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(71) Applicant: **HELIX TECHNOLOGY CORPORATION**
266 Second Avenue
Waltham, MA 02154(US)

(72) Inventor: **Eacobacci, Michael J.**
28 Blakely Circle
Randolph, Mass. 02368(US)

(72) Inventor: **Olsen, Donald A.**
10 Brandywine Terrace
Millis, Mass. 02054(US)

(74) Representative: **Kraus, Walter, Dr. et al,**
Patentanwälte Kraus & Weisert Irmgardstrasse 15
D-8000 München 71(DE)

(54) **Cryopump with rapid cooldown and increased pressure stability.**

(57) In a cryopump, condensation of gases such as argon, oxygen and nitrogen on surfaces other than the second stage array 38, 40 is avoided to prevent cross over hang up and pressure instability. To prevent condensation of argon, oxygen and nitrogen on the frontal cryopumping array 46, that array is held to a temperature of at least 50 K. A heat load to the first stage increases as the temperature of the first stage drops. That heat load is provided by a high emissivity radiation shield 44 or by a thermal switch 56, 58. Condensation of argon and other gases on the second stage refrigerator cylinder 32 is avoided by a close fitting sleeve 52 positioned over the refrigerator cylinder 32 in thermal contact with the second stage heat sink 30 but out of thermal contact with the cylinder 32.

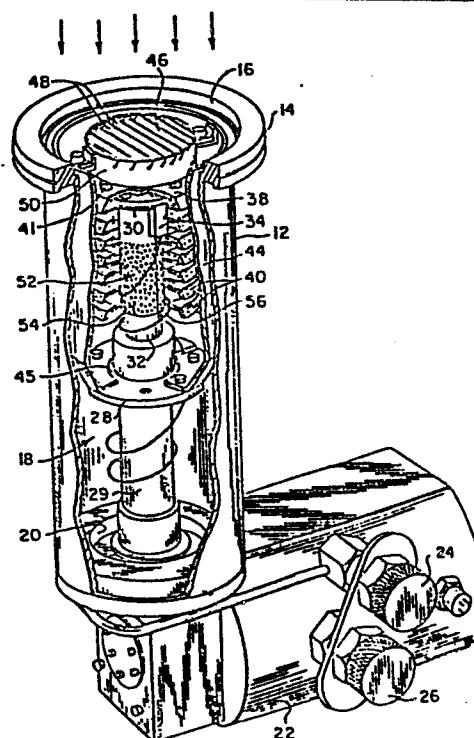


Fig. 1



DOCUMENTS CONSIDERED TO BE RELEVANT			EP 84103732.8
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 2)
X	GB - A - 2 061 391 (VARIAN ASSOCIATES, INC.)	1,6,7,9,12	F 04 B 37/08
A	* Totality, especially page 1, lines 105-117, page 2, lines 90-112 *	5,8,10,13,14,16	
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D,A	US - A - 4 356 701 (BARTLETT et al.)	1,12,14,16	
	* Totality *		

The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 03-10-1984	Examiner WITTMANN
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			