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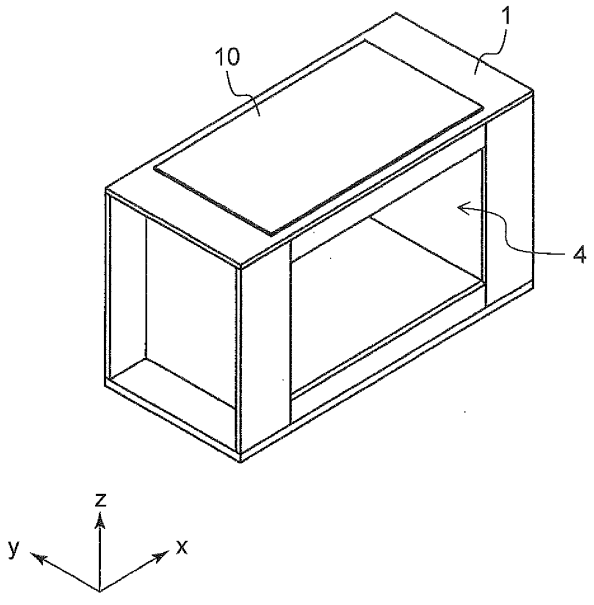
(54) INDUCTION HEATING COOKER

(57) Provided is an induction heating cooker capable of detaching a body from below a top unit relatively safely. Induction heating cooker (10) includes: top unit (20) having top plate (22); and body (30) for storing heating coil (32) for induction heating, body (30) being detachably supported vertically below top unit (20) by first support member (11) and second support member (21). Body (30) is positioned by first support member (11) so as to hang on top unit (20). Body (30) is fastened to top unit (20) by second support member (21).

FIG. 1A



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Description

TECHNICAL FIELD

[0001] The present disclosure relates to an induction heating cooker including: a top unit having a top plate; and a body for storing a heating coil.

BACKGROUND ART

[0002] A conventional induction heating cooker is inserted into an opening hole provided in a kitchen counter from above, and is attached to the kitchen counter. For example, there is known a technique for providing a packing on a back surface the top plate in order to prevent intrusion of water or the like into the opening hole at this time (for example, refer to PTL 1).

[0003] There is also known a cooker having a configuration in which a body is fixed by screws and the like from below the top unit (for example, refer to PTL 2). PTL 2 discloses such a configuration in which the body is screw-fixed from below.

Citation List

Patent Literature

[0004]

PTL 1: Unexamined Japanese Patent Publication No. 2003-151739
PTL 2: European Patent Application Publication No. 2790468 (A2)

SUMMARY OF THE INVENTION

Technical problems

[0005] At a time of maintaining an electrical component provided inside the body of such an induction heating cooker as described above, a worker first detaches the induction heating cooker from the kitchen counter. Thereafter, the worker detaches the screws and the like, which attach the body to the top unit, thereby separating the top unit and the body from each other. Then, the worker confirms an inside of the body.

[0006] However, when the induction heating cooker is used for a long period, the packing and a top panel of the kitchen counter adhere to each other, thus making it difficult to detach the induction heating cooker from the kitchen counter. Moreover, the packing cannot be peeled off completely, and it is also necessary to clean the kitchen counter.

[0007] Further, in order that the worker detaches only the body from below the top unit with the top unit being embedded in the top panel of the kitchen counter, the worker must detach the screws, which fix the body, while supporting the body from below. The recent induction heating cooker sometimes includes a plurality of heating coils and is heavy. Therefore, when the body is heavy or when a size of the product is large, it is difficult for the worker to safely detach the body from the top unit by only one hand while supporting the body by the other hand. If the product is heavy when the worker detaches the screws on one side of the body, then the other side of the product sometimes slides and falls. It is also apprehended that a member supporting the other side of the product may be deformed.

[0008] Also at a time of attaching the induction heating cooker to the kitchen counter, it is difficult for the worker to safely attach the body to the top unit by only one hand while supporting the body by the other hand.

[0009] It is an object of the present disclosure to improve the safety in the work in at least one of the detachment and attachment of the body.

Solutions to problems

[0010] An induction heating cooker according to a first aspect of the present disclosure, in which directions are defined by a vertical direction and a horizontal direction during use, includes: a top unit including a top plate; and a body for storing a heating coil for induction heating, the body being detachably supported vertically below the top unit by a first support member and a second support member.

[0011] The body is positioned by the first support member so as to hang on the top unit.

[0012] The body is fastened to the top unit by the second support member.

Advantageous effects of invention

[0013] In accordance with the induction heating cooker according to the present disclosure, the worker can release the body from being fastened by the second support member in a state where the body and the top unit are supported by the first support member. Then, after releasing the body from being fastened by the second support member, the worker releases the body and the top unit from being supported by the first support member, and can thereby detach the body relatively safely.

[0014] Moreover, in accordance with the induction heating cooker according to the present disclosure, the worker can fasten the body and the top unit to each other by the second support member in the state where the body and the top unit are supported by the first support member. Hence, the worker can attach the body relatively safely.

[0015] As described above, in accordance with the induction heating cooker according to the present disclosure, the safety in the work is improved at least one of when the body is detached and when the body is attached.

[0016] Furthermore, in an induction heating cooker according to a second aspect of the present disclosure, a

first position in the vertical direction when the body is released from being fastened by the second support member and is supported by the first support member and a second position in the vertical direction when the body is supported by the second support member may differ from each other.

[0017] By the above-described configuration, the first support member becomes less likely to undergo the stress applied from the body while the body is supported by the second support member.

[0018] In an induction heating cooker according to a third aspect, when the body and the top unit are fastened to each other by the second support member, the body may be positionally fixed by force stronger than when the body is released from being fastened by the second support member and is supported by the first support member.

[0019] By the above-described configuration, the first support member becomes less likely to undergo the stress applied from the body while the body is supported by the second support member.

[0020] In an induction heating cooker according to a fourth aspect, the first support member may be configured to support the body when the body is released from being fastened by the second support member.

[0021] By the above-described configuration, the safety in the work is improved at least one of when the body is detached and when the body is attached.

[0022] In an induction heating cooker according to a fifth aspect, the first support member may be configured to support the body when the body is released from being fastened by the second support member.

[0023] By the above-described configuration, the safety in the work is improved at least one of when the body is detached and when the body is attached.

[0024] In an induction heating cooker according to a sixth aspect, the first position may be lower than the second position.

[0025] By the above-described configuration, the first support member becomes less likely to undergo the stress applied from the body while the body is supported by the second support member.

[0026] In an induction heating cooker according to a seventh aspect, when the body is viewed in the vertical direction, both of the first support member and the second support member may be provided to support each of both ends in a longitudinal direction of the body.

[0027] By the above-described configuration, the body can be stably supported from both ends of the induction heating cooker.

[0028] In an induction heating cooker according to an eighth aspect, the first support member may be a combination of a hook member provided on the body and a hanging member on which the hook member is hung, the hanging member being provided on the top unit.

[0029] In accordance with the above-described configuration, the worker can perform at least one of attachment and detachment for the body from below the top unit relatively safely.

[0030] In an induction heating cooker according to a ninth aspect, the hook member may include a first portion extending in the vertical direction and a second portion bent downward at least at 180° from an upper end of the first portion. The hanging member may be configured to receive hanging of the second portion.

[0031] In accordance with the above-described configuration, the body can be held if an angle made by the body and the top unit is less than 90° even if the body is inclined.

[0032] In accordance with an induction heating cooker according to a tenth aspect, the first support member may be a combination of a part of the body and a retaining member for catching the part of the body, the retaining member being disposed on the top unit.

[0033] In accordance with the above-described configuration, the worker can attach and detach the body from below the top unit relatively safely.

[0034] In an induction heating cooker according to an eleventh aspect, the first support member may include a first support member made of a first combination and a first support member made of a second combination. When the body is viewed in the vertical direction, both of the first support member made of the first combination and the first support member made of the second combination may be provided to support each of both ends in the longitudinal direction of the body.

[0035] The first support member made of the first combination may include a hook member provided on the body and a hanging member on which the hook member is hung, the hanging member being provided on the top unit.

[0036] The first support member made of the second combination may include a part of the body and a retaining member of the top unit, for catching the part.

[0037] By the above-described configuration, the body can be stably supported from both sides.

[0038] In an induction heating cooker according to a twelfth aspect, the first support member may include a first support member made of a first combination and a first support member made of a second combination. When the body is viewed in the vertical direction, the first support member made of the first combination may be provided to support one of both ends in the longitudinal direction of the body. The first support member made of the second combination may be provided to support the other of both ends in the longitudinal direction of the body.

[0039] The first support member made of the first combination may include a hook member disposed on the body and a hanging member on which the hook member is hung, the hanging member being disposed on the top unit. The first support member made of the second combination may include a part of the body and a retaining member disposed on the top unit, for catching the part.

[0040] By the above-described configuration, the body can be stably supported from both sides. Moreover, when the body is detached, the first support member made of

the second combination disposed on one end of the body is first released, whereby the body can be inclined, and the support by the first support member made of the first combination can be released with ease. Furthermore, when the body is attached, the body is first supported by the first support member made of the first combination, and the body is next supported by the first support member made of the second combination, whereby work of temporal engagement becomes easy. Both of the first combination and the second combination are used, whereby the body can be stably supported on the top unit.

[0041] In an induction heating cooker according to a thirteenth aspect, the second support member may include a screw for fastening the body and the top unit to each other.

[0042] By the above-described configuration, the body and the top unit can be stably fastened to each other.

[0043] In an induction heating cooker according to a fourteenth aspect, a wall may be disposed at a position facing the part of the body via the retaining member.

[0044] In accordance with the above-described configuration, excessive elastic deformation of the retaining member can be suppressed, and a deterioration of the retaining member can be suppressed.

[0045] In an induction heating cooker according to a fifteenth aspect, the top unit may include a frame disposed below the top plate. The retaining member is inserted into the frame. The retaining member may include: a first portion disposed below the frame and catching the part of the body; a second portion connected to the first portion and disposed on an upper surface of the frame; and a third portion connected to the second portion and disposed below the frame.

[0046] By the above-described configuration, the retaining member becomes less likely to slip down.

