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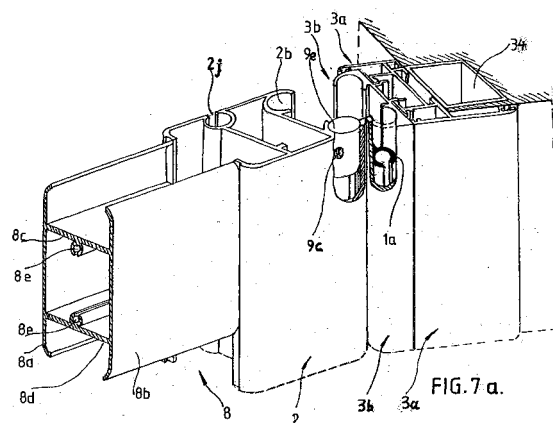
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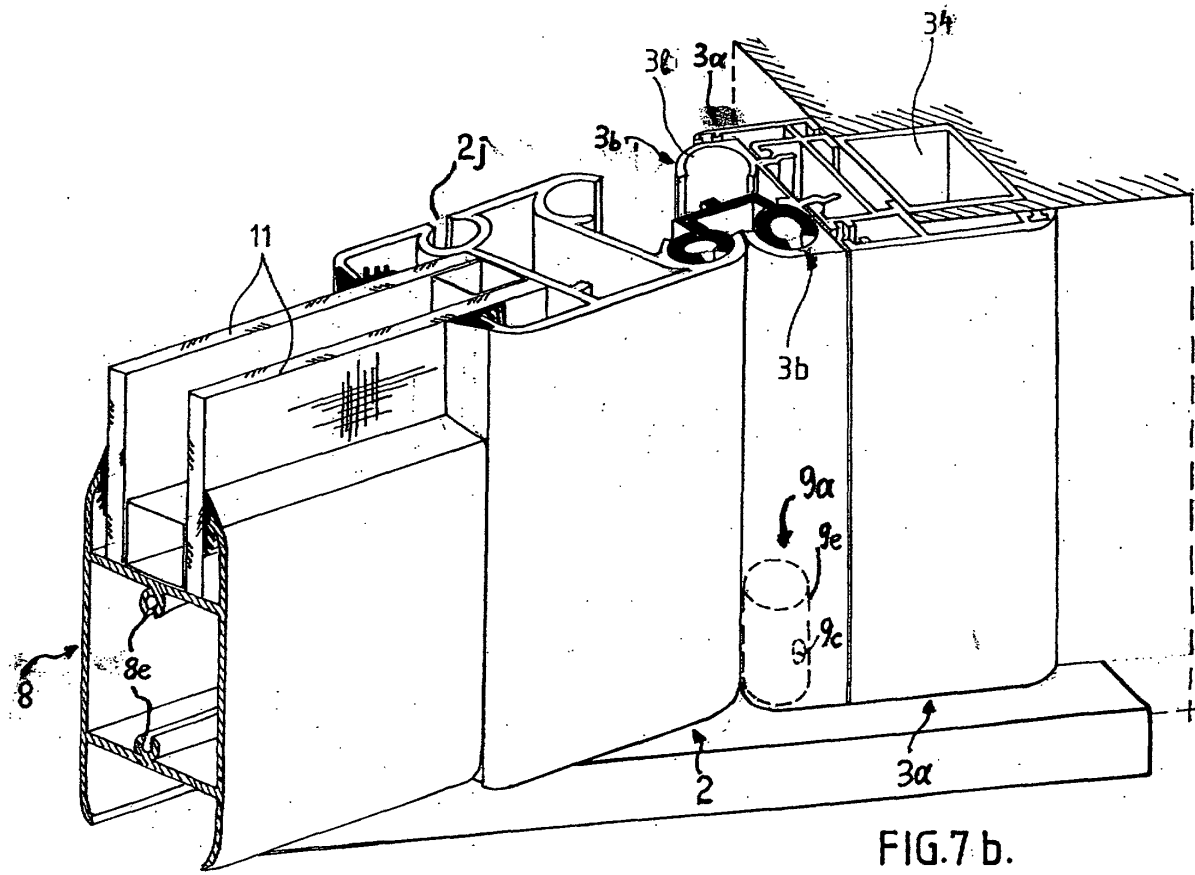
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(54) **Pivotable shutter panel assembly**

(57) The present invention relates to the field of shutter panels and more particularly provides a functionally organized system of profiles for a reliable, low cost shutter panel assembly process. The pivotable shutter assembly of the invention comprises in combination as illustratively shown in Fig. 7a, a single elongated hinge profile portion (1) extending along the vertical length of each one of the panels and of the mounting member (3), said elongated hinge profile portion (1) being provided with at least one pair of adjacent uniformly oriented circular sectors (1a,1b), and preferably including a third circular sector (1d), a frame profile portion (2) for surrounding and supporting each one of the panels in a rectangular configuration and presenting a pair of annular recesses (2a,2b) at one side thereof for receiving any of said pair of adjacent, uniformly oriented circular sectors (1a,1b) of said elongated hinge profile portion (1), and a mounting member profile portion (3) presenting at least one annular recess (31) for receiving any of said pair of adjacent, uniformly oriented circular sectors (1a, 1b) of said elongated hinge profile portion (1), wherein the pivotable shutter panel assembly is constructed using one said elongated hinge profile portion (1) for each pair of adjacent panels and engaging each one of said pair of adjacent, uniformly oriented circular sectors (1a, 1b) of the elongated hinge profile portion (1) within each one of opposing annular recesses (2a,2b) of the frame profile portion (2) of said pair of adjacent panels and using one said elongated hinge profile portion (1) to connect one of said pair of annular recesses (2a,2b) of the

frame profile portion (2) of the first one of said panels to said annular recess (31) of the mounting member profile portion (3).







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# EUROPEAN SEARCH REPORT

Application Number  
EP 02 38 6011

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	DE 93 04 204 U (RAU D.) 13 May 1993 (1993-05-13) * page 3, line 1 - line 11; figures * ----	1,7	E05D1/04 E05D3/06 E06B3/48 E05D15/26 E05D7/02 E05D5/06
X	DE 86 33 829 U (MARKISEN-KLAIBER) 19 March 1987 (1987-03-19) * page 7, paragraph 1 - page 9, paragraph 1; figures * ----	1	
Y	FR 2 769 040 A (FERMETURES PALLAUD) 2 April 1999 (1999-04-02) * page 2, line 37 - line 38; figure 1 * ----	2,3	
Y	US 4 878 530 A (JEAN MARIELLE) 7 November 1989 (1989-11-07) * column 3, line 44 - column 4, line 55; figures 1,2,4-10 * -----	2	
Y		3	
A		1,6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E05D E06B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 April 2003	Examiner Witasse-Moreau, C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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 &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04C01)



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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☒ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:  
1-3, 6, 7, 9
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 02 38 6011

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1,2,3,6

pivotable shutter panel assembly with door profiles and  
frame profile linked via hinge profile portions

2. Claims: 4,5

alternative types of filling material for the panels

3. Claims: 7,9

additional profiles (20, 30) for offsetting the rotation  
axis of folding wings

4. Claim : 8

edge profile (4) covering the abutting ends of two  
cooperating shutters

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 38 6011

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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29-04-2003

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82