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**EUROPEAN PATENT APPLICATION**

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⑦① Applicant: **PRINTCOM ETIKETT AB**  
**S-581 01 Linköping (SE)**

⑦② Inventor: **Axelsson, Bror**  
**Vassvägen 9B**  
**S-582 20 Linköping (SE)**

**Andersson, Per Ake**  
**Tygelgatan 27**  
**S-582 66 Linköping (SE)**

⑦④ Representative: **Wideberg, Sven Olle et al**  
**AWAPATENT AB Box 7402**  
**S-103 91 Stockholm (SE)**

⑥④ **Label structure for protected printing.**

⑥⑦ The present invention relates to a label structure for protected printing, comprising a transparent face material (1) being the actual label, an adhesive layer (2) and a removable rear protective layer (3). The invention is distinguished in that the back of the face material (1) is provided with preprinted mirror-inverted information text (6) and subsequently coated with the adhesive layer (2) and the protective layer (3). Both the adhesive layer and the protective layer have common, open fields in the form of windows (5) through which additional information (7) is adapted to be printed in mirror-inverted print on the back of said face material. Both preprinted information (6) and subsequently printed information (7) will be protected by said transparent face material (1) when the label is attached to a substrate.

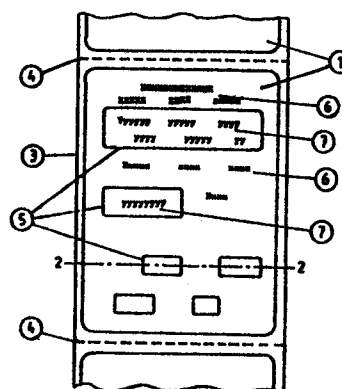


FIG 1

## Description

## LABEL STRUCTURE FOR PROTECTED PRINTING

The present invention relates to a label structure for protected printing, comprising a transparent face material being the actual label, an adhesive layer and a removable rear protective layer.

When prior art label structures with the information text printed on the face are used in certain applications, for example if the label is attached to a substrate which is exposed to heavy contamination or the like, or if the label is exposed to corrosive or otherwise aggressive substances, the information which the label serves to supply will become obliterated after some time. It has therefore been suggested that the information text be disposed on the back of a label consisting of a transparent material. In this way, the information is protected by the face material when the label is attached to a substrate.

However, such prior art label structures suffer from several drawbacks. For example, the label structure comprises several layers, namely in addition to the actual, transparent label, several underlying layers which serve int. al. to transfer and receive characters in response to a pressure applied to the face of the label. On its rear, the label structure carries a protective layer or protective paper, the so-called backing, and furthermore adhesive layers are arranged between the different layers to hold the structure together and, optionally, also release foils are provided between the different layers. Therefore, the entire structure is relatively thick, and it is difficult to conduct it through a printer or like machine in order to provide the information text intended.

In certain applications, a label structure is desired which comprises information common to all labels, e.g. the name and model number etc. of an article, as well as additional information which is different for different specimens of the article, such as colour, engine power or the like. This is something which is very difficult, if not impossible, to realise with prior art label structures.

The object of the present invention therefore is to provide a simple label structure which comprises only three layers to facilitate conducting the label structure through a printer or like machine for printing the information, and which does not suffer from the above-mentioned drawbacks. This object is achieved in that the label structure is given the characteristic features stated in the appended claims.

The invention will now be described in greater detail in the form of a preferred embodiment, reference being had to the accompanying drawings in which:

Fig. 1 is a plan view of a label structure according to the invention,

Fig. 2 is a section along line 2 - 2 in Fig. 1. and

Fig. 3 is a corresponding section through an alternative embodiment of the invention.

With reference to Figs. 1 and 2, the label structure comprises a transparent face material 1 being the

actual label. The transparent face material can be chosen according to the need for mechanical strength, chemical resistance etc. The back of the face material is provided with preprinted mirror-inverted information text designated 6. The face material is then coated with an adhesive layer 2 and, behind this, a protective layer 3 is provided which in the embodiment shown is a paper web having intermediate perforations 4 for tearing off a label. The adhesive used in the layer 2 can be chosen according to the adhesive power required. Both the adhesive layer 2 and the protective layer 3 have common, open fields in the form of windows 5 through which additional information, designated 7, can be printed on the back of the face material in mirror-inverted print by means of, for example, a data printer. Both the preprinted information 6 and the information 7 printed later will thus be protected by the transparent face material 1 when the label is attached to a substrate.

Because of its thin sandwich structure, the label web can readily be conducted through e.g. a data printer for mirror-inverted printing satisfying high demands on readability, such as optical reading of bar codes. The label web further is easily manufactured in a standard label press equipped with a special laminating unit.

