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(11) EP 1 278 034 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

22.01.2003 Bulletin 2003/04

(21) Application number: 02010292.7

(22) Date of filing: 21.05.2002

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 18.07.2001 IT MI20010405 U

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(51) Int Cl.7: F25D 23/04

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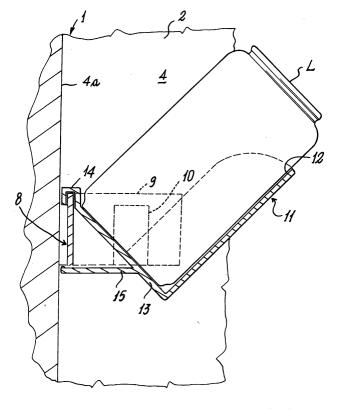
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(54) Removable and horizontally movable can holder for refrigerators

(57) A can holder (11) for refrigerator doors (1), comprising at least one cradle (12) for supporting a can (L), said cradle (12) being: a) provided with means (14) for its hooking to a supporting part (8) present in the door

(1); b) inclined to the horizontal and to the vertical when in use, so as to support the can L with its axis inclined upwards; c) provided with antirotation means (15) which bear on the door to also obtain and maintain the inclination (Figure 1).



F1G. 4

Description

[0001] The present invention relates to a can holder for refrigerators.

[0002] Refrigerator doors are known to present removable trays, provided with side walls, in which drink cans are usually placed to cool them. The cans are located vertically on the trays, however the presence of the side wall makes it difficult both to position them on and remove them from the tray. There is the additional drawback that if the tray is not completely occupied, the cans move noisily at each door opening/closure.

[0003] The main object of the present invention is to provide a can holder for refrigerator doors which enables the cans to be located such that they do not move on opening and closing the refrigerator door, while being comfortably withdrawable and positionable.

[0004] A further object of the present invention is to provide a can holder which enables better use to be made of the space defined by the refrigerator door.

[0005] These and further objects which will be more apparent from the ensuing detailed description are attained by a can holder in accordance with the teachings of the accompanying claims.

[0006] The invention will be better understood from the following detailed description, which is provided by way of non-limiting example and is given with reference to the accompanying drawing, in which:

Figure 1 is a schematic perspective view of a can holder of the invention mounted in the interior of a refrigerator door; this figure also shows by dashed and dotted lines the can holder while being removed from the door;

Figure 2 is a schematic perspective view of two side-by-side can holders mounted in the interior of the refrigerator door;

Figure 3 is a schematic horizontal section on the plane A-A of Figure 1;

Figure 4 is a vertical section through the can holder applied to the door (on the inner side thereof).

[0007] In the figures the reference numeral 1 indicates a generic refrigerator door the vertical lateral side walls of which are indicated by 2 and 3. These together with a lower side wall 4 and an upper side wall, this latter not shown, defines a compartment 5 in which removable trays 6 are provided in known manner. In order to be supported by the lateral side walls 2 and 3, these trays laterally present seats 10 which are closed at one end (the upper end) and are mounted on projecting parts or appendices 7 of a shape substantially mating with that of the seats and present on the inner face of the side walls 2 and 3.

[0008] In a like manner there is connected to or mounted on the door a bar-like support element 8 provided at its two ends with appendices 9 in which closed seats 10 are present, of a shape mating with the pro-

jecting parts or appendices 7.

[0009] The bar-like element 8 acts as a support for one or more can holders 11. The can holder, preferably constructed of plastic material, comprises one or more side-by-side cradles 12 for the inclined housing of cans

[0010] The cradles 12 comprise a concave part 12a (preferably in the form of a circular ring segment) and a common base wall 13 terminating upperly with a hookshaped appendix 14 by which the can holder engages, removably and translatably (see arrows F1 and F2), with the bar-like support element 8 (see Figure 4).

[0011] The base wall 13 and the concave part 12a are at right angles to each other and, when in use, the base wall 13 is inclined, preferably by 35°-45° (downwards), to the vertical end wall 4a of the compartment 4. As a result, the cans L are supported upwardly inclined in the cradles, as shown in Figure 4, making it simple to withdraw them from the cradle in which they rest.

[0012] For its antirotational stability and to preserve the inclination, the base 13 of the can holder comprises below the hook-shaped appendix a transverse piece 15 which bears against the end wall 4a. The number of cradles 12 present in the can holder can be one or more, for example three as shown.

[0013] The can holder can be easily removed from its support bar 8 by lifting it (see arrow F1 in Figure 1) and can also be moved along the bar (see arrow F2 in Figure 1) if space requirements, deriving for example from the presence of a bottle of considerable height in an underlying tray 6, require it.

