied;

- Fig. 2: the medicine bottle of fig. 1, of which a label part is being removed and being adhered to a patient's card;

- Fig. 3: a strip of basic material for the preparation of the labels according to the present invention;

- Fig. 4: separation into two layers of the strip of basic material depicted in fig. 3;

- Fig. 5: the execution of the processing for the local reduction of the adhering power of the labels to be prepared from the basic material;

- Fig. 6: the repeated execution of the processing mentioned above on a small part of said label;

- Fig. 7: the joining of the two layers of the strip of basic material;

- Fig. 8: the printing of the strip of material thus obtained;

- Fig. 9: the punching of the strip of material thus obtained; and

- Fig. 10: the removal of the remaining paper.

The medicine bottle 1 shown in fig. 1 has been supplied with a label 2 according to the present invention. The label 2 comprises a first label part 3 which has been adhered to the bottle 1 by means of an adhesive layer not depicted in fig. 1, and a second label part 4 also adhered to the bottle 1 by means of an adhesive layer, but wherein the latter adhesive layer has a smaller adhesive force. An area 5, not comprising a working adhesive layer has been located in the corner of the second label part 4. Both label parts 3, 4 are separated by a perforation line 6. The first label part 3 comprises

substantially diagonally extending cuts 7. Both label parts 3, 4 have been printed with the information relative to the medicine, such as the name of the medicine, the name of the producer, etc. Further the charge number and date of expiration can be applied to one or both of said parts by means of a reliefstamp, foil, ink or printing.

When the contents of the medicine bottle 1 are being applied to a patient, this is being registered by removing the second label part 4 from the medicine bottle 1 and by adhering this onto the patient's card. When the medicine is being applied by means of a syringe, the label part 4 is applied to the filled syringe, and in use with an infusion bottle the label part 4 is also applied to the infusion bottle, and subsequently adhered to the patient's card 8. The second label part 4 can easily be removed from the bottle 1, as the adhesive force of the adhesive layer of the second label part 4 is smaller. Moreover a "start" can easily be made as the area 5 in the corner of the label part 4 does not comprise a working adhesive layer. By means of the perforation 6 the second label part 4 can easily be detached from the first label part 3. This is improved by the fact that the adhesive power of the first label part 3 is substantially larger than that of the second label part. Nevertheless this smaller adhesive power of the second label part 4 is sufficient to adhere said label part 4 permanently onto the syringe, the infusion bottle and perhaps later onto the patient's card 8. The limited adhesive force and the area 5 thereof contribute considerably to the easy removal from the infusion bottle and the syringe.

Fraud by removal of the strongly adhesive first label part is cumbersome and is further hampered by tearing lines 7, so that it is practically impossible to remove the first label part as a whole and to adhere it to another bottle.

The preparation of the labels according to the present invention starts from a strip of basic material 14, consisting of a layer of carrier paper 9, onto which a layer of silicone 10, an adhesive layer 11 and a layer of label paper 12 are applied. The basic material 14 is supplied in the shape of rolls 13, as is shown in fig. 3, and is subsequently moved under the processing stations.

Initially the layer of basic material 14 is reversed and is, as is shown in fig. 4, separated into two layers, the 25 lower one of which consists of a layer of label paper 12, with the adhesive layer 11 being present thereon, and the second one of which consists of a layer 9 of carrier paper and the layer 10 of silicone applied thereon. This separation process is being executed by means of two rollers 15. This causes the adhesive layer 11 to be exposed, so that this can be subjected to the processing shown in fig. 5.

According to the processing shown in fig. 5 only those parts 16 of the adhesive label 1 are being processed, which will later be at the location of the second label part. A device 17 reducing the adhesive force causes a reduction of the adhesive force of the adhesive layer on the parts 16 by a processing with silicone, e.g. by local application of a thin layer of silicone. In a further processing station the processed parts 16 of the adhesive layer, onto which a thin layer of silicones can be present, is being dried by means of a UV-lamp 18. Thus an adhesive layer 11 is obtained, of which the adhesive force of the parts 16 has been reduced.

To obtain a preferred embodiment of the label 2 according to the present invention the same application is repeated but then only on the areas 19 of the adhesive layer 11. Consequently the adhesive force of the adhesive layer on the areas 19, being a part of the parts 16, has almost completely disappeared. This eases the tearing from the bottle of the label part 4 to be removed. Also this processing is being executed by a processing device 20, which for instance applies a layer of silicone on the part 19. Again in a further processing station the layer of silicone is being dried by a UV-lamp 21.