To make the label useful also in connection with any surface treatment that may be desired, for example the application of a paint, after the label has been attached to a substrate, it can be provided with a removable front protective layer 8, as shown in Fig. 3. This front protective layer is, of course, unbroken and covers the entire label and can be, for example, a thin film which adheres to the label. After surface treatment, if any, the protective layer is removed. For removal, the protective layer can be provided with a pull tab, e.g. in the form of an edge or a portion not coated with adhesive.

The invention is, of course, not limited to the embodiment described above, but may be modified within the scope of the appended claims.

## Claims

1. A label structure for protected printing, comprising a transparent face material (1) being the actual layer, an adhesive layer (2) and a removable rear protective layer (3), **characterised** in that the back of the face material (1) is provided with preprinted, mirror-inverted information text (6) and subsequently coated with said adhesive layer (2) and said protective layer (3) which both have common, open fields in the form of windows (5) through which additional information (7) is adapted to be printed in mirror-inverted print on the back of said face material, such that both preprinted information (6) and subsequently printed infor-

mation (7) will be protected by the transparent face material (1) when the label is attached to a substrate.

2. Label structure as claimed in claim 1, **characterised** in that said protective layer (3) preferably is formed as a continuous web, the label being punched to the desired shape, and said protective layer preferably having intermediate perforations (4) for tearing off label sheets.

3. Label structure as claimed in claim 1 or 2, **characterised** in that also an unbroken removable front protective layer (8) of the same shape as the label and in the form of, for example, a film, is adhered to the front of said face material (1) to protect temporarily said label attached to the substrate, during any surface treatment, or the like.

4. Label structure as claimed in claim 3, **characterised** in that the front protective layer (8) is provided with a pull tab, e.g. in the form of an edge or a portion without adhesive, to facilitate removal of said protective layer from said label.

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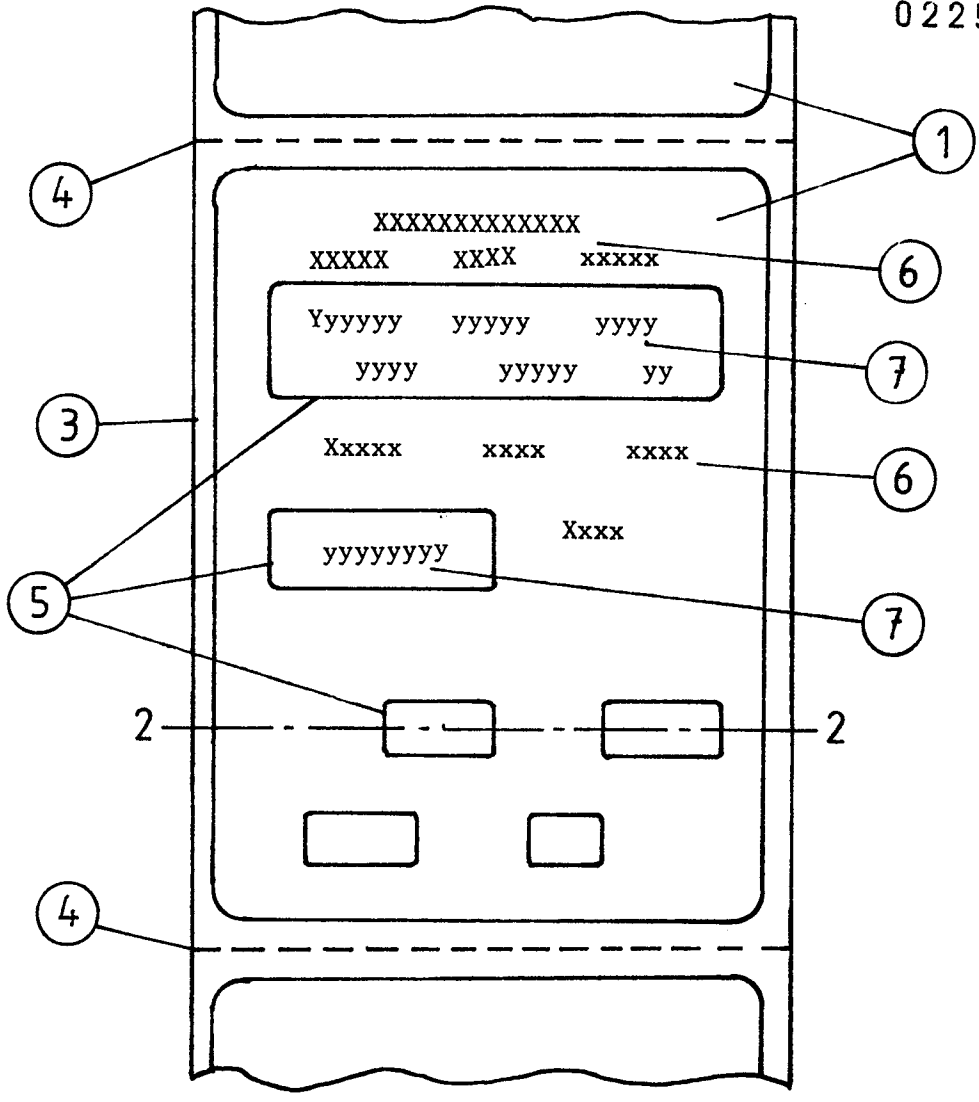