[0047] In an induction heating cooker according to a sixteenth aspect, the body may include a body case that composes a contour of the body. The hook member may include: a third portion connected to a lower end of the first portion and extending in the horizontal direction from the first portion; and a fourth portion rising upward from the third portion, and further, extending in the horizontal direction. The first portion, the second portion and the third portion may be disposed outside the body case. The fourth portion may penetrate the body case and may be disposed inside the body case. Each of the first portion and the third portion may have a surface facing an outer surface of the body case. The fourth portion may have a surface facing an inner surface of the body case.

[0048] By the above-described configuration, the hook member becomes less likely to slip down.

[0049] In an induction heating cooker according to a seventeenth aspect, when the body is viewed in the vertical direction, the first support member may include a depth-side first support member disposed on a depth side during use of the induction heating cooker, and a near-side first support member disposed on a near side during the use, the depth-side and near-side first support members being arrayed in a lateral direction of the body. Each of the depth-side first support member and the near-side first support member may be a combination of a hook member disposed on the body and a hanging member on which the hook member is hung, the hanging member being disposed on the top unit.

[0050] By the above-described configuration, the body can be stably supported on the top unit.

[0051] In an induction heating cooker according to an eighteenth aspect, the top unit may include a frame disposed below the top plate. The hanging member of the depth-side first support member may be composed by bending a part of the frame, and may have a flat shape. The hanging member of the near-side first support member may be composed of a member separate from the frame, and may be composed so as to surround the hook member from at least two directions.

[0052] By the above-described configuration, workability at the time of attaching and detaching the body is improved.

[0053] In an induction heating cooker according to a nineteenth aspect, the top unit may include a frame disposed below the top plate. The hanging member of the depth-side first support member may be composed by bending a part of the frame. The hanging member of the near-side first support member may be composed of a member separate from the frame, and may be inserted into a slit provided in the frame.

[0054] By the above-described configuration, the hanging member becomes less likely to slip down.

[0055] In an induction heating cooker according to a twentieth aspect, the top unit may include a frame disposed below the top plate. The hanging member of the depth-side first support member may be composed by bending a part of the frame. The hanging member of the near-side first support member may be composed of a member separate from the frame, and may be welded to the frame.

[0056] By the above-described configuration, the hanging member becomes less likely to slip down.

[0057] In an induction heating cooker according to a twenty-first aspect, the hanging member of each of the depth-side first support member and the near-side first support member may have a hole into which the hook member is inserted. A gap in the lateral direction between the hole of the hanging member and the hook member in the depth-side first support member may be wider than a gap in the lateral direction between the hole of the hanging member and the hook member in the near-side first support member.

[0058] By the above-described configuration, the workability at the time of attaching and detaching the body is improved.

[0059] In an induction heating cooker according to a twenty-second aspect, when the body is fastened to the top unit, the gap between the hole and the hook member in the depth-side first support member may include a near-side gap and a depth-side gap. The near-side gap

may be wider than the depth-side gap.

[0060] By the above-described configuration, the workability at the time of attaching and attaching the body is improved.

BRIEF DESCRIPTION OF DRAWINGS

[0061]

FIG. 1A is a schematic perspective view illustrating a state where an induction heating cooker according to a first exemplary embodiment is stored in a kitchen counter.

FIG. 1B is a schematic perspective view illustrating a relationship between the induction heating cooker according to the first exemplary embodiment and a cutout (rectangular hole) of the kitchen counter.

FIG. 2 is a block diagram illustrating a configuration of the induction heating cooker according to the first exemplary embodiment.

FIG. 3A is a plan view of the induction heating cooker according to the first exemplary embodiment.

FIG. 3B is a bottom view of the induction heating cooker in FIG. 3A.

FIG. 3C is a front view of the induction heating cooker in FIG. 3A.

FIG. 3D is a right side view of the induction heating cooker in FIG. 3A.

FIG. 3E is a left side view of the induction heating cooker in FIG. 3A.

FIG. 4A is a perspective view of the induction heating cooker in FIG. 3A when a top unit is viewed from obliquely upper left of the induction heating cooker.

FIG. 4B is a perspective view of the induction heating cooker in FIG. 3A when a bottom surface of a body is viewed from obliquely lower left of the induction heating cooker.

FIG. 5 is an exploded perspective view illustrating a configuration of the induction heating cooker according to the first exemplary embodiment.

FIG. 6A is a perspective view of the top unit of the induction heating cooker in FIG. 5 when a back surface of the top plate is viewed from obliquely lower left of the top unit.

FIG. 6B is an enlarged perspective view of the top unit in FIG. 6A.

FIG. 7 is a perspective view of a body of the induction heating cooker in FIG. 5 when the body is viewed from obliquely upper left,

FIG. 8A is a partial cross-sectional view illustrating a configuration of a second support member on a right end of the induction heating cooker in FIG. 3B when viewed in a direction A-A.

FIG. 8B is a partial cross-sectional view illustrating a state where the screw is detached to release the body from being fastened in the second support member in FIG. 8A.

FIG. 9A is a partial cross-sectional view illustrating a configuration of a first support member on the right end of the induction heating cooker in FIG. 3B when viewed in a direction B-B.

FIG. 9B is a partial cross-sectional view illustrating a state where the screw of the second support member is detached to release the body from being fastened in the first support member in FIG. 9A.

FIG. 10 is a view schematically illustrating a cross section of the first support member in FIG. 9A.

FIG. 11A is a perspective view illustrating an example of a retaining member for the first support member in FIG. 9A.

FIG. 11B is a view schematically illustrating a cross section of the retaining member in FIG. 11A.

FIG. 12A is a perspective view illustrating another example of the retaining member for the first support member.

FIG. 12B is a view schematically illustrating a cross section of the retaining member in FIG. 12A.

FIG. 13A is a partial cross-sectional view illustrating a configuration of a second support member on a left end of the induction heating cooker in FIG. 3B when viewed in a direction C-C.

FIG. 13B is a partial cross-sectional view illustrating a state where the screw is detached to release the body from being fastened in the second support member in FIG. 13A.

FIG. 14A is a partial cross-sectional view illustrating a configuration of the first support member on the left end of the induction heating cooker in FIG. 3B when viewed in a direction D-D.

FIG. 14B is a partial cross-sectional view illustrating a state where the screw of the second support member is detached to release the body from being fastened in the first support member in FIG. 14A.

FIG. 15A is a perspective view illustrating a state where the body is supported on the top unit by hook members as the first support member on the left end.

FIG. 15B is an enlarged perspective view illustrating the hook member in FIG. 15A.

FIG. 16 is a perspective view of an induction heating cooker according to another exemplary embodiment when viewed from obliquely lower right.

FIG. 17 is a partially exploded perspective view of the induction heating cooker according to the other exemplary embodiment.

FIG. 18 is a perspective view of the induction heating cooker according to the other exemplary embodiment when viewed from obliquely lower left.

FIG. 19A is a partially exploded view of the induction heating cooker according to the other exemplary embodiment when viewed from obliquely upper right by detaching the top unit.

FIG. 19B is an enlarged perspective view illustrating a hook member illustrated in FIG. 19A.

FIG. 20 is a partially exploded view of the induction heating cooker according to the other exemplary embodiment when viewed from obliquely below.

FIG. 21 is a perspective view of the induction heating cooker according to the other exemplary embodiment when viewed from obliquely sideways.

DESCRIPTION OF EMBODIMENTS

[0062] An induction heating cooker according to each of exemplary embodiments will be described below with reference to the accompanying drawings. Substantially the same members in the drawings are denoted by the same reference numerals.

(First exemplary embodiment)

[0063] FIG. 1A is a schematic perspective view illustrating a state where induction heating cooker 10 according to a first exemplary embodiment is stored in kitchen counter 1. FIG. 1B is a schematic perspective view illustrating a relationship between induction heating cooker 10 according to the first exemplary embodiment and a cutout (rectangular hole) 2 of kitchen counter 1.

[0064] FIG. 2 is a block diagram illustrating a configuration of induction heating cooker 10 according to the first exemplary embodiment.

[0065] FIG. 3A is a plan view of induction heating cooker 10 according to the first exemplary embodiment. FIG. 3B is a bottom view of induction heating cooker 10 in FIG. 3A. FIG. 3C is a front view of induction heating cooker 10 in FIG. 3A. FIG. 3D is a right side view of induction heating cooker 10 in FIG. 3A. FIG. 3E is a left side view of induction heating cooker 10 in FIG. 3A. FIG. 4A is a perspective view of induction heating cooker 10 in FIG. 3A when top unit 20 is viewed from obliquely upper left of induction heating cooker 10. FIG. 4B is a perspective view of induction heating cooker 10 in FIG. 3A when a bottom surface of body 30 is viewed from obliquely lower left of induction heating cooker 10. FIG. 5 is an exploded perspective view illustrating a configuration of induction heating cooker 10 according to the first exemplary embodiment. For convenience, x, y and z-axes perpendicular to one another are illustrated in the respective drawings. In the present exemplary embodiment, a direction parallel to the x-axis corresponds to a longitudinal direction of a body of the present disclosure. A direction parallel to a direction of the z-axis is a vertical direction when an induction heating cooker of the present disclosure is used. Directions parallel to the x-axis and the y-axis are each a horizontal direction when the induction heating cooker of the present disclosure is used.

[0066] As illustrated in FIGS. 1A and 1B, induction heating cooker 10 according to the first exemplary embodiment is fitted into cutout 2 of kitchen counter 1 and is used. As illustrated in FIG. 2, this induction heating cooker 10 includes: top unit 20 having top plate 22; and body 30 for storing heating coil 32 for induction heating. Body 30 is detachably supported vertically blow top unit 20 by first support member 11 and second support member 21. First support member 11 positions body 30 so that body 30 can hang on top unit 20. Second support member 21 fastens body 30 and top unit 20 to each other. For example, first support member 11 is either one of a combination of retaining member 12 and part of body 13 and a combination of hook members 14 and hanging members 15. These members and part will be described later. For example, second support member 21 is a combination of screws 18 and screw holes 19, which will be described later.