Subsequently the layer of carrier paper 9 with the silicon layer applied thereto and the layer of label paper 12 with the adhesive layer 11, in the mean time being processed and applied thereto, are joined by a device comprising two rollers 22, as is shown in fig. 7.

Then the layer of basic material thus processed is being reversed again, so that the layer 12 of label paper is in the upper position and is being printed, as has been depicted in fig. 8. It is then of course of the utmost importance, that the location of the processed parts 16, 19 of the adhesive layer 11 coincide with the location, onto which the relevant parts of the label are being printed. The device 23 for printing has been depicted - schematically in fig. 8.

Subsequently the printed strip of basic material 14 is being punched to make the perforation 6, the cuts 7 and the circumference of the label 2. The cuts thus developed extend into the layer of paper 12 only. A device for the execution of this punching has schematically been depicted in fig. 9. Finally, the strip 25 of remaining paper is removed, as is shown in fig. 10.

The final product thus obtained consists of a strip, comprising a strip of carrier paper 9, a layer of silicone 10, onto which labels 2 are attached by means of the layer of adhesive material 11. The adhesive force of the second label part is considerably decreased and the adhesive force of the area 5 of the second label part has almost completely disappeared.

Such a strip of material can easily be applied on the bottles or containers to be labelled by means of an automatic labelling machine. This will not cause any trouble as all parts of the label comprise sufficient adhesive force to adhere to the bottle, so that the bottle does not comprise flaps extending therefrom, and which may hamper the further treatment of the bottles.

As the separating line between the two label parts stretches perpendicularly on the longitudinal direction of the strip of basic material it is possible to execute the application of the labels on the bottles by means of existing labelling machines, of which the direction of supply of the labels corresponds with the direction of conveyance of the bottles, onto which the labels have to be applied.

The above described embodiment relates to the labelling of bottles and it speaks for itself that the invention is also applicable for the labelling of e.g. containers.

The application of the present invention is not limited to the field of pharmaceuticals either; its scope stretches to products, the use of which is desirable to be registered, as e.g. additives of motoroil, so that the client can establish by means of the application of the label part whether the additive has been added.

The label according to the present invention can also be applied to packings of consumer products so that the part of the label to be removed can be used as a stamp for a free trading stamp action.

Claims

1. Label, comprising two detachable parts and comprising an adhesive layer, characterized in that the adhesive force of the adhesive layer applied to one label part is smaller than the adhesive force of the adhesive layer applied to the other label part.

2. Label according to claim 1, characterized in that an area of the label part with a smaller adhesive force comprises an area adjacent to its circumference which does not comprise a working adhesive layer.

3. Label according to claim 2, characterized in that the area without adhesive layer has been located in at least one corner.

4. Label according to claim 2, characterized in that the area without an adhesive layer has been provided at the side of the label part, opposite the separation line between the two label parts.

5. Label according to one of the claims 1-4, characterized in that the separation line between the two label parts comprises a perforation.

6. Label according to one of the preceding claims, characterized in that label parts with a substantial adhesive force comprises at least one cut extending over a substantial part of the label part surface.

7. Label according to claim 6, characterized in that the cuts extend substantially diagonally over the label part surface.

8. Label according to one of the preceding claims, characterized in that the label has been applied such on the striplike carrier such, that the separation line between the two label parts extends perpendicularly to the longitudinal direction of the carrier.

9. Method for the preparation of labels according to claim 1, according to which the strip, comprising a carrier, a layer of silicone, an adhesive layer and label paper is being supplied, and consequently being printed and punched, after which the remaining label paper is being removed, characterized in that for the adhesive force reducing process the carrier and the silicone layer are being separated from the adhesive layer and the layer of label paper before the punching takes place, after which the layers are joined.

10. Method according to claim 9 for the preparation according to one of the claims 2-7, characterized in that one piece of the strip is being subjected twice to the processing.

11. Method according to claim 9 or 10, characterized in that the process reducing the adhesive force is being executed by the application of silicone.

12. Method according to claim 1, characterized in that the adhesive layer is being dried by means of UV-lamps after processing.

13. Label according to one of the claims 1-8, characterized in that the label is fit for the application on a container for medicine.

