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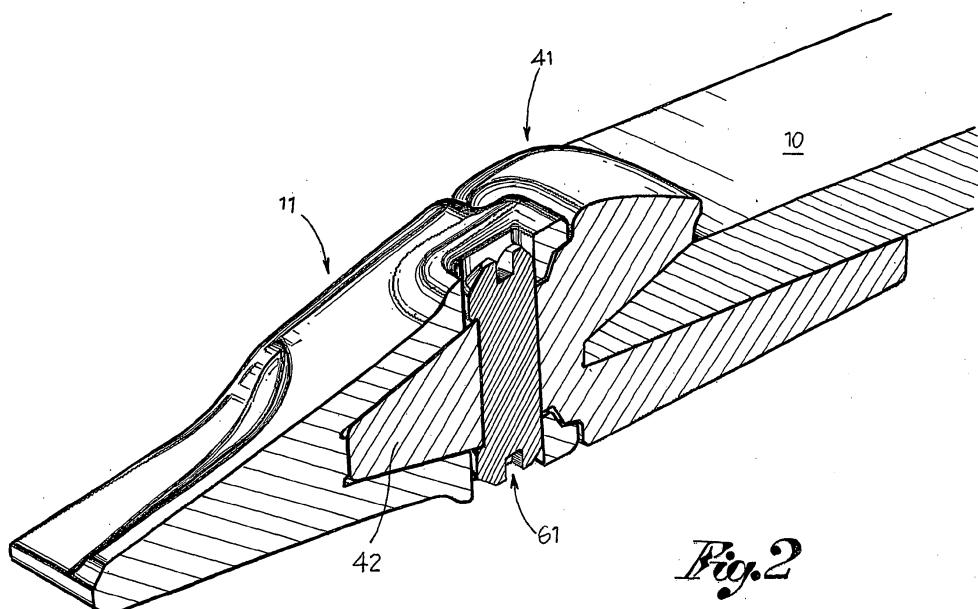
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(54) Tip for earth moving machinery and locking key therefore

(57) The invention relates to a tip assembly for earth moving machinery, comprising a tip (11) having a pocket (12) open at the back, said tip exhibiting a hole (16) for seating a locking key, a adapter (41) having a nose (42) that geometrically couples with said pocket (12), said nose being crossed by a seat (43) for seating the locking key, and a locking key (61) inserted in said hole in the tip and in said seat in the adapter for locking the tip to

the adapter. At least one surface of the nose exhibits a lowered or recessed zone obtained around the seat for the locking key. At least the wall of the pocket facing said surface of the nose internally exhibits a relief complementary to said lowered or recessed zone. In this way, the coupling between the tip and the adapter is made stronger by the interaction between at least two respective facing surfaces.





EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2 921 391 A (OPSAHL EUGENE G) 19 January 1960 (1960-01-19)	1,2,4,5	INV. E02F9/28
A	* the whole document * -----	3	
X	US 4 919 566 A (CARON JAMES O [US] ET AL) 24 April 1990 (1990-04-24)	1,2,4	
Y	* figures 7,8,10,11 * -----	3	
X	US 3 675 350 A (MULCAHY HARRY W ET AL) 11 July 1972 (1972-07-11)	1,2,5	
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X	US 2003/070330 A1 (OLDS JOHN R [US] ET AL) 17 April 2003 (2003-04-17)	1	
Y	* figures 1,3,4 *	3	
X	US 2 251 169 A (SEAL VOORHEES N) 29 July 1941 (1941-07-29)	1,2,5	
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A	* the whole document *	3,4	E02F E02D
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	* figures 34-36 *		
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	* figures *		

The present search report has been drawn up for all claims			
1	Place of search Munich	Date of completion of the search 18 August 2011	Examiner Laurer, Michael
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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Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due 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 those claims for which no payment was due.

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:

1-5

The present supplementary 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 (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
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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: 1-5

directed to a tip for a bucket of an earth moving machinery wherein a pocket is arranged therein having a special load bearing shape;

2. claims: 6-10

directed to a locking key for a tip assembly with two elongate side portions and an elastomeric material arranged therebetween, and with a plane outer surface;

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

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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.

18-08-2011

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