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(54) **DOOR HINGE FOR AN OVEN DOOR**

(57) The present invention relates to a door hinge (10) for a door of a domestic appliance, in particular for an oven door (30). The door hinge (10) comprises a stationary hinge part (12) and a moveable hinge part (14) connected to said stationary hinge part (12). The moveable hinge part (14) is slidable relative to the stationary hinge part (12) between a closed state and an intermediate state of the door hinge (10). The moveable hinge part (14) is pivotable relative to the stationary hinge part (12) between the intermediate state and an opened state of the door hinge (10). One of the stationary hinge part (12) and the moveable hinge part (14) comprises an elongated pin element (20) extending parallel to a pivoting

axis of the door hinge (10). Another one of the stationary hinge part (12) and the moveable hinge part (14) comprises at least two elongated holes (22), preferably a pair of elongated holes (22), for receiving the pin element (20). The pin element (20) is slidable perpendicular to its longitudinal axis and within the elongated holes (22) between the closed state and the intermediate state of the door hinge (10). The pin element (20) and/or the stationary hinge part (12) or moveable hinge part (14), respectively, are pivotable around its longitudinal axis at a limit stop of the elongated holes (22) between the intermediate state and the opened state of the door hinge (10).

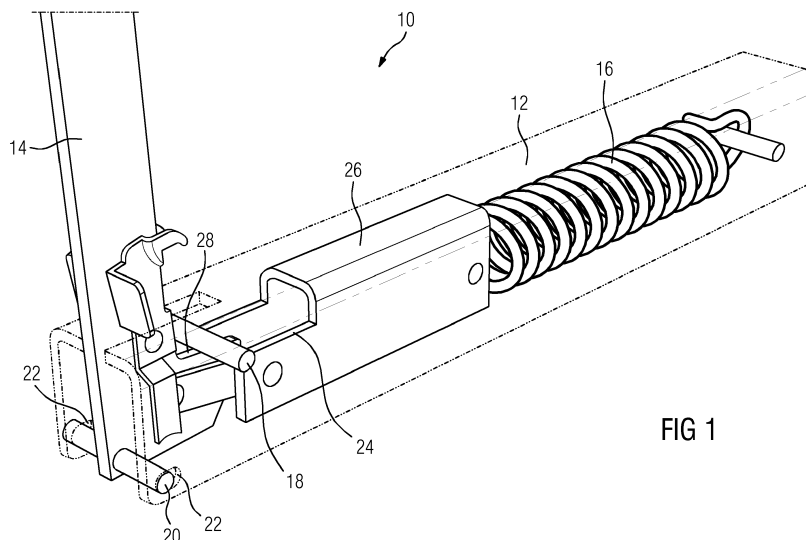


FIG 1

Description

[0001] The present invention relates to a door hinge for a door of a domestic appliance, in particular for an oven door of a cooking oven. Further, the present invention relates to a door for a domestic appliance, in particular an oven door for a cooking oven. Moreover, the present invention relates to a domestic appliance, in particular a cooking oven.

[0002] An oven door acts as a thermal barrier in order to keep the heat within an oven cavity during the cooking process. A gasket is provided for sealing a gap between the oven door and the oven cavity. A transparent oven door allows the user supervising the progress of the food stuff being cooked in the oven cavity. The oven door is usually supported by door hinges. Said door hinges allow a pivoting of the oven door relative to the oven cavity. The pivoting of a so-called drop-down door is performed along a vertical direction, i.e. the pivoting axis extends horizontally. The pivoting of a so-called side-opening door is performed along a horizontal direction, i.e. the pivoting axis extends vertically.

[0003] It is necessary that the user has to open and subsequently close the oven door in order to insert and remove food stuff into and from, respectively, the oven cavity. Further, the user has to open and subsequently close the oven door in order to treat the food stuff. The mechanical force for the movement of the oven door is generated by the user and applied to the oven door via a door handle, a recessed grip or another comparable device.

[0004] However, the mechanical force generated by the user is not uniform between the totally opened and totally closed states of the oven door during the opening and/or closing procedure. In particular, when the oven door is in the totally closed state, a spring element of each door hinge generates a static force between the oven door and the oven cavity. Said static force of the spring elements avoid an opening of the oven door due to overpressure in the oven cavity during the cooking process. The user has to overcome the force of the spring elements when opening the oven door.

[0005] The movement of the oven door is defined by the door hinges, so that the oven door performs a pivoting movement. During closing, the oven door touches at first that portion of the gasket, which is arranged closest to the door hinges. Thus, that portion of the gasket, which is arranged closest to the door hinges, is distorted. A proper sealing cannot be guaranteed along the complete gasket. A completely heat-proof sealing of the gap between the oven door and the oven cavity is desirable.

[0006] FIG 7 illustrates a schematic sectional side view of the oven door 30 for the cooking oven 40 according to the prior art in a partially opened state. The oven door 30 is attached at the chassis of the cooking oven 40 via a conventional door hinge 10. The cooking oven 40 comprises the oven cavity 34. The gasket 32 is attached at the front side of the front frame of said oven cavity 34.

The front frame and the gasket 32 enclose the front opening of the oven cavity 34. The oven door 30 includes the inner glass panel 36. The sealing of the oven cavity 34 is obtained by squeezing the gasket 32 between the front frame of the oven cavity 34 and the inner glass panel 36. The oven door 30 is pivotable by the user via a door handle 38. In the partially opened state a portion of the gasket 32 is squeezed. The squeezed portion of the gasket 32 is close to the door hinge 10 and to the pivoting axis of the oven door 30. In contrast, another portion of said gasket 32 spaced from the door hinge 10 and to the pivoting axis of the oven door 30 is not squeezed. During closing the oven door 30 the gasket 32 is distorted.

[0007] FIG 8 illustrates two detailed schematic sectional side views of the oven door 30 for the cooking oven 40 according to the prior art in the partially opened state. In said partially opened state of the oven door 30 and during closing said oven door 30 the gasket 32 is distorted, so that a proper sealing cannot be guaranteed along the complete gasket 32.

[0008] It is an object of the present invention to provide a door hinge for an oven door, which improves the sealing of gap between the oven door and the oven cavity.

[0009] The object is achieved by a door hinge for an oven door according to claim 1.

