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(54) Abstract Title  
**Ornamental sticker fabrication method**

(57) An ornamental sticker fabrication method includes the steps of i) coating a layer of releasing agent on a sheet of paper-like material to form a base sheet, ii) using a silk screen to print an adhesive layer in a predetermined shape on the base sheet, iii) using a silk screen to print a resin layer on the adhesive layer, iv) heating the material thus obtained, causing the resin layer and the adhesive layer to be bonded together, v) using a plate printing process to print a colored layer in a predetermined design on the resin layer, vi) using a silk screen to print a protective film on the colored layer, and vii) heating the material thus obtained so as to form a finished ornamental sticker.

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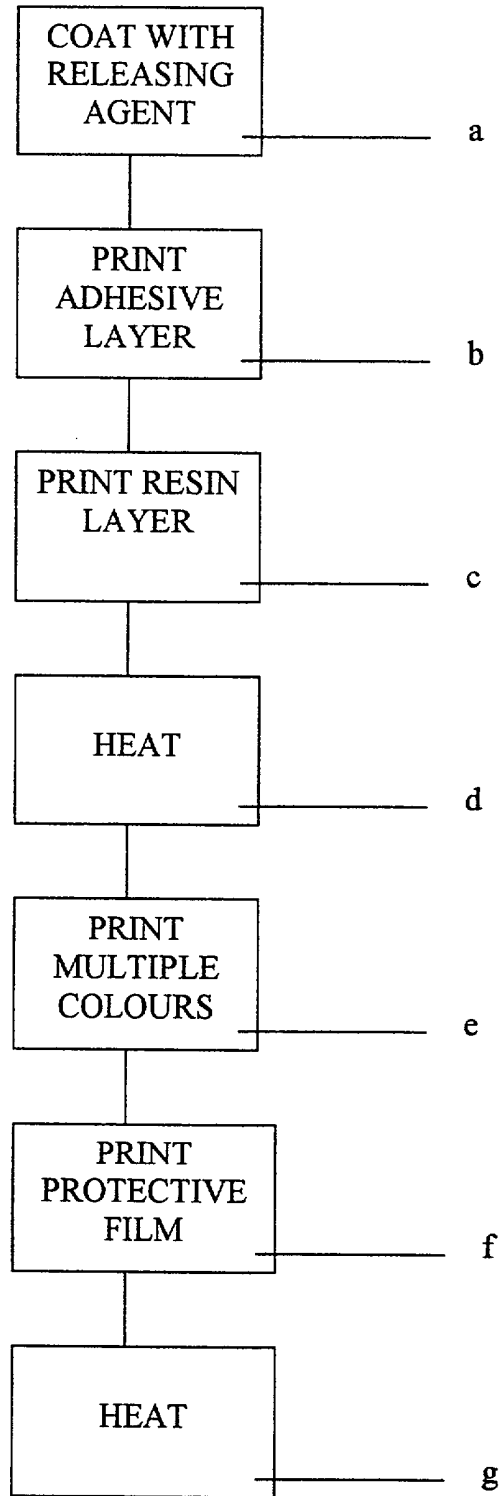


Figure 1

# ORNAMENTAL STICKER FABRICATION METHOD

## BACKGROUND OF THE INVENTION

The present invention relates to an ornamental sticker fabrication method, and more particularly to a high efficient  
5 ornamental sticker fabrication method, which enables the desired design and colors to be simultaneously printed on the prepared material through one single step, so that the ornamental sticker fabrication efficiency is greatly improved, and the ornamental sticker manufacturing cost is significantly reduced.

10 According to conventional ornamental sticker fabrication methods, an adhesive layer is printed on a releasing sheet material by a silk screen process, and then a resin layer is printed on the adhesive layer by a silk screen process, and the material thus  
15 predetermined design and colors are printed one after another on the resin layer by a silk screen process, and the material thus obtained is treated with a heating process to form the desired ornamental stick. Because the predetermined design and colors are printed on the resin layer one after another, the ornamental  
20 sticker fabrication procedure is complicated. After the printing of one color, an air-drying process must be employed to let the printed color be dried in the open air before the printing of a next color. If the design has, for example, five colors, the air drying process

must be repeated performed at five times. Further, because the designed colors are not printed in one step, printed colors may not match perfectly, unable to produce a satisfactory 3-dimensional visual effect.

