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(54) Crusher and use thereof

(57)A crusher (1) is disclosed for comminuting material, in particular organic material, comprising a comminuting vessel (2) with an inner vertical side wall (3), a drive shaft (5) extending substantially vertically and centrally within said comminuting vessel, a crushing tool (7) arranged on said drive shaft within the comminuting vessel to rotate with the drive shaft, the crushing tool comprising at least one flexible, elongated crushing element (9) having a free end (11), the crusher furthermore comprising crusher drive means (13, 14) arranged to drive the rotation of said drive shaft, the comminuting vessel having an inlet opening (4) and an outlet opening (15), wherein the outlet opening of the comminuting vessel is situated in the cylindrical wall of the comminuting vessel at the horizontal level of said at least one crushing element, wherein the free end of the at least one crushing element extends out through the outlet opening during operation of the crusher when the drive means drives the rotation of the drive shaft and the crushing tool. The use of the crusher is furthermore disclosed, in particular for organic material to be used in the production ofbiogas.

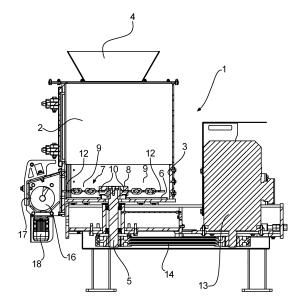


Fig. 3



EUROPEAN SEARCH REPORT

Application Number EP 14 16 7308

DOCUMENTS CONSIDERED TO BE RELEVANT EPO FORM 1503 03.82 (P04C01)

Category	Citation of document with ir of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)			
A		MEWA RECYCLING MASCHINEN t 2000 (2000-08-03) ; *	1-15	INV. B02C13/16 B02C13/286 B02C13/28			
A	WO 00/74912 A1 (BAC HELMUTH [AT]; WENDE 14 December 2000 (2 * the whole documer	2000-12-14)	1-15	B02C23/18			
А	DE 10 2006 006096 A ALTENBURGER MASCH [16 August 2007 (200 * the whole documen	[DE]) 7-08-16)	1-15				
				TECHNICAL FIELDS SEARCHED (IPC)			
				B02C			
The present search report has been drawn up for all claims							
,	Place of search	Date of completion of the search	Examiner				
	Munich	27 March 2015		acz, Ireneusz			
X : part Y : part docu A : tech O : non	CATEGORY OF CITED DOCUMENTS T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filling date Y: particularly relevant if combined with another document of the same category A: technological background C: non-written disclosure T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filling date D: document cited in the application L: document oited for other reasons A: member of the same patent family, corresponding						
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27-03-2015

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10				
	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	DE 19903526 A1	03-08-2000	NONE	
15	WO 0074912 A1	14-12-2000	AT 226131 T AT 407970 B AU 755118 B2 AU 4899700 A	15-11-2002 25-07-2001 05-12-2002 28-12-2000
20			BR 0011248 A CA 2375127 A1 CN 1353636 A DE 50000659 D1 DK 1181141 T3	05-03-2002 14-12-2000 12-06-2002 21-11-2002 10-02-2003
25			EP 1181141 A1 ES 2185594 T3 JP 3786602 B2 JP 2003501292 A PT 1181141 E US 6719454 B1	27-02-2002 01-05-2003 14-06-2006 14-01-2003 31-03-2003 13-04-2004
30	DE 102006006096 A1	16-08-2007	WO 0074912 A1 ZA 200108606 A DE 102006006096 A1 WO 2007090599 A1	14-12-2000 03-05-2002 16-08-2007 16-08-2007
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