[0010] According to the present invention a door hinge for a door of a domestic appliance, in particular for an oven door, is provided, wherein

- the door hinge comprises a stationary hinge part,
- the door hinge comprises a moveable hinge part connected to the stationary hinge part,
- the moveable hinge part is slidable relative to the stationary hinge part between a closed state and an intermediate state of the door hinge,
- the moveable hinge part is pivotable relative to the stationary hinge part between the intermediate state and an opened state of the door hinge,
- one of the stationary hinge part and the moveable hinge part comprises an elongated pin element extending parallel to a pivoting axis of the door hinge,
- another one of the stationary hinge part and the moveable hinge part comprises at least two elongated holes, preferably a pair of elongated holes, for receiving the pin element,
- the pin element is slidable perpendicular to its longitudinal axis and within the elongated holes between the closed state and the intermediate state of the door hinge, and
- the pin element and/or the stationary hinge part or moveable hinge part, respectively, are pivotable around its longitudinal axis at a limit stop of the elongated holes between the intermediate state and the opened state of the door hinge.

[0011] The core of the present invention is the door hinge providing a pivoting and translatory motion of the door. The moveable hinge part is either slidable or piv-

otable relative to the stationary hinge part depending on the position of the door. The translatory motion of the door, directly before said door is closed, allows a uniform squeezing of a gasket arranged between a front frame of the domestic appliance and an inner side of the door. Said uniform squeezing allows a reliable sealing by the gasket.

[0012] In particular, the stationary hinge part and/or the moveable hinge part are elongated, wherein preferably the longitudinal axes of the stationary hinge part and/or the moveable hinge part extend perpendicular to the pivoting axis of the door hinge. For example, the stationary hinge part and the moveable hinge part form substantially a right angle in the closed state of the door hinge and an obtuse angle in the opened state of the door hinge.

[0013] Further, at least one spring element may be interconnected between the stationary hinge part and the moveable hinge part, wherein preferably said spring element pulls the moveable hinge part relative to the stationary hinge part into the closed state.

[0014] Moreover, at least one slide element may be interconnected between the stationary hinge part and the moveable hinge part, wherein preferably said slide element is slidable perpendicular to the pivoting axis of the door hinge.

[0015] Preferably, the stationary hinge part and the moveable hinge part include guide elements defining constraints, so that the moveable hinge part is pivotable relative to the stationary hinge part between the intermediate state and the opened state of the door hinge, and that the moveable hinge part is slidable relative to the stationary hinge part between the closed state and the intermediate state and the opened state of the door hinge.

[0016] For example, the moveable hinge part includes at least one pivotable guide edge interacting with an element of the stationary hinge part, wherein the cooperation of the pivotable guide edge and said element of the stationary hinge part forces that the moveable hinge part is pivotable relative to the stationary hinge part between the closed state and the intermediate state of the door hinge.

[0017] In this case, the cooperation of the pivotable guide edge and said element of the stationary hinge part forces the moveable hinge part to pivot relative to the stationary hinge part between the intermediate state and the opened state of the door hinge, when the moveable hinge part moves outwards.

[0018] Additionally or alternatively, the slide element may include at least one slidable guide edge interacting with an element of the stationary hinge part, wherein the cooperation of the slidable guide edge and said element of the stationary hinge part conditions that the slide element is only slidable along the longitudinal axis of the stationary hinge part.

[0019] According to the preferred embodiment of the present invention, the stationary hinge part includes at least one stationary pin element interacting with the pivotable guide edge of the moveable hinge part, wherein

the cooperation of the stationary pin element and the pivotable guide edge forces the moveable hinge part to pivot relative to the stationary hinge part between the closed state and the intermediate state of the door hinge, and wherein preferably the cooperation of the stationary pin element and the slidable guide edge conditions that the slide element is only slidable along the longitudinal axis of the stationary hinge part, when the moveable hinge part moves outwards.

[0020] Further, the pin element may be an integrated part of the moveable hinge part, while the elongated holes are formed in the stationary hinge part.

[0021] Moreover, the pin element may be slidable between outer limit stops and inner limit stops of the elongated holes, wherein the outer limit stops are closer to the pivoting axis of the door hinge than the inner limit stops.

[0022] Preferably, the pin element lies at the outer limit stops of the elongated holes, when the door hinge is in the intermediate state and in a partially opened state, wherein preferably the pin element lies at the outer limit stops again, when the moveable hinge part is in the opened state.

[0023] In contrast, the pin element may lie at the inner limit stops of the elongated holes, when the door hinge is in the closed state. In particular, the pin element is slidable between the inner limit stops and the outer limit stops of the elongated holes, when the moveable hinge part is slidable relative to the stationary hinge part between the closed state and the intermediate state of the door hinge, wherein preferably the pin element is pulled from the outer limit stops to the inner limit stops back again by the spring element, when the moveable hinge part is in the opened state.

[0024] Further, the present invention relates to a door for a domestic appliance, in particular an oven door for a cooking oven, wherein the door comprises at least two door hinges mentioned above.

[0025] At last, the present invention relates to a domestic appliance, in particular a cooking oven, wherein the domestic appliance comprises at least two door hinges and/or the door mentioned above.

[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 perspective view of a door hinge according to a preferred embodiment of the present invention,

FIG 2 illustrates a schematic perspective view of the door hinge according to the preferred embodiment of the present invention in a closed state,

FIG 3 illustrates a schematic perspective view of the door hinge according to the preferred embodiment of the present invention in an intermediate

state,

FIG 4 illustrates a schematic perspective view of the door hinge according to the preferred embodiment of the present invention in a partially opened state,

FIG 5 illustrates a schematic perspective view of the door hinge according to the preferred embodiment of the present invention in an opened state,

FIG 6 illustrates three schematic sectional side views of an oven door for a cooking oven according to the preferred embodiment of the present invention in the partially opened state, the intermediate state and the closed state, respectively,

FIG 7 illustrates a schematic sectional side view of the oven door for the cooking oven according to the prior art in the partially opened state, and

FIG 8 illustrates two detailed schematic sectional side views of the oven door for the cooking oven according to the prior art in the partially opened state.

[0028] FIG 1 illustrates a schematic perspective view of a door hinge 10 according to a preferred embodiment of the present invention. In particular, the door hinge 10 is provided for an oven door 30 of a cooking oven 40. In general, the door hinge 10 is provided for the door 30 of an appliance 40.

