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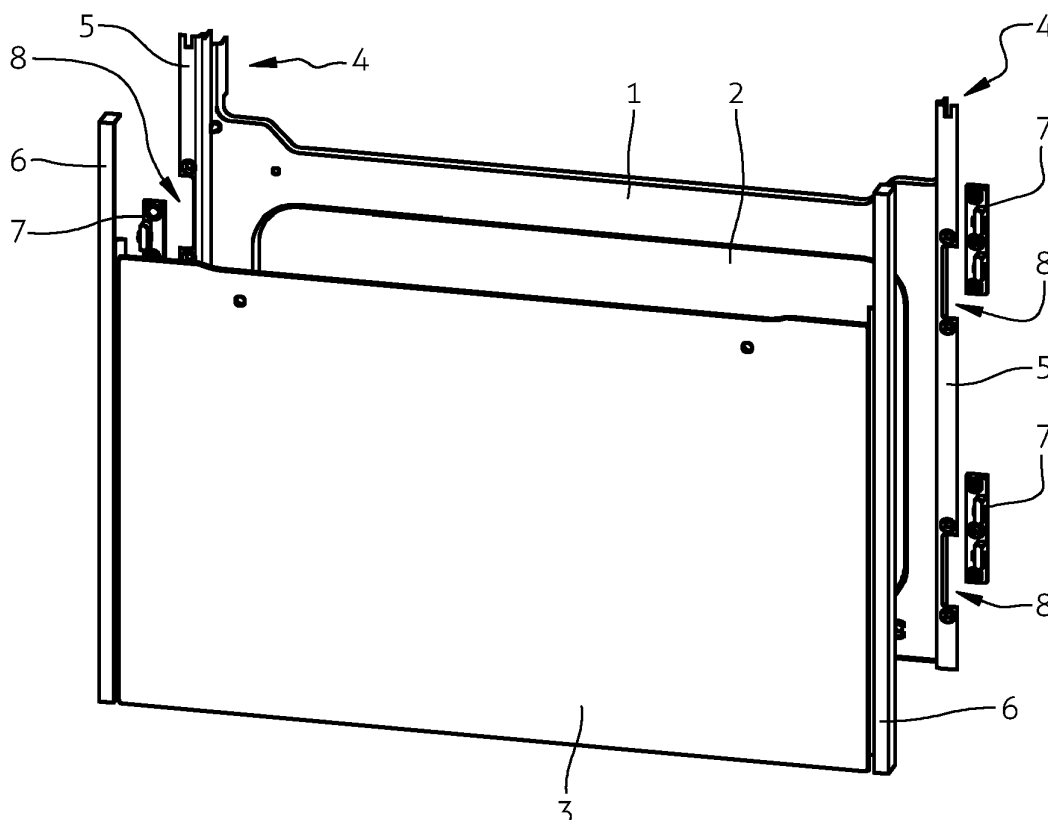
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(54) **DEVICE FOR ATTACHING A DECORATIVE RAIL WITH A HOUSEHOLD APPARATUS**

(57) The present invention refers to a device for attaching a decorative rail with a household apparatus, preferably an oven, comprising a front wall (1) with an opening (2) for input food to be thermally treated, said opening (2) being closable by a door having a glass plate

(3), wherein a column (4) extends alongside each vertical side of the front wall (1). It is provided for according to the present invention that at least one holder (7) is arranged on the column (4) cooperating with a decorative rail (6).



SL. 1

Description

[0001] The present invention refers to a household apparatus, preferably to a household baking oven, and in particular to a device for attaching a decorative rail with a household apparatus.

[0002] Known are solutions for attaching a decorative rail to various walls, such as a wall of an oven, using additional support element attached to said wall. However, said solutions does not allow for the decorative rail to be later adjusted in its position to correct, thereby, unevenly wide gap to the neighbouring element and, respectively, a door of an oven. Additional drawback is represented by the fact that errors in dimensions resulting in the apparatus transport cannot be eliminated in the place of the mounting i.e. with the end buyer.

[0003] It is the object of the present invention to create a device for attaching a decorative rail with a household apparatus, which remedies drawbacks of the known solutions.

[0004] According to the present invention, the object as set above is solved by features as set forth in characterizing part of claim 1. Detail of the invention is further disclosed in subclaims.