## **5 SUMMARY OF THE INVENTION**

The present invention has been accomplished to provide an ornamental sticker fabrication method, which eliminates the aforesaid drawbacks. It is one object of the present invention to provide an ornamental sticker fabrication method, which greatly  
10 reduces the cost of the ornamental stickers. It is another object of the present invention to provide an ornamental sticker fabrication method, which is practical for making ornamental stickers that can produce a good 3-dimensional visual effect. The ornamental sticker fabrication method of the present invention comprises the  
15 steps of i) coating a layer of releasing agent on a sheet of paper-like material to form a base sheet, ii) using a silk screen to print an adhesive layer in a predetermined shape on the base sheet, iii) using a silk screen to print a resin layer on the adhesive layer, iv) heating the material thus obtained, causing the resin layer and  
20 the adhesive layer to be bonded together, v) using a plate printing process to print a colored layer in a predetermined design on the resin layer, vi) using a silk screen to print a protective film on the colored layer, and vii) heating the material thus obtained so as to

form a finished ornamental sticker. Because the desired design and colors are simultaneously formed on the resin layer by means of the application of a plate printing process, t different colors that are arranged adjacent to each other match perfectly, causing a better  
5 3-dimensional visual effect.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a block diagram explaining the ornamental sticker fabrication flow of the present invention.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

10 Referring to FIG. 1, an ornamental sticker fabrication method in accordance with the present invention comprises the steps of:

- 15 (a) coating a layer of releasing agent, for example, PVA (polyvinyl acetate) on a sheet of paper-like material to form a base sheet;
- (b) using a silk screen to print an adhesive layer in a predetermined shape on the base sheet;
- (c) using a silk screen to print a resin layer on the adhesive layer at the base sheet in the same predetermined shape;
- 20 (d) heating the resin layer-adhesive layer-base sheet thus obtained at 170°C~190°C for about 5 minutes, enabling the resin layer and the adhesive layer to be positively bonded together;

- (e) using a plate printing process to print multiple colors, forming a colored layer in a predetermined design on the resin layer;
- (f) using a silk screen to print a protective film comprising polyurethane on the colored layer; and
- (g) heating the material thus obtained from step (f) at 170°C~190°C for about 5 minutes, forming the desired sticker.

The adhesive used in step (b) may consist of either oily adhesives, or aqueous adhesives comprising an acrylic acid ester polymer. It is preferable, however, to use an aqueous adhesive considering that it is easy to remove any adhesive residue, which may remain after removal of the sticker, which has been in place for an extended period of time.

According to the aforesaid sticker fabrication method, a plate printing process is used to print multiple colors on the prepared material. This procedure enables the predetermined design and colors to be simultaneously printed on the prepared material in one step, so that different colors that are arranged adjacent to each other match perfectly, causing a better 3-dimensional visual effect.

While only one embodiment of the present invention has been shown and described, it will be understood that various modifications and changes could be made thereunto without

departing from the spirit and scope of the invention disclosed.

**What the invention claimed is:**

1. An ornamental sticker fabrication method comprising the steps of:

5 i) coating a layer of releasing agent on a sheet of paper-like material to form a base sheet;

ii) using a silkscreen process to print an adhesive layer in a predetermined shape on said base sheet;

10 iii) using a silk screen to print a resin layer on said adhesive layer at said base sheet in the same predetermined shape;

iv) heating the material thus obtained from step iii), causing said resin layer and said adhesive layer to be bonded together;

15 v) using a plate printing process to print multiple colors, forming a colored layer in a predetermined design on said resin layer;

vi) using a silk screen to print a protective film on said colored layer; and

vii) heating the material thus obtained from step vi), causing the material to form a finished ornamental sticker.

20 2. The ornamental sticker fabrication method of claim 1 wherein said releasing agent is polyvinyl acetate.

3. The ornamental sticker fabrication method of claim 1 wherein said resin layer is comprised of polyurethane.



4. The ornamental sticker fabrication method of claim 1 wherein the material obtained from step iii) is heated at 170°C~190°C for about 5 minutes during step iv).

5 5. The ornamental sticker fabrication method of claim 1 wherein said protective film is comprised of polyurethane.

6. The ornamental sticker fabrication method of claim 1 wherein the material thus obtained from step vi) is heated at 170°C~190°C for about 5 minutes during step vii).

7. An ornamental sticker fabrication method substantially as hereinbefore  
10 described with reference to, and as illustrated in the accompanying drawing.



INVESTOR IN PEOPLE

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Examiner: A J Rudge  
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### Patents Act 1977 Search Report under Section 17

#### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.S): B6C(CEAS, CEJ, CHB, CHD, CHE)

Int CI (Ed.7): B41M-1/12;1/14; 1/20; 1//36; 3/00R; 5/035; 5/38; 7/00; 7/02

Other: Online databases: EPODOC, JAPIO, WPI

#### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
	None	

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X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.