FIG 1

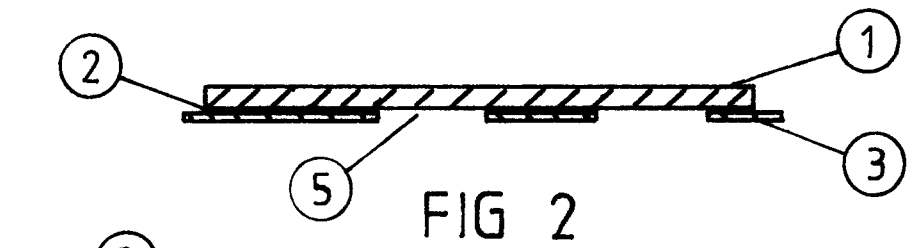


FIG 2

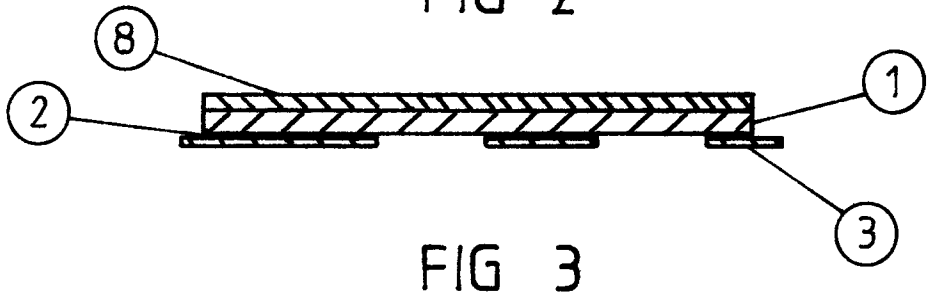


FIG 3



EP 86 85 0392

| 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-3 657 043 (FELDMUHLE AG)<br>* Column 2, lines 6-47; figure 2<br>*                                                                    | 1                                                                                                                                                                                                                                                                            | G 09 F 3/02<br>G 09 F 3/10                    |
| Y                                                                                                                                                                                                                       | FR-A-2 414 763 (COSCO INDUSTRIES INC.)<br>* Claims 1,3; page 4, line 37 -<br>page 5, line 7; page 7, lines 1-13; figures 1-3 *            | 1                                                                                                                                                                                                                                                                            |                                               |
| A                                                                                                                                                                                                                       | FR-A-1 422 182 (GROG & COMPAGNIE)<br>* Abstract; page 2, right-hand column, paragraphs 2-4; figures 1-4 *                                 | 2                                                                                                                                                                                                                                                                            |                                               |
| A                                                                                                                                                                                                                       | CH-A- 192 861 (A. HERITIER)<br>* Claim; page 1, right-hand column, paragraph 2 *                                                          | 1                                                                                                                                                                                                                                                                            | TECHNICAL FIELDS SEARCHED (Int. Cl.4)         |
| A                                                                                                                                                                                                                       | DE-A-1 008 101 (EBERLE & CO. APPARATEBAUGESELLSCHAFT)<br>* Column 2, lines 21-44; figures 1-3 *                                           | 1                                                                                                                                                                                                                                                                            | G 09 F                                        |
| A                                                                                                                                                                                                                       | EP-A-0 065 766 (BEIERSDORF AG)<br>* Claims 1-3,5; page 2, line 25 -<br>page 3, line 6; page 4, line 8 -<br>page 5, line 15; figures 1-2 * | 3-4                                                                                                                                                                                                                                                                          |                                               |
| The present search report has been drawn up for all claims                                                                                                                                                              |                                                                                                                                           |                                                                                                                                                                                                                                                                              |                                               |
| Place of search<br>THE HAGUE                                                                                                                                                                                            |                                                                                                                                           | Date of completion of the search<br>03-03-1987                                                                                                                                                                                                                               | Examiner<br>FRANSEN L.J.L.                    |
| <b>CATEGORY OF CITED DOCUMENTS</b>                                                                                                                                                                                      |                                                                                                                                           |                                                                                                                                                                                                                                                                              |                                               |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                           | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                               |