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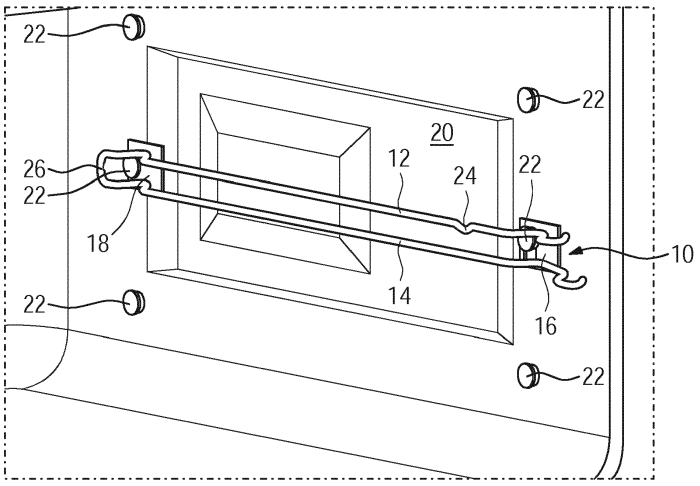
(54) GUIDE RAIL FOR RECEIVING AND SUPPORTING A BAKING TRAY OR COOKING GRID IN AN OVEN CAVITY OF A COOKING OVEN

(57) The present invention relates to a guide rail (10) for receiving and supporting a baking tray or cooking grid. The guide rail (10) includes an upper rod (12) and a lower rod (14). The upper rod (12) and the lower rod (14) are arranged parallel to each other. The guide rail (10) includes at least two holding elements (16, 18) interconnecting the upper rod (12) and the lower rod (14). At least two of the holding elements (16, 18) include in each case at least one recess engageable or engaged with a fastening element (22) attached or attachable at a side wall (20) of the oven cavity (32), so that the guide rail (10) is attachable at and removable from the fastening elements (22) at the side wall (20) of the oven cavity (32), wherein the upper rod (12) and the lower rod (14) are arrangeable horizontally at the side wall (20) of the oven cavity (32), and wherein a lateral border of the baking tray or cooking grid is arrangeable between the upper rod (12) and the lower rod (14).

FIG 3



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Description

[0001] The present invention relates to a guide rail for receiving and supporting a baking tray or cooking grid in an oven cavity of a cooking oven. In particular, the guide rail is an accessory support part of the cooking oven. Further, the present invention relates to a set of guide rails for receiving and supporting one or more baking trays and/or cooking grids within an oven cavity of a cooking oven. Moreover, the present invention relates to a cooking oven including a set of guide rails for receiving and supporting one or more baking trays and/or cooking grids within an oven cavity.

[0002] In an oven cavity of a cooking oven the food stuff is supported by a baking tray or a cooking grid. The use of the baking tray or cooking grid depends on the kind of food stuff and on the cooking mode. Further, the baking tray or cooking grid should be arrangeable at different levels inside the oven cavity depending on the kind of food stuff and cooking mode. There are devices for supporting the baking tray or cooking grid. Usually, said devices are arranged at the side walls of the oven cavity. For example, a pair of side grids is attached at the side walls of the oven cavity.

[0003] An example of the side grid 30 according to the prior art is shown in FIG 4. The side grid 30 is attached at the side wall 20 of the oven cavity 32. A pair of side grids 30 is attached at both side walls 20 of the oven cavity 20. In FIG 4 only one side grid is shown. The side grids 30 are provided for supporting the baking tray or cooking grid. The side grid 30 includes a plurality of rods. In this example, the side grid 30 includes eight horizontal rods forming four guide rails. A pair of adjacent horizontal rods forms one guide rail in each case. Further, the side grid 30 includes a number of vertical rods connected to the horizontal rods. The side grid 30 allows that the baking tray or cooking grid may be arranged at four different levels inside the oven cavity 32.

[0004] However, when the oven cavity 32 is heated up, then also the side grids 30 are heated up and become very hot. The heat absorption of the side grids 30 increases the energy consumption of the cooking oven. Further, the side grids 30 are relative complex.

[0005] It is an object of the present invention to provide a device for supporting the baking tray or cooking grid in an oven cavity, which allows a reduced energy consumption of the cooking oven by low complexity.

[0006] The object of the present invention is achieved by a guide rail according to claim 1.

[0007] According to the present invention a guide rail for receiving and supporting a baking tray or cooking grid in an oven cavity of a cooking oven is provided, wherein:

- the guide rail includes an upper rod and a lower rod,
- the upper rod and the lower rod are arranged parallel to each other,
- the guide rail includes at least two holding elements interconnecting the upper rod and the lower rod, and
- at least two of the holding elements include in each case at least one recess engageable or engaged with a fastening element attached or attachable at a side wall of the oven cavity, so that
- the guide rail is attachable at and removable from the fastening elements at the side wall of the oven cavity, wherein
- the upper rod and the lower rod are arrangeable horizontally at the side wall of the oven cavity, and wherein
- a lateral border of the baking tray or cooking grid is arrangeable between the upper rod and the lower rod.

