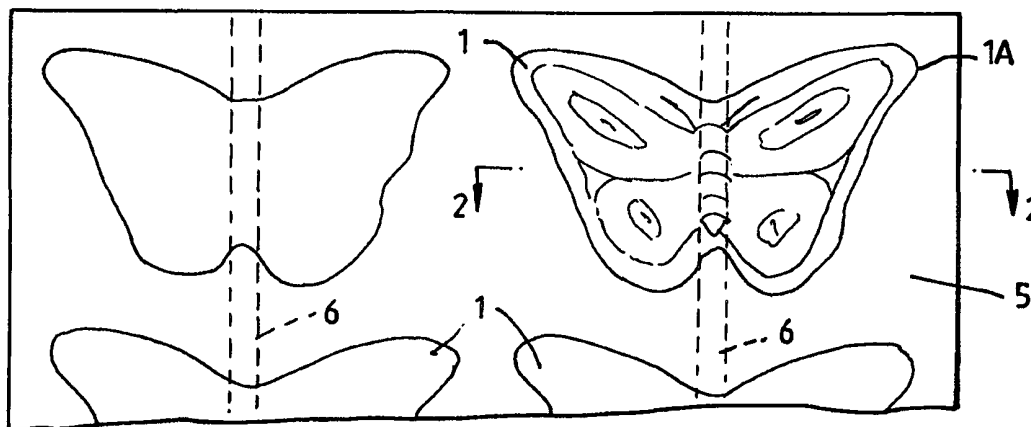




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : B44F 7/00</p>	<p>A1</p>	<p>(11) International Publication Number: WO 00/01541</p> <p>(43) International Publication Date: 13 January 2000 (13.01.00)</p>
<p>(21) International Application Number: PCT/AU98/00504</p> <p>(22) International Filing Date: 1 July 1998 (01.07.98)</p> <p>(71) Applicant (for all designated States except US): FRONTIER TOWER PTY. LTD. [AU/AU]; 14 White Lodge Court, Donvale, VIC 3111 (AU).</p> <p>(72) Inventor; and (75) Inventor/Applicant (for US only): O'NEILL, Daryl, Philip [AU/AU]; 14 White Lodge Court, Donvale, VIC 3111 (AU).</p> <p>(74) Agent: CARTER SMITH & BEADLE; 2 Railway Parade, P.O. Box 557, Camberwell, VIC 3124 (AU).</p>		<p>(81) Designated States: AL, AM, AT, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p>

(54) Title: SELF-ADHESIVE DECORATIVE DEVICES



(57) Abstract

A decorative device (1) including a supporting release layer (2), an adhesive layer (3) applied to the release layer and adhering to a flexible film backing member (4), a semi-rigid plastics layer (5) from which the decorative device (1) is cut along line 1A, the plastic layer (5) being secured to the backing member (4) by means of a central narrow line of adhesive (6) which enables parts of the decorative device to be folded away from the backing member (4) when the backing member (4) is adhesively secured to a supporting surface.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

SELF-ADHESIVE DECORATIVE DEVICES

Field of the Invention

This invention relates to self-adhesive decorative devices.

Background of the Invention

5 Self-adhesive decorative devices are widely available as decorations for flat surfaces such as book covers, domestic walls and doors, or any other surface requiring decoration. Known self-adhesive decorative devices usually suffer from the disadvantage that the decorated surface is substantially flat so that the decorative device is not able to stand out significantly from the surface
10 being decorated.

Statement of Invention and Object

It is an object of the present invention to provide a self-adhesive decorative device in which the outer surface of the device can be made to stand out from the surface being decorated.

15 The invention provides a decorative device including a self-adhesive flexible film backing member adapted to be adhered to a surface to be decorated, a semi-rigid plastics layer secured to said backing member so as to leave part of said semi-rigid plastics layer free to be folded with respect to the backing member, whereby said semi-rigid plastics layer can be made to stand
20 out from the surface being decorated.

The semi-rigid plastics layer preferably has a plastics memory to enable substantially permanent folding of the plastics layer with respect to the backing member.