[0005] The invention will be more readily understood on reading the following description of a non-limiting embodiment and with reference to the accompanying drawing

Fig. 1 shows a three-dimensional view of a front wall of an oven,

Fig. 2 shows a three-dimensional view of a holder of a decorative rail according to the invention,

Fig. 3 shows a cross-sectional view of an assembly of the front wall of the oven and the decorative rail,

Fig. 4 shows a sectional view along the line IV-IV of Fig. 3 of the assembly of the front wall of the oven and the decorative rail.

[0006] A household apparatus in particular a household baking oven comprises a front wall 1 with an opening 2 for input food to be thermally treated, said opening 2 being closable by a door having a glass plate 3. A column 4 extends alongside each vertical side of the front wall 1, each said column is formed in the present embodiment with a flange 5 which essentially extends in parallel with the plane of said oven door and, respectively, of said glass plate 3. Each said column 4 is covered on the outer side of the oven, i.e. on the side facing a user, with a decorative rail 6, a gap t being provided between each vertical side of said glass plate 3 and each decorative rail 6. Said gap t must retain constant width along both sides of the glass plate 3 and, respectively, the decorative rail 6.

[0007] In order to ensure said constant width of said gap t , it is provided for according to the present invention that at least one holder 7 of the decorative rail 6 is arranged on each column 4, preferably two holders 7, that

are vertically spaced relative to each other. Each holder 7 is placed in a cavity 8 formed in each flange 5 of each column 4, and firmly connected with the flange 5 by means of fastening means 9. In the present embodiment, said fastening means 9 is selected as a screw, however, other fastening means are possible, such as snap-in means and similar.

[0008] Said holders 7 are identical at all places of the attachment of the decorative rail 6, therefore, only one holder is described in the continuation. The holder 7 comprises a base plate 10 which comprises in the area of each longitudinal extreme end thereof a through hole 11 for receiving said fastening means 9. The base plate 10 is formed in the central longitudinal area thereof with at least one projection 12 extending in direction perpendicularly to the base plate 10 and, respectively, to said flange 5 of the column 4. Said at least one projection 12 is formed with a through hole 13 provided for the reception of an adjusting means 14 by means of which the width of said gap t is adjusted. In the present embodiment the through hole 13 is shaped as a threaded through hole whereas the adjusting means 14 is shaped as a sleeve comprising an outer and an inner thread. The outer thread of the sleeve 14 is intended for meshing with the thread of the threaded through hole 13 whereas the inner thread of the sleeve 14 is intended for meshing with an additional fastening means 15. The width i.e. the dimension of said projection 12 defined by the direction between both columns 4 must be less than the length of said adjusting means 14 and, respectively, the sleeve.

[0009] In order to achieve appropriate cooperation between each decorative rail 6 and the holders 7, said decorative rail 6 comprises at least in the area of cooperation with the holder 7 a recess 16 into which there is positioned said at least one projection 12 of the holder 7. The decorative rail 6 comprises in the area of said adjusting means 14 and, respectively, said additional fastening means 15, and coaxially with the centre line thereof a through hole 17. Said through hole 17 is intended to enable an accession to the sleeve 14 and to fix the decorative rail 6 by means of said additional fastening means 15. The depth of said recess 16 i.e. the dimension perpendicularly to the glass plate 3, and the length of said recess 16 i.e. the dimension in the direction of the longitudinal extension of the column 4 and, respectively, the decorative rail 6 are at least equal to the dimension of the projection 12 in respective direction, and preferably they comprise slightly greater dimension. The width of said recess 16 i.e. the dimension defined by the direction between the two columns 4 must be equal to the length of said adjusting means 14 and, respectively, the sleeve. It is provided for according to the preferred embodiment that a clearance fit is provided between the walls of the recess 16 and the adjusting means 14 which still enables a friction-less rotation of the adjusting means 14 with respect to the walls of the recess 16.