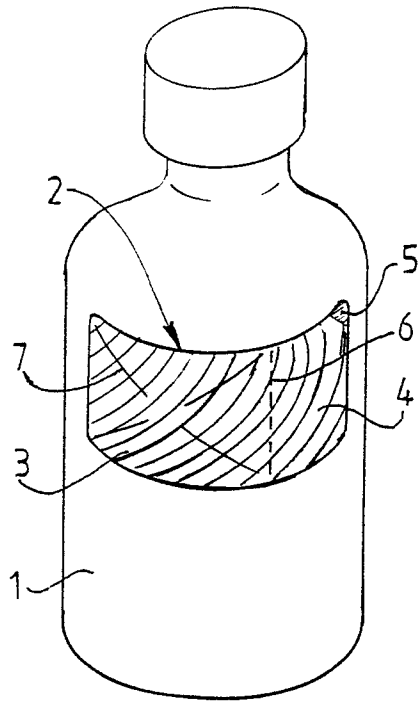


FIG. 1

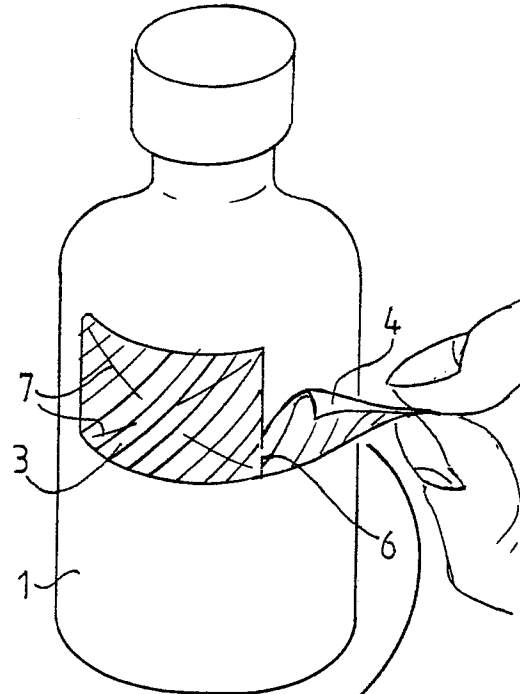
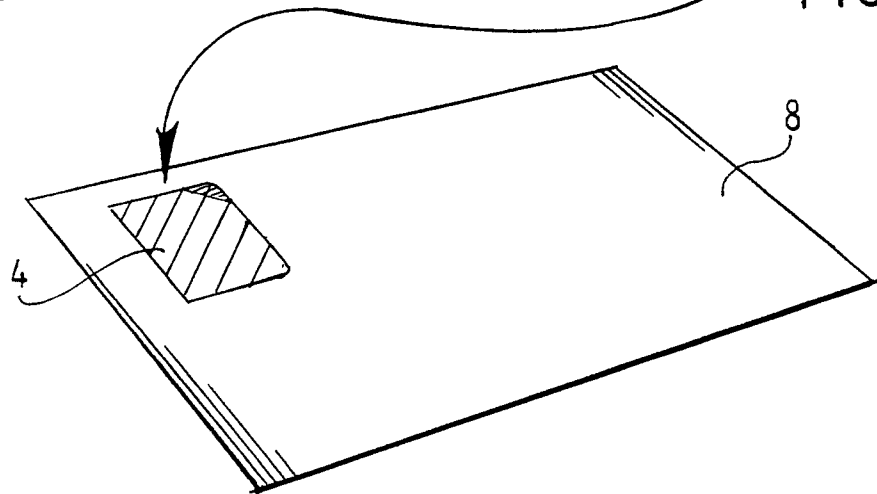