25 The backing member and semi-rigid plastics layer may be die cut with any desired shape or outline from larger sheets of flexible film and semi-rigid plastics material, and the semi-rigid plastics layer preferably carries printed decorative material to further enhance the decorative device.

The self-adhesive flexible film backing member is preferably carried by a supporting release layer to protect the adhesive against inadvertent adhesion.
30 In most cases, a multiplicity of decorative devices will be carried by the

supporting release layer with each decorative device die cut from larger sheets of flexible film backing material and semi-rigid plastics material.

The backing member is preferably formed from transparent or translucent plastics material so that it is less visible than the decorative device formed from the semi-rigid plastics layer.

In one form of the invention, the semi-rigid plastics layer carries printed replicas of butterflies, birds, aircraft, or other devices having wings, and each printed device is die cut around the periphery of the device through the semi-rigid plastics layer and through the flexible film backing member.

10 Brief Description of the Drawings

An embodiment of the invention will now be described with reference to the accompanying drawings in which:

Figure 1 is a fragmentary plan view of a sheet of decorative devices embodying the invention;

15 Figure 2 is a fragmentary sectional elevation of the sheet of decorative devices taken along the line 2-2 in Figure 1;

Figure 3 is a sectional elevation of a decorative device removed from the sheet of Figures 1 and 2; and

20 Figure 4 is a sectional elevation of a decorative device adhesively secured to a surface.

Description of Preferred Embodiment

Referring first to Figures 1 and 2, the sheet 1 of decorative devices 1 includes a supporting release layer 2, an adhesive layer 3 applied to the release layer and adhering to a flexible film backing member 4, a semi-rigid plastics layer 5, from which the decorative device 1 is cut along line 1A, the cut also penetrating the backing member 4, and to which printed matter further defining the decorative devices is applied, the plastics layer 5 being secured to the backing member along central narrow lines of adhesive 6 which enable the wings of the decorative devices, in the present case, butterfly replicas, to be folded away from the backing member so that the decorative device has the

appearance of a resting butterfly (Figure 4).

The release layer 2 can comprise any suitable polysiloxane or teflon coated release liner ranging from 23 μ m polyethylene terephthalate to 200 μ m clay or polyethylene coated Kraft paper. In the preferred embodiment, the release layer 2 comprises 62gsm densified glassine, with one side coated with
5 dimethyl polysiloxane.

The adhesive layer 3 applied to the release layer 2 comprises any suitable hot melt adhesive, such as a styrene-isoprene-styrene based hot melt permanent adhesive applied to the release layer and taken up by the flexible film backing
10 member. The hot melt adhesive is preferably specifically modified to exhibit adhesion to polar (unplasticized P.V.C.) and apolar (polyolefinic) surfaces. However, any styrene-isoprene styrene, styrene butadiene styrene, styrene-ethylbutadiene-styrene, 2 ethyl hexyl acrylate, butyl acrylate, methyl acrylate hot melt system, or any of the family of block-copolymer synthetic or natural
15 rubber based hot melt adhesives could be modified to perform this function.

The flexible film backing member 4 comprises any suitable clear synthetic film, having the capability of conforming to an uneven substrate to which the decorative device may be applied. In this specific case the film comprises 58 μ m biaxially oriented polypropylene. However, the film could be
20 pasticized P.V.C. cellulose acetate, polyethylene, polystyrene or any similar material.

The semi-rigid plastics layer 5 comprises a 125 μ m unplasticized polyvinyl chloride sheet adhesively secured along narrow strips 6 corresponding to the centre line of the decorative device using a suitable hot melt adhesive
25 such as ethylene vinyl acetate based hot melt adhesive. The adhesive strips 6 are about 5 to 10mm in width, and in this specific example, run along the length of the body of the butterfly decoration 1.

The semi-rigid plastics layer 5 may comprise any clear or translucent rigid synthetic film having sufficient stiffness and memory to remain in a raised
30 position when creased or folded along the central adhesive line attaching the

plastics layer to the backing member. The film should be capable of being printed in an unsupported roll format by any or all of the commonly known roll printing processes such as gravure, letterpress, offset/lithography or flexography without unduly stretching or shrinking under the heat of drying or curing.