[0067] As illustrated in FIG. 3A and FIG. 4A, under the top plate, this induction heating cooker 10 includes: four laterally long heating coils 32 located on a left side; three longitudinally long heating coils 32 located on a center; and four laterally long heating coils 32 located on a right side. Induction heating cooker 10 further includes display 34 on a center front. As illustrated in FIG. 3B, on a back surface (that is, a bottom surface) of body 30, retaining member 12 is disposed on a right end of body 30. As illustrated in FIG. 3D, retaining member 12 supports body 30 so that body 30 hangs on top unit 20. As illustrated in FIG. 3E, two hook members 14 are disposed on a left end of body 30. By hook members 14, body 30 is positioned so as to hang on top unit 20. In the present exemplary embodiment, the right end of body 30 refers to a right end in a longitudinal direction of body 30 when body 30 is viewed from above. The left end of body 30 refers to a left end in the longitudinal direction of body 30 when body 30 is viewed from above. Retaining member 12 and hook members 14 individually correspond to the first support member. Moreover, body 30 is fastened to top unit 20 by screws 18. These screws 18 correspond to the second support member. A front-and-rear direction of top unit 20 illustrated in FIG. 3A is reverse to a front-and-rear direction of top unit 20 illustrated in FIG. 3B. That is, in FIG. 3A, display 34 is disposed in a lower portion of the drawing. Meanwhile, in FIG. 3B, display 34 is disposed in an upper portion of the drawing.

[0068] In accordance with this induction heating cooker 10, the worker can release body 30 from being fastened by second support member 21 in a state where body 30 is supported on top unit 20 by the first support member. Then, after releasing body 30 from being fastened by the second support member, the worker releases body 30 and top unit 20 from being supported by first support member 11, and can thereby detach body 30 relatively safely. In accordance with this induction heating cooker 10, the worker can fasten body 30 by the second support member in a state where body 30 is supported on top unit 20 by the first support member. Hence, the worker can attach body 30 relatively safely. Accordingly, in accordance with this induction heating cooker 10, the safety in the work is improved at least one of when body 30 is detached and when body 30 is attached.

[0069] A description will be given below of constituent members which compose this induction heating cooker 10.

<Top unit>

[0070] FIG. 6A is a perspective view of top unit 20 of induction heating cooker 10 in FIG. 5 when a back surface of top plate 22 is viewed from obliquely lower left of top unit 20. FIG. 6B is an enlarged perspective view of the top unit in FIG. 6A. Top unit 20 includes top plate 22. In top unit 20, frame 23 is adhered to the back surface of top plate 22. That is, frame 23 is disposed below top plate 22 when induction heating cooker 10 is used. A material of frame 23 is, for example, metal. Frame 23 has side surface 20a for supporting body 30, and a protrusion 20b in which screw holes 19 are provided. In the present exemplary embodiment, frame 23 is attached with retaining member 12 and hanging members 15, which will be described later.

<Top plate>

[0071] Top plate 22 composes an upper surface of induction heating cooker 10. An object to be heated is mounted on top plate 22. As top plate 22, for example, a glass top plate made of glass may be used.

<Body>

[0072] FIG. 7 is a perspective view of the body of the induction heating cooker in FIG. 5 when the body is viewed from obliquely upper left. As illustrated in FIG. 5 and FIG. 7, in body 30, controller 36 and heating coils 32 are provided sequentially in a thickness direction of body 30. The thickness direction is a direction parallel to the z-axis illustrated in FIG. 5. Moreover, body 30 includes body case 31 for housing controller 36, heating coils 32 and the like. Body case 31 composes a contour of body 30. In the present exemplary embodiment, hook members 14 to be described later are disposed on body case 31. A material of body case 31 is, for example, metal.

[0073] For example, as illustrated in FIG. 5, body 30 may include: a first body having the heating coils; and a second body having controller 36. In this case, for example, the second body may be supported vertically under the first body by a third support member (not illustrated) and a fourth support member. The third support member may have a similar configuration to first support member 11, and the fourth support member may have a similar configuration to second support member 21. That is, the second body may be positioned so as to hang on the first body by the third support member. The second body may be fastened to the first body by the fourth support member. In this case, the worker can divide body 30 into the first body and the second body and can individually attach the first body and the second body. Moreover, the worker can divide body 30 into the first body and the second body and can individually detach the first body and the second body. That is, the worker can divide a weight of body 30 into two and can individually handle the divided weights. Body 30 may include not only heating coils 32, display 34, and controller 36 but also an inverter and the like.

<Heating coil>

[0074] Heating coils 32 have a substantially elliptical shape having a major axis and a minor axis when viewed from above. The elliptical shape is not limited to a case of having two mathematical focal points. The elliptical shape just needs to have at least the major axis and the minor axis, and may be such an oblong shape in which a contour includes a linear portion. Heating coils 32 are formed into the elliptical shape as described above, whereby an output can be increased more than in a case of using two small circular coils, and heating efficiency can be improved. The entire contour is preferably formed of a curve. A corner is preferably prevented from being formed on the contour. Moreover, the shape of heating coils 32 is not limited to the elliptical shape or the oblong shape, and may be a circular shape.

[0075] In FIG. 3A, induction heating cooker 10 includes: four laterally long heating coils 32 located on the left side; three longitudinally long heating coils 32 located on the center; and four laterally long heating coils 32 located on the right side. However, the number and arrangement of heating coils 32 are not limited to these. For example, one of heating coils 32 may be arranged on each of the right and left sides, or one of heating coils 32 may be arranged on each of the right and left sides and the center. Alternatively, heating coils 32 may be arranged such that two are disposed on the left side, two are disposed on the center, and two are disposed on the right side.

<Display>

[0076] Induction heating cooker 10 may include display 34. Display 34 may be disposed for each of heating regions of the respective heating coils. When one pot is placed across a plurality of the heating coils, display 34 may display such an image or a character in which the plurality of heating regions and one object to be heated correspond to each other. For example, display 34 may display one pot disposed across the plurality of heating regions. When each of a plurality of pots is disposed on each of the plurality of heating regions, the plurality of pots may be displayed individually. A user can confirm the number of objects to be heated and the corresponding heating regions by seeing the display on display 34.

<First support member>

(Catching-type first support member)

[0077] FIG. 9A is a partial cross-sectional view illustrating a configuration of first support members 12, 13 on a right end of induction heating cooker 10 in FIG. 3B when viewed in a direction B-B. FIG. 9B is a partial cross-

sectional view illustrating a state where the screw of the second support member is detached to release the body in first support members 12, 13 in FIG. 9A. FIG. 10 is a view schematically illustrating cross sections of first support members 12, 13 in FIG. 9A. FIG. 11A is a perspective view illustrating an example of retaining member 12 for the first support member in FIG. 9A. FIG. 11B is a view schematically illustrating a cross section of retaining member 12 in FIG. 11A. FIG. 12A is a perspective view illustrating another example as retaining member 12a for the first support member. FIG. 12B is a view schematically illustrating a cross section of retaining member 12a in FIG. 12A.

[0078] As illustrated in FIG. 10, part of body 13 that is a part of body 30 is caught by retaining member 12 disposed on top unit 20, whereby body 30 is supported so as to hang on top unit 20. A material of retaining member 12 is, for example, metal. This retaining member 12 has spring property. That is, retaining member 12 is elastically deformed. In this manner, retaining member 12 can catch part of body 13 and position body 30 so that body 30 hangs on top unit 20. While grasping body 30 from below, the worker catches part of body 13 into a space between top unit 20 and retaining member 12, hangs part of body 13 on projection 12b of retaining member 12, and can thereby support body 30 on top unit 20. On the contrary, while grasping body 30, the worker can detach part of body 13 from retaining member 12. A combination of retaining member 12 and part of body 13 (this is an example of the second combination of the present disclosure) corresponds to the catching-type first support member.

[0079] The combination of retaining member 12 and part of body 13 is provided on the right end of body 30 as illustrated in FIG. 3D, FIG. 9A and FIG. 9B. This first support member may be provided on the left end or right and left ends (that is, both ends) without being limited to the right end. The number of the first support member provided on the right end is not limited to one, and may be two or more. The number of the first support member provided on the left end or both ends is not limited to one, and may be two or more. In the example described above, retaining member 12 is provided on top unit 20, and part of body 13 is provided on body 30. Without being limited to this, the retaining member may be provided on the body, and a part of the top unit may be caught between the body and the top unit.

[0080] If engagement by the second support member to be described later refers to final engagement, then engagement by the first support member (that is, retaining member 12 and part of body 13) can refer to so-called temporal engagement. That is, when body 30 and top unit 20 are fastened to each other by the second support member, body 30 is positionally fixed by force stronger than when body 30 is released from being fastened by the second support member and is supported by the first support member (for example, retaining member 12 and part of body 13).

[0081] Body 30 is temporarily engaged with top unit 20 using the catching-type first support member, whereby the worker can hang body 30 on top unit 20 while grasping body 30. Moreover, the worker can detach body 30 from top unit 20 while grasping body 30. Accordingly, the worker can attach and detach body 30 from below top unit 20 relatively safely. Here, "while grasping the body" refers to "while supporting body 30 by both hands". For example, the worker can catch part of body 13 by pushing and expanding retaining member 12 with only the thumb or the forefinger.

[0082] As illustrated in FIG. 9A, in a state where body 30 and top unit 20 are fastened to each other by screws 18 as the second support member to be described later, part of body 13 is spaced above projection 12b of retaining member 12 at a little interval. Hence, a stress applied from body 30 is less likely to act on retaining member 12. Meanwhile, as illustrated in FIG. 9B, in a state where the screws as the second support member are detached to release body 30 from being fastened, body 30 is supported on top unit 20 by the first support member (that is, retaining member 12 and part of body 13). In this case, part of body 13 abuts against projection 12b of retaining member 12, body 30 is supported more below than in the state of FIG. 9A, and the stress applied from body 30 acts on retaining member 12.

