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(12) # EUROPEAN PATENT APPLICATION

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(54) **Window label.**

(57) A label or sticker (33) particularly suited for an automobile price sticker is constructed in a simple and easy manner. A first face of a paper web (26) is full face coated with repositional adhesive (28), while the second face is coated with a release material (27) that does not stick to the adhesive. Non-variable information (29) can be imaged on the first face before coating, and after coating variable information (30) is imaged onto the adhesive of the first face of the web by non-contact printing (e.g., with an ink jet printer), for example, using multicolored inks. The web may be rolled up (25) after coating and before variable imaging, and after variably imaging ultimately the web is separated into individual labels or stickers (33), the adhesive face of which is applied to the inside of an automobile window (34) so that the imaged information is visible through the automobile window from the exterior.

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BACKGROUND AND SUMMARY OF THE INVENTION

There are a number of situations in which it is desirable to apply a label or sticker to a window or other transparent surface so that indicia on the label or sticker is visible through the transparent surface. For example, price and information stickers for automobile purchase have adhesive and printed information on the same side, which is visible through an automobile window. Conventional stickers are usually constructed from multiple layers to allow printing with a laser printer and subsequent removal of the liner to expose a border of adhesive material, the printing being uncovered by adhesive. Because the label is subjected to fluctuations in environmental conditions, it expands and contracts. These dimensional changes in the label occur at a rate appreciably different than that of the window, often resulting in the label pulling away from the window, or otherwise becoming unreadable.

According to the present invention a method of manufacturing a label or sticker, and the label or sticker so produced, are provided which overcome the problems discussed above for labels that must be viewed through transparent surfaces. According to one aspect of the present invention a method of manufacturing a label/sticker is provided which comprises the following steps: (a) Substantially full face coating a first face of a web with adhesive. (b) Substantially full face coating a second face of the web with release material which does not stick to the adhesive. (c) Imaging variable information onto the adhesive on the first face of the web. And (d) separating the variable information imaged web into individual labels/stickers.

Step (c) is preferably practiced by non-contact printing, typically ink jet printing, which may utilize multicolored inks. Steps (a) through (d) are typically practiced substantially sequentially, and normally between steps (a) and (c) there are the further steps of (e) taking a web up into a roll with the release coat contacting the adhesive coat and (f) unwinding the roll. Prior to step (a) non-variable information may be imaged on the first face of the web, and step (a) may be practiced utilizing pressure sensitive adhesive (such as repositional adhesive).

After step (e) there is the further step of applying a first face of the label/sticker to a transparent surface so that the imaged information is visible through the transparent surface, and the adhesive connects the label/sticker to the transparent surface (substantially over its entire face). Also, between steps (c) and (d) the web may be taken up into a roll form again before ultimately separating it into individual labels and stickers, or alternatively the labels and stickers may be formed into a pad after step (d).

According to another aspect of the present invention a label or sticker is provided which has a base (e.g., of cellulose or like material) having a first face fully coated with adhesive, and a second face fully coated with release material which does not stick to the adhesive. Ink, such as multicolored ink, forming indicia, is disposed on the adhesive of the first face. The adhesive is typically repositional adhesive, and the indicia preferably comprises price and other information about an automobile. The coated base is typically in a roll configuration with the adhesive face contacting the release material face, and the release material on the outside of the roll.

It is a primary object of the present invention to provide a simple but effective method of manufacturing a label or a sticker, and the label or sticker so produced, of the type having indicia which is visible through a transparent surface to which the label or sticker is adhesive connected. This and other objects of the invention will become clear from an inspection of the detailed description of the invention and from the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a box diagram indicating exemplary method steps that may be performed in the practice of an exemplary method according to the present invention;

FIGURE 2 is a side view, with the layers greater exaggerated in size for clarity of illustration, of an exemplary roll form of labels or stickers according to the present invention; and

FIGURE 3 is a perspective schematic view illustrating utilization of an individual label or sticker according to the present invention on the inside surface of a window of an automobile.

DETAILED DESCRIPTION OF THE DRAWINGS

FIGURE 1 illustrates schematically a base paper web 10, of cellulose material, or including cellulose material, or a like material, which is optionally first non-variably imaged on a first side thereof as indicated at box 11. The non-variable information may be printed on the web at stage 11 by laser, thermal, ion deposition, ink jet, magnetography, or like printing techniques. Subsequently, the web 10 passes to stage 12 wherein adhesive is substantially full face coated on the first face of the web, over the non-variable imaged material. The web 10 then passes on to stage 13 where a release coat is provided on the second face of the web, opposite the first face. Stages 12 and 13 may be reversed in order.

The adhesive that is utilized may be any suitable adhesive for the application desired. Most desirably it is pressure sensitive adhesive, such as repositional adhesive such as sold by Moore Business Forms, Inc. of Lake Forest, Illinois under the trademark "CLEANTAC". The release coating applied at stage 13 may be any release coating which will not stick to the particular adhesive applied at stage 12.