[0008] The core of the present invention is that the single guide rail is alternatingly attachable at different levels of the side wall of the oven cavity by the user. Only one pair of the guide rails has to be attached at the opposite side walls in order to receive and support the baking tray or cooking grid. When the oven cavity is heated up, then only the pair of the guide rails is heated up. The heat absorption of the pair of guide rails is relative small and reduces the energy consumption of the cooking oven. Further, the pair of the guide rails is realised by low complexity.

[0009] Preferably, the guide rail includes a front holding element and a rear holding element, wherein the front holding element interconnects front portions of the upper rod and the lower rod, while the rear holding element interconnects rear portions of the upper rod and the lower rod.

[0010] In particular, at least one, preferably two, of the holding elements includes a sheet arrangeable parallel to the side wall of the oven cavity.

[0011] Further, the recess of the holding element may include a bigger portion and a smaller portion, wherein the bigger portion is provided for receiving the fastening element, while the smaller portion is provided for engaging with said fastening element.

[0012] For example, the recess of the holding element is formed as a key hole, wherein the smaller portion is arranged above the bigger portion.

[0013] Alternatively, the recesses of two holding elements may be formed as long holes, wherein preferably the longitudinal axes of the long holes of the long holes of the two holding elements are arranged perpendicular to each other.

[0014] Additionally, the guide rail may include at least one pull-out stop, wherein preferably said pull-out stop is formed as a bulge in the upper rod.

[0015] Moreover, the guide rail may include at least one end stop, wherein preferably said end stop is arranged at a rear end of the guide rail and between the upper rod and the lower rod.

[0016] Furthermore, the upper rod and the lower rod may be formed as a U-shaped bar, wherein the curved joint of said U-shaped bar forms the rear end of the guide rail, and wherein preferably the curved joint of said U-

shaped bar forms the end stop of the guide rail. Thus, the guide rail is producible of three elements.

[0017] Preferably, the guide rail may include a single upper rod and a single lower rod. In this case, the end stop may be preferably formed by a bend at a rear end of the single upper rod and/or the single lower rod.

[0018] In particular, the guide rail is made of metal, wherein preferably the upper rod and the lower rod are welded at the holding elements. Alternatively, the guide rail may be made of plastic material or ceramic material.

[0019] Further, the present invention relates to a set of guide rails for receiving and supporting one or more baking trays and/or cooking grids within an oven cavity of a cooking oven, wherein the set of guide rails comprises at least one pair of the guide rails mentioned above, wherein preferably the guide rails of one pair are symmetric to each other.

[0020] Moreover, the present invention relates to a cooking oven including at least one pair of the guide rails according to any one of the preceding claims, wherein the fastening elements are detachably or permanently attached as a matrix at each of the opposite side walls of the oven cavity, and wherein at least two fastening elements are arranged at each level of one side wall, and wherein preferably the fastening elements are arranged symmetrically at the opposite side walls. The user of the cooking oven can select the level, at which at least one pair of the guide rails is arranged. Further, the user can decide attaching either one or more pairs of the guide rails. However, the installation of only one pair of guide rails saves heating energy.

[0021] In particular, each guide rail of the at least one pair of guide rails includes the upper rod and the lower rod, preferably said single upper rod and said single lower rod, preferably wherein said at least one pair of guide rails is attachable or attached at the fastening elements on opposite side walls in order to define a corresponding single level for receiving and supporting a baking tray or cooking grid in the oven cavity. The guide rail includes either the single upper rod and single lower rod or the upper rod and lower rod formed as a U-shaped bar.

[0022] For example, at least two pairs of guide rails including the upper rod and the lower rod, preferably said single upper rod and said single lower rod, in each case are attachable or attached at two or more corresponding pairs of fastening elements arranged at different levels on the opposite side walls of the oven cavity.

[0023] In particular, the fastening element includes a circumferential groove enclosing partially or completely said fastening element, wherein said circumferential groove is engageable or engaged with the recess of the holding element.

[0024] Preferably, the circumferential groove extends parallel the side wall of the oven cavity.

[0025] At last, the fastening element may be welded, riveted and/or screwed at the side wall of the oven cavity, wherein preferably the connection between the fastening element and the side wall of the oven cavity is tight, in particular airtight.

[0026] Novel and inventive features of the present invention are set forth in the appended claims.

[0027] The present invention will be described in further detail with reference to the drawings, in which

FIG 1 illustrates a schematic side view of a guide rail for receiving and supporting a baking tray or cooking grid according to a preferred embodiment of the present invention,

FIG 2 illustrates a schematic sectional front view of a fastening element attached at a side wall 20 of an oven cavity and for fixing the guide rail according to the preferred embodiment of the present invention,

FIG 3 illustrates a schematic perspective view of the guide rail for receiving and supporting the baking tray or cooking grid according to the preferred embodiment of the present invention, and

FIG 4 illustrates a schematic perspective view of a side grid for receiving and supporting the baking tray or cooking grid according to the prior art.

