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(54) **Manufacturing process for diary covers and similar items**

(57) The present invention relates to a manufacturing process for diary covers and similar items, according to which covers have a monolithic structure and are made of suitable plastic materials, such as polyurethane, PVC, TR or rubber, with moulding technique.

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Description

[0001] The present patent application relates to a manufacturing process for diary covers and similar items.

[0002] As it is known, diary covers are usually made of real or synthetic leather and characterised by a rigid bearing structure, while the front surface is padded with a layer of soft material.

[0003] The process that is currently used to produce such covers is quite complicated and requires the use of sophisticated, expensive automatic machines defined as "cover-making machines" by experts.

[0004] According to the traditional process, the rigid structure of the cover with the front soft pad is realised first. Then the same is covered with a suitable layer of real or synthetic leather.

[0005] In particular, the rigid bearing structure is of multilayer type (or "sandwich"), since it comprises an internal layer of cardboard, an intermediate layer of foam rubber and an external layer of thin cardboard.

[0006] The external layer of thin cardboard is turned over and glued to the cardboard layer after the introduction of the soft foam-rubber layer. Once the multilayer structure has been realised, the same is cut to measure.

[0007] A first section of the multilayer structure will act as the diary front cover and a second identical section will act as the rear cover.

[0008] To this purpose, the two multilayer sections are glued to a suitable piece of real or synthetic leather. Then the perimeter of the leather piece is turned inward and glued against the two sections of the hardening multilayer structure.

[0009] The last operation is carried out with the sophisticated, expensive "cover-making machines".

[0010] It must be noted that the assembly of this structure with the diary is carried out according to a standardised technology, according to which the first and the last page of the diary are glued against the internal side of the front cover and the rear cover, respectively.

[0011] As mentioned earlier, the new process according to the present invention is more practical, economical and efficient than the traditional process described above.

[0012] Thanks to the new technology, from a basically handicraft process that makes use of many manual operations, the production of diary covers becomes an almost completely automated industrial process.

[0013] The basic principle of the present invention is the production of diary covers by means of injection or moulding technique using various plastic materials, such as polyurethane, PVC, TR, rubber, etc.

[0014] The process according to the present invention basically consists in a single operating step, in which the moulding material is injected inside a suitably designed mould.

[0015] The diary covers produced with the new technology are no longer characterised by a composite mul-

tilayer structure. Instead, they feature a monolithic structure, with a much higher resistance to wear compared to traditional leather covers.

[0016] It appears evident that the mould used to produce diary covers according to the present invention allows for obtaining covers having the desired thickness and size.

[0017] Moreover, it must be noted that the covers produced according to the process of the present invention may be provided with a softer external surface in order to obtain the same effect as the padded side of traditional covers.

[0018] This is obtained using the known moulding technologies, by introducing layers of plastic material with different softness (i.e. more rigid in the inside and softer on the outside) in the mould.

[0019] Finally, it must be noted that the covers produced with the process according to the present invention can be assembled with diaries using the traditional technique, i.e. by gluing the first and the last page of the diary against the internal side of the front cover and the internal side of the rear cover, respectively.

Claims

1. Manufacturing process for diary covers and similar items **characterised in that** covers have a monolithic structure and are made of suitable plastic materials, such as polyurethane, PVC, TR or rubber, with moulding technique.
2. Manufacturing process for diary covers and similar items, according to claim 1, **characterised in that** covers are produced by means of successive layers of plastic materials having a different softness, preferably more rigid in the inside and softer on the outside.



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EUROPEAN SEARCH REPORT

Application Number
EP 00 83 0599

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.7)
X	GB 1 138 964 A (TWINLOCK)	1	B42C7/00
Y	* the whole document *	2	
X	US 3 088 753 A (MORTIMER S. SENDOR) 7 May 1963 (1963-05-07) * the whole document *	1	
X	FR 1 133 453 A (ROMULO FIUMARELLI) 27 March 1957 (1957-03-27) * the whole document *	1	
Y	US 4 111 460 A (ALVIN V. ROBERTS) 5 September 1978 (1978-09-05) * the whole document *	2	
Y	US 3 454 694 A (EASTMAN KODAK) 8 July 1969 (1969-07-08) * the whole document *	2	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) B42C B42D
Place of search THE HAGUE		Date of completion of the search 30 January 2001	Examiner Loncke, J
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 83 0599

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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30-01-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 1138964	A		NONE	
US 3088753	A	07-05-1963	NONE	
FR 1133453	A	27-03-1957	NONE	
US 4111460	A	05-09-1978	NONE	
US 3454694	A	08-07-1969	NONE	