



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



Publication number:

**0 447 906 A3**

(12)

## EUROPEAN PATENT APPLICATION

(21) Application number: 91103649.9

(51) Int. Cl.<sup>5</sup>: E05B 35/00, E05B 65/52

(22) Date of filing: 09.03.91

(30) Priority: 16.03.90 JP 67597/90  
26.02.91 JP 30991/91

(43) Date of publication of application:  
25.09.91 Bulletin 91/39

(84) Designated Contracting States:  
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

(88) Date of deferred publication of the search report:  
16.10.91 Bulletin 91/42

(71) Applicant: TAMURA PLASTIC MFG CO., LTD  
3-41, Kokihigashi

Komaki-shi, Aichi-ken(JP)

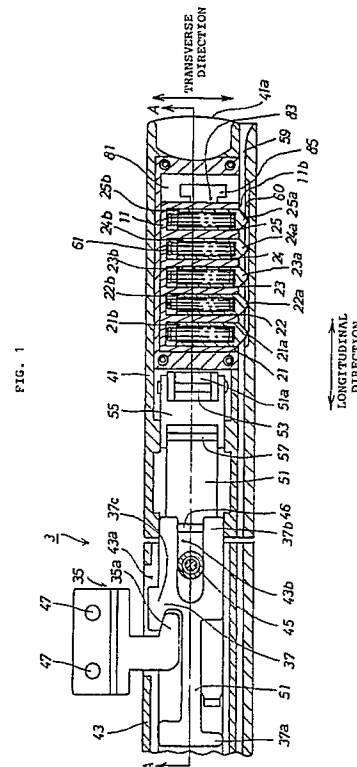
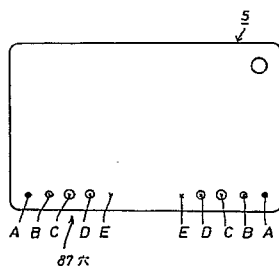
(72) Inventor: Sakai, Tadashi  
6-9, Nakayama-cho  
Seto-shi, Aichi-ken(JP)

(74) Representative: Vetter, Hans, Dipl.-Phys. Dr. et al  
Patentanwälte Dipl.-Ing. Rudolf Magenbauer  
Dipl.-Phys. Dr. Otto Reimold Dipl.-Phys. Dr.  
Hans Vetter, Dipl.-Ing. Martin Abel,  
Hölderlinweg 58  
W-7300 Esslingen(DE)

(54) Locking device for unlocking or locking by the insertion of a card key provided with a plurality of holes.

(57) In the improvement to a locking device (3) of this invention, a slider (11) is mounted for sliding by a card key with tumblers (21 - 25) being pushed in the sliding direction by the card key. In addition, since the tumblers (21 - 25) are pushed into the slider (11), the slider (11) does not prevent the card key from sliding. Consequently, unlocking or locking operations can be attained by sliding the card key along the tips of the tumblers (21 - 25) without stopping of the card key by a step portion. Therefore, the improvement to a locking device (3) of the invention effects smoother unlocking or locking operation than a conventional locking device.

FIG. 3



EP 0 447 906 A3



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number

EP 91 10 3649

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.5)
A	FR-A-1 010 520 (POHLENZ)  * the whole document * ---	1, 2, 5, 6, 10, 11, 14, 15, 19	E05B35/00 E05B65/52
D, A	US-A-4 754 630 (KAWAKAMI)  * the whole document * -----	1, 2, 5, 6, 10, 11, 15, 16	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			E05B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 AUGUST 1991	Examiner VESTIN
<b>CATEGORY OF CITED DOCUMENTS</b> 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			