[0028] FIG 1 illustrates a schematic side view of a guide rail 10 for receiving and supporting a baking tray or cooking grid according to a preferred embodiment of the present invention. In FIG 1 the guide rail 10 is attached at a side wall 20 of an oven cavity 32 of a cooking oven. A pair of guide rails 10 attachable or attached at opposite side walls 20 at the same level is required and sufficient for receiving and supporting the baking tray or cooking grid. In particular, the guide rail 10 is an accessory support part of the cooking oven. Moreover, two or more pairs of guide rails are attachable or attached at different levels on the opposite side walls of the oven cavity.

[0029] The guide rail 10 includes an upper rod 12 and a lower rod 14. The upper rod 12 and the lower rod 14 extend parallel to each other. In the mounted state of the guide rail 10, the upper rod 12 and the lower rod 14 extend horizontally. In this example, the upper rod 12 and the lower rod 14 of the guide rail 10 are formed by a U-shaped bar. Alternatively, the upper rod 12 and the lower rod 14 are not directly connected to each other. In the preferred latter case, the guide rail may include a single upper rod and a single lower rod. Further, the guide rail 10 includes a front holding element 16 and a rear holding element 18. The front holding element 16 interconnects front portions of the upper rod 12 and the lower rod 14. In a similar way, the rear holding element 18 interconnects rear portions of the upper rod 12 and the lower rod 14.

[0030] The terms "upper", "lower", "front", "rear" and other prepositions relate to the guide rail 10 in the intended use from the view of the user.

[0031] In this example, the front holding element 16

and the rear holding element 18 are formed as metal sheet elements. Preferably, the upper rod 12 and the lower rod 14 are welded onto the front holding element 16 and the rear holding element 18, so that the guide rail 10 forms a single-piece part.

[0032] Further, the guide rail 10 may include a pull-out stop 24 and an end stop 26. In this example, the pull-out stop 24 is formed as bulge in the upper rod 12, while the end stop 26 is formed by the U-shaped joint between the upper rod 12 and the lower rod 14. The bulge of the pull-out stop 24 extends downwards. The pull-out stop 24 avoids that the baking tray or cooking grid is pulled-out accidently by the user. The end stop 26 prevents that the baking tray or cooking grid is pushed against a rear wall of the oven cavity. If the guide rail 10 includes the single upper rod 12 and the single lower rod 20, then the end stop 26 can preferably be formed by a bend at a rear end of the single upper rod 12 and/or the single lower rod 14. In the latter case, the single upper rod 12 and/or the single lower rod 14 are L-shaped. Moreover, one of the single upper rod 12 and single lower rod 14 may be L-shaped, while the other of said single upper rod 12 and single lower rod 14 may be straight.

[0033] The front holding element 16 and the rear holding element 18 include at least one recess in each case. Said recess is engaged or engageable with a fastening element 22 attached at a side wall 20 of the oven cavity. Preferably, the recess includes a bigger portion and a smaller portion, wherein the bigger portion is provided for receiving the fastening element 22, while the smaller portion is engaged or engageable with the fastening element 22. In particular, the recess is formed as a key hole, wherein preferably the smaller portion is arranged above the bigger portion of said key hole.

[0034] Alternatively, the recess may be formed as a long hole. For example, the elongated axes of the recesses of the front holding element 16 and the rear holding element 18 may be arranged perpendicular or parallel to each other. In general, the orientation of the elongated axes of the recesses of the front holding element 16 and the rear holding element 18 may be arbitrary. The shape and orientation of the recesses of the holding elements 16 and 18 and the shapes of the fastening elements 22 are adapted to each other.

[0035] The fastening elements 22 may be detachably or permanently attached at the side wall 20 of the oven cavity. In FIG 1 six fastening elements 22 are attached at the side wall 20 of the oven cavity. In this example, the fastening elements 22 are arranged at three levels, wherein two fastening elements 22 are arranged at each level. In general, two or more fastening elements 22 are arranged at each level, wherein an arbitrary number of levels within the scope of the size of the side wall 20 may be provided.

[0036] According to another embodiment of the present invention the guide rail 10 includes one or more further holding elements arranged between the front holding element 16 and the rear holding element 18. Said further holding elements may be also engaged or engageable with corresponding fastening elements 22. Either the further holding elements may be connected to the upper rod 12 or lower rod 14 or interconnect said upper rod 12 and lower rod 14.

[0037] In particular, the guide rail 10 is made of metal. Preferably, the upper rod 12 and the lower rod 14 are welded at the holding elements 16 and 18. For example, the guide rail 10 is made of steel, stainless steel, aluminium or aluminium alloy.

[0038] Alternatively, the guide rail 10, preferably the guide rail that comprises said single upper rail and said single lower rail, may be made of plastic material, in particular a high-performance thermoplastic material. Said high-performance thermoplastic material may be polyphenylene sulphide, polyphthalamide, polyether ether ketone or liquid crystal polymer. For example, polyphenylene sulphide has a melting point higher than about 285 °C, which is sufficient for the use in the oven cavity 32. Preferably, the guide rail 10 made of plastic material may be manufactured by injection moulding. Moreover, the guide rail 10 may be made of ceramic material.