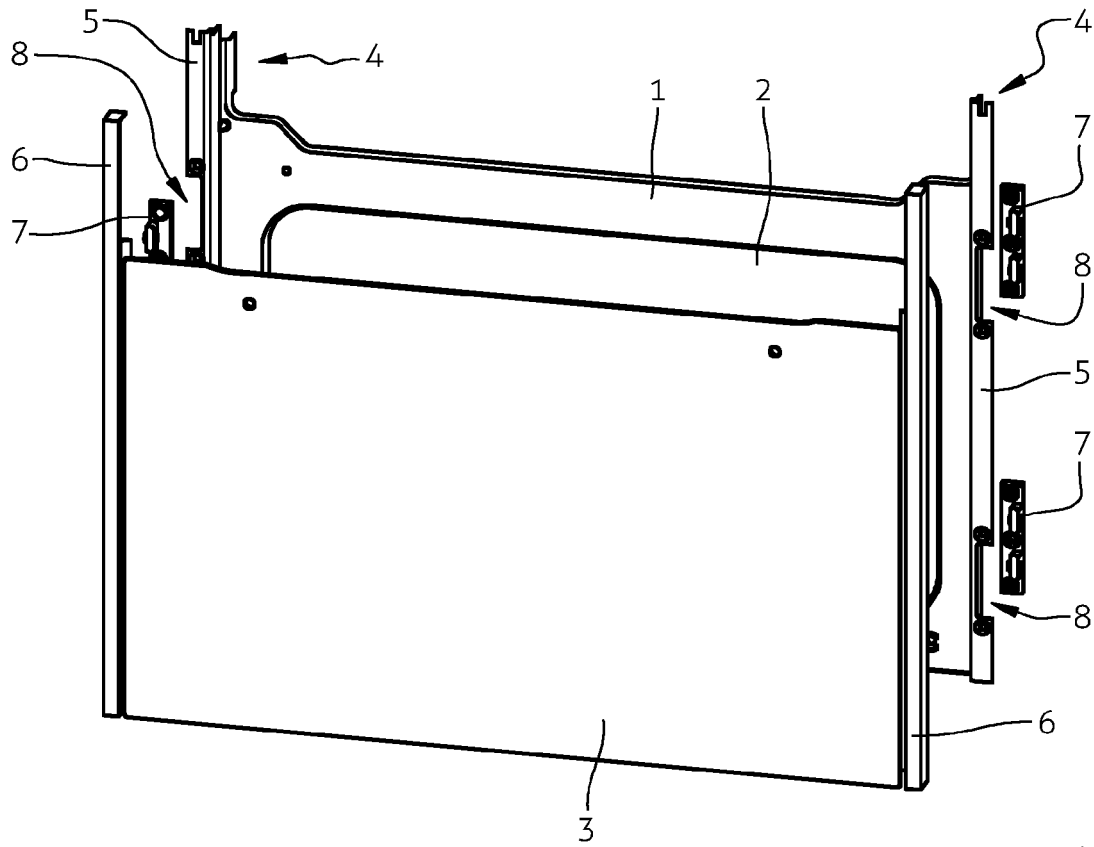
[0010] When assembling the household apparatus, said holders 7 are mounted by means of fastening means

9 to the columns 4 into respective cavities 8 in the columns 4. At this stage it is provided that the adjusting means 14 is already screwed into the threaded through hole 13 of at least one projection 12 of each holder 7. Afterwards, the decorative rail 6 is positioned on the holders 7 in a manner that said decorative rail is placed with each recess 16 thereof onto the projection 12 of each holder 7. The adjusting means 14 of each holder 7 is actuated through said through hole 17 until the required gap t between the glass plate 3 and the decorative rail 6 is achieved. Once the required gap t has been reached, the additional fastening means 15 is screwed into said inner thread of the adjusting means 14, thus, fixing the decorative rail. In order to easily manipulate the adjusting means 14 a slit is provided at least on the front thereof, thus enabling submitting the torque by means of a common screwdriver.

