

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 January 2004 (29.01.2004)

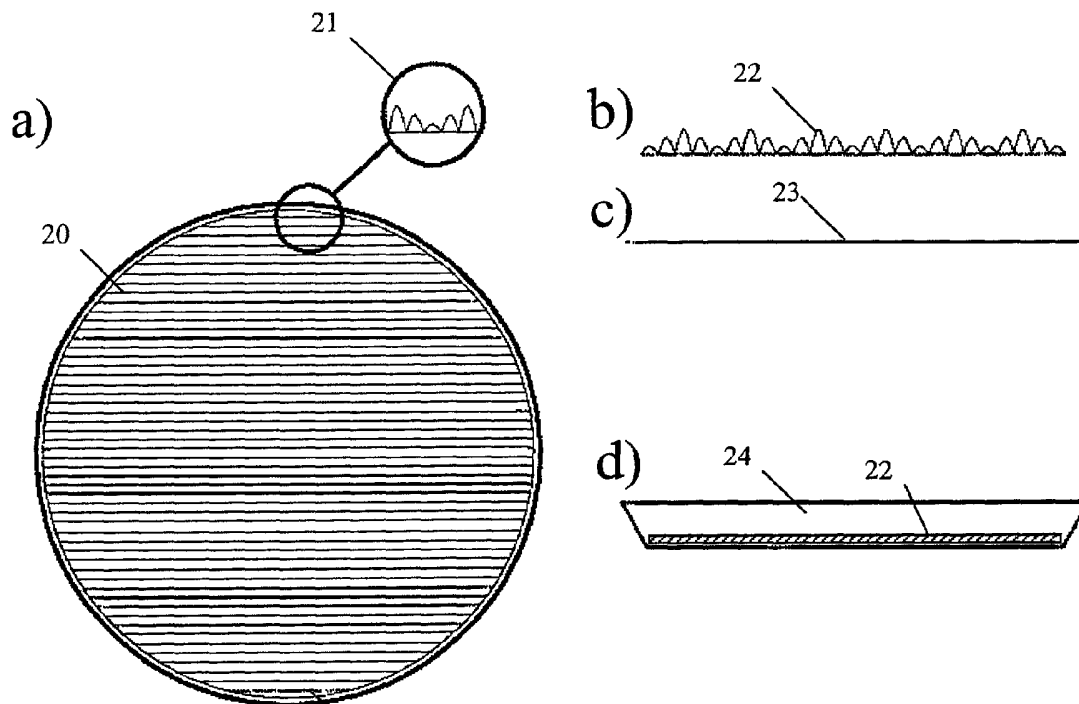
PCT

(10) International Publication Number
WO 2004/009468 A3

- (51) International Patent Classification⁷: **B65D 81/34**
- (21) International Application Number:
PCT/CH2003/000461
- (22) International Filing Date: 9 July 2003 (09.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02405641.8 23 July 2002 (23.07.2002) EP
- (71) Applicant (for all designated States except US): **FRITSON AG** [CH/CH]; Seestrasse 1, CH-6330 Cham (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MANN, Darrel** [GB/GB]; 3 Lower Linden Road, Somerset BS21 7SU (GB). **WINKLESS, Barry** [IE/IE]; 2 St. Malachys Villa, Dundalk, Co. Louth (IE).
- (74) Agent: **BREMI, Tobias**; Isler & Pedrazzini AG, Gotthardstrasse 53, Postfach 6940, CH-8023 Zürich (CH).
- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report

[Continued on next page]

(54) Title: FOOD PACKAGE AND METHOD FOR HEATING A FOOD PACKAGE USING MICROWAVE



(57) Abstract: Device for controlling heating of a foodstuff with microwave energy comprising a plate-like surface of susceptor material onto which the foodstuff is placed during irradiation with microwave energy, characterized in that the surface of susceptor material comprises protrusions (2) onto which the foodstuff is placed, and that there are protrusions (2) of at least two different heights.

WO 2004/009468 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
22 April 2004

INTERNATIONAL SEARCH REPORT

International Application No
PCT/CH 03/00461

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B65D81/34				
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) IPC 7 B65D				
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, PAJ				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	EP 0 246 041 A (ALCAN INT ^o LTD) 19 November 1987 (1987-11-19)	1,8,9		
Y	page 9, line 4 - line 33; figures 4,5,11,12	2-4,7, 10-13, 17,19		
Y	----- WO 96/15958 A (HAMBLIN GEOFFREY RONALD ;PAK PACIFIC CORP PTY (AU)) 30 May 1996 (1996-05-30)	2-4		
X	the whole document	8,9		
Y	----- US 5 310 977 A (STENKAMP VICTORIA S ET AL) 10 May 1994 (1994-05-10) the whole document	7		
----- -/--				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.				
<input checked="" type="checkbox"/> Patent family members are listed in annex.				
° Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; border: none; vertical-align: top;"> "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 "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 "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. "&" document member of the same patent family </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"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 "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 "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. "&" document member of the same patent family
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"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 "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 "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. "&" document member of the same patent family			
Date of the actual completion of the international search <p style="text-align: center; font-size: 1.2em;">2 October 2003</p>	Date of mailing of the international search report <p style="text-align: center; font-size: 1.2em;">23. 02. 2004</p>			
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 <p style="text-align: center; font-size: 1.2em;">Pernice, C</p>			