[0039] FIG 2 illustrates a schematic sectional front view of the fastening element 22 attached at the side wall 20 of the oven cavity 32 for fixing the guide rail 10 according to the preferred embodiment of the present invention.

[0040] The fastening element 22 is detachably or permanently attached at the side wall 20 of the oven cavity 32. The fastening element 22 is welded, riveted or screwed at the side wall 20 of the oven cavity 32. Preferably, the connection between the fastening element 22 and the side wall 20 is tight, in particular airtight, so that humid air cannot leak. Further, the fastening element 22 may be detachably or permanently attached by a snap-in mechanism at the side wall 20 of the oven cavity 32.

[0041] In this example, the fastening element 22 includes a circumferential groove 28 extending parallel to the plane of the side wall 20 of the oven cavity 32. Said circumferential groove 28 encloses partially or completely the fastening element 22. In general, the fastening element 22 has an arbitrary suitable shape, so that the recess of the front holding element 16 and/or rear holding element 18 is engageable with the fastening element 22. In this example, the recess of the front holding element 16 and/or rear holding element 18 is engageable with the circumferential groove 28 of the fastening element 22.

[0042] If the recess of the front holding element 16 and/or the rear holding element 18 is formed as the key hole, wherein the smaller portion is arranged above the bigger portion of said key hole, then the guide rail 10 is mountable and dismountable by the user in a simple way and without any tool.

[0043] FIG 3 illustrates a schematic perspective view of the guide rail 10 for receiving and supporting the baking tray or cooking grid according to the preferred embodiment of the present invention.

[0044] The guide rail 10 includes the upper rod 12, the

lower rod 14, the front holding element 16 and the rear holding element 18. The upper rod 12 and the lower rod 14 extend parallel to each other. When the guide rail 10 is attached at the side wall 20, then the upper rod 12 and the lower rod 14 extend horizontally. In this example, the upper rod 12 and the lower rod 14 are formed by the curved U-shaped bar. The front holding element 16 interconnects the front portions of the upper rod 12 and the lower rod 14, while the rear holding element 18 interconnects the rear portions of the upper rod 12 and the lower rod 14. Optionally, the upper rod 12 and the lower rod 14 are interconnected by one or more further holding elements arranged between the front holding element 16 and the rear holding element 18.

[0045] In this example, the guide rail 10 includes the pull-out stop 24 formed as the bulge in the upper rod 12 and the end stop 26 formed by the U-shaped joint between the upper rod 12 and the lower rod 14. The pull-out stop 24 avoids that the baking tray or cooking grid is pulled-out accidently by the user, while the end stop 26 prevents that the baking tray or cooking grid is pushed against a rear wall of the oven cavity.

[0046] In this example, the front holding element 16 and the rear holding element 18 are formed as metal sheet elements, wherein preferably the upper rod 12 and the lower rod 14 are welded onto the front holding element 16 and the rear holding element 18, so that the guide rail 10 is formed as the single-piece part. The front holding element 16 and the rear holding element 18 include the recess in each case, which is engaged with the corresponding fastening element 22 at the side wall 20 of the oven cavity 32.

[0047] Preferably, the recess includes a bigger portion and a smaller portion, wherein the bigger portion is provided for receiving the fastening element 22, while the smaller portion engages the fastening element 22. In particular, the recess is formed as the key hole, wherein preferably the smaller portion is arranged above the bigger portion of said key hole.

[0048] FIG 4 illustrates a schematic perspective view of a side grid 30 for receiving and supporting the baking tray or cooking grid according to the prior art. The side grid 30 is attached at the side wall 20 of the oven cavity 32. A pair of side grids 30 is attached at both side walls 20 of the oven cavity 20. In FIG 4 only one side grid is shown. The baking tray or cooking grid is supported by both side grids 30.

[0049] The side grid 30 includes a plurality of rods. In this example, the side grid 30 includes eight horizontal rods forming four guide rails. A pair of adjacent horizontal rods forms one guide rail in each case. Further, the side grid 30 includes a number of vertical rods connected to the horizontal rods. The side grid 30 allows that the baking tray or cooking grid may be arranged at four different levels inside the oven cavity 32.

[0050] When the oven cavity 32 is heated up, then also the side grids 30 are heated up and become very hot. The heat absorption of the side grids 30 increases the energy consumption of the cooking oven. Further, the side grids 30 are relative complex.

[0051] In contrast, the guide rails 10 according to the present invention absorb only a small amount of heat. Moreover, the inventive guide rails 10 are realised by low complexity.

[0052] Further, the present invention relates to the cooking oven including at least one pair of the guide rails 10 mentioned above. Said cooking oven comprises a plurality of the fastening elements 22. Preferably, the fastening elements 22 are arranged at different levels, wherein at least two fastening elements 22 are arranged at each level of the side wall 20. The number of levels depends on the size of the oven cavity 32. The fastening elements 22 are arranged as a matrix at the side wall 20 of the oven cavity 32.

