



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 960 982 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
02.10.2002 Bulletin 2002/40

(51) Int Cl.7: **E02F 9/16, B66C 13/54**

(43) Date of publication A2:
01.12.1999 Bulletin 1999/48

(21) Application number: **99660094.6**

(22) Date of filing: **31.05.1999**

(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

(72) Inventor: **Kareinen, Anssi Ensio**
80260 Joensuu (FI)

(74) Representative:
Hjelt, Dag Silvio Hjalmar Andrea et al
Borenus & Co Oy Ab,
Folkskolegränd 3
00100 Helsingfors (FI)

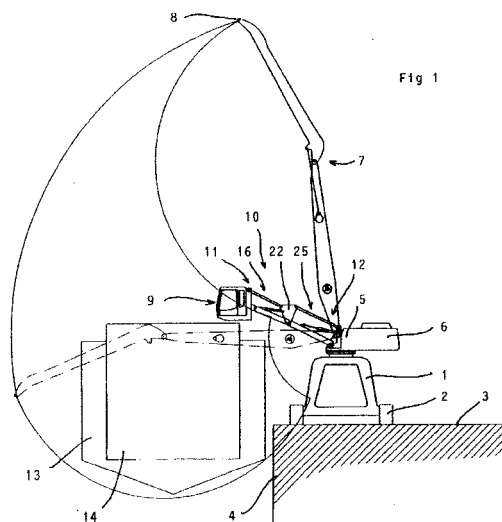
(30) Priority: **29.05.1998 FI 981206**

(71) Applicant: **Mantsinen Oy**
80400 Ylämylly (FI)

(54) **Cabin arrangement**

(57) The invention relates to an arrangement for adapting a steering cab (9) movably, in relation to a working machine, at the end of a boom arm (10). Said boom arm (10) is made up of several successive parallelogram shaped trapezoidal knuckle boom portions (16, 25) between which there is, respectively, an interconnecting piece (22) comprising at least three spaced boom link joints. A power means acts within each of said trapezoidal knuckle boom portions (16, 25) for changing the geometry of the respective trapezoidal knuckle boom portion (16, 25) with respect to its link joints.

The invention also relates to a method for extending the range of the path of a steering cab (9), wherein the altitude of the cab can be adjusted, said steering cab (9) being arranged in such a manner at an outer end (11) of a trapezoidal knuckle boom (16) attached to a working machine that the shape of said trapezoidal knuckle boom is adjustable by means of a power means (32). At least one further parallelogram shaped trapezoidal knuckle boom portion (25) is attached between the inner end of said trapezoidal knuckle boom and said working machine by means of a separate piece (22), said further parallelogram shaped trapezoidal knuckle boom portion being separately movable by means of a second power means (33).



EP 0 960 982 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 66 0094

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)
X	DE 44 43 170 A (SCHAEFF KARL GMBH & CO) 13 June 1996 (1996-06-13) * column 2, line 58 - column 6, line 6; figures *	1-7,9,10	E02F9/16 B66C13/54
X	AT 330 989 B (SCHMIDT ELISABETH ;SCHMIDT ELISABETH (ST)) 26 July 1976 (1976-07-26) * page 2, line 1 - page 3, line 47; figure 1 *	1-3,9,10	
A	DE 26 31 578 A (FUCHS FA JOHANNES) 19 January 1978 (1978-01-19) * figure 1 *	2	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B66C E02F
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 7 August 2002	Examiner Masset, M
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			

EPO FORM 1503 03/82 (P04C01)

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

EP 99 66 0094

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.

07-08-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 4443170	A	13-06-1996	DE 4443170 A1	13-06-1996
AT 330989	B	26-07-1976	AT 793371 A	15-10-1975
DE 2631578	A	19-01-1978	DE 2631578 A1	19-01-1978

EPO FORM P0459

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