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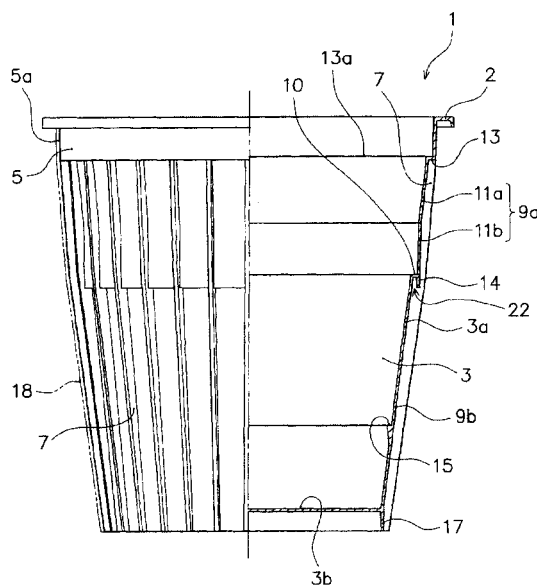
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(54) **Heat-insulating container**

(57) A heat-insulating food container includes an injection-molded container body (3) having a bottom wall (3b), a circumferential wall (3a) integrally connected to a periphery of the bottom wall (3b) and upwardly extending therefrom for defining an inner space and an upper open end, and vertical ribs (7) vertically extending along the circumferential wall (3a). The circumferential wall

(3a) includes circumferential wall parts (9a, 9b, 9c) respectively having different diameters and arranged in such a manner as to form the circumferential wall (3a) with the diameter thereof decreasing in a stepwise manner as it advances downwardly, thereby forming corresponding stepped portions on an exterior surface and an interior surface thereof.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 01 25 0166

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	WO 95 02979 A (MULTICUP VENDING GMBH ;WITTEN HANS ROBERT (DE)) 2 February 1995 (1995-02-02)	1	B65D81/38 B65D1/26
Y	* , sentence 17 - sentence 27; claim 1; figure 1 *	2,3	
Y	--- US 4 846 350 A (SORENSEN JENS O) 11 July 1989 (1989-07-11) * column 2, line 55 - column 3, line 68; figures 1,2 *	2,3	
A	--- US 5 071 060 A (DEFELICE AMEDIO) 10 December 1991 (1991-12-10) * column 1, line 51 - column 2, line 38; figures 1-4 *	1	
A	--- FR 1 557 801 A (ALCA) 21 February 1969 (1969-02-21) * figures 1,2 *	1	
A	--- GB 2 061 699 A (MONO CONTAINERS LTD) 20 May 1981 (1981-05-20) * figure 3 *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D
A	--- US 4 657 141 A (SORENSEN JENS O) 14 April 1987 (1987-04-14) * figure 2C *	1	

The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 2 October 2001	Examiner Fournier, J
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	

EPO FORM 1503 03.82 (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-3



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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-3

Subject I (claims 1-3) relates to a cylindrical container having a circumferential wall with parts having different diameters decreasing in a stepped manner as it advances downwardly.

2. Claim : 4

Subject II (claim 4) relates to a container having a downwardly-facing rib forming a double layered annular portion.

3. Claims: 5-8

Subject III (claims 5-8) relates to a container having, an annular stepped portion located near the upper open end of the container and serving as an indicator, and another stepped portion performing a reinforcing function.

4. Claims: 9-10

Subject IV (claims 9 and 10) relates to a container with a particular dimension relation between the thickness of the circumferential wall and the base part of ribs extending along the container.

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

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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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02-10-2001

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9502979	A	02-02-1995	DE	9311069 U1	21-04-1994
			AU	6994294 A	20-02-1995
			WO	9502979 A2	02-02-1995

US 4846350	A	11-07-1989	EP	0394245 A1	31-10-1990
			JP	2914985 B2	05-07-1999
			JP	3504954 T	31-10-1991
			WO	8808814 A1	17-11-1988

US 5071060	A	10-12-1991	NONE		

FR 1557801	A	21-02-1969	NONE		

GB 2061699	A	20-05-1981	NONE		

US 4657141	A	14-04-1987	US	4467994 A	28-08-1984
			US	RE33608 E	11-06-1991

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82