



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
22.03.2017 Bulletin 2017/12

(51) Int Cl.:
H01J 35/18 ^(2006.01)

(43) Date of publication A2:
14.05.2014 Bulletin 2014/20

(21) Application number: **13187283.0**

(22) Date of filing: **03.10.2013**

(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

(72) Inventor: **Davis, Robert**
Provo, UT Utah 84604 (US)

(74) Representative: **Walker, Ross Thomson**
Forresters
Skygarden
Erika-Mann-Strasse 11
80636 München (DE)

(30) Priority: **07.11.2012 US 201213670710**

(71) Applicant: **Brigham Young University**
Provo, UT 84602 (US)

(54) **Variable radius taper X-ray window support structure**

(57) A support structure (10) for an x-ray window comprising a support frame (11) defining a perimeter (11p) and an aperture (11a), a plurality of ribs (12) extending across the aperture of the support frame and carried by the support frame, and openings 13) between the plurality of ribs. A rib taper region (12t) can extend

from a central portion (12c) of the ribs to the support frame. The taper region can include a non-circular, arcuate pair of fillets (fig. 3,(33a), (33b)) on opposing sides of the ribs and an increasing of rib width from the central portion to the support frame.

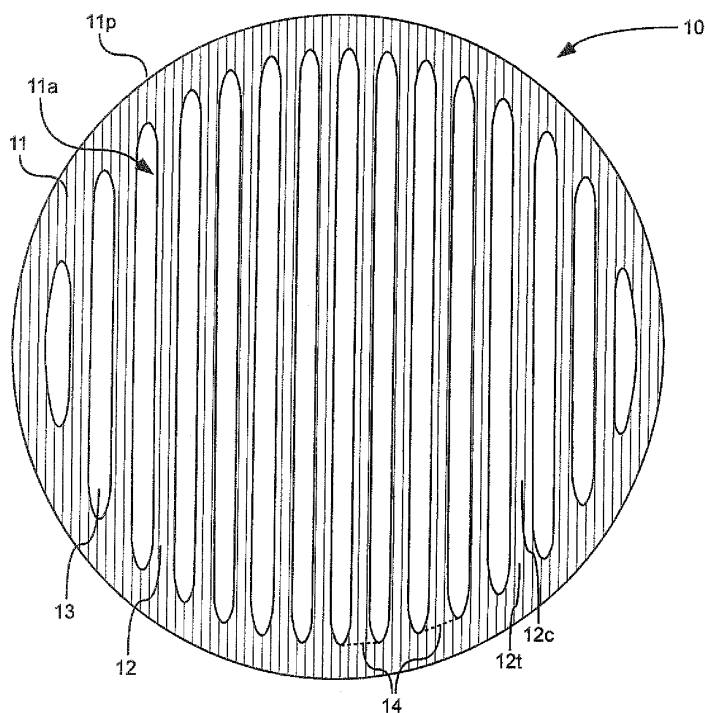


FIG. 1



EUROPEAN SEARCH REPORT

 Application Number
 EP 13 18 7283

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X,P	US 2013/064355 A1 (DAVIS ROBERT C [US]) 14 March 2013 (2013-03-14) * US provisional application 61/689458 is oldest application, and makes this document prior art for claim 1-3,5,7; paragraphs [0017], [0020], [0025], [0039]; figure 1 *	1-3,5,7	INV. H01J35/18
A	US 5 173 612 A (IMAI TAKAHIRO [JP] ET AL) 22 December 1992 (1992-12-22)	1-15	
A	JP H04 121700 A (NEC CORP) 22 April 1992 (1992-04-22) * abstract; figure 1 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01J
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 February 2017	Examiner Oestreich, Sebastian
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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 EPO FORM 1503 03/02 (P04C01)

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

EP 13 18 7283

5 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
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10-02-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2013064355 A1	14-03-2013	NONE	
US 5173612 A	22-12-1992	DE 69114638 D1	21-12-1995
		DE 69114638 T2	25-07-1996
		EP 0476827 A1	25-03-1992
		JP 3026284 B2	27-03-2000
		JP H04127100 A	28-04-1992
		US 5173612 A	22-12-1992
JP H04121700 A	22-04-1992	NONE	