After stage 13, the web is preferably wound up into a roll as indicated at stage 14, and then transported to a further use or utilization site as indicated at 15 in FIGURE 1. At the use or utilization site 15 the web is then unwound from the roll form as indicated at 16, and then is non-contact printed at stage 17.

At stage 17, noncontact printing is used to apply ink to the adhesive on the first face of the web 10. Preferably the noncontact printing practiced is ink jet printing, and multicolored inks may be utilized if desired.

After stage 17 there is the optional stage -- as indicated in dotted line at 18 in FIGURE 1 -- of taking up the web into a roll again before shipping it to the final use site (e.g., the shop where stickers are applied to cars). Alternatively, the web can be separated into individual forms (labels or stickers) immediately after stage 17, as indicated by stage 19 of FIGURE 1. After separation into individual forms, the forms may optionally be formed into a pad as illustrated by dotted line at 20 in FIGURE 1 to further facilitate use in the field.

Ultimately, after the imaged web has been separated into individual labels or stickers, the labels or stickers are applied to a transparent surface as indicated at 21 in FIGURE 1. Normally the transparent surface is the inside of a car window, the non-variable and variable imaged indicia relating to price and other information about the vehicle.

FIGURE 2 schematically illustrates an exemplary roll of labels or stickers according to the present invention, as they exist immediately after step 17. The roll configuration is illustrated generally by reference numeral 25 in FIGURE 1, with the component parts exaggerated in size. The labels or stickers as illustrated in FIGURE 2 comprise a base paper 26, which may be cellulose paper or the like, which has a release coating 27 applied at stage 13, on the second face thereof, with adhesive coating 28 applied at stage 12 on the first face thereof. Non-variable imaged indicia 29 is shown on the first face, the indicia 29 having been applied at stage 11, while indicia formed by ink from an ink jet printer is shown schematically by reference numeral 30 in FIGURE 2, being provided on the full face adhesive coat 28. As also schematically illustrated in FIGURE 2, the individual labels or stickers may be separated by perforations 31 or other lines of weakness from the rest of the forms in the roll 25. In the roll 25, the release coating 27 is preferably on the outside of the roll, with the adhesive coating 28 contacting underlying release material 27 in the spiral configuration of the roll 25.

FIGURE 3 schematically illustrates an exemplary label or sticker 33 produced according to the invention shown attached to the inside surface of an automobile window 34. Non-variable information is indicated by reference numeral 29, while the variable information is illustrated by reference numeral 30. The sticker 33 is not likely to separate from the automobile window 34 due to the fact that it is full face coated, and if the adhesive 28 is repositional adhesive, it may be readily removed without leaving a significant residue, either when the vehicle is purchased, or to move it to another spot on the vehicle. By non-contact printing the variable information on the adhesive, it is simple for a purchaser or user of forms to apply the variable information right on site, with associated advantages, while still having a label or sticker that will not come inadvertently detached from the automobile window 34.

While the invention has been primarily described with respect to automobile stickers, it is, of course, understood that many other environments may also be provided for utilization of the labels or stickers 33 according to the invention, and a wide variety of non-variable and variable indicia may be provided thereon.

While the invention has been herein shown and described in what is presently conceived to be the most practical and preferred embodiment thereof, many modifications may be made thereof within the scope of the invention, which scope is to be accorded the broadest interpretation of the appended claims so as to encompass all equivalent structures and methods.

Claims

1. A method of manufacturing a label/sticker, comprising the steps of:
   (a) substantially full face coating a first face of a web with adhesive;
   (b) substantially full face coating a second face of the web with release material which does not stick to the adhesive;
   (c) imaging variable information onto the adhesive on the first face of the web; and
   (d) separating the variable information imaged web into individual labels/stickers.

2. A method as recited in claim 1 characterised in that step (c) is practiced by non-contact printing, for example by ink jet printing.

3. A method as recited in claim 1 or claim 2 characterised in that steps (a) - (d) are practiced substantially sequentially.

4. A method as recited in any of claims 1 to 3 characterised by the further steps, between steps (a) and (c), of (e) taking the web up into a roll with the release coat contacting the adhesive coat, and (f) unwinding the roll.

5. A method as recited in any of claims 1 to 4 characterised by the further step, prior to step (a) of imaging non-variable information on the first face of the web.

6. A method as recited in any of claims 1 to 5 characterised in that step (a) is practiced by coating the first face with repositional and/or pressure sensitive adhesive.

7. A method as recited in any of claims 1 to 6 characterised by the further step, after step (d), of applying the first face of a label/sticker to a transparent surface so that the imaged information is visible through the transparent surface, and the adhesive connects the label/sticker to the transparent surface.

8. A method as recited in any of claims 1 to 7 characterised in that step (c) is practiced using multicolored inks.

9. A method as recited in claim 4 characterised by the further step between steps (c) and (d), of taking the web up into a roll form again.

10. A method as recited in any of claims 1 to 8 characterised by the further step, after step (d), of forming the labels/stickers into a pad.