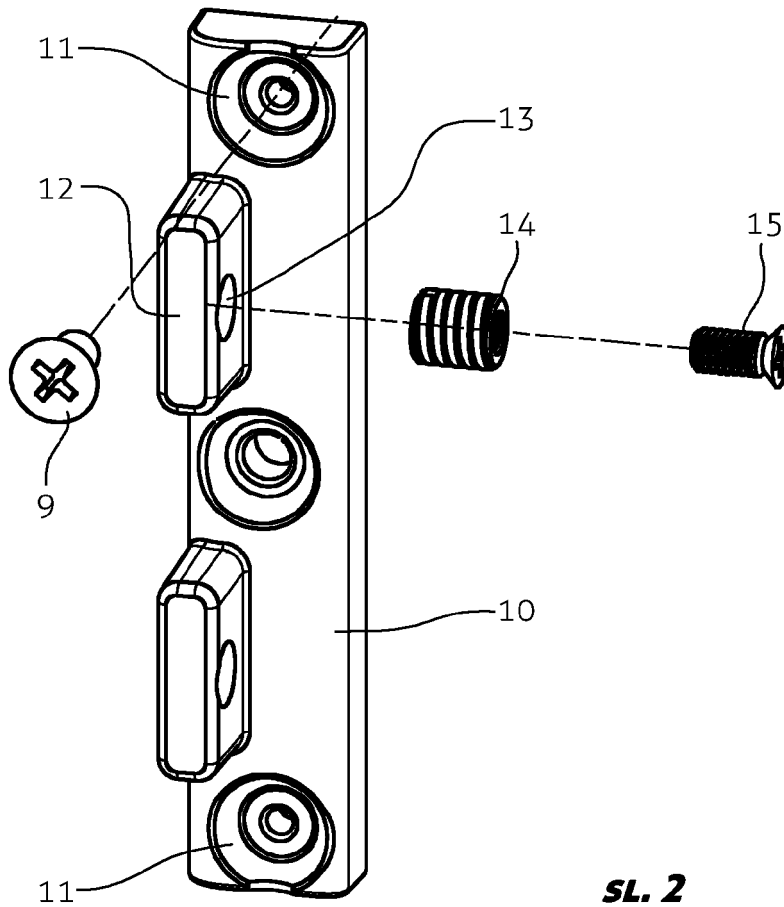
7. A device according to claim 1 to 5, **characterized in that** between the walls of said recess (16) and said adjusting means (14) there is provided a clearance fit which enables friction-less rotation of the adjusting means (14) with regard to the walls of the recess (16).
8. A device according to any of the preceding claim 3, **characterized in that** the depth and the length of said recess (16) are at least equal to the dimension of the projection (12) in the respective direction.

Claims

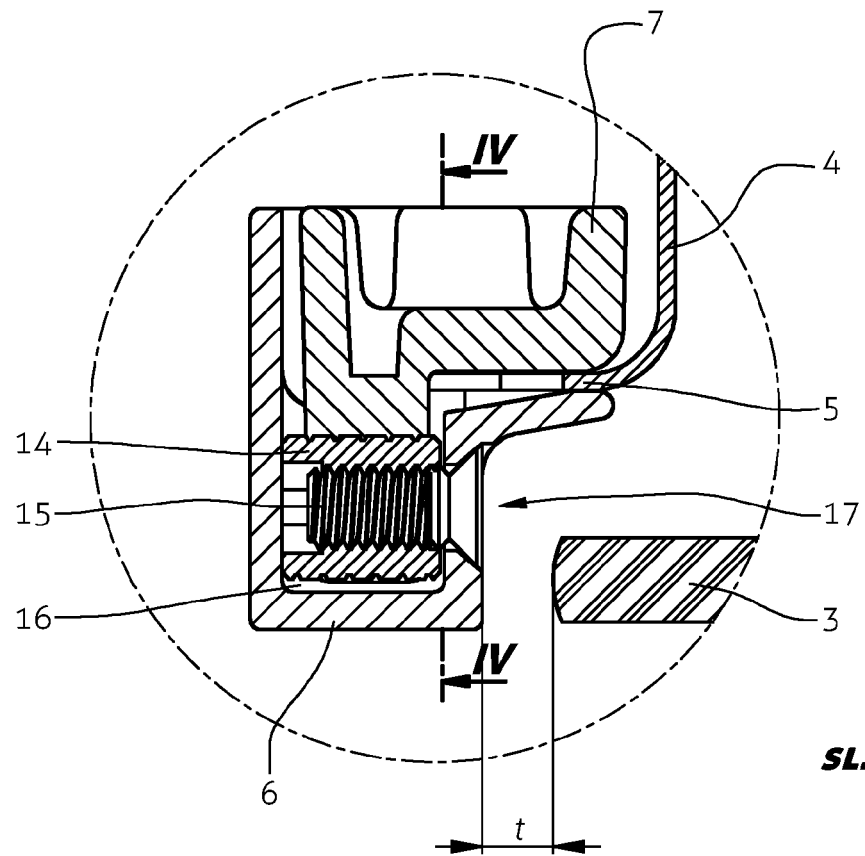
1. A device for attaching a decorative rail with a household apparatus, preferably an oven, comprising a front wall (1) with an opening (2) for input food to be thermally treated, said opening (2) being closable by a door having a glass plate (3), wherein a column (4) extends alongside each vertical side of the front wall (1), **characterized in that** at least one holder (7) is arranged on the column (4) cooperating with a decorative rail (6).
2. A device according to claim 1, **characterized in that** said holder (7) is fixed in a cavity (8) formed in a flange (5) of each column (4).
3. A device according to claim 1, **characterized in that** said holder (7) comprises a base plate (10) formed in the central longitudinal area thereof with at least one projection (12) comprising a through hole (13) intended to receive an adjusting means (14) by means of which a width (t) of a gap between the glass plate (3) and the decorative rail (6) can be adjusted.
4. A device according to claim 3, **characterized in that** the through hole (13) is intended to be a threaded through hole whereas the adjusting means (14) is intended to be a sleeve comprising an outer thread and an inner thread.
5. A device according to claims 1 to 4, **characterized in that** the decorative rail (6) comprises at least in the area of cooperation with the holder (7) a recess (16) into which is positioned said at least one projection (12) of the holder (7).
6. A device according to claims 1 to 5, **characterized in that** the width of said projection (12) must be smaller than the length of said adjusting means (14).