[0029] The door hinge 10 comprises a stationary hinge part 12 and a moveable hinge part 14. The stationary hinge part 12 is provided for a chassis of the cooking oven 40. The moveable hinge part 14 is provided for the oven door 30 of the cooking oven 40. The stationary hinge part 12 and the moveable hinge part 14 are elongated. The moveable hinge part 14 is pivotable and slidable relative to the stationary hinge part 12. The moveable hinge part 14 is slidable relative to the stationary hinge part 12 between a closed state and an intermediate state of the door hinge 10. The moveable hinge part 14 is slidable along the longitudinal axis of the stationary hinge part 12. The moveable hinge part 14 is pivotable relative to the stationary hinge part 12 between the intermediate state and an opened state of the door hinge 10. The longitudinal axes of the stationary hinge part 12 and the moveable hinge part 14 are perpendicular to a pivoting axis of the door hinge 10.

[0030] The stationary hinge part 12 includes a stationary pin element 18. Said stationary pin element 18 is elongated and attached at the stationary hinge part 12. The longitudinal axis of the stationary pin element 18 extends perpendicular to the longitudinal axis of the stationary hinge part 12. The stationary hinge part 12 and

the stationary pin element 18 form a rigid body or a single-piece part.

[0031] The moveable hinge part 14 includes an elongated moveable pin element 20 extending perpendicular to the longitudinal axes of said moveable hinge part 14. The moveable hinge part 14 and the moveable pin element 20 may be formed as a single-piece part. The moveable pin element 20 is received by a pair of elongated holes 22 of the stationary hinge part 12. The moveable pin element 20 is slidable perpendicular to its longitudinal axis between two limit stops of the elongated holes 22. Inner limit stops of the elongated holes 22 face the chassis of the cooking oven 40, while outer limit stops of the elongated holes 22 are averted from said chassis. When the moveable pin element 20 lies against the outer limit stops of the elongated holes 22, then the moveable hinge part 14 is able to pivot relative to the stationary hinge part 12. The longitudinal axis of the moveable pin element 20 forms the pivoting axis of the door hinge 10, when the pin element 20 lies against the outer limit stops of the elongated holes 22.

[0032] A spring element 16 and a slide element 26 are interconnected between the moveable hinge part 14 and the stationary hinge part 12. In this example, the spring element 16 and the slide element 26 are arranged within the stationary hinge part 12. The spring element 16 pulls the moveable pin element 20 against the inner limit stops of the elongated holes 22. When the moveable pin element 20 lies against the inner limit stops of the elongated holes 22, then the moveable hinge part 14 is not able to pivot relative to the stationary hinge part 12, but is only slidable along the longitudinal axis of the stationary hinge part 12. The translatory motion of the moveable hinge part 14 relative to the stationary hinge part 12 is defined by the movement of the moveable pin element 20 between the inner and outer limit stops of the elongated holes 22.

[0033] Further, the moveable hinge part 14 includes a pivotable guide edge 28. The pivotable guide edge 28 is in contact with the stationary pin element 18 of the stationary hinge part 12. The cooperation of the pivotable guide edge 28 and the stationary pin element 18 prevents that the moveable hinge part 14 is pivotable relative to the stationary hinge part 12 between the closed state and the intermediate state of the door hinge 10.

[0034] FIG 2 illustrates a schematic perspective view of the door hinge 10 according to the preferred embodiment of the present invention in a closed state. In the closed state of the door hinge 10 the moveable pin element 20 of the moveable hinge part 14 lies against the inner limit stops of the elongated holes 22 of the stationary hinge part 12.

[0035] The pivotable guide edge 28 is in contact with the stationary pin element 18 of the stationary hinge part 12. The interaction of the pivotable guide edge 28 and the stationary pin element 18 forces the moveable hinge part 14 to pivot relative to the stationary hinge part 12 between the closed state and the intermediate state of

the door hinge 10. The stationary pin element 18 follows the movable hinge part 12 along the pivotable guide edge 28, when the door 30 will be opened.

[0036] FIG 3 illustrates a schematic perspective view of the door hinge 10 according to the preferred embodiment of the present invention in an intermediate state. The intermediate state defines a changeover from the translatory motion to the pivoting motion of the moveable hinge part 14 relative to the stationary hinge part 12.

[0037] In the intermediate state of the door hinge 10 the moveable pin element 20 of the moveable hinge part 14 lies against the outer limit stops of the elongated holes 22 of the stationary hinge part 12. The outer limit stops of the elongated holes 22 prevent any further translatory motion of the moveable hinge part 14 relative to the stationary hinge part 12. The cooperation of the stationary pin element 18 and the pivotable guide edge 28 forces the moveable hinge part 14 to pivot relative to the stationary hinge part 12. The pivoting of the moveable hinge part 14 relative to the stationary hinge part 12 is obtained by a user against the force of the spring element 16.

[0038] FIG 4 illustrates a schematic perspective view of the door hinge 10 according to the preferred embodiment of the present invention in a partially opened state.

[0039] In the partially opened state of the door hinge 10 the moveable pin element 20 of the moveable hinge part 14 still lies against the outer limit stops of the elongated holes 22 of the stationary hinge part 12. The stationary pin element 18 has gone beyond the pivotable guide edge 28. In this example, there is no contact between the stationary pin element 18 and the surface 24 of the slide element 26. The pivoting of the moveable hinge part 14 relative to the stationary hinge part 12 effect the sliding of the slide element 26 along the longitudinal axis of the stationary hinge part 12.

[0040] FIG 5 illustrates a schematic perspective view of the door hinge 10 according to the preferred embodiment of the present invention in an opened state. In the opened state of the door hinge 10 the moveable pin element 20 of the moveable hinge part 14 has been pulled against the inner limit stops of the elongated holes 22 of the stationary hinge part 12 by the spring element 16. In particular, FIG 5 clarifies the shape of the pivotable guide edge 28 at the moveable hinge part 14.

[0041] In FIG 5 the stationary pin element 18 has gone beyond the pivotable guide edge 28. When the door is fully opened, then the moveable pin element 20 of the moveable hinge part 14 has been pulled against the inner limit stops of the elongated holes 22 of the stationary hinge part 12 by the spring element 16.

[0042] FIG 6 illustrates three schematic sectional side views of an oven door 30 for the cooking oven 40 according to the preferred embodiment of the present invention in the partially opened state, the intermediate state and the closed state, respectively.

[0043] The oven door 30 is attached at the chassis of the cooking oven 40 via the door hinge 10 according to the present invention. The cooking oven 40 comprises

an oven cavity 34. A gasket 32 is attached at a front side of a front frame of said oven cavity 34. The front frame and the gasket 32 enclose a front opening of the oven cavity 34. The oven door 30 includes an inner glass panel 36. The sealing of the oven cavity 34 is obtained by squeezing the gasket 32 between the front frame of the oven cavity 34 and the inner glass panel 36. The oven door 30 is movable by the user via a door handle 38.