[0053] Preferably, the cooking oven includes one pair of the guide rails 10 accompanied by said cooking oven. For example, the pair of the guide rails 10 is arranged at a mean level of the cooking oven. The user may change the guide rails 10 from one level to another level in a simple way. Further, one or more additional pairs of the guide rails 10 may be provided as accessories. The user of the cooking oven can select at least one height level, at which a pair of the guide rails 10, preferably comprising a single upper rod and a single lower rod, is arranged. Moreover, the user can decide attaching either one or more pairs of the guide rails 10 in the oven cavity 32. However, the installation of only one pair of guide rails 10 in the oven cavity 32 saves heating energy.

[0054] Although an illustrative embodiment of the present invention has been described herein with reference to the accompanying drawings, it is to be understood that the present invention is not limited to that precise embodiment, and that various other changes and modifications may be affected therein by one skilled in the art without departing from the scope or spirit of the invention. All such changes and modifications are intended to be included within the scope of the invention as defined by the appended claims.

List of reference numerals

[0055]

10	guide rail
12	upper rod
14	lower rod
16	front holding element
18	rear holding element
20	side wall of the oven cavity
22	fastening element
24	pull-out stop
26	end stop
28	circumferential groove
30	side grid
32	oven cavity

Claims

1. A guide rail (10) for receiving and supporting a baking tray or cooking grid in an oven cavity (32) of a cooking oven, wherein:

   - the guide rail (10) includes an upper rod (12) and a lower rod (14),
   - the upper rod (12) and the lower rod (14) are arranged parallel to each other,
   - the guide rail (10) includes at least two holding elements (16, 18) interconnecting the upper rod (12) and the lower rod (14), and
   - at least two of the holding elements (16, 18) include in each case at least one recess engageable or engaged with a fastening element (22) attached or attachable at a side wall (20) of the oven cavity (32), so that
   - the guide rail (10) is attachable at and removable from the fastening elements (22) at the side wall (20) of the oven cavity (32), wherein
   - the upper rod (12) and the lower rod (14) are arrangeable horizontally at the side wall (20) of the oven cavity (32), and wherein
   - a lateral border of the baking tray or cooking grid is arrangeable between the upper rod (12) and the lower rod (14).

2. The guide rail according to claim 1,
   characterised in that
   the guide rail (10) includes a front holding element (16) and a rear holding element (18), wherein the front holding element (16) interconnects front portions of the upper rod (12) and the lower rod (14), while the rear holding element (18) interconnects rear portions of the upper rod (12) and the lower rod (14).

3. The guide rail according to claim 1 or 2,
   characterised in that
   at least one, preferably two, of the holding elements (16, 18) includes a sheet arrangeable parallel to the side wall (20) of the oven cavity (32).

4. The guide rail according to any one of the preceding claims,
   characterised in that
   the recess of the holding element (16, 18) includes a bigger portion and a smaller portion, wherein the bigger portion is provided for receiving the fastening element (22), while the smaller portion is provided for engaging with said fastening element (22), preferably wherein the recess of the holding element (16, 18) is formed as a key hole, wherein the smaller portion is arranged above the bigger portion.

5. The guide rail according to any one of the claims 1 to 3,
   characterised in that
   the recesses of two holding elements (16, 18) are formed as long holes, wherein preferably the longitudinal axes of the long holes of the two holding elements (16, 18) are arranged perpendicular to each other.

6. The guide rail according to any one of the preceding claims,
   characterised in that
   the guide rail (10) includes at least one pull-out stop (24), wherein preferably said pull-out stop (24) is formed as a bulge in the upper rod (12).

7. The guide rail according to any one of the preceding claims,
   characterised in that
   the guide rail (10) includes at least one end stop (26), wherein preferably said end stop (24) is arranged at a rear end of the guide rail (10) and between the upper rod (12) and the lower rod (14).

8. The guide rail according to any one of the preceding claims,
   characterised in that
   the upper rod (12) and the lower rod (14) are formed as a U-shaped bar, wherein the curved joint of said U-shaped bar forms the rear end of the guide rail (10), and wherein preferably the curved joint of said U-shaped bar forms the end stop (24) of the guide rail (10).

9. The guide rail according to any one of the claims 1 to 8,
   characterised in that
   the guide rail (10) includes a single upper rod (12) and a single lower rod (14), preferably wherein the end stop (26) is formed by a bend at a rear end of the single upper rod (12) and/or the single lower rod (14).

10. The guide rail according to any one of the preceding claims,
    characterised in that
    the guide rail (10) is made of metal, wherein preferably the upper rod (12) and the lower rod (14) are welded at the holding elements (16, 18).