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CH 03/00461

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/053167 A (GEN MILLS INC ;JI HONG (US); MONFORTON RANDAL J (US)) 26 July 2001 (2001-07-26) the whole document -----	10-12, 17,19
Y	WO 01/030657 A (M S O LTD ;WALSH DOMINIC (GB); MAST ROY LEE (US)) 3 May 2001 (2001-05-03) claims 1-4; figures 3,4 -----	13
X	WO 95/24110 A (GICS & VERMEE L P) 8 September 1995 (1995-09-08) the whole document -----	1,2,8,9
A		3-7
A	EP 0 839 737 A (MAST ROY LEE) 6 May 1998 (1998-05-06) the whole document -----	10-12, 17,19
A	US 5 317 120 A (BUNKE PAUL R ET AL) 31 May 1994 (1994-05-31) the whole document -----	1,5,6
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 24, 11 May 2001 (2001-05-11) & JP 2001 199482 A (KURARAY CO LTD), 24 July 2001 (2001-07-24) abstract -----	1-13

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CH 03/00461

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

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

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.:

1-9, 10-13, 17, 19

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-9, 10-13, 17, 19

A device for controlling the heating of foodstuffs by microwave energy comprising a plate-like susceptor comprising protrusions onto which the the foodstuffs is placed, and that the protrusions are of at least two different heights.
Food package comprising said device and means for controlling heating of a foodstuff with microwave energy comprising:

a) a food package having a microwave shielding layer with a plurality of apertures;

b) a foodstuff contained in the package and initially located in close proximity to the microwave shielding layer;

c) means for moving said microwave shielding layer away from close proximity to the foodstuff after the package and foodstuff are irradiated with microwave energy

2. claims: 14, 15

A food package for controlling heating of a foodstuff with microwave energy wherein a variable geometry feature is provided.

3. claim: 16

A food package for controlling heating of a foodstuff with microwave energy having a foam surface susceptor material which minimizes contact with the foodstuff and acts as a moisture trap.

4. claim: 18

A food package for controlling heating of a foodstuff with microwave energy where gaps are provided between adjacent food products such that the right amount of food can be selected for heating by cutting the packaging at said gaps.

INTERNATIONAL SEARCH REPORT

...formation on patent family members

International Application No

PCT/CH 03/00461

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0246041	A	19-11-1987	CA 1279902 C	05-02-1991
			AT 91106 T	15-07-1993
			AT 75688 T	15-05-1992
			AU 597976 B2	14-06-1990
			AU 7264387 A	12-11-1987
			AU 597742 B2	07-06-1990
			AU 8051187 A	23-06-1988
			BR 8702358 A	17-02-1988
			BR 8705880 A	05-07-1988
			DE 3778853 D1	11-06-1992
			DE 3786370 D1	05-08-1993
			DE 3786370 T2	28-10-1993
			DK 231487 A	10-11-1987
			DK 563287 A	19-06-1988
			EP 0246041 A2	19-11-1987
			EP 0271981 A2	22-06-1988
			ES 2031910 T3	01-01-1993
			JP 1721583 C	24-12-1992
			JP 4004499 B	28-01-1992
			JP 62293020 A	19-12-1987
			JP 2108344 C	06-11-1996
			JP 8025584 B	13-03-1996
			JP 63178971 A	23-07-1988
			MX 161944 A	08-03-1991
			NZ 220243 A	29-05-1989
			NZ 222374 A	26-02-1990
			US 4831224 A	16-05-1989
			ZA 8703246 A	28-09-1988

WO 9615958	A	30-05-1996	AU 708119 B2	29-07-1999
			AU 3864095 A	17-06-1996
			WO 9615958 A1	30-05-1996
			CA 2205487 A1	30-05-1996
			EP 0790940 A1	27-08-1997
			NZ 295320 A	29-07-1999
			US 6137099 A	24-10-2000

US 5310977	A	10-05-1994	NONE	

WO 0153167	A	26-07-2001	US 6259079 B1	10-07-2001
			AU 2932601 A	31-07-2001
			CA 2397530 A1	26-07-2001
			EP 1252076 A1	30-10-2002
			JP 2003520162 T	02-07-2003
			WO 0153167 A1	26-07-2001

WO 0130657	A	03-05-2001	AU 1854501 A	08-05-2001
			WO 0130657 A2	03-05-2001

WO 9524110	A	08-09-1995	US 5484984 A	16-01-1996
			AU 2157595 A	18-09-1995
			WO 9524110 A2	08-09-1995
			US 5543606 A	06-08-1996

EP 0839737	A	06-05-1998	US 6054698 A	25-04-2000
			EP 0839737 A1	06-05-1998

US 5317120	A	31-05-1994	AT 152418 T	15-05-1997

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/CH 03/00461

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5317120	A	CA 2069160 A1 DE 69219409 D1 DE 69219409 T2 EP 0522617 A2	29-12-1992 05-06-1997 11-12-1997 13-01-1993

JP 2001199482	A	24-07-2001	NONE