[0083] When FIG. 9A and FIG. 9B are compared with each other, a height position of body 30 as illustrated in FIG. 9B and a height position of body 30 as illustrated in FIG. 9A are different from each other. FIG. 9B illustrates the state of body 30 when body 30 is released from being fastened by the second support member and is supported by the first support member (that is, retaining member 12 and part of body 13). FIG. 9A illustrates the state of body 30 when body 30 is supported by the second support member (that is, screws 18 and screw holes 19, which will be described later). Specifically, the height position of body 30 when body 30 is supported by the second support member (that is, screws 18 and screw holes 19) is higher. In this manner, while body 30 is supported by the second support member (that is, screws 18 and screw holes 19), the stress applied from body 30 to the first support member (that is, retaining member 12 and part of body 13) can be reduced.

[0084] For example, retaining member 12 may have two projections 12b illustrated in FIGS. 11A and 11B. Moreover, like retaining member 12a illustrated in FIGS. 12A and 12B, retaining member 12a may have single projection 12c. The retaining member is not limited to these, and just needs to be capable of catching and supporting part of body 13.

(Hook-type first support member)

[0085] FIG. 14A is a partial cross-sectional view illustrating a configuration of the first support member (that is, hook members 14 and hanging members 15) on the left end of induction heating cooker 10 in FIG. 3B when

viewed in a direction D-D. FIG. 14B is a partial cross-sectional view illustrating a state where the first support member (that is, hook members 14 and hanging members 15) in FIG. 14A is released by detaching the screws of the second support member (screws 18 to be described later). FIG. 15A is a perspective view illustrating a state where body 30 is hung and supported on top unit 20 by hook members 14 as the first support member provided on the left end of body 30. FIG. 15B is an enlarged perspective view illustrating hook members 14 in FIG. 15A.

[0086] As illustrated in FIGS. 14A, 14B, 15A and 15B, hook members 14 are screwed to body case 31. Hanging members 15 are disposed on frame 23 of top unit 20. Hook members 14 of body 30 are hung on hanging members 15 of top unit 20, whereby top unit 20 supports body 30. More specifically, holes 15a are provided in hanging members 15, and tip ends of hook members 14 are inserted into holes 15a. The worker hangs hook members 14 on hanging members 15 while grasping body 30 from below, and can thereby support body 30 by top unit 20. On the contrary, while grasping body 30, the worker can detach hook members 14 hung from hanging members 15. This combination (first combination of the present disclosure) of hook members 14 and hanging members 15 corresponds to the hook-type first support member. A material of hook members 14 and hanging members 15 in the present exemplary embodiment is, for example, metal.

[0087] In accordance with the hook-type first support member (that is, hook members 14 and hanging members 15), the worker can detach and temporarily engage body 30 while grasping body 30. Accordingly, the worker can attach and detach body 30 relatively safely from below top unit 20. Here, "while grasping the body" refers to "while supporting body 30 by both bands". For example, the worker can hang hook members 14 on hanging members 15 while supporting body 30 by both hands.

[0088] As illustrated in FIG. 14A, in the state where body 30 and top unit 20 are fastened to each other by screws 18 which compose the second support member to be described later, hook member 14 is spaced above lower end of hole 15a of hanging member 15 at a little interval, and the stress applied from body 30 is less likely to act on hanging members 15. Meanwhile, in FIG. 14B, in the state where the screws as the second support member are detached to release body 30 from being fastened, body 30 is supported by the first support member (that is, hook members 14 and hanging members 15). In this case, hook members 14 hang on hanging members 15, and body 30 is supported more below than in the state of FIG. 14A, and the stress applied from body 30 acts on hanging members 15.

[0089] When FIG. 14A and FIG. 14B are compared with each other, a height position of body 30 as illustrated in FIG. 14B and a vertical position of body 30 as illustrated in FIG. 14A are different from each other. FIG. 14B illustrates the state of body 30 when body 30 is released from being fastened by the second support member and is supported by the first support member (that is, hook members 14 and hanging members 15). FIG. 14A illustrates the state of body 30 when body 30 is supported by the second support member (that is, screws 18 and screw holes 19). Specifically, the vertical position of body 30 when body 30 is supported by the second support member (that is, screws 18 and screw holes 19) is higher. In this manner, while body 30 is supported by the second support member (that is, screws 18 and screw holes 19), the first support member (that is, hook members 14 and hanging members 15) becomes less likely to undergo the stress applied from body 30.

[0090] As illustrated in FIGS. 14A and 14B, hook members 14 include first portions 14b extending upward from below, and second portions 14a bent outward at 90° from upper ends of the first portions and further bent downward at 90°. That is, second portions 14a are bent at 180° from first portions 14b. Second portions 14a include the tip ends of hook members 14. In this manner, as illustrated in FIGS. 15A and 15B, body 30 can be held if the angle made by body 30 and top unit 20 is less than 90° even if body 30 is inclined. Second portions 14a may be bent from first portions 14b at an angle of 180° or more.

[0091] If engagement by the second support member to be described later refers to final engagement, then engagement by the first support member composed of the combination of hook members 14 and hanging members 15 can refer to so-called temporal engagement. That is, when body 30 and top unit 20 are fastened to each other by the second support member, body 30 is positionally fixed by force stronger than when body 30 is released from being fastened by the second support member and is supported by the first support member (hook members 14 and hanging members 15).

[0092] Hereinafter, the combination and disposition of the first support member will be summarized. Such first support members (that is, the combination of retaining member 12 and part of body 13 and the combination of hook members 14 and hanging members 15) may be provided on both of right and left ends of the induction heating cooker. The catching-type first support member (that is, retaining member 12 and part of body 13) may be disposed on either one of the right and left ends, and the hook-type first support member (that is, hook members 14 and hanging members 15) may be provided on the other of the right and left ends. In this case, which of the first support members is to be provided on each of the right and left ends is set as appropriate. The first support member (that is, the combination of retaining member 12 and part of body 13 and the combination of hook members 14 and hanging members 15) may be provided on front and rear ends of body 30. The front and right ends are both ends in a lateral direction of body 30. The number of the first support member made of the combination of retaining member 12 and part of body 13 is arbitrary. The number of the first support member made of hook member 14 and hanging member 15 is arbitrary.

The number of the second support member is arbitrary.

[0093] In the present exemplary embodiment, the catching-type first support member is disposed on one end side of body 30, and the hook-type first support member is disposed on the other end side of body 30, whereby attaching work and detaching work by the worker become easier. That is, when body 30 is detached, the catching-type first support member disposed on one end of body 30 just needs to be first released. In this manner, body 30 can be inclined, and the support by the hook-type first support member can be released with ease. When body 30 is attached, body 30 is first inclined to support the body by the hook-type first support member, and body 30 is next supported by the catching-type first support member, whereby the temporal engagement becomes easy. Both of the catching-type and hook-type first support members are used, whereby body 30 can be stably supported on top unit 20.

<Second support member>

[0094] FIG. 8A is a partial cross-sectional view illustrating a configuration of the second support member (that is, screw 18 and screw hole 19) on the right end of induction heating cooker 10 in FIG. 3B when viewed in a direction A-A. FIG. 8B is a partial cross-sectional view illustrating a state where screw 18 is detached to release body 30 from being fastened in the second support member (that is, screw 18 and screw hole 19) in FIG. 8A. FIG. 13A is a partial cross-sectional view illustrating a configuration of the second support member (that is, screw hole, screw 18 and screw hole 19) on a left end of induction heating cooker 10 in FIG. 3B when viewed in a direction C-C. FIG. 13B is a partial cross-sectional view illustrating a state where screw 18 is detached to release body 30 from being fastened in the second support member (that is, screw 18 and screw hole 19) in FIG. 13A.

[0095] As illustrated in FIG. 8A, body 30 and top unit 20 are detachably fastened to each other by screw 18 and screw hole 19. Screws 18 and screw holes 19 are individually provided on the right and left ends of induction heating cooker 10. As illustrated in FIG. 3B, on the bottom surface of body 30, screws 18 and screw holes 19 are provided at three spots on each of the right and left ends and at two spots on each of the front and rear ends. That is, screws 18 and screw holes 19 are provided at ten spots in total. These screws 18 and screw holes 19 provided in body 30 and top unit 20 correspond to the second support member.

[0096] When body 30 and top unit 20 are fastened to each other by screws 18, screw holes 19 of body 30 and screw holes 19 of top unit 20 are brought into close contact with each other as illustrated in FIG. 8A and FIG. 13A. As illustrated in FIG. 8A and FIG. 13A, a state where body 30 and top unit 20 are fastened to each other by screws 18 is a fastened state. Body 30 and top unit 20 are fastened to each other by screws as described above, and accordingly, body 30 and top unit 20 can be supported stably.

[0097] Meanwhile, as illustrated in FIG. 8B and FIG. 13B, a state where screws 18 are detached is a state where body 30 and top unit 20 are released from being fastened to each other. In this case, though the support by the second support member (that is, screws 18 and screw holes 19) is released, body 30 is supported by the above-mentioned first support member (that is, at least one of the combination of retaining member 12 and part of body 13 and the combination of hook members 14 and hanging members 15).

[0098] Based on the comparison between FIG. 8A and FIG. 8B and the comparison between FIG. 13A and FIG. 13B, the height position of body 30 when body 30 is released from being fastened by the second support member and is supported by the first support member and the height position of body 30 when body 30 is supported by the second support member differ from each other. Here, the first support member is at least one of the combination of retaining member 12 and part of body 13 and the combination of hook members 14 and hanging members 15, and the second support member is screws 18 and screw holes 19. Specifically, the height position of body 30 when body 30 is supported by the second support member (that is, screws 18 and screw holes 19) is higher. That is, while body 30 is supported by the second support member (that is, screws 18 and screw holes 19), there can be reduced the stress applied from body 30 to the first support member (that is, at least one of the combination of retaining member 12 and part of body 13 and the combination of hook members 14 and hanging members 15).

[0099] In the exemplary embodiment described above, the side surface (side surface 20a in FIG. 6A) of top unit 20 is covered with body 30; however, without being limited to this, body 30 may be fitted into an inside of side surface 20a of top unit 20.

[0100] A description will be further given below of induction heating cooker 10 according to another exemplary embodiment. First, a constituent element (that is, wall 24) to be added to a vicinity of retaining member 12 will be described with reference to FIG. 16. As illustrated in FIG. 16, wall 24 may be disposed on frame 23. Wall 24 extends downward from a back surface of frame 23. Wall 24 is disposed at a position facing part of body 13 via retaining member 12. A material of wall 24 is, for example, metal.

