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54 Cable type window winder with simplified kinematic chain and electrical or manual drive.

57 The invention relates to a window winder with a closed cable-type, kinematic chain (6), in which all the traditional items for guiding, driving or tensing the cable have been eliminated, as have the supports and parts which are welded or riveted together.

The unit is secured to the vehicle door by tightening three nuts which have been previously arranged on the corresponding bolts or screws fastened to it, thus making the assembly operation extremely easy, being extended to its use in a double rail (1,1') by simply duplicating its kinematic chain and adding the synchronizing element (17-19) between both.

There is a rail or guide element (1) along which a drive slide (2) moves. The rail is equipped with a set of end supports (3,4) and the drive slide (2) is connected to a steel cable (6) which travels through these supports, with the ends of the cable connected to a tensioner drum (5) mounted on the rail.

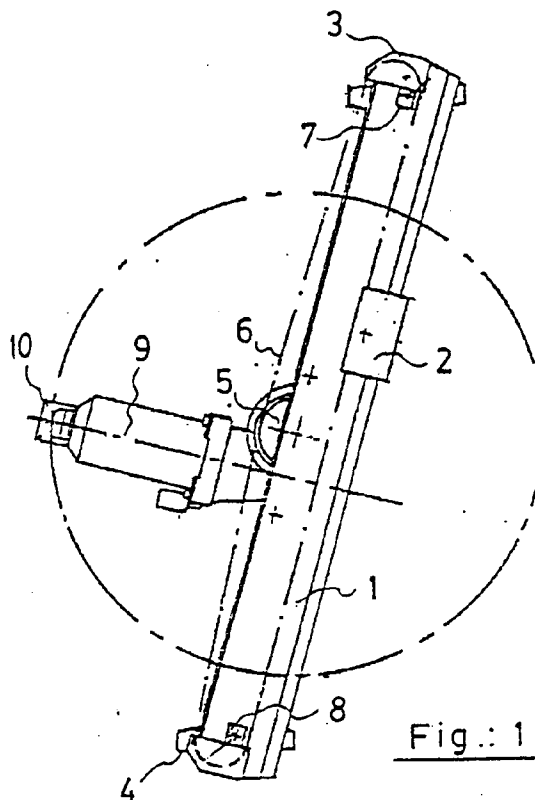


Fig.: 1



European Patent
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EUROPEAN SEARCH REPORT

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EP 94 50 0179

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.6)
A	DE-A-32 20 431 (NIPPON CABLE SYSTEM INC.) * page 6 - page 7, paragraph 2; figures 1-4 *	1	E05F11/48
A	DE-A-37 40 579 (METALURGICA CARTO LTDA) * column 5, line 53 - line 64; figures 1,2 *	1	
A	DE-A-31 36 890 (HÜLSBECK & FÜRST GMBH & CO KG) * page 6, paragraph 1 - paragraph 2 * * page 7, paragraph 2; figure 1 *	1	
A	FR-A-2 385 869 (TERENZIO SESSA) * page 4 - page 7; figures 1-8 *	1,2	
A	DE-A-29 32 295 (SABAT) * page 11, last paragraph - page 12, paragraph 1; figure 2 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			E05F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 June 1995	Examiner Van Kessel, J
CATEGORY OF CITED DOCUMENTS		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	
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			

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