11. A label or sticker comprising a cellulose base (26) having a first face substantially full coated with adhesive (28), and a second face substantially full coated with release material (27) which does not stick to the adhesive; and ink, forming indicia (29), disposed on the adhesive of the first face.

12. A label or sticker as recited in claim 11 characterised in that the adhesive is repositional adhesive.

13. A label or sticker as recited in claim 11 or claim 12 characterised in that the coated base is in a roll configuration (25) with the adhesive face (28) contacting the release material face (27), and the release material is on the outside of the roll.

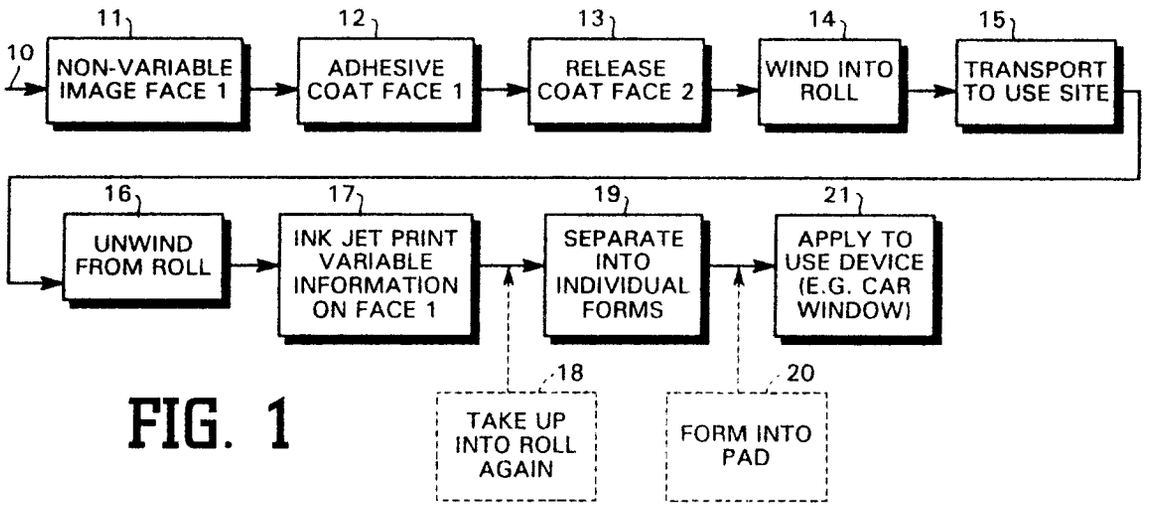

FIG. 1

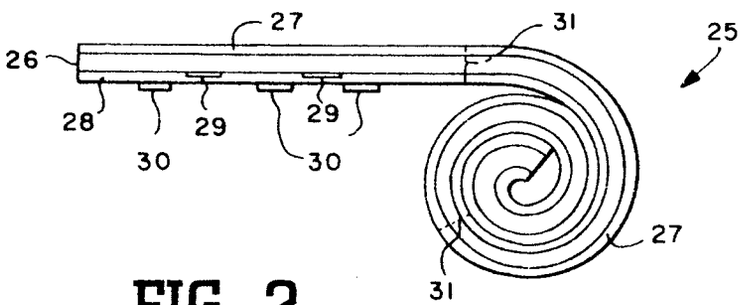

FIG. 2

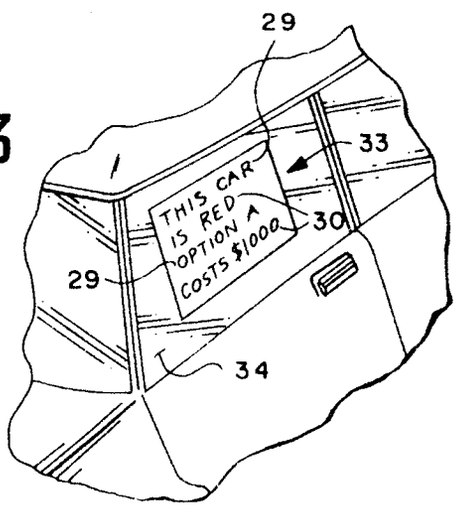

FIG. 3

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EUROPEAN SEARCH REPORT

Application Number
EP 93 30 9963

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.5)
X	US-A-4 068 028 (SAMONIDES) * column 1, paragraph 1 -paragraph 4 * * column 11, line 27 - line 42 * * column 12, paragraph 2; figure 10 *	1-13	B31D1/02 G09F3/10
P,X	EP-A-0 552 956 (MOORE BUSINESS FORMS, INC.)	1,5-8, 10,11	
X	FR-A-2 644 273 (PEROT)	1,4-6,8, 11-13	
A	EP-A-0 225 301 (PRINTCOM ETIKETT AB)		
A	US-A-4 940 258 (CUBA ET AL)		
			TECHNICAL FIELDS SEARCHED (Int.Cl.5) B31D G09F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	11 February 1994	Pipping, L

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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