[0101] Here, if the worker pulls retaining member 12 outward too much, then retaining member 12 sometimes deteriorates. In the configuration illustrated in FIG. 16, outward elastic deformation of retaining member 12 is regulated by wall 24. That is, due to wall 24, the worker cannot pull retaining member 12 outward by a certain amount or more. Hence, the deterioration of retaining member 12 is suppressed by providing wall 24.

[0102] A modification of retaining member 12 will be described with reference to FIG. 17. As illustrated in FIG. 17, retaining member 12 may be inserted into holes 23a,

23b of frame 23 from above. Retaining member 12 may include first portion 121, second portion 122, and third portion 123. These first portion 121, second portion 122, and third portion 123 may be formed integrally with one another.

[0103] When induction heating cooker 10 is assembled, first portion 121 is disposed below frame 23. First portion 121 is a portion for catching part of body 13 when body 30 is temporarily engaged. Projection 12b mentioned above is provided on first portion 121. Second portion 122 is connected to first portion 121. When induction heating cooker 10 is assembled, retaining member 12 penetrates hole 23a of frame 23, and second portion 122 is disposed on an upper surface of frame 23. Third portion 123 is connected to second portion 122. When induction heating cooker 10 is assembled, retaining member 12 penetrates holes 23b of frame 23, and third portion 123 is disposed below frame 23.

[0104] An outer surface of third portion 123 is disposed so as to come close to an inner wall of cutout 2 of kitchen counter 1 illustrated in FIG. 1B. Hence, when the worker inserts top unit 20 into cutout 2 from above, top unit 20 is positioned to cutout 2 as appropriate.

[0105] Moreover, in the configuration illustrated in FIG. 17, first portion 121 and third portion 123 are connected to each other via second portion 122 above frame 23. Hence, retaining member 12 is less likely to slip down from top unit 20.

[0106] A modification of hook-type first support member 11 will be described with reference to FIGS. 18 to 21. A configuration illustrated in FIGS. 18 to 21 includes depth-side first support member 111 and near-side first support member 211 as hook-type first support member 11. Both of depth-side first support member 111 and near-side first support member 211 are disposed on one end in the longitudinal direction of body 30 when body 30 is viewed in the vertical direction. On the other end in the longitudinal direction, first support member 11 composed of the combination of retaining member 12 and part of body 13 may be disposed.

[0107] As illustrated in FIG. 18, depth-side first support member 111 and near-side first support member 211 are arrayed in the lateral direction of body 30 when body 30 is viewed in the vertical direction. When induction heating cooker 10 is used, depth-side first support member 111 is disposed on a depth side. Near-side first support member 211 is disposed on a near side close to the user.

[0108] Depth-side first support member 111 is a combination of hook member 114 and hanging member 115. Near-side first support member 211 is a combination of hook member 214 and hanging member 215.

[0109] As described above, depth-side first support member 111 and near-side first support member 211 are provided on one end in the longitudinal direction of body 30, and other first support member 11 is provided on the other end, whereby body 30 is supported by three points or more. Hence, body 30 is stably supported.

[0110] Hook members 114, 214 in first support members 111, 211 in the modification will be described with reference to FIG. 18, FIG. 19A, and FIG. 19B. As illustrated in FIG. 18, FIG. 19A, and FIG. 19B, each of hook members 114, 214 may include third portion 14c and fourth portion 14d in addition to first portion 14b and second portion 14a, which are mentioned above. Third portion 14c is connected to a lower end of first portion 14b. Third portion 14c extends in the horizontal direction (for example, the x-axis direction in FIG. 1A) from the first portion. Fourth portion 14d rises upward from third portion 14c, and further extends in the horizontal direction (for example, the x-axis direction).

[0111] First portion 14b, second portion 14a, and third portion 14c are disposed outside body case 31. Fourth portion 14d penetrates body case 31, and is disposed inside body case 31. For example, as illustrated in FIG. 19A, fourth portion 14d of near-side hook member 214 is inserted into hole 31a of body case 31 from below.

[0112] Each of first portion 14b and third portion 14c has a surface facing an outer surface of body case 31. Fourth portion 14d has a surface facing an inner surface of body case 31. First portion 14b is attached to body case 31 by screw 37.

[0113] Third portion 14c and fourth portion 14d are provided, whereby third portion 14c of each of hook members 114, 214 receives body 30 even if screw 37 is detached. Therefore, hook member 114 is less likely to slip down from body 30.

[0114] Hanging members 115, 215 in first support members 111, 211 of the modification will be described with reference to FIG. 18. Hanging member 115 on the depth side is composed by cutting a part of frame 23 and bending the part downward. A shape of hanging member 115 is a flat rectangular shape. Hanging member 215 on the near side is composed of a member separate from frame 23. Hanging member 215 is composed so as to surround hook member 214 from at least two directions. When the at least two directions are explained in FIG. 18, the at least two directions are a direction going from left to right and a direction going from near to depth, or a direction going from left to right and a direction going from depth to near. In FIG. 18, hanging member 215 is composed so as to surround hook member 214 from three directions in total, which the direction going from left to right, the direction from near to depth, and the direction going from depth to near.

[0115] As described above, hanging member 215 surrounds hook member 214 from many directions, whereby it becomes easy to position hook member 214, and it becomes easy to position body 30 and top unit 20 when body 30 is attached to top unit 20. When hanging member 215 surrounds hook member 214 from many directions, an unfolded area of hanging member 215 is increased. Hence, strength of frame 23 is maintained when hanging member 215 is composed of the member separate from frame 23 rather than when hanging member 215 is composed of a part of frame 23. Meanwhile, a shape of depth-side hanging member 115 is flat. Accordingly, at the time

of attaching body 30, the worker can easily confirm whether hanging member 215 and hook member 214 positionally correspond to each other from cavity 4 illustrated in FIG. 1A. Hence, workability is improved at the time of attaching and detaching body 30.

[0116] As illustrated in FIG. 20, slits 25 may be formed in frame 23. Apart of near-side hanging member 215 may be inserted into slits 25 from below. In this manner, hanging member 215 becomes less likely to slip down from frame 23. A back surface of a part of near-side hanging member 215 may be welded to the upper surface of frame 23. In this manner, hanging member 215 becomes less likely to slip down from frame 23.

[0117] Moreover, as illustrated in FIG. 21, depth-side hanging member 115 may have hole 115a into which hook member 114 is inserted. Near-side hanging member 215 may have hole 215a into which hook member 214 is inserted.

[0118] When body 30 is fastened to top unit 20, then in depth-side first support member 111, gaps are provided between hole 115a of hanging member 115 and hook member 114. A width (that is, a length in the lateral direction of body 30) of the gaps is a sum of width d1 and width d2. Width d1 is a width of the depth-side gap. Width d2 is a width of the near-side gap.

[0119] When body 30 is fastened to the top unit, then in near-side first support member 211, slight gaps are provided between hole 215a of hanging member 215 and hook member 214. A width of the slight gaps is a sum of width d3 and width d4. Width d3 is a width of the depth-side gap. Width d4 is a width of the near-side gap.

[0120] In the configuration illustrated in FIG. 21, the sum of width d1 and width d2 may be larger than the sum of width d3 and width d4. That is, depth-side first support member 111 is formed so that a width of hole 115a of hanging member 115 becomes wider with respect to hook member 114 than in near-side first support member 211. Here, the worker attaches body 30 to top unit 20 so as to look into kitchen counter 1 from cavity 4 illustrated in FIG. 1A. Hence, during the work, it is more difficult for the worker to see the depth side than the near side. In the configuration illustrated in FIG. 21, depth-side hole 115a is relatively large with respect to hook member 114. Therefore, hook member 114 can be inserted with ease, and the workability is improved.

[0121] Moreover, when body 30 is fastened to top unit 20, then with regard to the depth-side gaps, width d2 of the near-side gap may be wider than width d1 of the depth-side gap. Design is made so that hook member 114 is positioned by pressing hook member 114 against the depth side of hole 115a, whereby the workability is further improved.

[0122] As illustrated in FIG. 20, frame 23 includes side surface 20a bent downward between hanging members 115, 215 and body 30. Cutaway portion 126 is provided in a region of side surface 20a, the region facing hanging member 115. Cutaway portion 226 is provided in a region of side surface 20a, the region facing hanging member 215. That is, cutaway portion 126 is disposed on the depth side, and cutaway portion 226 is disposed on the near side. Each of cutaway portions 126, 226 is cut away so that a vertical length of each cutaway portion is locally short.

[0123] During the work, by cutaway portions 126, 226, the worker can confirm the positions of hanging members 115, 215 and hook members 114, 214 while looking into kitchen counter 1 from cavity 4 illustrated in FIG. 1A. Hence, the workability is improved.

[0124] A value obtained by subtracting width d6 of depth-side cutaway portion 126 from width d5 of depth-side hook member 114 may be larger than a value obtained by subtracting width d8 of near-side cutaway portion 226 from width d7 of near-side hook member 214. That is, depth-side cutaway portion 126 is configured so that the width of depth-side cutaway portion 126 is narrow with respect to the depth-side hook member 114. In this manner, once hook member 114 is inserted between side surface 20a and hanging member 115 during the work, it is difficult for hook member 114 to hang on cutaway portion 126, and the workability is improved.

[0125] In the exemplary embodiment described above, catching-type first support member and hook-type first support member are illustrated as the first support member. However, the first support member is not limited to these. Desirably, in this case, the first support member can be operated while grasping the body or by only a thumb.

[0126] In the exemplary embodiment described above, the first support member is composed of the combination of the portion provided in the body and the portion provided in the top unit. For example, this combination is at least one of the combination of the retaining member and a part of the body or the top unit and the combination of the hook member and the hanging member. Moreover, the combination may be a combination of the hook member provided on the top unit and the hook member provided on the body. Each of the respective members which compose these combinations can be provided on either one of the body and the top unit. For example, the retaining member can be provided on the body, and catch a part of the top unit. Moreover, the hook member may be provided on the top unit, and the hanging member may be provided on the body. The hanging member does not have to be provided with the hole, and just needs to have a structure capable of hanging the hook member.

