

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 August 2008 (28.08.2008)

(10) International Publication Number
WO 2008/101649 A3

(51) International Patent Classification:

C03B 5/167 (2006.01) C03B 17/04 (2006.01)
C03B 5/187 (2006.01) BOIF 7/00 (2006.01)
C03B 7/092 (2006.01)

(21) International Application Number:

PCT/EP2008/001232

(22) International Filing Date:

18 February 2008 (18.02.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10 2007 008 102.4

19 February 2007 (19.02.2007) DE

(71) Applicant (for all designated States except US): **UMI-CORE AG & CO. KG** [DE/DE]; Rodenbacher Chaussee 4, 63457 Hanau-Wolfgang (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SINGER, Rudolf** [DE/DE]; Am Sportfeld 1, 55270 Engelstadt (DE).

(74) Agent: **VOSSIUS & PARTNER**; Siebertstrasse 4, 81675 Munich (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FT, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

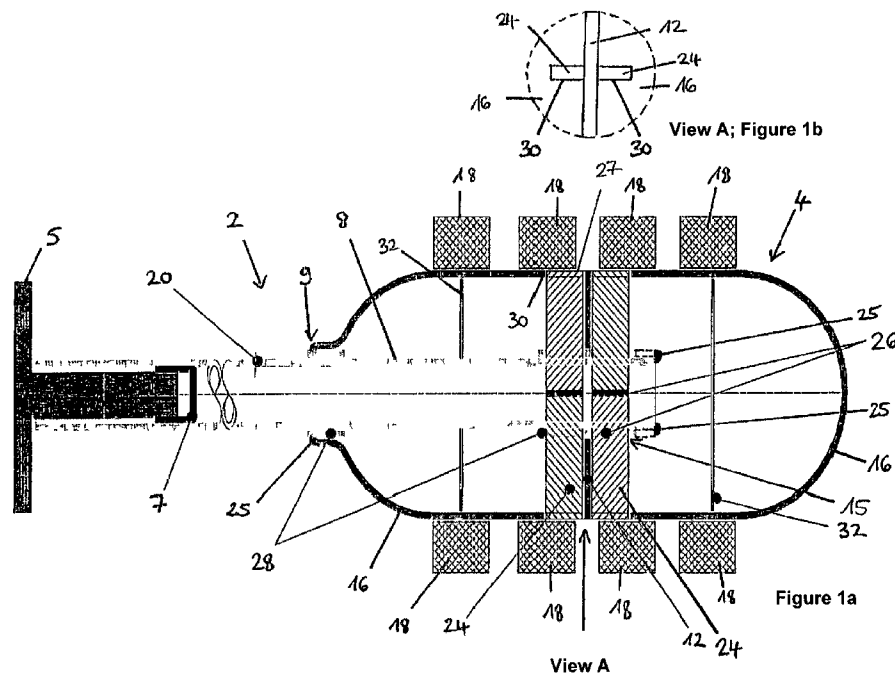
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
16 October 2008

(54) Title: APPARATUS AND METHOD FOR PROCESSING MOLTEN GLASS



(57) Abstract: Apparatus, which is suitable for being surrounded by molten glass, the apparatus having a shank which has at least one at least partially seamless tube consisting of an oxide dispersion-strengthened PGM material, the shank having at least one thickened portion on which an actuating device is arranged.

WO 2008/101649 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2008/001232

A. CLASSIFICATION OF SUBJECT MATTER
 INV. C03B5/167 C03B5/187 C03B7/092 C03B17/04 B01F7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
C03B BOIF

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
 EPO-Internal , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	DE 44 40 702 A1 (ILMENAU TECH GLAS [DE]) 11 July 1996 (1996-07-11)	1,6-9, 12,13, 16-19, 24, 28-30, 32,41
Y	abstract column 1, line 45 - column 2, line 47 column 3, line 48 - line 51 column 4, line 4; figures 1-7 ----- -/~	10,11, 14,15, 20,21, 23,25, 26, 33-40, 42,43

Further documents are listed in the continuation of Box C See patent family annex

* Special categories of cited documents

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
--	--

Date of the actual completion of the international search 20 May 2008	Date of mailing of the international search report 28/08/2008
---	--

Name and mailing address of the ISA/ European Patent Office, P B 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel (+31-70) 340-2040, Tx 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer Deckwerth, Marti n
---	---

