

(12)



(11) **EP 3 719 209 A3**

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 21.10.2020 Bulletin 2020/43

(43) Date of publication A2: **07.10.2020 Bulletin 2020/41**

(21) Application number: 20167603.8

(22) Date of filing: 01.04.2020

(51) Int Cl.:

E02F 3/20 (2006.01) E01C 23/09 (2006.01) E02F 3/18 (2006.01) E02F 3/36 (2006.01) E02F 5/08 (2006.01)

E01C 23/088 (2006.01) E02D 29/14 (2006.01) E02F 3/24 (2006.01) E02F 3/96 (2006.01)

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated Extension States:

BA ME

Designated Validation States:

KH MA MD TN

(30) Priority: 02.04.2019 IT 201900004936

(71) Applicant: Simex S.r.l.
40017 San Giovanni in Persiceto, Bologna (IT)

(72) Inventor: RISI, Mirco
I-40017 San Giovanni in Persiceto, BOLOGNA (IT)

(74) Representative: Crippa, Paolo Ernesto Jacobacci & Partners S.p.A. Piazza della Vittoria 11 25122 Brescia (IT)

(54) EXCAVATING ASSEMBLY AND OPERATING MACHINE COMPRISING THIS ASSEMBLY

- (57) The present invention relates to an excavating assembly (100) comprising
- at least one excavating apparatus (1) that can be used directly connected to an operating machine (106) for excavating trenches or removing layers of tarmac along curvilinear traveling paths and along linear traveling paths in an operating surface (Z);
- said excavating apparatus (1) comprising an excavating tool (8);
- said excavating tool (8) comprising an excavating tool axis of rotation (R) that is substantially parallel to the operating surface (Z);
- said excavating apparatus (1) comprising an excavating drive device or excavating drive motor (52) that actuate, and can be moved integrally with, the excavating tool (8);
- said assembly (100) also comprising a rotary support (101);
- said rotary support (101) comprising an excavator attachment saddle support (102) that can be connected to an operating machine (106), for example an excavator comprising a movable excavator arm (103);
- said rotary support (101) comprising a lower framework (104);
- said lower framework (104) being rotatably connected to said excavator attachment saddle (102) such that it rotates about a rotary support axis of rotation (V) that is substantially perpendicular to said operating surface (Z);
- said rotary support (101) comprising a driving motor (105) for rotating the support or support motor, which actuates, and can move integrally with, the excavator attachment saddle support (102) and initiates the rota-

tional movement of said lower framework (104);

- said excavating apparatus (1) being detachably connected to said lower framework (104) such that, by rotating said lower framework (104) with respect to said attachment saddle (102), said excavating tool (8) travels along a circular path.

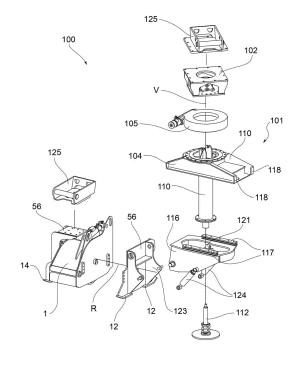


FIG.14



EUROPEAN SEARCH REPORT

Application Number EP 20 16 7603

5

J						
		DOCUMENTS CONSID				
	Category	Citation of document with ir of relevant passa	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
10	x		EIJING QSHT ENGINEERING 6 May 2015 (2015-05-06)	1-3,7-10	E02F3/20 E01C23/088	
15	Y	EP 1 048 787 A2 (MI RICHTER HENNING DR 2 November 2000 (20 * paragraphs [0009]	[DE])	1,3,6-10	E01C23/09 E02D29/14 E02F3/18 E02F3/24 E02F3/36 E02F3/96 E02F5/08	
20	Υ	DE 33 19 586 A1 (WA FRITZ) 6 December 1 * page 5, last para paragraph 2; figure	984 (1984-12-06) graph - page 7,	1,3,6-10		
25	А	WO 2017/046725 A1 (23 March 2017 (2017 * the whole documen	SIMEX ENG S R L [IT]) -03-23) t *	1,11		
					TECHNICAL FIELDS SEARCHED (IPC)	
30					E02F E01C E02D	
35						
40						
45						
1		The present search report has I				
	Place of search		Date of completion of the search	Examiner		
04001	Munich		10 September 2020	Kühn, Thomas		
PPO FORM 1503 03.82 (P04C01)	X : parl Y : parl doc	ATEGORY OF CITED DOCUMENTS ticularly relevant if taken alone ticularly relevant if combined with anothument of the same category	if taken alone E : earlier patent doc after the filing dat if combined with another D : document cited ir le category L : document cited fo		the application rother reasons	
55 PHO - OHO	A : technological background O : non-written disclosure P : intermediate document		& : member of the sa document	, corresponding		

2

EP 3 719 209 A3

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

EP 20 16 7603

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.

10-09-2020

)	Patent document cited in search report	Patent document ed in search report			Patent family member(s)	Publication date
	CN 104594170	A	06-05-2015	NONE		
5	EP 1048787 /	A2	02-11-2000	DE EP	19919025 A1 1048787 A2	02-11-2000 02-11-2000
	DE 3319586	 A1	06-12-1984	NONE		
0	WO 2017046725 /	 A1	23-03-2017	EP US WO	3350373 A1 2018258611 A1 2017046725 A1	25-07-2018 13-09-2018 23-03-2017
5						
)						
-						
•						
0						
5						
)						
5	-ORIM P0459					

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