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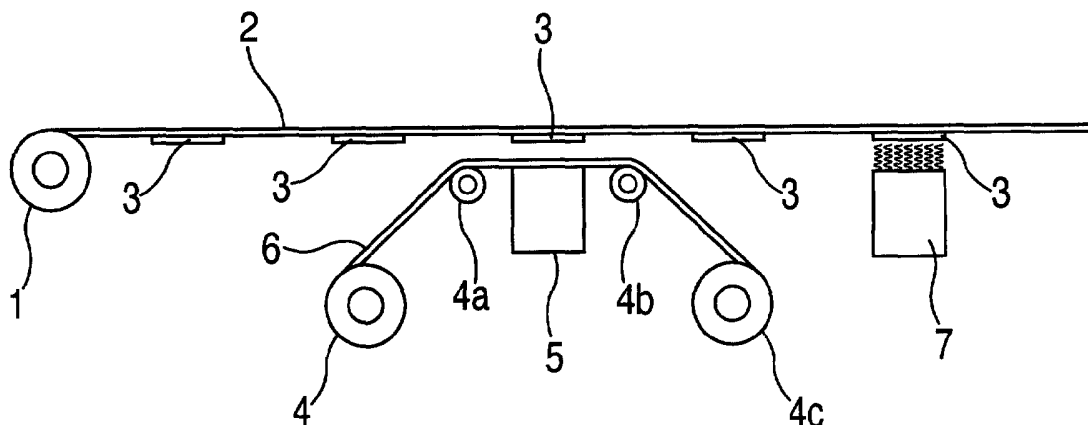
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[Continued on next page]

(54) Title: PREPARATION OF NOVEL PHYSICAL TRANSFER ELEMENTS SUCH AS HOT STAMPING FOIL AND METHODS FOR USING THE SAME IN PRODUCING CHEMICALLY RESISTANT BONDS



(57) Abstract: A technique is disclosed for transferring information from a hot stamping foil (6) to a substrate (3) wherein the adhesive used to attach the information to the substrate (3) is a solid, radiation-curable resin which is cured by radiation to form a tenaciously adhered bond between the substrate (3) and the information transferred. The radiation used for curing the resin is ultraviolet or electron beam radiation. The resulting bond is resistant to solvents, chemicals, detergents, heat and mechanical stresses likely to be encountered in the use of the substrates. The invention is capable of use with various substrates including polyvinylchloride, polyesters and/or paper-based products such as heavy cardboard. The information to be transferred to the substrate (2) by use of the hot stamping foil (6) may take the form of colors, metallic films, high refractive index materials, clear coats, adhesive coats, holographic images, lettering, pictures, artwork and the like.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/01312

A. CLASSIFICATION OF SUBJECT MATTER
 IPC(7) : B44C 1/165,1/17; B32B 31/00,31/20; B41M 3/12
 US CL : 156/230,233,240,247,277,289; 427/146,147,148; 428/40.1,195.1,202,203,204,343,914,915
 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)
 U.S. : 156/230,233,240,247,277,289; 427/146,147,148; 428/40.1,195.1,202,203,204,343,914,915

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 01-202492 A (DOI et al) 15 August 1989 (15.08.1989), see entire document	1-8, 10-13, 15-22, 24-29, 37-34, 36-38, 39-51 and 53
Y		14 and 52
X	US 5,028,290 A (CURIEL) 02 July 1991 (02.07.1991), see entire document	27, 28, 29 and 35
Y	EP 498040 A1 (MINNETIAN et al) 12 August 1992 (12.08.1992), see entire document.	14 and 52

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/01312

Continuation of Item 4 of the first sheet:

Title is too long (21+ words) and overly precise.

New Title:

Hot Stamping Foil and Methods for its Preparation and Use

Continuation of B. FIELDS SEARCHED Item 3:

EAST Search:

Databases: USPAT, USPGPUB, EPO, JPO, Derwent, IBM-TDB

Search terms: UV, care, transfer, transferred, transferable, transferring, print, printed, printing, cure, cured, curing, pre, post, foil, currency, suess, adhesive, label, information, indicia, reverse