[0044] The oven door 30 shown on the left hand side of FIG 6 is in the partially opened state. In said partially opened state there is no contact between the gasket 32 and the inner glass panel 36.

[0045] The oven door 30 shown in the centre of FIG 6 is in the intermediate state. The changeover from the partially opened state to the intermediate state is obtained by pivoting the oven door 30. In the intermediate state the inner glass panel 36 is arranged parallel to the front frame of the oven cavity 34 and the plane formed by the gasket 32. The inner glass panel 36 and the gasket 32 are either in touch or marginally spaced from each other. The gasket 32 is not squeezed between the front frame of the oven cavity 34 and the inner glass panel 36 in the intermediate state.

[0046] The oven door 30 shown on the right hand side of FIG 6 is in the closed state. The changeover from the intermediate state to the closed state is obtained by a motion of the oven door 30. The gasket 32 is uniformly squeezed between the front frame of the oven cavity 34 and the inner glass panel 36 during said motion and in the closed state of the oven door 30. In said closed state the inner glass panel 36 is arranged parallel to the front frame of the oven cavity 34 and the plane formed by the gasket 32.

[0047] The uniform squeezing of the gasket 32 between the front frame of the oven cavity 34 and the inner glass panel 36 allows a reliable sealing of the oven cavity 34 by the gasket 32.

[0048] In an alternative embodiment of the present invention, the stationary hinge part 12 may include an elongated pin element 20, while the elongated holes 22 are formed in the moveable hinge part 14, wherein said elongated pin element 20 is received by the elongated holes 22.

[0049] FIG 7 illustrates a schematic sectional side view of the oven door 30 for the cooking oven 40 according to the prior art in the partially opened state.

[0050] The oven door 30 is attached at the chassis of the cooking oven 40 via a conventional door hinge 10. The cooking oven 40 comprises the oven cavity 34. The gasket 32 is attached at the front side of the front frame of said oven cavity 34. The front frame and the gasket 32 enclose the front opening of the oven cavity 34. The oven door 30 includes the inner glass panel 36. The sealing of the oven cavity 34 is obtained by squeezing the gasket 32 between the front frame of the oven cavity 34 and the inner glass panel 36. The oven door 30 is pivotable by the user via a door handle 38.

[0051] In the partially opened state a portion of the gas-

ket 32 is squeezed. The squeezed portion of the gasket 32 is close to the door hinge 10 and to the pivoting axis of the oven door 30. In contrast, another portion of said gasket 32 spaced from the door hinge 10 and to the pivoting axis of the oven door 30 is not squeezed. During closing the oven door 30 the gasket 32 is distorted.

[0052] FIG 8 illustrates two detailed schematic sectional side views of the oven door 30 for the cooking oven 40 according to the prior art in the partially opened state. In said partially opened state of the oven door 30 and during closing said oven door 30 the gasket 32 is distorted, so that a proper sealing cannot be guaranteed along the complete gasket 32.

[0053] 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

[0054]

- 10 door hinge
- 12 stationary hinge part
- 14 moveable hinge part
- 16 spring element
- 18 stationary pin element
- 20 movable pin element
- 22 elongated hole
- 24 surface
- 26 slide element
- 28 pivotable guide edge
- 30 oven door
- 32 gasket
- 34 oven cavity
- 36 inner glass panel
- 38 door handle
- 40 cooking oven

Claims

1. A door hinge (10) for a door of a domestic appliance, in particular for an oven door (30), wherein
 - the door hinge (10) comprises a stationary hinge part (12),
 - the door hinge (10) comprises a moveable hinge part (14) connected to the stationary hinge part (12),
 - the moveable hinge part (14) is slidable relative to the stationary hinge part (12) between a

closed state and an intermediate state of the door hinge (10),

- the moveable hinge part (14) is pivotable relative to the stationary hinge part (12) between the intermediate state and an opened state of the door hinge (10),
- one of the stationary hinge part (12) and the moveable hinge part (14) comprises an elongated pin element (20) extending parallel to a pivoting axis of the door hinge (10),
- another one of the stationary hinge part (12) and the moveable hinge part (14) comprises at least two elongated holes (22), preferably a pair of elongated holes (22), for receiving the pin element (20),
- the pin element (20) is slidable perpendicular to its longitudinal axis and within the elongated holes (22) between the closed state and the intermediate state of the door hinge (10), and
- the pin element (20) and/or the stationary hinge part (12) or moveable hinge part (14), respectively, are pivotable around its longitudinal axis at a limit stop of the elongated holes (22) between the intermediate state and the opened state of the door hinge (10).

2. The door hinge according to claim 1, **characterised in that**

the stationary hinge part (12) and/or the moveable hinge part (14) are elongated, wherein preferably the longitudinal axes of the stationary hinge part (12) and/or the moveable hinge part (14) extend perpendicular to the pivoting axis of the door hinge (10).

3. The door hinge according to claim 1 or 2, **characterised in that**

at least one spring element (16) is interconnected between the stationary hinge part (12) and the moveable hinge part (14), wherein preferably said spring element (16) pulls the moveable hinge part (14) relative to the stationary hinge part (12) into the closed state.

4. The door hinge according to any one of the preceding claims, **characterised in that**

at least one slide element (26) is interconnected between the stationary hinge part (12) and the moveable hinge part (14), wherein preferably said slide element (26) is slidable perpendicular to the pivoting axis of the door hinge (10).

5. The door hinge according to any one of the preceding claims, **characterised in that**

the stationary hinge part (12) and the moveable hinge part (14) include guide elements (18, 28) defining constraints, so that the moveable hinge part