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2008/001232

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	US 2003/101750 AI (GOLLER MARTIN H [US] ET AL) 5 June 2003 (2003-06-05) paragraphs [0017] - [0021] , [0070] - paragraph [0074] ; figure 1	42, 43
A	US 2002/046586 AI (SINGER RUDOLF [DE] ET AL SINGER RUDOLF [DE] ET AL) 25 April 2002 (2002-04-25) paragraph [0002] - paragraphs [0007] , [0023] , [0031]	1,27,41
A	DOLGOSHEV N I ET AL: "PLATINUM STIRRERS FOR MOLTEN GLASS FEEDERS" GLASS AND CERAMICS, SPRINGER, NEW YORK, NY, US, vol . 49, no. 5 / 06, 1 May 1992 (1992-05-01) , pages 297-298, XP000338505 ISSN: 0361-7610	1,41
Y	page 298; figures 1,2	39,40
A	DE 44 40 704 AI (ILMENAU TECH GLAS [DE]) 1 August 1996 (1996-08-01) col umn 2, line 2 - line 30 col umn 3, line 10 - line 13	10-29
A	ANONYMOUS: "Plati num stirrer for stirri ng molten gl ass" RESEARCH DISCLOSURE, MASON PUBLICATIONS, HAMPSHIRE, GB, vol . 394, no. 34, 1 February 1997 (1997-02-01) , XP007121573 ISSN: 0374-4353 the whol e document	10-29
Y	DE 25 00 793 AI (PILKINGTON BROTHERS LTD) 17 July 1975 (1975-07-17) p. 6, 2. paragraph Fig. 1	34-38
Y	US 2002/014093 AI (WALSER HERMANN [AT] ET AL) 7 February 2002 (2002-02-07) paragraphs [0001] , [0018]	34-38
Y	JP 02 009725 A (TANAKA PRECIOUS METAL IND) 12 January 1990 (1990-01-12) abstract the whole document	10, 11, 14, 15, 20, 21, 23, 25, 26
Y	DE 10 2004 018148 AI (SCHOTT AG [DE]) 10 November 2005 (2005-11-10) paragraph [0044] ; figures la, 5a	33

-/--

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2008/001232

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	JP 58 009830 A (TANAKA PRECIOUS METAL IND) 20 January 1983 (1983-01-20) abstract the whole document -----	1-43
A	DE 10 2004 032795 A1 (SCHOTT AG [DE]) 2 February 2006 (2006-02-02) figures 1-4 -----	1-43

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2008/001232

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additi onal sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see additi onal sheet

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM POT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,6-40,41,42-43

Independent claims 1, 41 and claims 6-40 and 42, 43 dependent thereon directed to an apparatus according to claim 1 comprising "a shank having at least on thickened portion" and a method according to claim 41 using said apparatus.

2. claims: 2,41,5-43

Independent claims 2, 41 and claims 5-40 and 42, 43 dependent thereon directed to an apparatus according to claim 2 and a method according to claim 41 using said apparatus.

3. claims: 3,4-43

Independent claims 3, 41 and claims 4-40 and 42, 43 dependent thereon directed to an apparatus according to claim 3 comprising "the shank having an additional sleeve (37) at least in a portion in which an evaporation of the shank (20) occurs during operation" and a method according to claim 41 using said apparatus.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2008/001232

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4440702	A1	11-07-1996	AT 180465 T 15-06-1999
			CN 1167476 A 10-12-1997
			CZ 9701343 A3 16-12-1998
			WO 9615072 A1 23-05-1996
			EP 0800486 A1 15-10-1997
			RU 2151107 C1 20-06-2000
			SK 58997 A3 08-10-1997

US 2003101750	A1	05-06-2003	NONE

US 2002046586	A1	25-04-2002	AT 292529 T 15-04--2005
			BR 0104615 A 28-05--2002
			CN 1349866 A 22-05--2002
			DE 10051946 A1 29-05--2002
			EP 1199116 A2 24-04--2002
			JP 2002205123 A 23-07--2002
			KR 20020033427 A 06-05--2002
			TW 509598 B 11-11--2002

DE 4440704	A1	01-08-1996	AT 195497 T 15-09-2000
			CN 1167475 A 10-12-1997
			CZ 9701364 A3 11-11-1998
			WO 9615995 A2 30-05-1996
			EP 0800485 A2 15-10-1997
			RU 2162449 C2 27-01-2001
			SK 60497 A3 10-12-1997

DE 2500793	A1	17-07-1975	FR 2257550 A1 08-08-1975
			FR 930099 A 21-01-1948
			GB 1476131 A 10-06-1977
			JP 50101415 A 12-08-1975
			US 3971646 A 27-07-1976

US 2002014093	A1	07-02-2002	AT 4238 U1 25-04-2001
			EP 1151969 A2 07-11-2001
			JP 2002020125 A 23-01-2002

JP 2009725	A	12-01-1990	JP 2591795 B2 19-03-1997

DE 102004018148	A1	10-11-2005	CN 1680203 A 12-10-2005
			JP 2005298326 A 27-10-2005
			US 2005227027 A1 13-10-2005

JP 58009830	A	20-01-1983	JP 1500671 C 28-06-1989
			JP 63048628 B 29-09-1988

DE 102004032795	A1	02-02-2006	NONE