[0127] In the exemplary embodiment described above, the combination of the screw and the screw holes is illustrated as the second support member; however, the second support member is not limited to this. For example, the second support member may be a bolt, a nut and a screw hole, and the body may be supported on the top unit by these. The second support member may be another fastening member.

[0128] The present disclosure incorporates those in each of which at least two among exemplary embodiments and examples in the varieties of exemplary em-

bodiments and examples, which are mentioned above, are combined as appropriate, and by the combinations, the effects intrinsic to the respective embodiments and examples can be exerted.

INDUSTRIAL APPLICABILITY

[0129] In accordance with the induction heating cooker according to the present disclosure, the body can be released from being fastened by the second support member in the state where the body is hung on the top unit by the first support member. After the fastening by the second support member is released, the support by the first support member is released, whereby the body can be detached relatively safely. In accordance with the induction heating cooker according to the present disclosure, the body can be fastened to the top unit by the second support member in the state of being supported on the top unit by the first support member. Hence, the body can be attached relatively safely. As described above, in accordance with the induction heating cooker according to the present disclosure, the safety in the work is improved at least one of when the body is detached and when the body is attached. In this manner, the maintenance can be carried out with ease.

REFERENCE MARKS IN THE DRAWINGS

[0130]

1: kitchen counter
2: cutout (rectangular hole)
4: cavity
10: induction heating cooker
11: first support member
111: depth-side first support member
211: near-side first support member
12, 12a: retaining member (first support member)
12b: projection
12c: projection
121: first portion
122: second portion
123: third portion
13: part of body (first support member)
14: hook member (first support member)
114: hook member (depth-side hook member)
214: hook member (near-side hook member)
14a: second portion
14b: first portion
15: hanging member (first support member)
115: hanging member (depth-side hanging member)
215: hanging member (near-side hanging member)
15a: hole
115a: hole
215a: hole
18: screw (second support member)
19: screw hole (second support member)
20: top unit
20a: side surface
20b: protrusion
21: second support member
22: top plate
23: frame
23a: hole
23b: hole
24: wall
25: slit
126 cutaway portion
226: cutaway portion
30: body
31: body case
31a: hole
32: heating coil
34: display
36: controller
37: screw

Claims

1. An induction heating cooker in which directions are defined by a vertical direction and a horizontal direction during use, the induction heating cooker comprising:

   a top unit including a top plate; and
   a body for storing a heating coil for induction heating, the body being detachably supported below the top unit by a first support member and a second support member,
   wherein the body
   is positioned by the first support member so as to hang on the top unit; and
   is fastened to the top unit by the second support member.

2. The induction heating cooker according to claim 1, wherein a first position in the vertical direction when the body is released from being fastened by the second support member and is supported by the first support member and a second position in the vertical direction when the body is supported by the second support member differ from each other.

3. The induction heating cooker according to claim 1, wherein, when the body and the top unit are fastened to each other by the second support member, the body is positionally fixed by force stronger than when the body is released from being fastened by the second support member and is supported by the first support member.

4. The induction heating cooker according to claim 1, wherein the first support member is configured to support the body when the body is released from being fastened by the second support member.

5. The induction heating cooker according to claim 2 or 3, wherein the first support member is configured to support the body when the body is released from being fastened by the second support member.

6. The induction heating cooker according to claim 2 or 5, wherein the first position is lower than the second position.

7. The induction heating cooker according to any one of claims 1 to 6, wherein, when the body is viewed in the vertical direction, both of the first support member and the second support member are provided to support each of both ends in a longitudinal direction of the body.

8. The induction heating cooker according to any one of claims 1 to 7, wherein the first support member is a combination of a hook member disposed on the body and a hanging member on which the hook member is hung, the hanging member being disposed on the top unit.

9. The induction heating cooker according to claim 8, wherein the hook member includes a first portion extending in the vertical direction and a second portion bent downward at least at 180° from an upper end of the first portion, and
the hanging member is configured to receive hanging of the second portion.

10. The induction heating cooker according to any one of claims 1 to 7, wherein the first support member is a combination of a part of the body and a retaining member for catching the part of the body, the retaining member being disposed on the top unit.

11. The induction heating cooker according to any one of claims 1 to 6, wherein the first support member includes a first support member made of a first combination and a first support member made of a second combination,
when the body is viewed in the vertical direction, both of the first support member made of the first combination and the first support member made of the second combination are provided to support each of both ends in the longitudinal direction of the body,
the first support member made of the first combination includes a hook member disposed on the body and a hanging member on which the hook member is hung, the hanging member being disposed on the top unit, and
the first support member made of the second combination includes a part of the body and a retaining member of the top unit, for catching the part.

12. The induction heating cooker according to any one of claims 1 to 6, wherein the first support member includes a first support member made of a first combination and a first support member made of a second combination,
when the body is viewed in the vertical direction, the first support member made of the first combination is provided to support one of both ends in the longitudinal direction of the body,
the first support member made of the second combination is provided to support other of both ends in the longitudinal direction of the body,
the first support member made of the first combination includes a hook member disposed on the body and a hanging member on which the hook member is hung, the hanging member being disposed on the top unit, and
the first support member made of the second combination includes a part of the body and a retaining member disposed on the top unit, for catching the part.

13. The induction heating cooker according to any one of claims 1 to 12, wherein the second support member includes a screw for fastening the body and the top unit to each other.