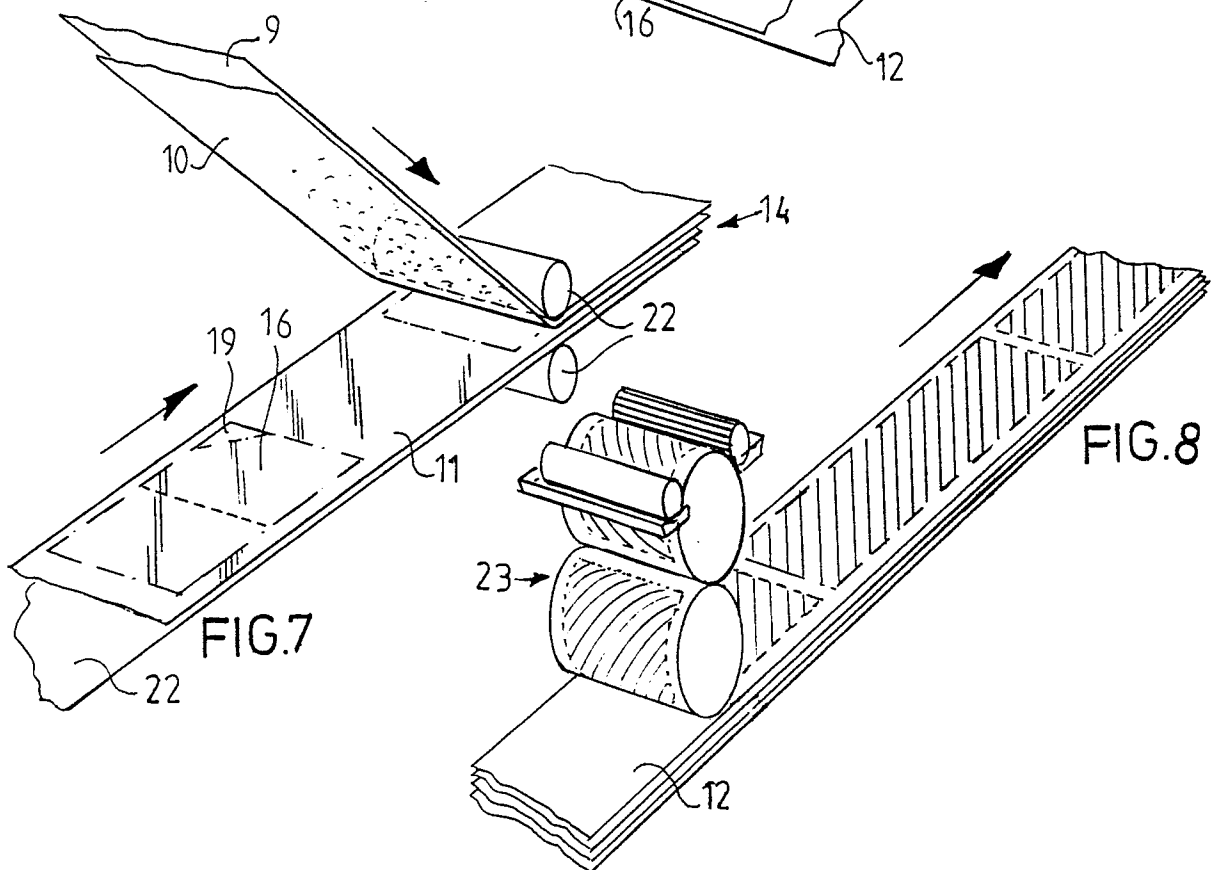
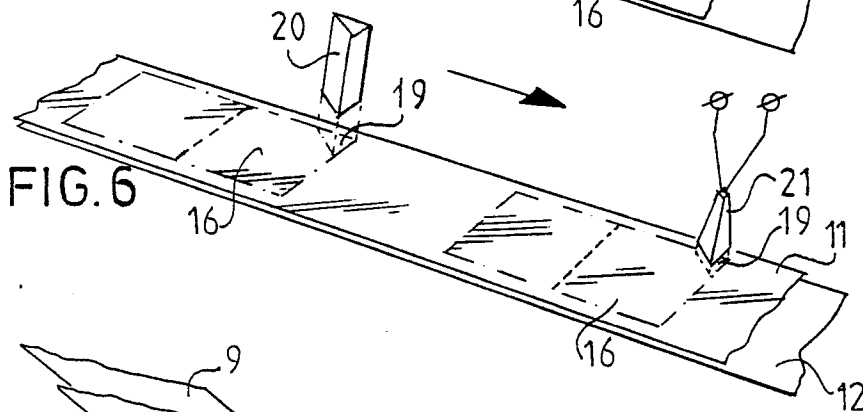
