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(54) **Fluid cylinder, preferably for actuating a grab bucket**

(57) An actuator device (8), in particular for an orange-peel bucket (1), having a support (9), a hydraulic jack (10) provided with a liner (15) and a rod (18) movable along an actuating axis (19), and a joint (24) hinging in the jack (10) to the support (9); the joint (24) is provided with inner passages to feed oil to the jack (10) without outer flexible pipes.

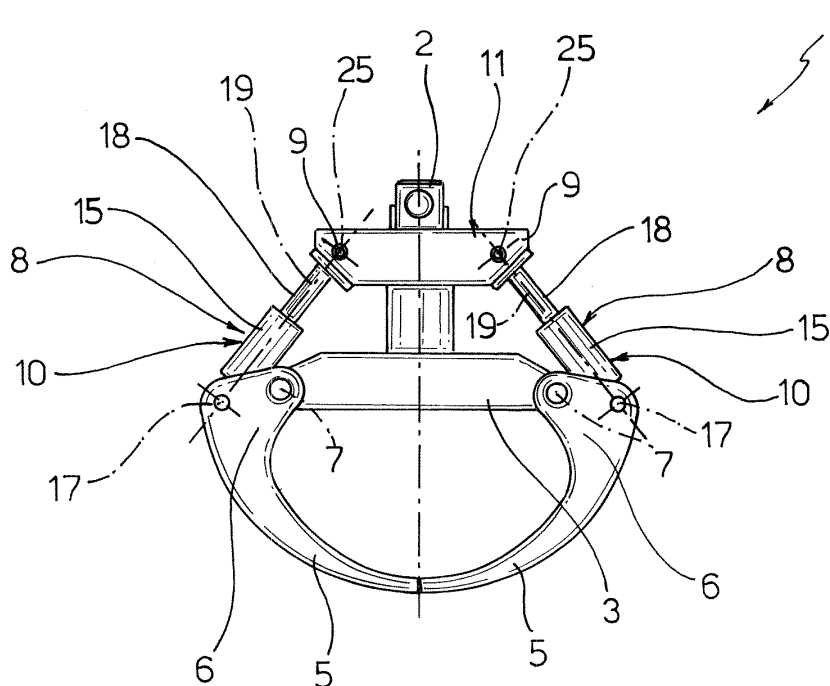


Fig.1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 10 0872

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	US 3 202 062 A (BURDEN ROBERT W) 24 August 1965 (1965-08-24) * the whole document *	1-4	INV. E02F9/22 E02F3/47 B66C3/16 F15B15/14
X	US 3 152 522 A (BURDEN ROBERT W ET AL) 13 October 1964 (1964-10-13) * the whole document *	1	
X	US 1 534 439 A (BURKHARDT HANS ET AL) 21 April 1925 (1925-04-21) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			E02F B66C F15B F16C
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 16 May 2006	Examiner Laurer, M
<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>			

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EPO FORM 1503 03.82 (P04C01)

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims 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 the first ten claims.

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, 2+3-4



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: 1,2+3-4

directed to an actuator device with means for improving the fluid supply to the actuator device;

2. claims: 5-11

directed to an actuator device with means for improving the internal fluid supply within the actuator device;

3. claim: 12

directed to an actuator device with means for improving the manufacturing of the fluid/mechanical coupling to the supporting means;

4. claims: 13-14

directed to an "orange-peel" bucket in which an actuating device substantially comprising the features of claim 1 is used in order to improve actuation and fluid supply in said bucket;

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

EP 06 10 0872

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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16-05-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3202062	A	24-08-1965	NONE	

US 3152522	A	13-10-1964	NONE	

US 1534439	A	21-04-1925	NONE	
