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(54) **Concealed hinge for doors or windows**

(57) A concealed hinge (1) for doors or windows (2) constituted by a frame or case (3) with which at least one leaf (4) is rotatably associated, comprising a bridge (5) that is approximately U-shaped in plan view so as to form a base (6) from which a first arm and a second arm (7, 8) protrude which are approximately mutually parallel,

each arm interacting selectively and respectively with first and second snap-acting means that are adapted to guide the opening of the leaf (4) from a closed condition to a first stable condition rotated through approximately 90°, followed by a second stable condition rotated through approximately 90° more, and vice versa.

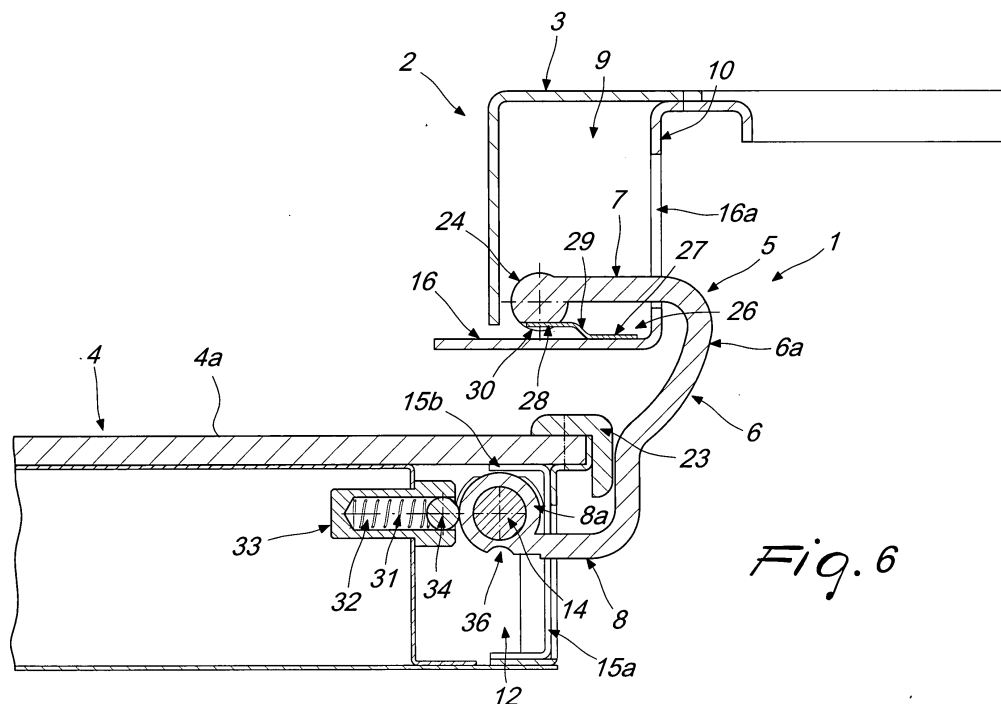


Fig. 6

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EUROPEAN SEARCH REPORT

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EP 09 42 5224

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CH 399 234 A (KRONE KG [DE]) 31 March 1966 (1966-03-31)	1,2,6-9, 29	INV. E05D3/12
Y	* page 2, line 104 - page 3, line 65;	3	E05D11/10
A	figures 1-5 *	11	

X	US 6 817 063 B1 (NANIA ADRIAN [US]) 16 November 2004 (2004-11-16)	1,2,6, 15-17, 29	
Y	* abstract; figures 4,8 *	11-14	

Y	EP 1 098 027 A2 (CMI SRL [IT]) 9 May 2001 (2001-05-09)	1-10, 28, 29, 32, 33	
	* abstract; figures *		

Y	WO 2004/027189 A1 (CMI SRL [IT]) 1 April 2004 (2004-04-01)	1-10, 28, 29, 32, 33	
	* page 3, paragraph 4-5; figures *		

Y	DE 93 14 375 U1 (HETTICH PAUL GMBH & CO [DE]) 10 February 1994 (1994-02-10)	11-14	
	* figures *		

A	DE 92 03 230 U1 (REMIS GMBH) 27 May 1992 (1992-05-27)	30, 31	TECHNICAL FIELDS SEARCHED (IPC) E05D
	* figure 5 *		

The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 7 February 2014	Examiner Witasse-Moreau, C
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			

EPO FORM 1503 03.82 (P04C01)



Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due 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 those claims for which no payment was due.

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:

☒ 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:

1-17, 28-33

☐ The present supplementary 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 (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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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: 1-17, 28-33

Concealed hinge with two snap-acting means for allowing a sequenced opening

2. claims: 18-27

Sequenced concealed hinge with means for allowing alignment with additional hinges associated with same door

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

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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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07-02-2014

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