Claims

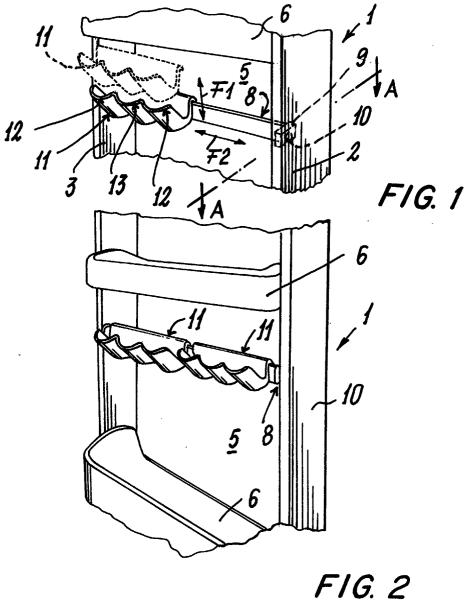
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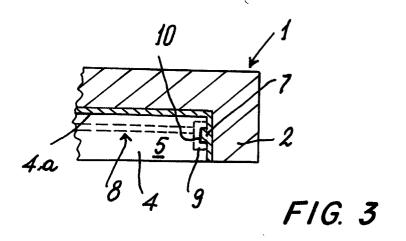
- 1. A can holder (11) for refrigerator doors (1), characterised by comprising at least one cradle (12) for supporting a can (L), said cradle (12) being: a) provided with means (14) for its hooking to a supporting part (8) present in the door (1); b) inclined to the horizontal and to the vertical when in use, so as to support the can L with its axis inclined upwards; c) provided with antirotation means (15) which bear on the door to also obtain and maintain the inclination.
- 2. A can holder as claimed in claim 1, wherein the cradle (12) presents an arcuate part (12a) and a base part (13) perpendicular to the preceding.
- 3. A can holder as claimed in claim 1, wherein said hooking means (14) are represented by a hookshaped extension to the base (13) of the cradle (12).
- 4. A can holder as claimed in claims 1 and/or 2, wherein the antirotation means for also obtaining and maintaining the inclination are represented by a further extension (15) to the base (13) of the cradle (12), said extension (15) being located below the

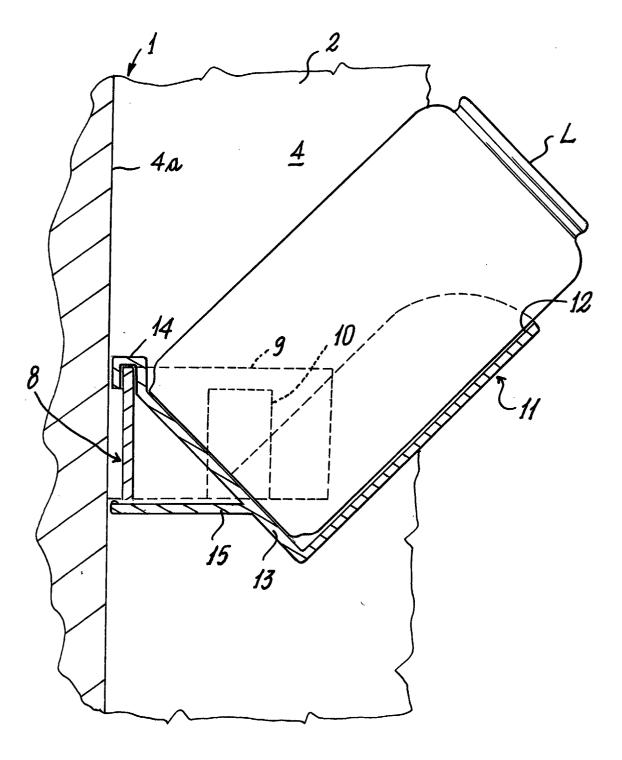
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hooking means (14).









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EUROPEAN SEARCH REPORT

Application Number EP 02 01 0292

ategory	Citation of document with of relevant pas	ndication, where appropriate, sages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)	
Х	DE 199 49 238 A (AE 19 April 2001 (2001	EG HAUSGERAETE GMBH)	1,3	F25D23/04	
А	* abstract * * column 2, line 67 * figures 1-3,6 *	2,4			
A	PATENT ABSTRACTS OF vol. 1998, no. 10, 31 August 1998 (199 -& JP 10 122734 A (15 May 1998 (1998-0 * abstract * * figures 1-3 *	98-08-31) FUJITSU GENERAL LTD),			
A	DE 198 21 824 A (AE 18 November 1999 (1				
A	GB 2 203 028 A (OCE 12 October 1988 (19				
A	DE 82 33 134 U (BOS GMBH) 5 May 1983 (1		TECHNICAL FIELDS SEARCHED (Int.CI.7)		
A	GB 1 381 650 A (IRE 22 January 1975 (19			A47B	
	The present search report has				
THE HAGUE		Date of completion of the search 9 July 2002	De	Examiner Graaf, J.D.	
X : parti Y : parti docu A : techi O : non-	ATEGORY OF CITED DOCUMENTS cularly relevant if taken alone cularly relevant if combined with anot ment of the same category notogical background -written discosure mediate document	E : earlier patent of after the filling of the D : document cited L : document cited	iple underlying the i Jocument, but publicate d in the application d for other reasons	shed on, or	

EPO FORM 1503 03.82 (P04C01)

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

EP 02 01 0292

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09-07-2002

	Patent documen cited in search rep	-	Publication date		Patent family member(s)	Publication date
DE	19949238	Α	19-04-2001	DE	19949238 A1	19-04-2001
JP	10122734	A	15-05-1998	NONE	ann anns deus mann dett menn deus Anne Anne Anne Cane Cane Anny enter anne mus en	n and the district the specific state days and the specific state state and specific
DE	19821824	А	18-11-1999	DE ES IT	19821824 A1 2167151 A1 PN990018 U1	18-11-1999 01-05-2002 15-11-1999
GB	2203028	A	12-10-1988	IT DE ES FR	210137 Z2 8802781 U1 1005405 U1 2613466 A3	14-11-1988 05-05-1988 01-11-1988 07-10-1988
DE	8233134	U	05-05-1983	DE	8233134 U1	05-05-1983
GB	1381650	A	22-01-1975	BE CH DE ES FR	789297 A1 546934 A 7236631 U 184627 Y 2172638 A7	15-01-1973 15-03-1974 04-01-1973 01-06-1974 28-09-1973

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