5 Examples of suitable synthetic films include biaxially oriented polypropylene having a thickness in the range of 12 to 80 μ m, unplasticized polyvinyl chloride in the range of 75 to 200 μ m, polyethylene terephthalate in the range of 23 to 60 μ m, polycarbonate in the range of 25 to 75 μ m, cellulose acetate in the range of 40 to 70 μ m or any other suitable clear synthetic film
10 having the properties outlined above.

The semi-rigid plastics layer is preferably adhesively secured to the backing member after printing, and at this time, the plastics layer and the backing member are preferably in the form of continuous webs. The decorative devices 1 are all cut from this web, as is the backing member 4.

15 In another embodiment, the semi-rigid plastics layer can be formed from a printable film, such as Mylar (registered trade mark) or one of the above plastics treated so as to be capable of being printed on using ink jet printing or other means of printing or colouring available to home users or from suitable service providers. In this embodiment, the decorative devices are provided in
20 die cut shapes ready for printing or colouring by the purchaser.

It will be appreciated from the above that the decorative devices 1 embodying the invention are particularly attractive and since the parts of the plastics layer 5 which are not adhered to the backing member 4 can be folded so as to stand up from the backing member when it has been adhesively secured
25 to a surface to be decorated, the attractiveness and appeal of the decorative device is thereby significantly enhanced.

CLAIMS:

1. A decorative device including a self-adhesive flexible film backing member adapted to be adhered to a surface to be decorated, a semi-rigid plastics layer secured to said backing member so as to leave part of said semi-rigid plastics layer free to be folded with respect to the backing member, whereby said semi-rigid plastics layer can be made to stand out from the surface being decorated.
2. The device of claim 1, wherein the semi-rigid plastics layer has a plastics memory to enable substantially permanent folding of the plastics layer with respect to the backing member.
3. The device of claim 1 or 2, wherein the backing member and the semi-rigid plastics layer are die cut with any desired shape or outline from larger sheets of flexible film and semi-rigid plastics material.
4. The device of any preceding claim, wherein the semi-rigid plastics layer carries printed decorative material to further enhance the decorative device.
5. The device of any preceding claim wherein the backing member is carried by a supporting release layer to protect the adhesive against inadvertent adhesion.
6. The device of any preceding claim wherein the backing member is transparent or translucent so that it is less visible than the semi-rigid layer.
7. The device of any preceding claim, wherein the semi-rigid layer carries a printed replica of a butterfly, bird, aircraft or other device having wings, each printed replica being die cut around the periphery of the replica.
8. The device of any preceding claim, wherein the semi-rigid plastics layer is made from a material in which at least the exposed surface is ink jet printable or colourable using printing or colouring means available to a user at home or at a suitable service provider.

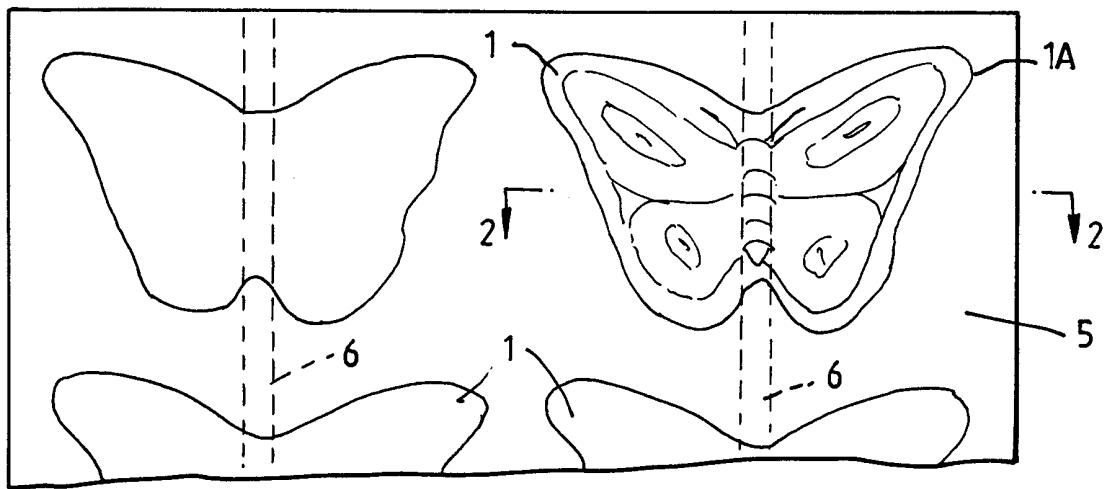


FIG. 1.