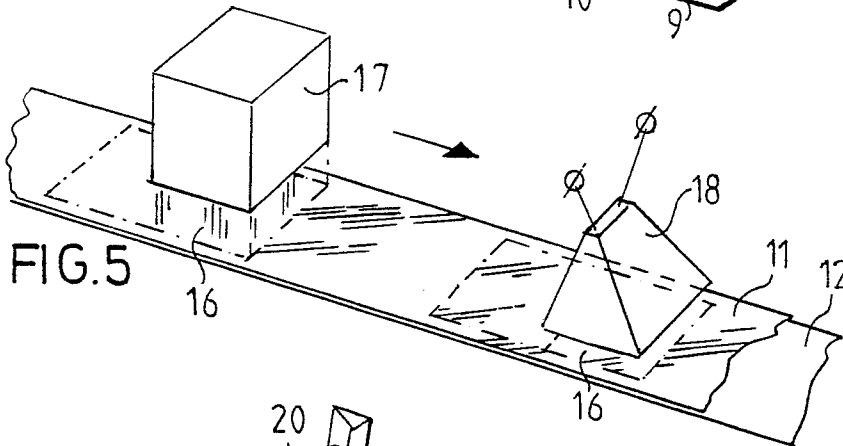
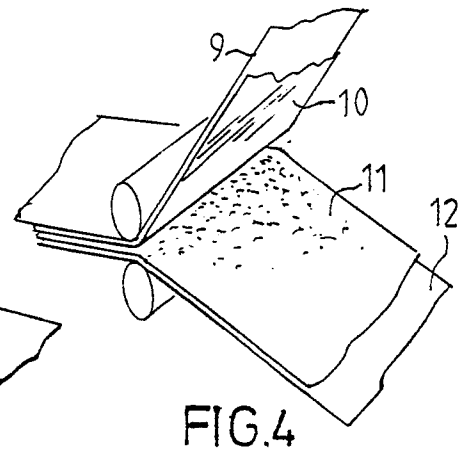
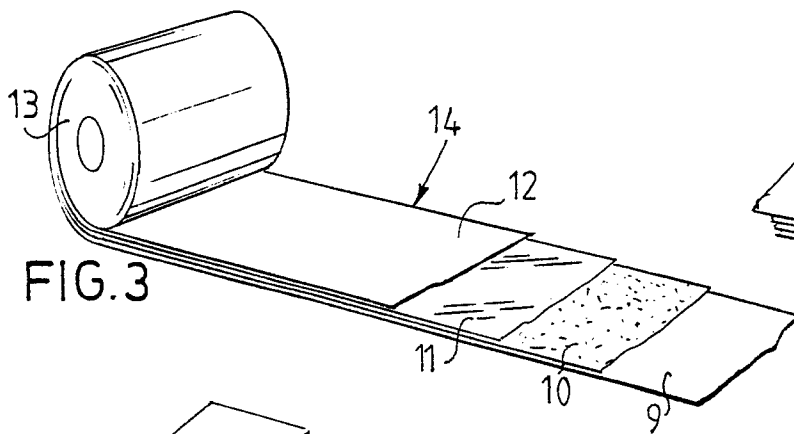