- (12) is pivotable relative to the stationary hinge part (12) between the intermediate state and the opened state of the door hinge (10), and that the moveable hinge part (12) is slidable relative to the stationary hinge part (12) between the closed state and the intermediate state and the opened state of the door hinge (10).
6. The door hinge according to any one of the preceding claims,
characterised in that
the moveable hinge part (14) includes at least one pivotable guide edge (28) interacting with an element (18) of the stationary hinge part (12), wherein the cooperation of the pivotable guide edge (28) and said element (18) of the stationary hinge part (12) forces that the moveable hinge part (14) is pivotable relative to the stationary hinge part (12) between the closed state and the intermediate state of the door hinge (10).
 7. The door hinge according to claim 6,
characterised in that
the cooperation of the pivotable guide edge (28) and the element (18) of the stationary hinge part (12) forces that the moveable hinge part (14) is pivotable relative to the stationary hinge part (12) between the intermediate state and the opened state of the door hinge (10), when the moveable hinge part (14) moves outwards.
 8. The door hinge according to any one of the preceding claims,
characterised in that
the stationary hinge part (12) includes at least one stationary pin element (18) interacting with the pivotable guide edge (28) of the moveable hinge part (14), wherein the cooperation of the stationary pin element (18) and the pivotable guide edge (28) forces the moveable hinge part (14) to pivot relative to the stationary hinge part (12) between the closed state and the intermediate state of the door hinge (10), when the moveable hinge part (14) moves outwards.
 9. The door hinge according to any one of the preceding claims,
characterised in that
the pin element (20) is an integrated part of the moveable hinge part (14), while the elongated holes (22) are formed in the stationary hinge part (12).
 10. The door hinge according to claim 9,
characterised in that
the pin element (20) is slidable between outer limit stops and inner limit stops of the elongated holes (22), wherein the outer limit stops are closer to the pivoting axis of the door hinge than the inner limit stops.
 11. The door hinge according to claim 10,
characterised in that
the pin element (20) lies at the outer limit stops of the elongated holes (22), when the door hinge (10) is in the intermediate state and in a partially opened state, wherein preferably the pin element (20) lies at the outer limit stops of the elongated holes (22) again, when the moveable hinge part (14) is the opened state.
 12. The door hinge according to claim 10 or 11,
characterised in that
the pin element (20) lies at the inner limit stops of the elongated holes (22), when the door hinge (10) is in the closed state.
 13. The door hinge according to any one of the claims 10 to 12,
characterised in that
the pin element (20) is slidable from the inner limit stops to the outer limit stops of the elongated holes (22), when the moveable hinge part (14) is slidable relative to the stationary hinge part (12) between the closed state and the intermediate state of the door hinge (10), wherein preferably the pin element (20) is pulled from the outer limit stops to the inner limit stops of the elongated holes (22) back again by the spring element (16), when the moveable hinge part (14) is the opened state.
 14. A door (30) for a domestic appliance (40), in particular an oven door (30) for a cooking oven (40),
characterised in that
the door (30) comprises at least two door hinges (10) according to any one of the claims 1 to 13.
 15. A domestic appliance (40), in particular a cooking oven (40),
characterised in that
the domestic appliance (40) comprises at least two door hinges (10) according to any one of the claims 1 to 13 and/or a door (30) according to claim 14.

