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(72) Inventor: **Galliazzo, Giuliano**  
**36042 Breganze (Vicenza) (IT)**

(74) Representative: **Modiano, Guido, Dr.-Ing. et al**  
**Modiano & Associati SpA**  
**Via Meravigli, 16**  
**20123 Milano (IT)**

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(71) Applicant: **Topp S.r.l.**  
**36064 Mason Vicentino,**  
**Frazione Villaraspa (Vicenza) (IT)**

(54) **Chain-drive actuator**

(57) A chain-drive actuator (10) that is useful particularly but not exclusively for closing and opening horizontally-hinged doors and windows, and comprises, within a box-like containment body (11), motor means (13) connected to a reduction unit (14) that is in turn coupled in output to an actuation unit (15) that comprises a chain (16) with an outer end preset to pass through a corresponding opening formed in the box-like body. The actuator comprises guiding means (19) for the chain (16) that comprise at least one guiding slot (21), which is formed at the bottom of the box-like body and in which an inner end (23) of the at least one chain is slidingly guided so as to form a movable stroke limiter during traction and retraction.

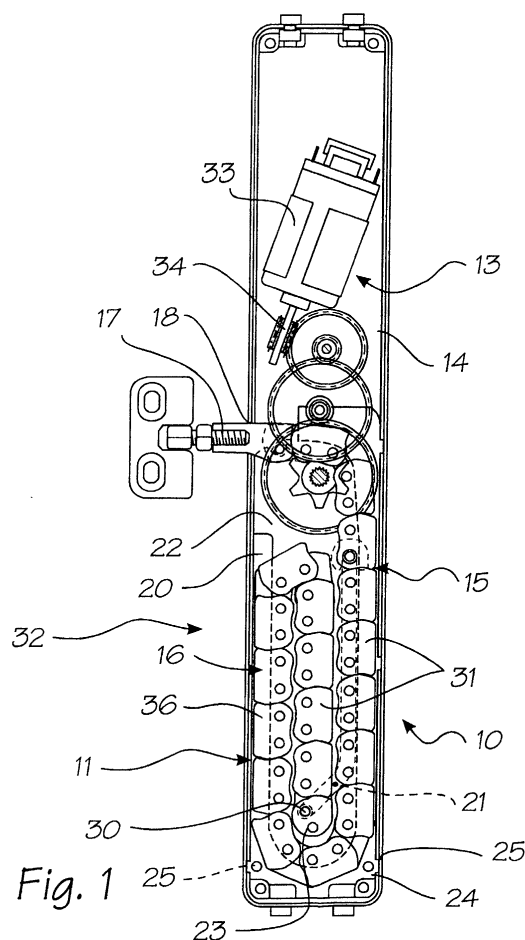


Fig. 1



European Patent  
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# EUROPEAN SEARCH REPORT

Application Number  
EP 02 01 1561

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 2 159 600 A (CRAFTBILT DEV) 4 December 1985 (1985-12-04)	1-3,6-9, 11	E05F15/12 E05F11/06
Y	* page 2, line 36 - line 68; figure 3 *  * page 2, line 60 - line 62 * * page 2, line 46 - line 53 * * page 2, line 20 - line 23 * ----	4,5,10, 12	
Y	EP 0 864 720 A (TOPP S R L) 16 September 1998 (1998-09-16) * column 3, line 21 - line 49; figures 3,4,7,8 *	4,5,12	
Y	US 3 090 613 A (BECHTOLD PAUL E) 21 May 1963 (1963-05-21) * column 3, line 31 - line 33; figure 7 * -----	10	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E05F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 7 August 2003	Examiner Guillaume, G
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 02 01 1561

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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07-08-2003

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2159600	A	04-12-1985	NZ 208320 A	30-06-1987
			AU 578472 B2	27-10-1988
			AU 4305585 A	05-12-1985
EP 0864720	A	16-09-1998	IT PD970051 A1	14-09-1998
			EP 0864720 A2	16-09-1998
US 3090613	A	21-05-1963	NONE	

EPO FORM P0459

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