FIG. 1A

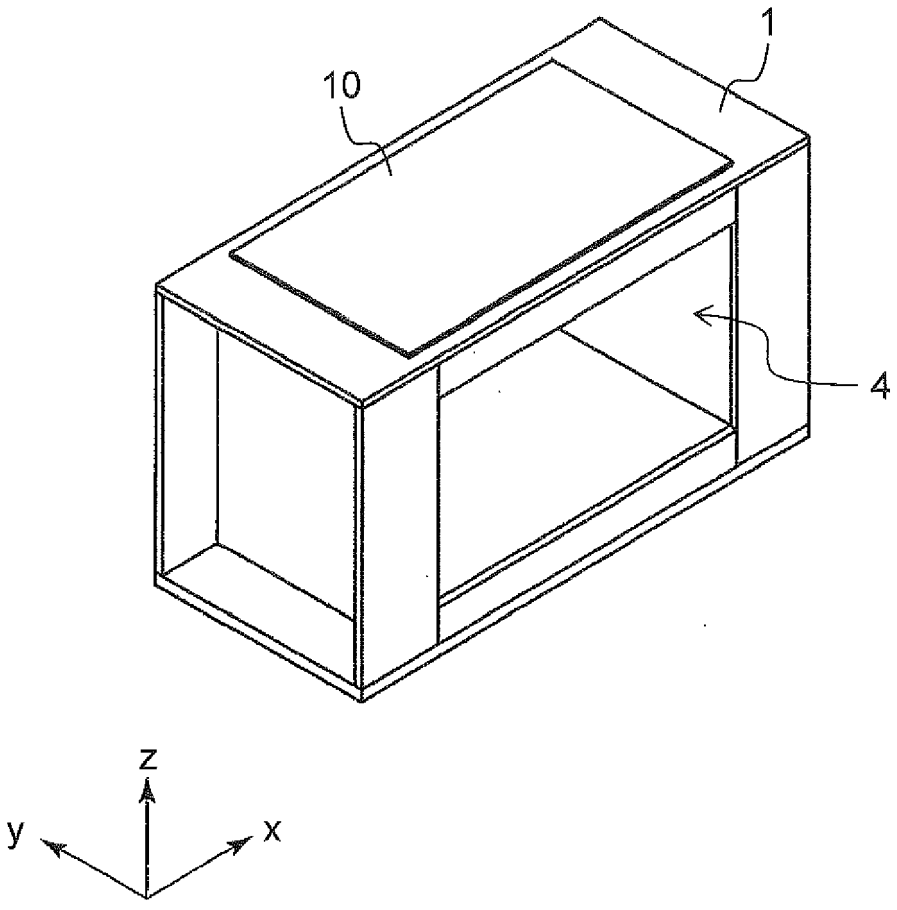


FIG. 1B

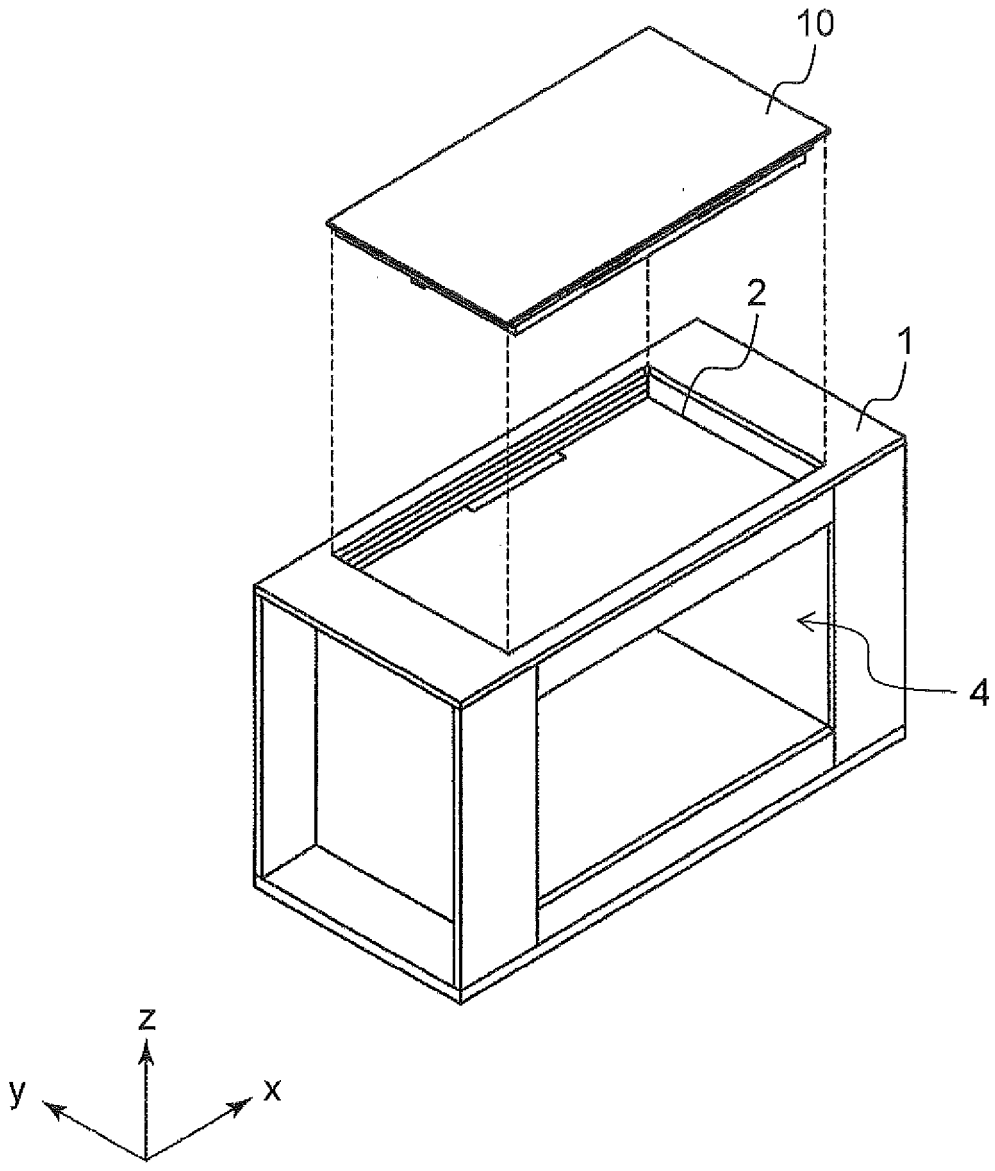


FIG. 2

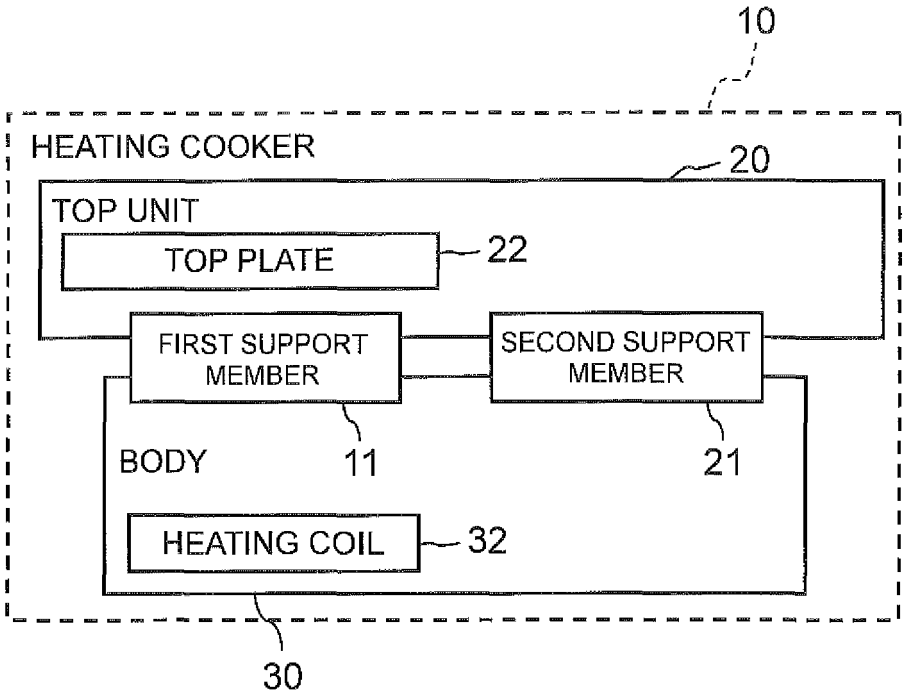

10
HEATING COOKER
20
TOP UNIT
TOP PLATE
22
FIRST SUPPORT MEMBER
SECOND SUPPORT MEMBER
BODY
11
21
HEATING COIL
32
30

FIG. 3A

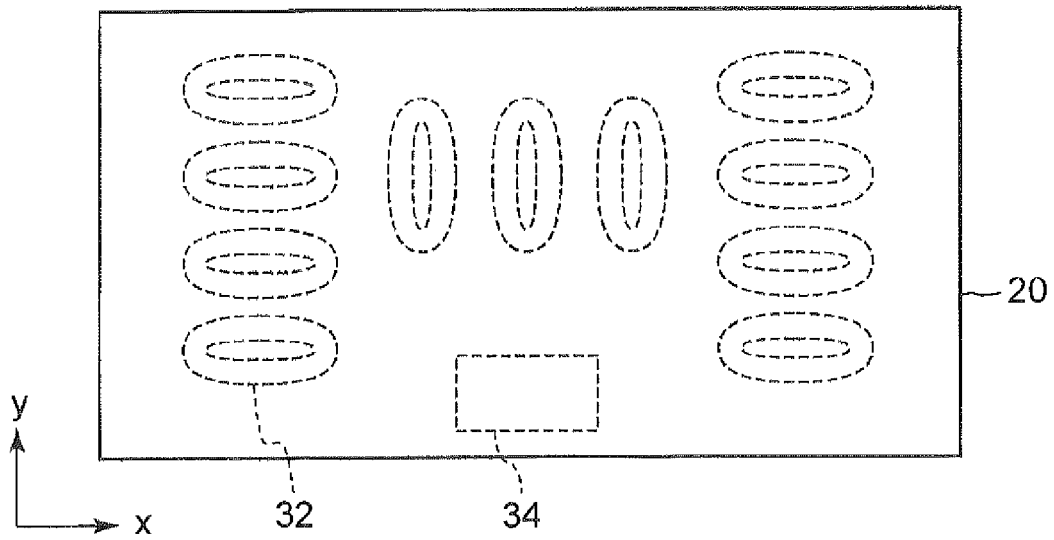


FIG. 3B