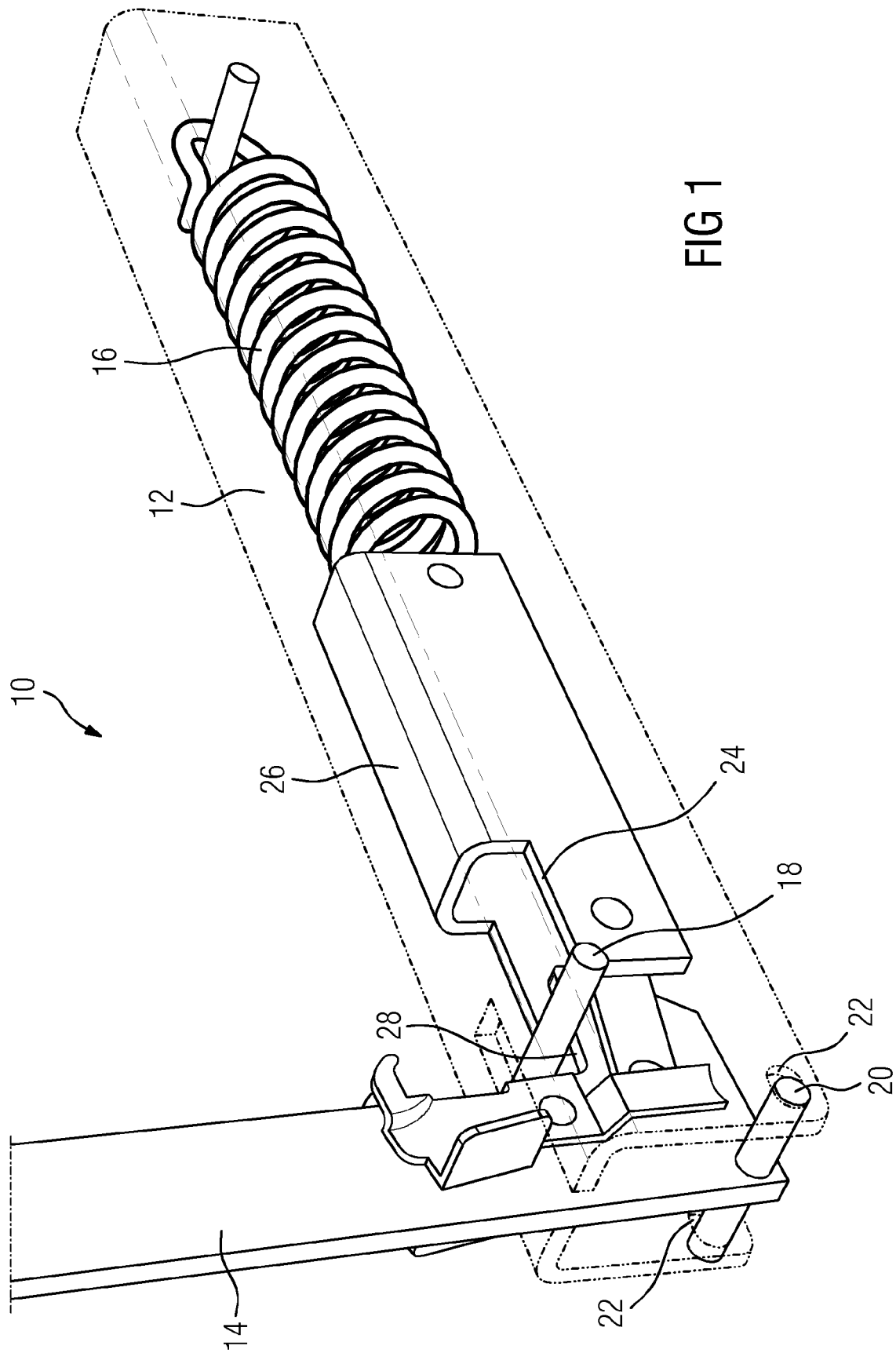


FIG 2

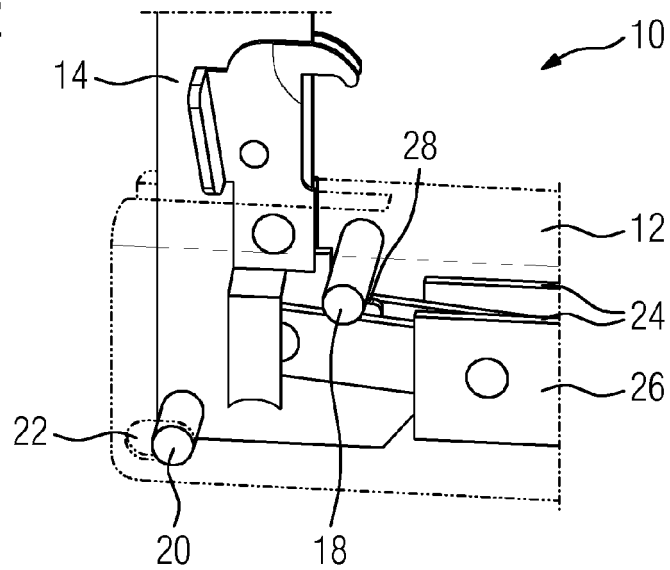


FIG 3

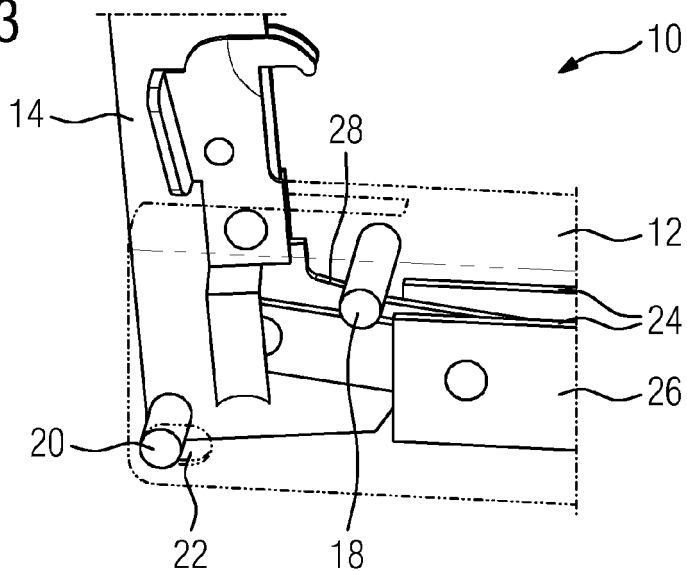


FIG 4

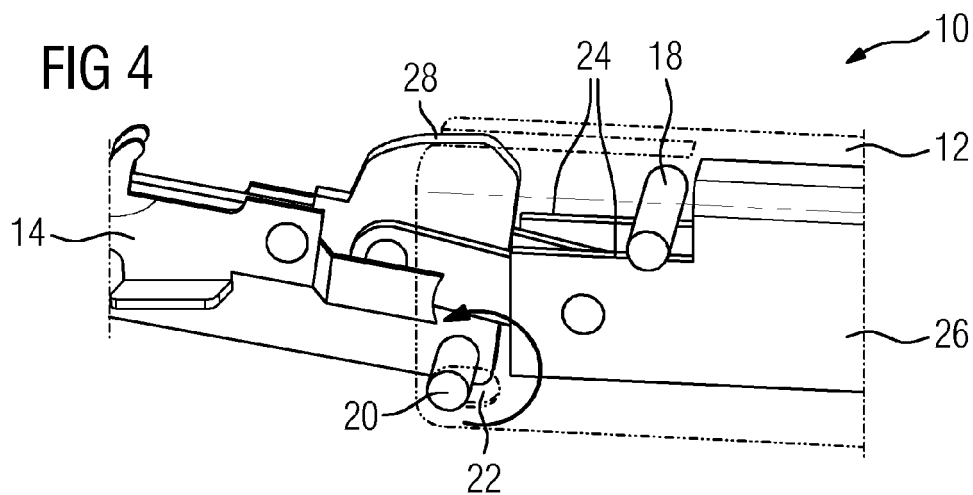
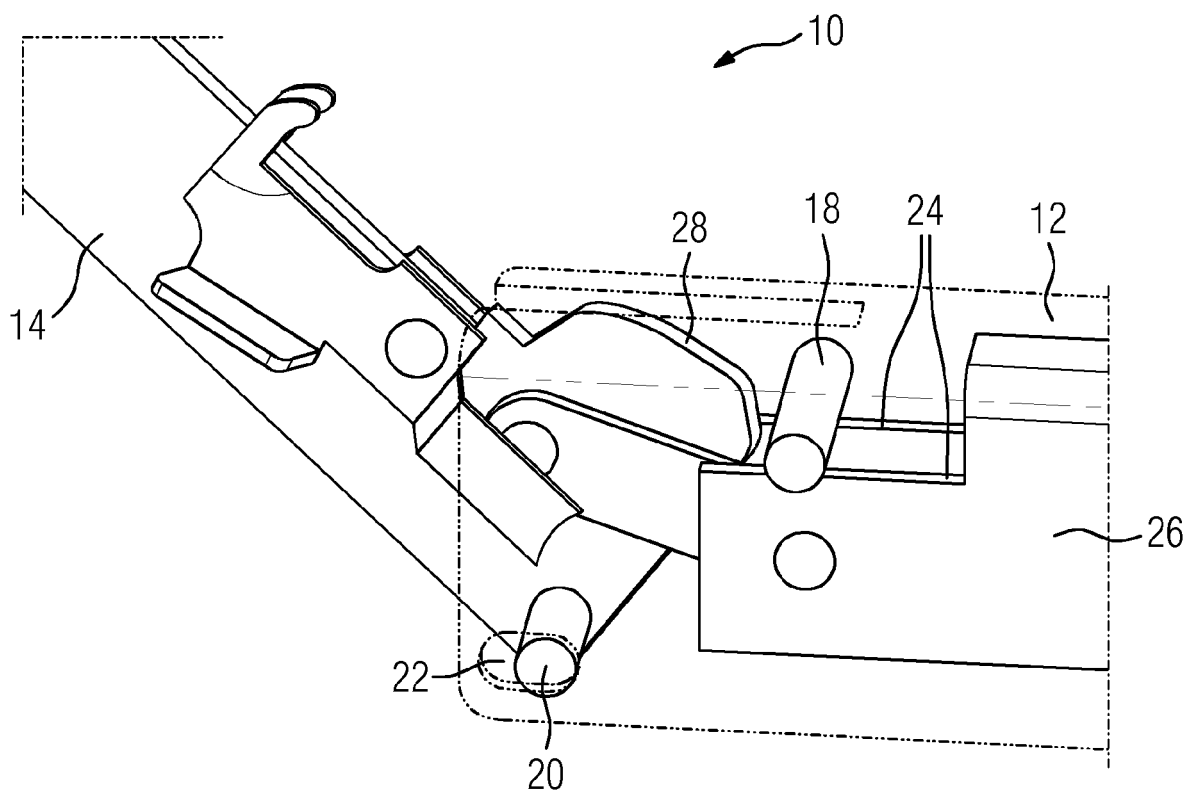


