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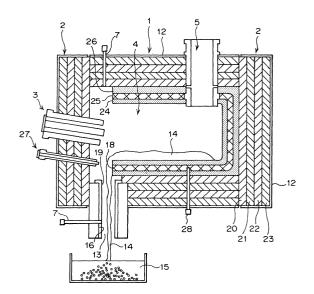
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(54) Ash Melting Device

An ash melting device employing the means of using a crucible (4) with a three-layer (24,25,26) structure, using an auxiliary burner (27) for prevention of the lowering of temperature in the vicintiy of the discharge outlet (13) employing furnace walls with a four-layer (20-23) structure to improve the heat insulating property and thereby improve the durability, providing lids (2) at both the left and right sides to enable the crucible to be taken out readily, etc. This ash melting device is intended to significantly improve durability even after a long period of use at a high temperature of 1600 to 1700°C or more, to resolve the problem of prevention of use of the melting furnace due to clogging of the vicinity of the discharge outlet by the cooling and solidification of the ash melt, to reduce fuel cost by the improvements in thermal efficiency through improvement of the heat insulating property of the furnace walls, and to enable the crucible to be exchanged readily in a short time.







EUROPEAN SEARCH REPORT

Application Number EP 01 00 0791

Category	Citation of document with in of relevant passag	dication, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
A	US 4 436 143 A (SEVASTAKIS GUS) 13 March 1984 (1984-03-13) * column 2, line 53 - column 3, line 55; figures 1,4,9 *		1,3,5,7	F23G5/08 F23G5/44 F23G7/00 F23M5/00
A	EP 0 051 910 A (AIK 19 May 1982 (1982-0 * abstract; figures	5-19)	1-3	
A	EP 1 111 305 A (ALS 27 June 2001 (2001- * claims 1,13; figu		1,4	
A	DE 36 02 244 C (MAR 18 December 1986 (1 * abstract; figure	986-12-18)	1	
A	EP 0 446 888 A (OSA 18 September 1991 (* column 4, line 22	1991-09-18)	1	TECHNICAL FIELDS
Α	US 4 359 209 A (JOH 16 November 1982 (1			SEARCHED (Int.Cl.7) F23G F23M
T	EP 1 319 893 A (MIN CO LTD (JP)) 18 Jun	OWA AKIRA ;HIKARI TECH e 2003 (2003-06-18) 		F27B
	The present search report has b	een drawn up for all claims		
	Place of search	Date of completion of the search		Examiner
	MUNICH	7 October 2003	Lec	laire, T
X : parti Y : parti docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone cularly relevant if combined with another to the same category nological background written disclosure	T: theory or principle E: earlier patent door after the filing date or D: document cited in L: document cited for &: member of the sar	ument, but publis the application other reasons	hed on, or

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

EP 01 00 0791

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.

07-10-2003

A A	13-03-1984 19-05-1982 27-06-2001	NONI JP AU AU EP ES FI DE EP JP NO TW	57081945 542880 6919481 0051910 266011 811335 19961384 1111305 2001215010 20006489 465711	B2 A A1 Y A A1 A1 A	22-05-198; 21-03-198; 20-05-198; 19-05-198; 01-09-198; 11-05-198; 21-06-200; 27-06-200; 21-06-200; 21-11-200;
A	27-06-2001	AU EP ES FI DE EP JP NO TW	542880 6919481 0051910 266011 811335 19961384 1111305 2001215010 20006489 465711	B2 A A1 Y A A1 A1 A	21-03-198 20-05-198 19-05-198 01-09-198 11-05-198 21-06-200 27-06-200 10-08-200 21-06-200
		EP JP NO TW 	1111305 2001215010 20006489 465711	A1 A A	27-06-200 10-08-200 21-06-200
С	18-12-1986		2504714		21-11-200.
		DE AT DE EP	3524714 3602244 36061 3660439 0208066	C1 T D1	10-07-1986 18-12-1986 15-08-1986 01-09-1986 14-01-1987
A	18-09-1991	JP JP DE DE EP US	69115084 69115084 0446888	A D1 T2 A2	06-10-1999 28-11-1999 18-01-1990 20-06-1990 18-09-1993 07-01-1992
Α	16-11-1982	BR CA EP	1182271	A1	20-12-1983 12-02-1983 13-07-1983
А	18-06-2003	JP AU EP US CN WO TW	8805601 1319893 2003097968 1388881 0225172	A A1 A1 T A1	27-03-2002 02-04-2002 18-06-2003 29-05-2003 01-01-2003 28-03-2002 11-10-2002
) A	A 16-11-1982	JP DE DE DE EP US A 16-11-1982 BR CA EP A 18-06-2003 JP AU EP US CN WO	JP 3267612 DE 69115084 DE 69115084 EP 0446888 US 5078065 A 16-11-1982 BR 8203885 CA 1182271 EP 0083390 A 18-06-2003 JP 2002089822 AU 8805601 EP 1319893 US 2003097968 CN 1388881 WO 0225172	JP 3267612 A DE 69115084 D1 DE 69115084 T2 EP 0446888 A2 US 5078065 A A 16-11-1982 BR 8203885 A CA 1182271 A1 EP 0083390 A1 B A 18-06-2003 JP 2002089822 A AU 8805601 A EP 1319893 A1 US 2003097968 A1 CN 1388881 T WO 0225172 A1