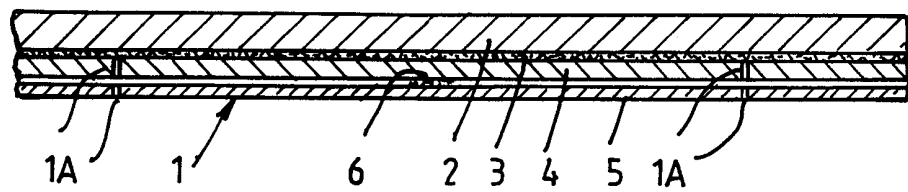


FIG. 2.

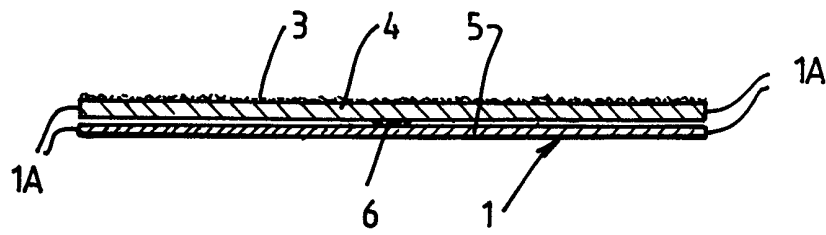


FIG. 3.

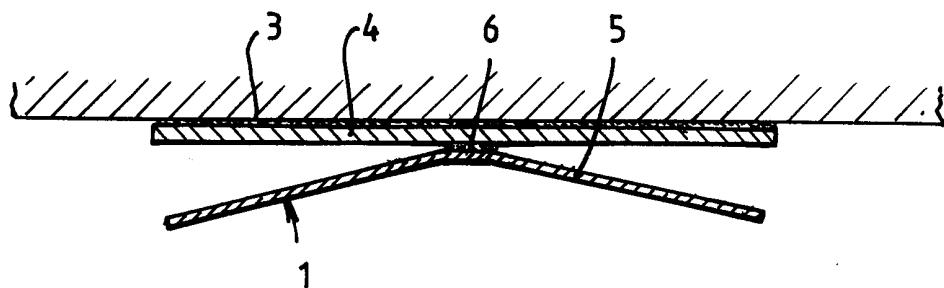


FIG. 4.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/AU 98/00504

A. CLASSIFICATION OF SUBJECT MATTER		
Int Cl ⁶ : B44F 7/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) IPC: B44C, B44D, B44F 7/00, B41M 3/-, B42D 15/-		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU: IPC as above		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT, JAPIO + keywords		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2230492 A (KIM JAE-DUCK) 24 October 1990 Whole document	1-8
A	US 4505770 A (LARIMORE) 19 March 1985 Whole document	1-8
A	Patent Abstracts of Japan, JP, 09-300898 A (TAKAGI SENI KK) 25 November 1997 Abstract	1-8
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C		<input checked="" type="checkbox"/> See patent family annex
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier document but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 18 September 1998		Date of mailing of the international search report 29 SEP 1998
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200 WODEN ACT 2606 AUSTRALIA Facsimile No.: (02) 6285 3929		Authorized officer A. ALI Telephone No.: (02) 6283 2607

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/AU 98/00504

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Derwent Abstract Accession No. K8433D/42, Class P78, NL 8000910 A (VAN DEN BERG SLOTHO) 16 September 1981 Abstract	1-8

INTERNATIONAL SEARCH REPORT
Information on patent family members

International Application No.
PCT/AU 98/00504

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
GB	2230492	US	5021275	US	5169681
US	4505770	US	4394904		
END OF ANNEX					