11. A set of guide rails (10) for receiving and supporting one or more baking trays and/or cooking grids within an oven cavity (32) of a cooking oven,
    characterised in that
    the set of guide rails (10) comprises at least one pair of the guide rails (10) according to any one of the preceding claims, wherein preferably the guide rails (10) of one pair are symmetric to each other.

12. A cooking oven including at least one pair of the

guide rails (10) according to any one of the preceding claims,
characterised in that
the fastening elements (22) are detachably or permanently attached as a matrix at each of the opposite side walls (20) of the oven cavity (32), wherein at least two fastening elements (22) are arranged at each level of one side wall (20), and wherein preferably the fastening elements (22) are arranged symmetrically at the opposite side walls (20).

13. The cooking oven according to claim 12,
characterised in that
each guide rail (10) of the at least one pair of guide rails (10) includes the upper rod (12) and the lower rod (14), preferably said single upper rod (12) and said single lower rod (14), preferably wherein said at least one pair of guide rails (10) is attachable or attached at the fastening elements (22) on opposite side walls (20) in order to define a corresponding single level for receiving and supporting a baking tray or cooking grid in the oven cavity (32), in particular wherein at least two pairs of guide rails (10) including the upper rod (12) and the lower rod (14) in each case are attachable or attached at two or more corresponding pairs of fastening elements (22) arranged at different levels on the opposite side walls (20) of the oven cavity (32).

14. The cooking oven according to claim 12 or 13,
characterised in that
the fastening element (22) includes a circumferential groove (28) enclosing partially or completely said fastening element (22), wherein said circumferential groove (28) is engageable or engaged with the recess of the holding element (16, 18), preferably wherein the circumferential groove (28) extends parallel the side wall (20) of the oven cavity (32).

15. The cooking oven according to any one of the claims 12 to 14,
characterised in that
the fastening element (22) is welded, riveted and/or screwed at the side wall (20) of the oven cavity (32), wherein preferably the connection between the fastening element (22) and the side wall (22) of the oven cavity (32) is tight, in particular airtight.