FIG 5



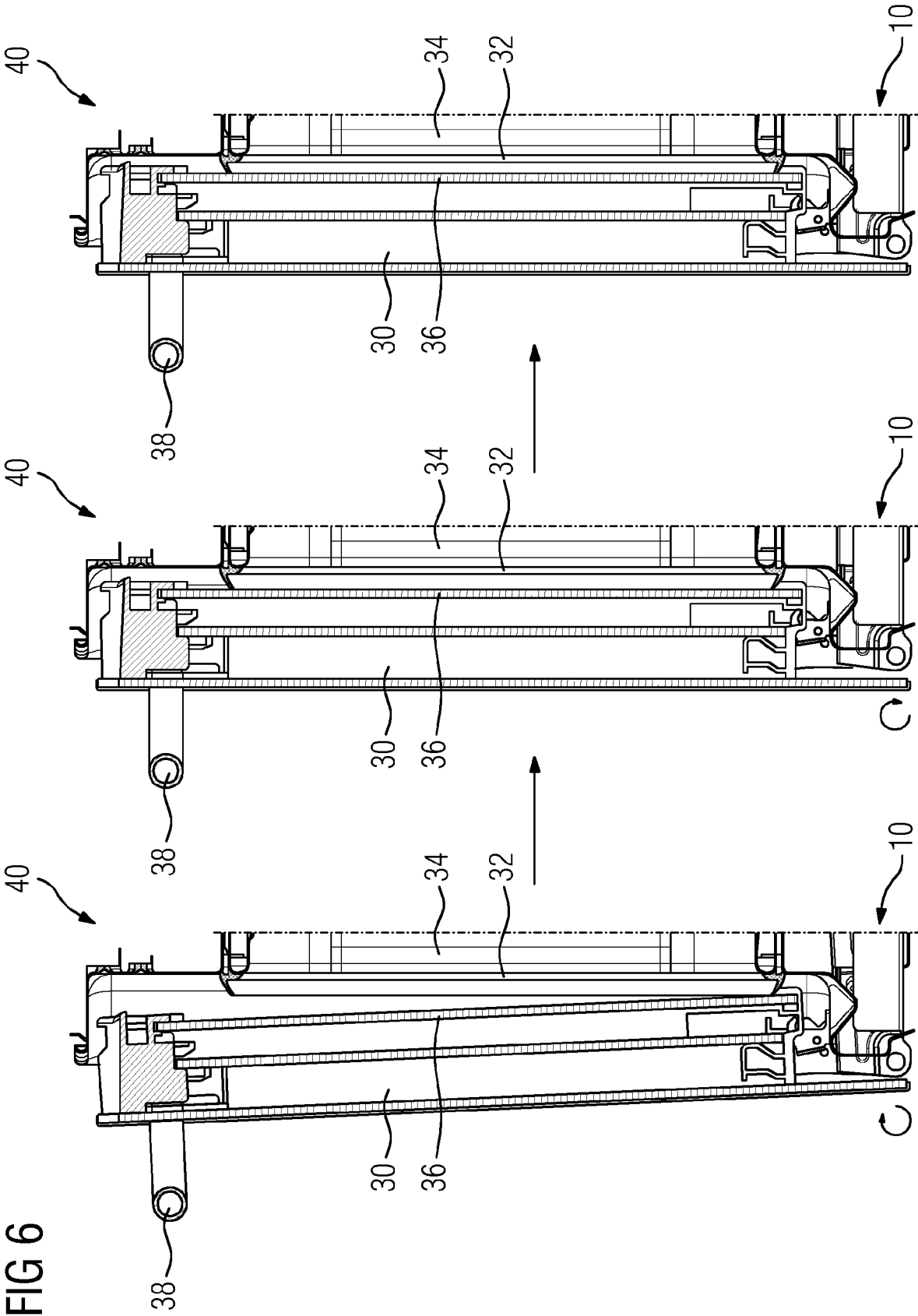


FIG 7

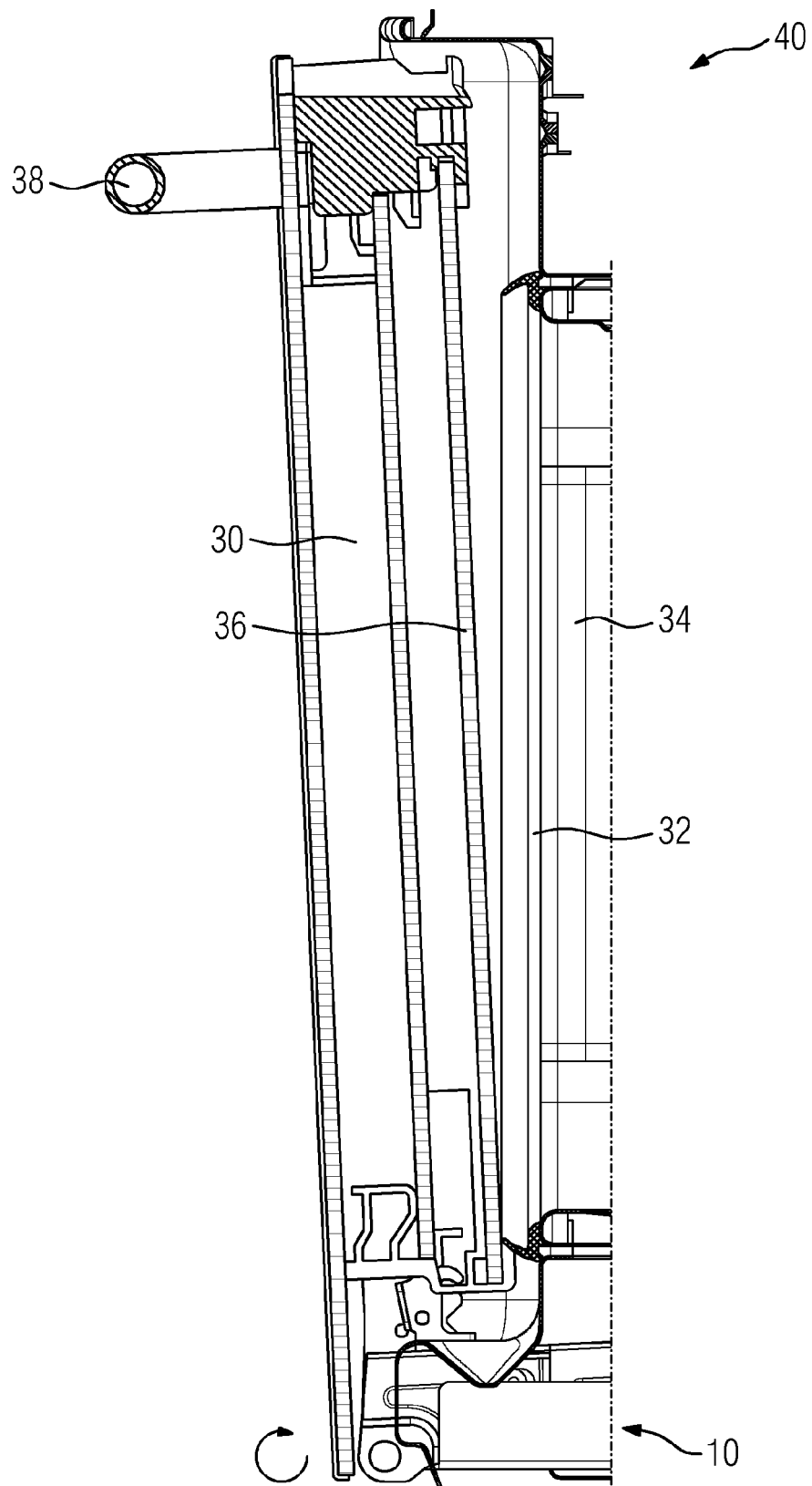
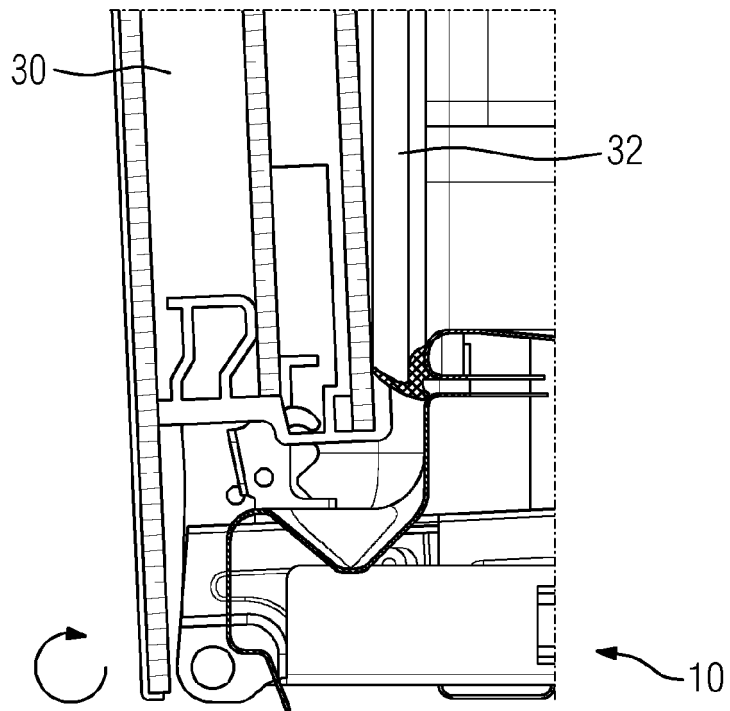
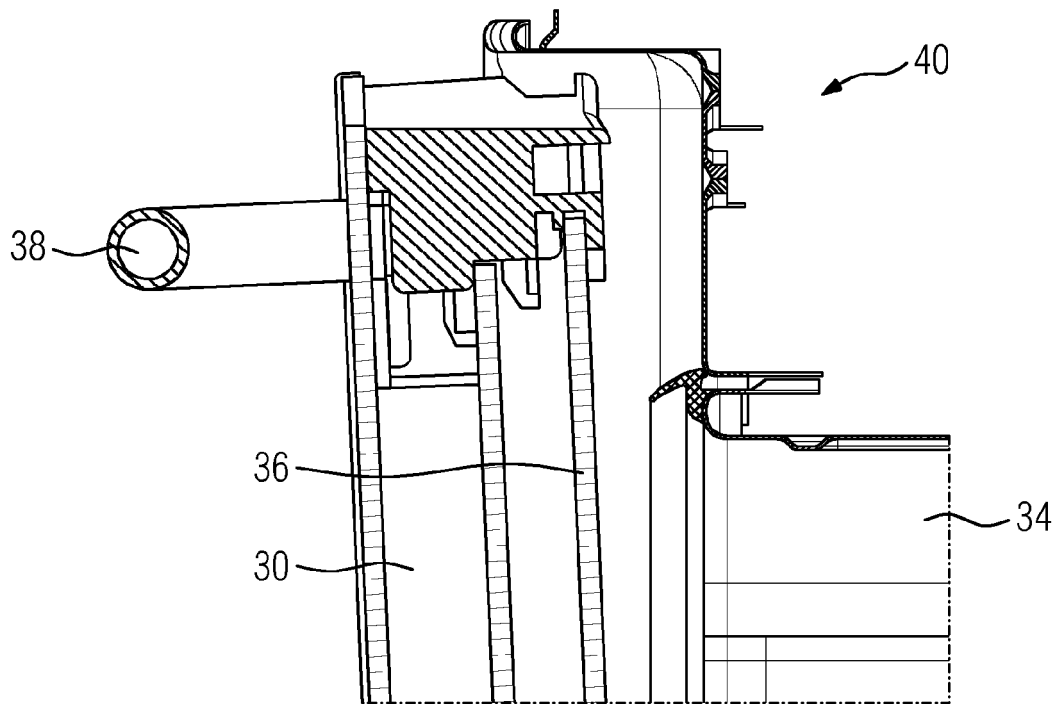


FIG 8





EUROPEAN SEARCH REPORT

Application Number
EP 16 18 4538

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			E05D F24C E05F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		19 January 2017	Guillaume, Geert
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			

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