FIG. 2





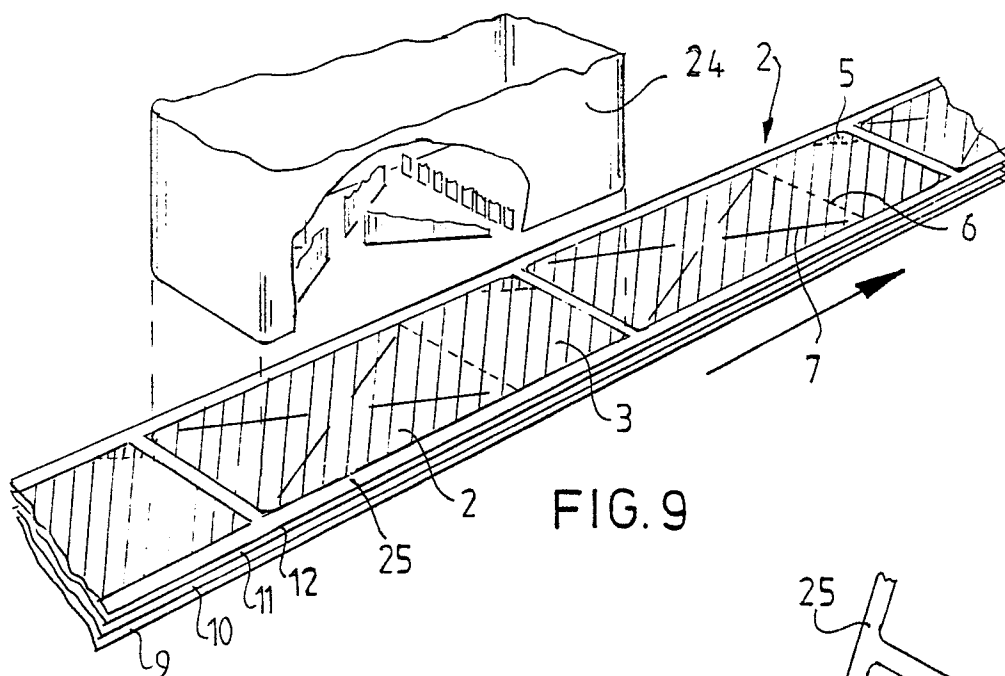


FIG. 9

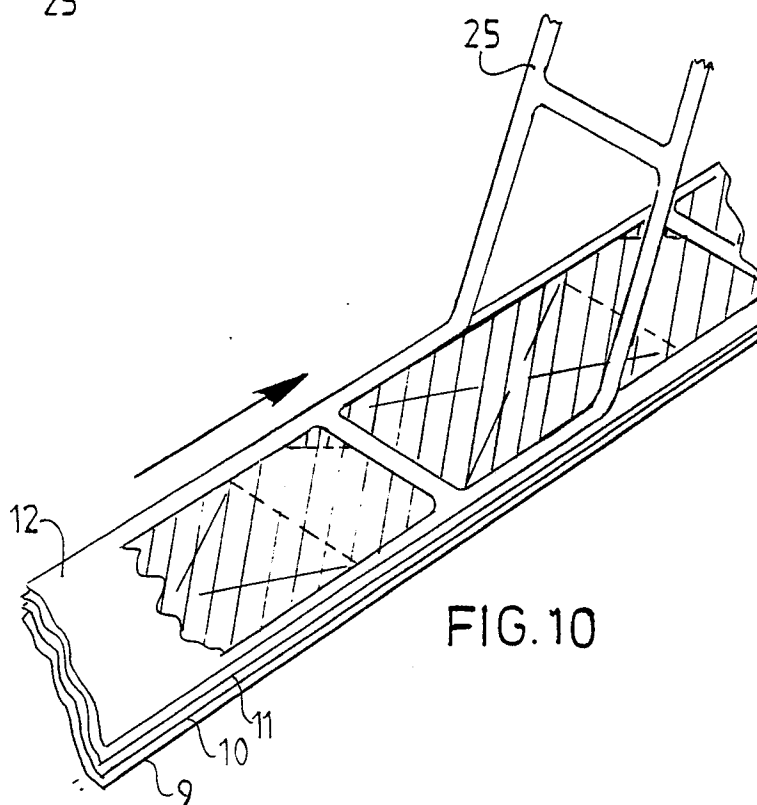


FIG. 10



EP 88 20 0252

DOCUMENTS CONSIDERED TO BE RELEVANT															
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)												
Y	US-A-4 324 058 (S. SHERWICK) * Column 2, lines 12-32; column 3, lines 8-23; figures 1-3 *	1,8,13	G 09 F 3/02												
A	---	9													
D,Y	EP-A-0 140 420 (H. BAARTMANS) * Claims 1-4; figures 1-3 *	1,8,13													
A	FR-A-1 568 013 (N. McLEOD) * Page 1; claim 4; figures 1-4 *	1-5													
A	FR-A-2 545 249 (BERARD & FILS S.A.) * Abstract; figure *	6,7													
A	GB-A- 957 589 (DYMO INDUSTRIES) * Claim 1; figures 1,5,7 *	6,7													
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)												
			G 09 F												
The present search report has been drawn up for all claims															
Place of search THE HAGUE		Date of completion of the search 20-05-1988	Examiner ODGERS M. L.												
<table><tr><td>CATEGORY OF CITED DOCUMENTS</td><td>T : theory or principle underlying the invention</td></tr><tr><td>X : particularly relevant if taken alone</td><td>E : earlier patent document, but published on, or after the filing date</td></tr><tr><td>Y : particularly relevant if combined with another document of the same category</td><td>D : document cited in the application</td></tr><tr><td>A : technological background</td><td>L : document cited for other reasons</td></tr><tr><td>O : non-written disclosure</td><td>& : member of the same patent family, corresponding document</td></tr><tr><td>P : intermediate document</td><td></td></tr></table>				CATEGORY OF CITED DOCUMENTS	T : theory or principle underlying the invention	X : particularly relevant if taken alone	E : earlier patent document, but published on, or after the filing date	Y : particularly relevant if combined with another document of the same category	D : document cited in the application	A : technological background	L : document cited for other reasons	O : non-written disclosure	& : member of the same patent family, corresponding document	P : intermediate document	
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