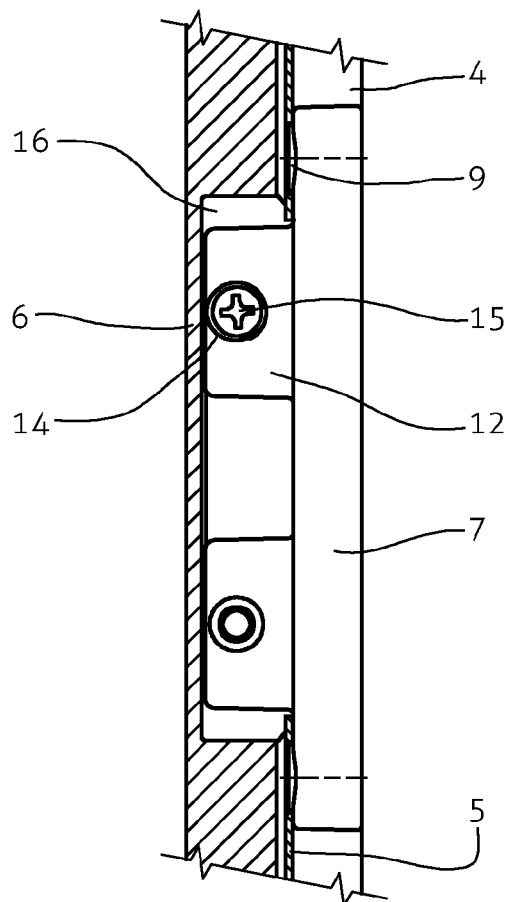
SL. 1



SL. 2



SL. 3



SL. 4



EUROPEAN SEARCH REPORT

Application Number
EP 16 20 1836

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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	DE 91 09 279 U1 (BOSCH-SIEMENS HAUSGERAETE GMBH) 28 November 1991 (1991-11-28) * figure 2 *	1-8	INV. F24C15/02 F24C15/08 F24C15/06
X	DE 199 06 903 A1 (KUEPPERSBUSCH HAUSGERAETE AG [DE]) 24 August 2000 (2000-08-24) * figure 3 *	1	
A	FR 1 268 099 A (HOMANN WERKE) 28 July 1961 (1961-07-28) * figure 2 *	1-8	
			TECHNICAL FIELDS SEARCHED (IPC)
			F24C A47L F25D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 16 February 2017	Examiner Adant, Vincent
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EPO FORM 1503 03.02 (P04C01)

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

EP 16 20 1836

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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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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 9109279 U1	28-11-1991	DE 9109279 U1	28-11-1991
		EP 0525316 A1	03-02-1993
		ES 2089287 T3	01-10-1996
		YU 69292 A	08-01-1996

DE 19906903 A1	24-08-2000	NONE	

FR 1268099 A	28-07-1961	NONE	
