



(19)

Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 957 062 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
21.03.2001 Bulletin 2001/12

(51) Int. Cl.⁷: B66F 7/08

(43) Date of publication A2:
17.11.1999 Bulletin 1999/46

(21) Application number: 99109616.5

(22) Date of filing: 14.05.1999

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

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 14.05.1998 IT MO980104

(71) Applicant: GIULIANO S.r.l.
42015 Correggio (Reggio Emilia) (IT)

(72) Inventor: Vignoli, Giuliano
41100 Modena (IT)

(74) Representative:
Modiano, Guido, Dr.-Ing. et al
Modiano Gardi Patents,
Via Meravigli, 16
20123 Milano (IT)

(54) Linkage with reduced starting load for moving the ramps of compact auto lifts for motor vehicles

(57) A linkage with reduced starting load for moving the ramps (1) of compact auto lifts comprising a base carriage (4) which can slide at floor level on a corresponding footing (5) and has a preset horizontal stroke, an end of a fluid-actuated actuator (6) and a contiguous end of a linkage element (7) being respectively coarticulated to said carriage (4), the length of said actuator (6) being axially variable, said linkage element (7) having eccentric means (8) for a partial rotation of said linkage

element (7) on a vertical plane, the opposite end of said linkage element (7) being in turn slidingly articulated in a hinge-like manner, by way of corresponding articulation means (9), to the body of a lever (10) for lifting the corresponding ramp (2) by contact, the opposite end of said actuator (6) being articulated to a rod-like member (2) which composes a pantograph structure for lifting said ramps (1).

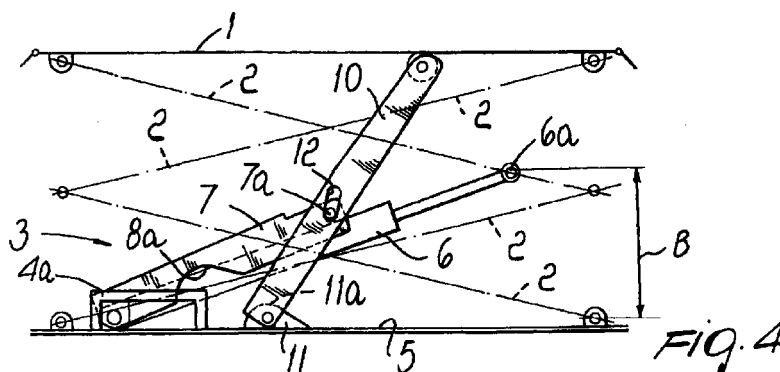


FIG. 4

EP 0 957 062 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 10 9616

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	US 2 937 852 A (CLARKE) 24 May 1960 (1960-05-24) * the whole document *	1	B66F7/08
A	US 2 533 980 A (WEAVER) 12 December 1950 (1950-12-12)		
A	EP 0 372 246 A (JLG INDUSTRIES) 13 June 1990 (1990-06-13)		
A	EP 0 286 615 A (MÄKELÄ) 12 October 1988 (1988-10-12)		
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B66F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 January 2001	Examiner Van den Berghe, E
<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 & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04C01)

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

EP 99 10 9616

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

25-01-2001

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 2937852	A	24-05-1960	NONE		
US 2533980	A	12-12-1950	NONE		
EP 372246	A	13-06-1990	US	4890692 A	02-01-1990
			AU	603519 B	15-11-1990
			AU	4543589 A	19-07-1990
			GB	2225771 A,B	13-06-1990
			JP	2188396 A	24-07-1990
EP 286615	A	12-10-1988	FI	871591 A	11-10-1988