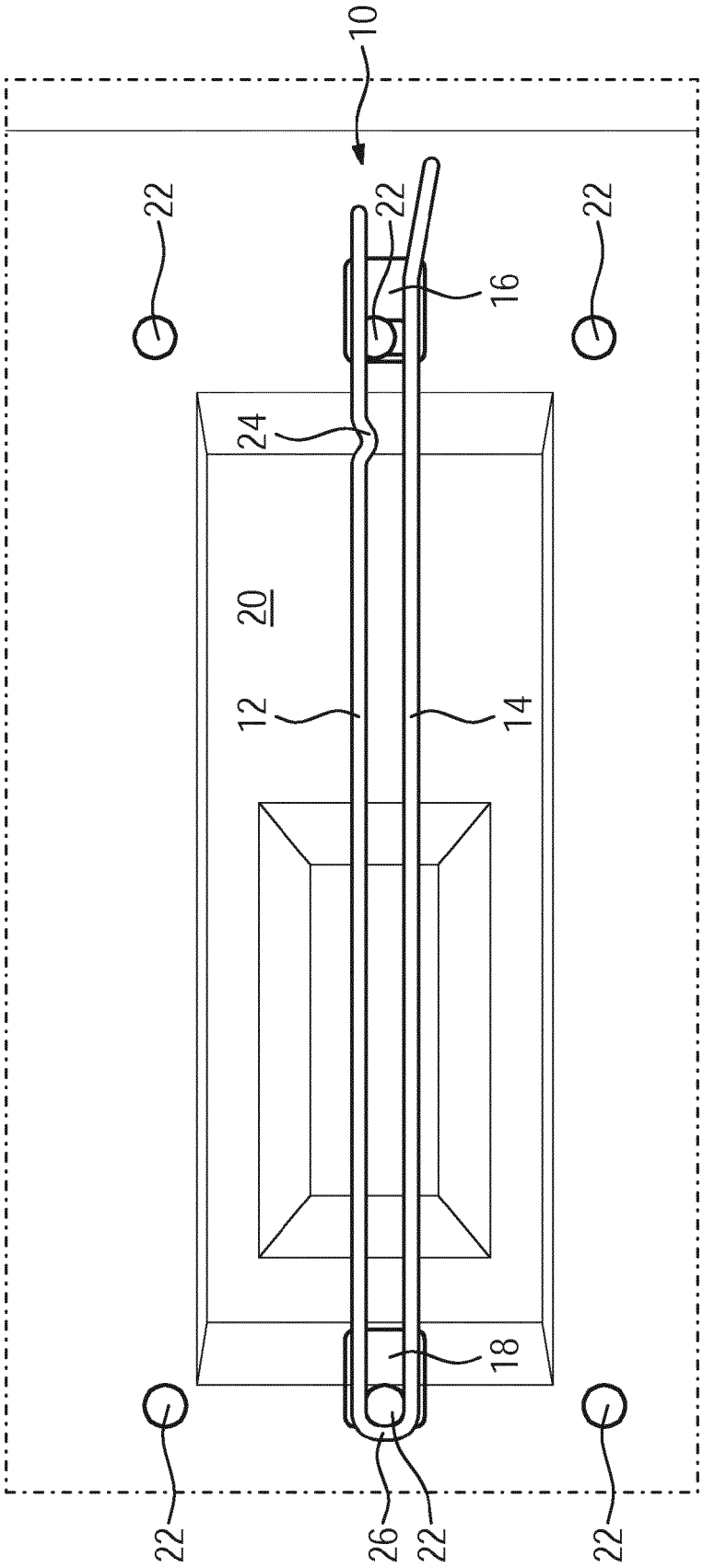


FIG 1

FIG 2

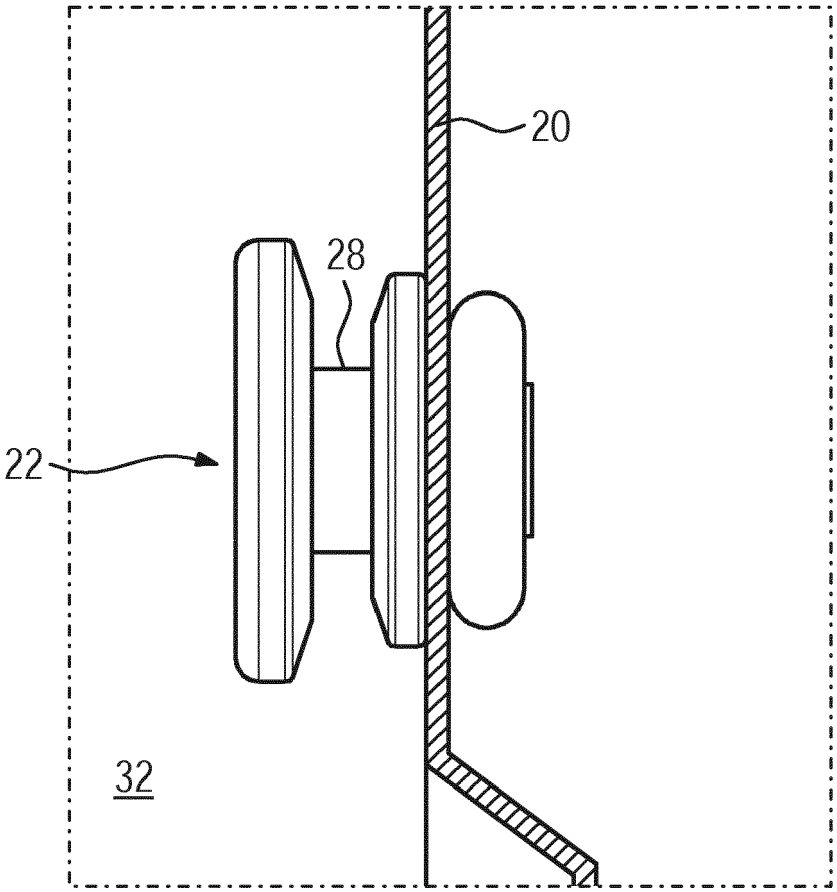


FIG 3

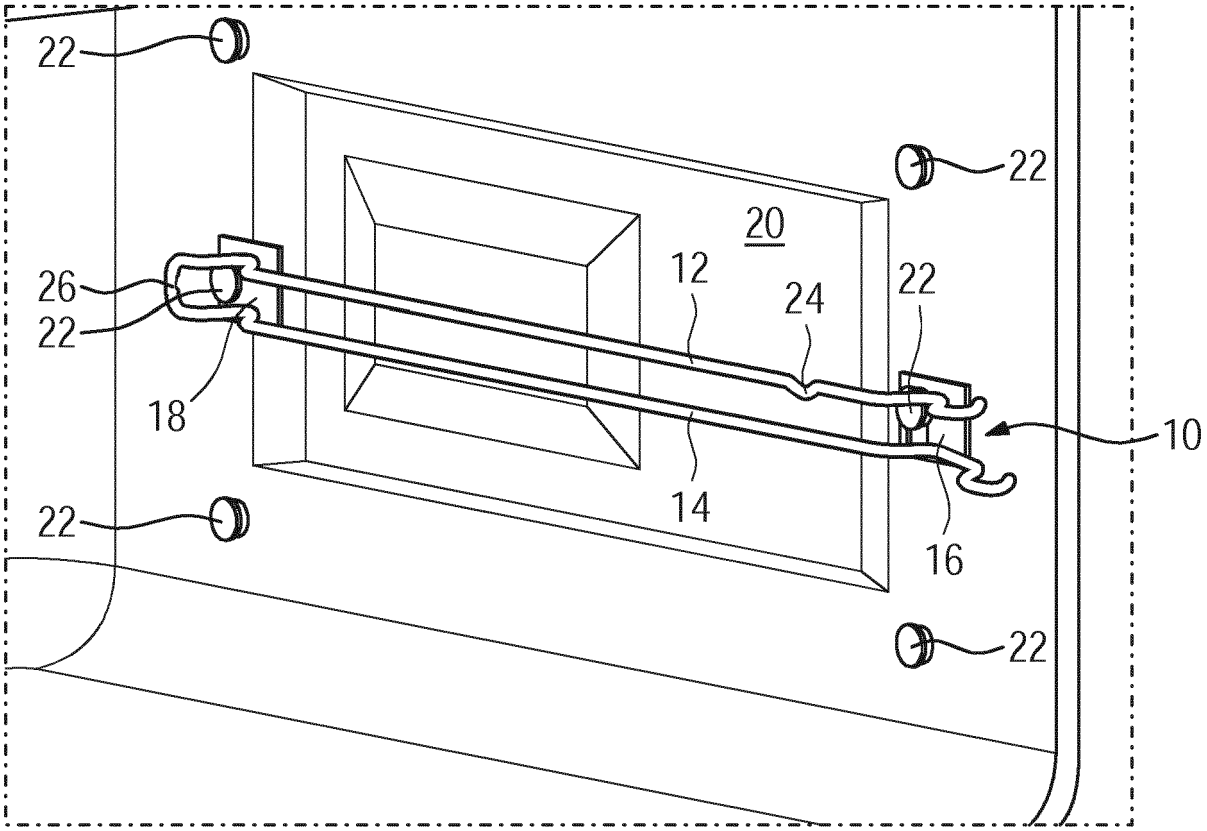
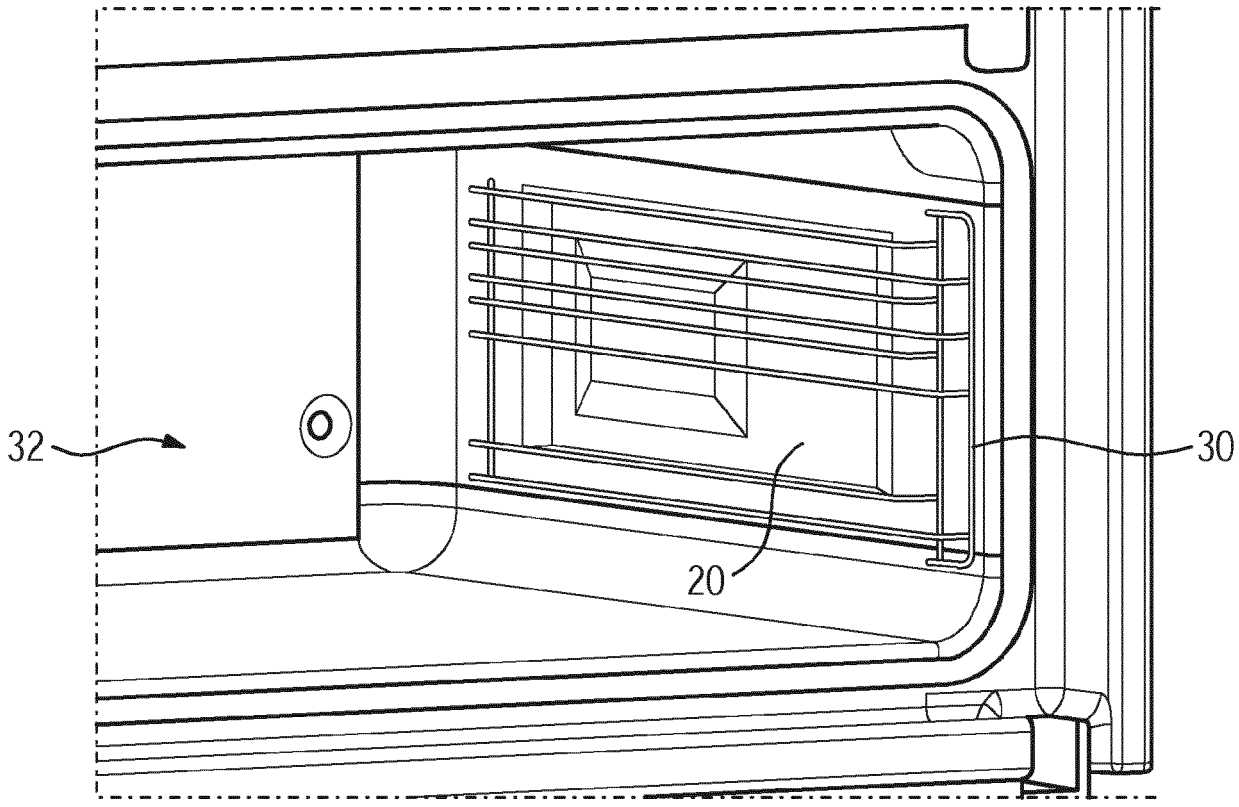


FIG 4



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EUROPEAN SEARCH REPORT

Application Number
EP 16 18 7229

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	EP 2 757 322 A1 (ELECTROLUX HOME PROD CORP [BE]) 23 July 2014 (2014-07-23) * paragraphs [0024] - [0027], [0039], [0050]; figures 1-4,10 *	1-8, 10-15	INV. F24C15/16
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