Europäisches Patentamt European Patent Office Office européen des brevets

(11) **EP 1 178 222 A3**

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **02.01.2003 Bulletin 2003/01**

(51) Int Cl.⁷: **F15B 13/06**, F15B 11/17

(43) Date of publication A2: 06.02.2002 Bulletin 2002/06

(21) Application number: 01116758.2

(22) Date of filing: 19.07.2001

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 31.07.2000 IT BO000473

(71) Applicant: Hydrocontrol S.p.A. 40060 Osteria Grande (IT)

(72) Inventors:

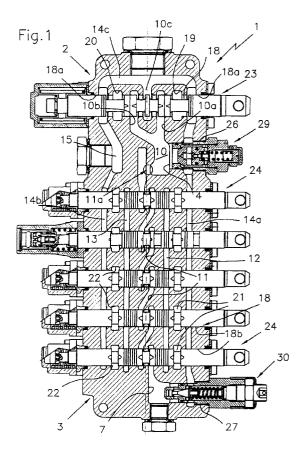
 Musiani, Massimo 40061 Minerbio (Prov.of Bologna) (IT)

 Bulgarelli, Claudio 41100 Modena (IT)

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

(54) Hydraulic distribution unit for controlling the actuation of a bush cutter

(57)A hydraulic distribution unit (2) for controlling the actuation of a bush cutter, comprising a high flowrate distribution unit associated with a rotary mower and a low flow-rate distribution unit associated with a positioning arm of the rotary mower; the distribution units have respective intake ducts (4,7) which are supplied by a high flow-rate pump and by a low flow-rate pump and respective discharges which lead into a common reservoir for collecting the oil; the distribution units are suitable to feed, by means of a pair of delivery manifolds (5,6), a motor for actuating the rotary mower and, by means of a series of pairs of delivery manifolds (8,9), a piston-type hydraulic servomechanism for mutually opposite movements of the positioning arm, the high flowrate and low flow-rate distribution units being provided as a single body which has a first portion (2) dedicated to the actuation of the rotary mower and a second portion (3) dedicated to the actuation of the positioning arm.





EUROPEAN SEARCH REPORT

Application Number

EP 01 11 6758

	DOCUMENTS CONSID	ERED TO BE RELEVAN	Τ	
Category	Citation of document with it of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
Х	US 3 146 593 A (STA 1 September 1964 (1 * column 2, line 66 claims 4,7,9-11; fi	964-09-01) - column 5, line 33;	1-7	F15B13/06 F15B11/17
А	US 3 759 292 A (BIA 18 September 1973 (* column 2, line 27 figures 1,2 *		1-7	
A	US 3 785 156 A (JUN 15 January 1974 (19 * abstract; figures	74-01-15)	1-3,5-7	
				TECHNICAL FIELDS SEARCHED (Int.CI.7) F15B A01D E02F
	The present search report has	peen drawn up for all claims Date of completion of the searc		Examiner
	THE HAGUE	7 November 200	1	henmacher, M
X : parti Y : parti docu A : tech O : non-	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anot unent of the same category nological background—written disclosure mediate document	E : earlier pater after the filin her D : document c L : document c	inciple underlying the int document, but public g date lited in the application ited for other reasons the same patent family	shed on, or

EPO FORM 1503 03.82 (P04C01)

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

EP 01 11 6758

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.

07-11-2002

cited in search re	ent eport	Publication date		Patent fam member(:	nily s)	Publication date
US 3146593	А	01-09-1964	GB	911053	A	21-11-1962
US 3759292	Α	18-09-1973	BE	792618		12-06-1973
			CA	976839		28-10-197
			DE	2261626		14-06-1973
			FR	2163536		27-07-1973
			GB	1413689		12-11-1979
			JP	48065382		08-09-1973
	w	NA ATES MANY AND SHAN STORY PROPER AREA SHAN SHAN SHAN SHAN SHAN SHAN SHAN SHA	SE 	390199	B 	06-12-1976
US 3785156	A	15-01-1974	NONE	-		

 $\stackrel{ ext{O}}{\boxplus}$ For more details about this annex : see Official Journal of the European Patent Office, No. 12/82