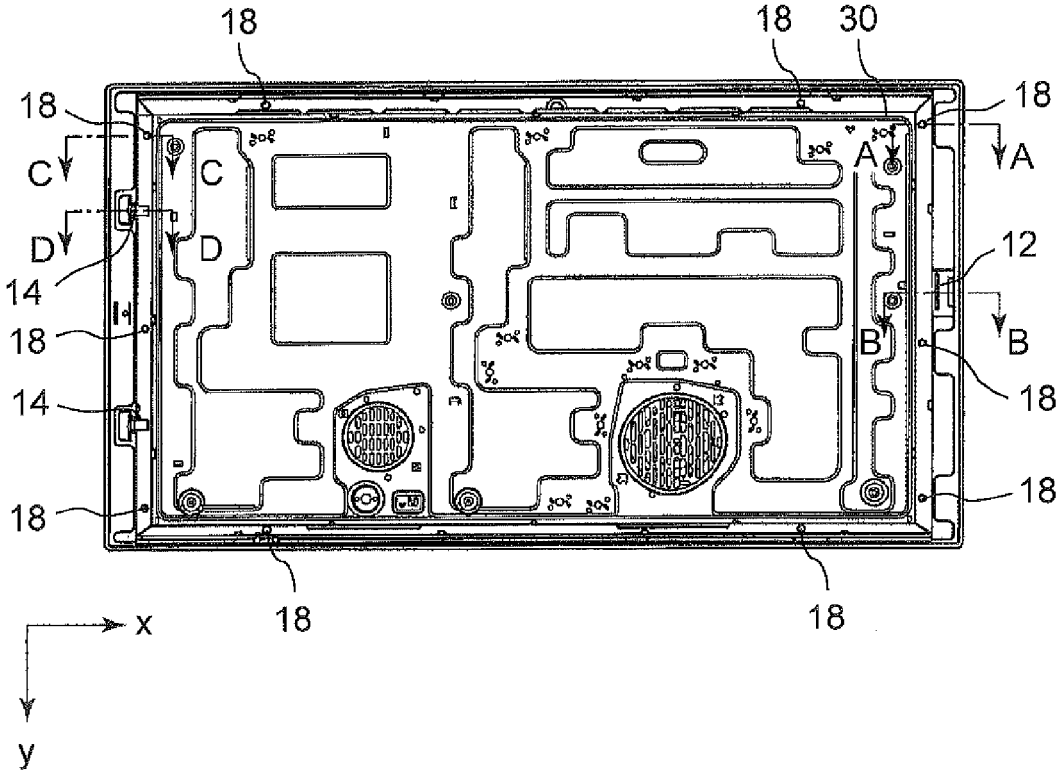


FIG. 3C

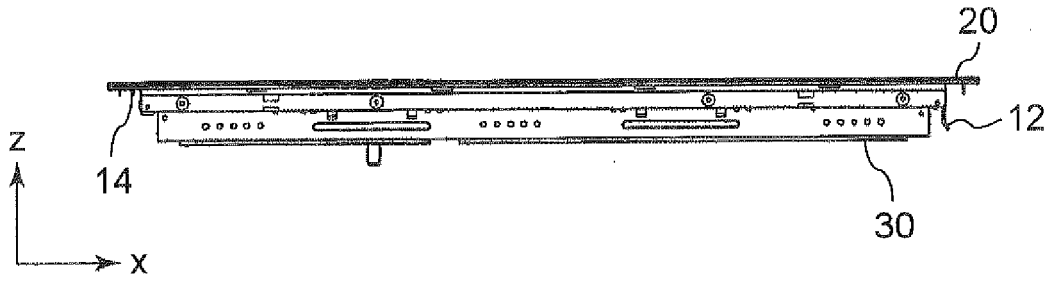


FIG. 3D

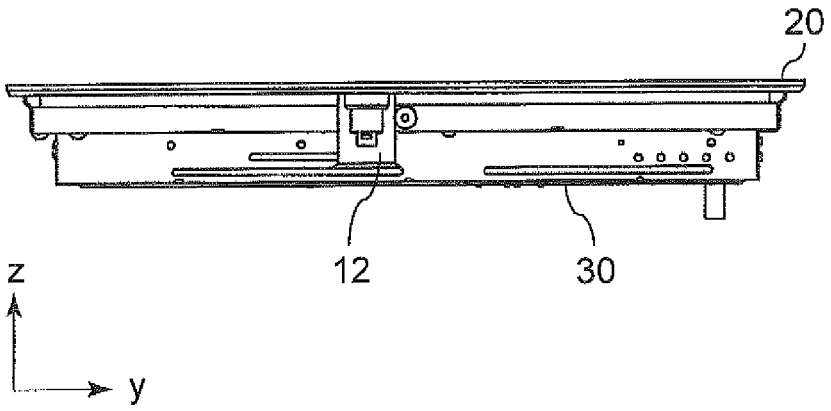


FIG. 3E

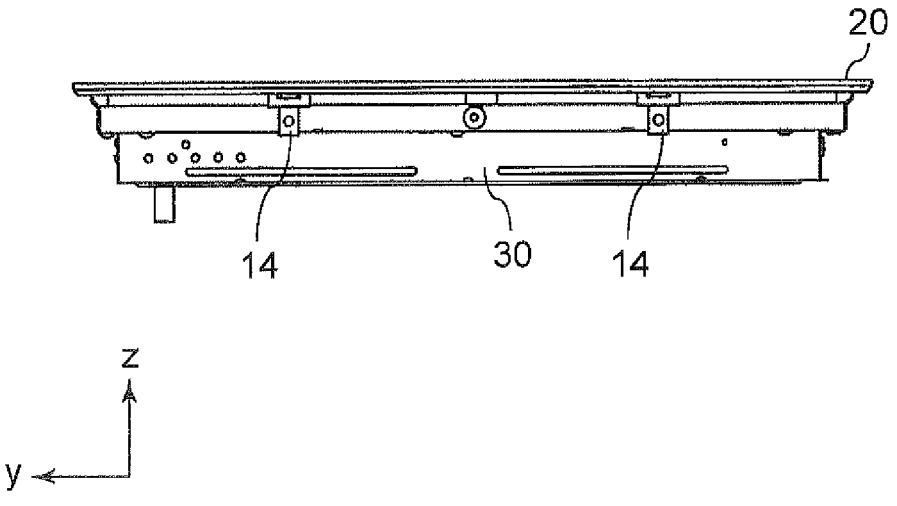


FIG. 4A

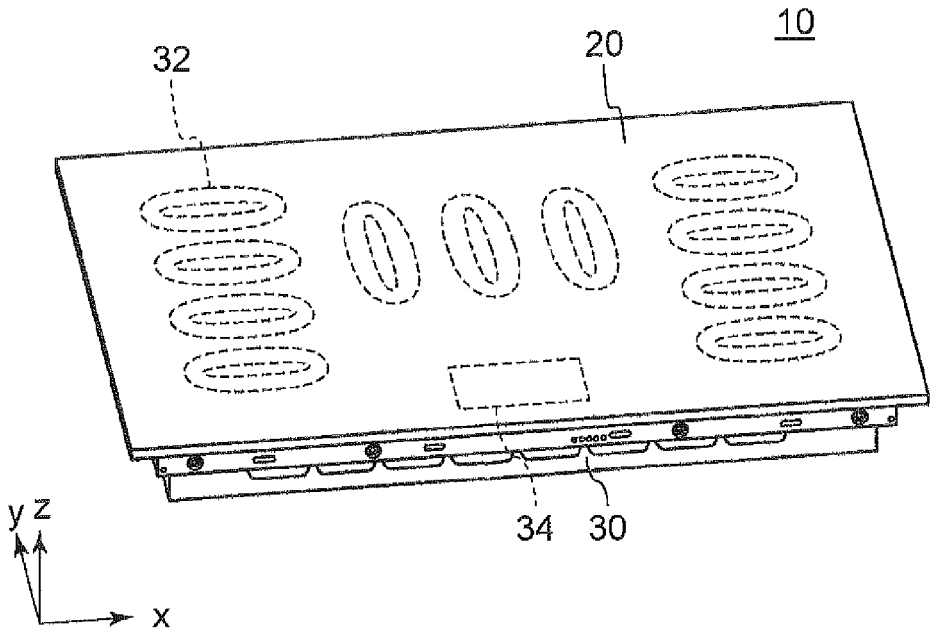


FIG. 4B

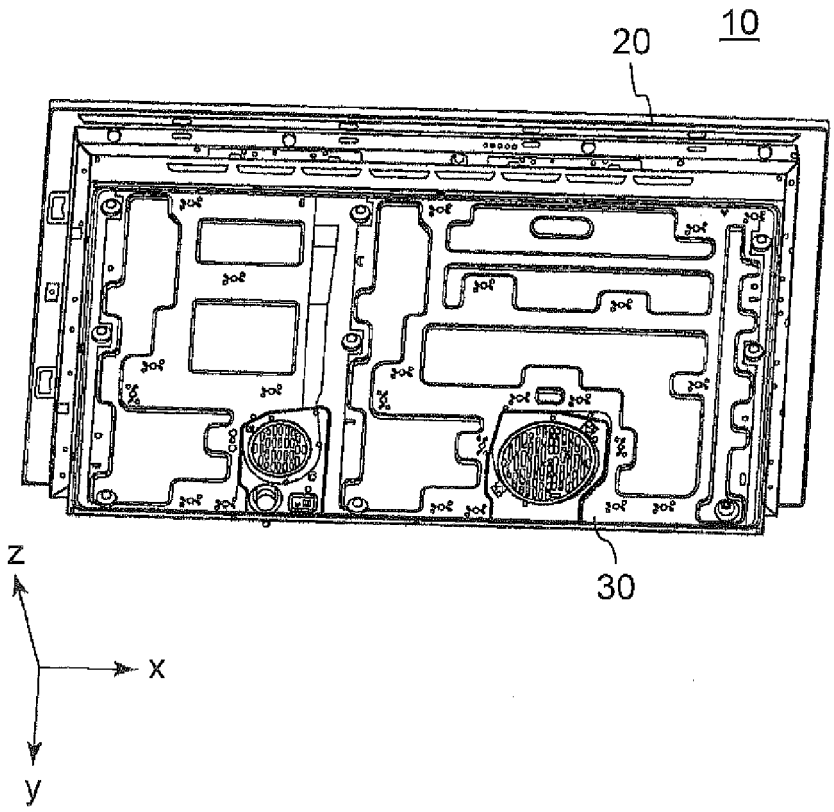


FIG. 5

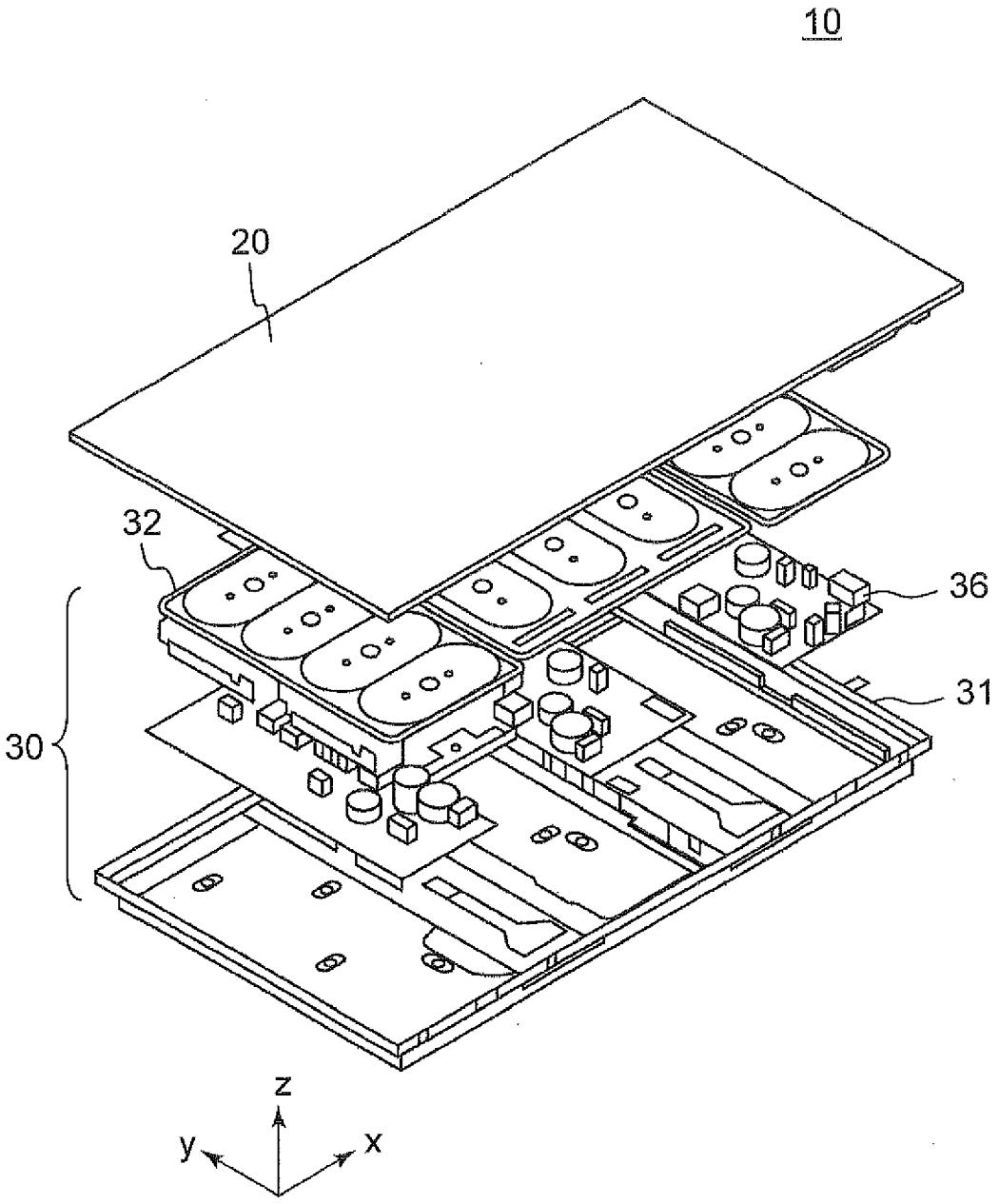


FIG. 6A

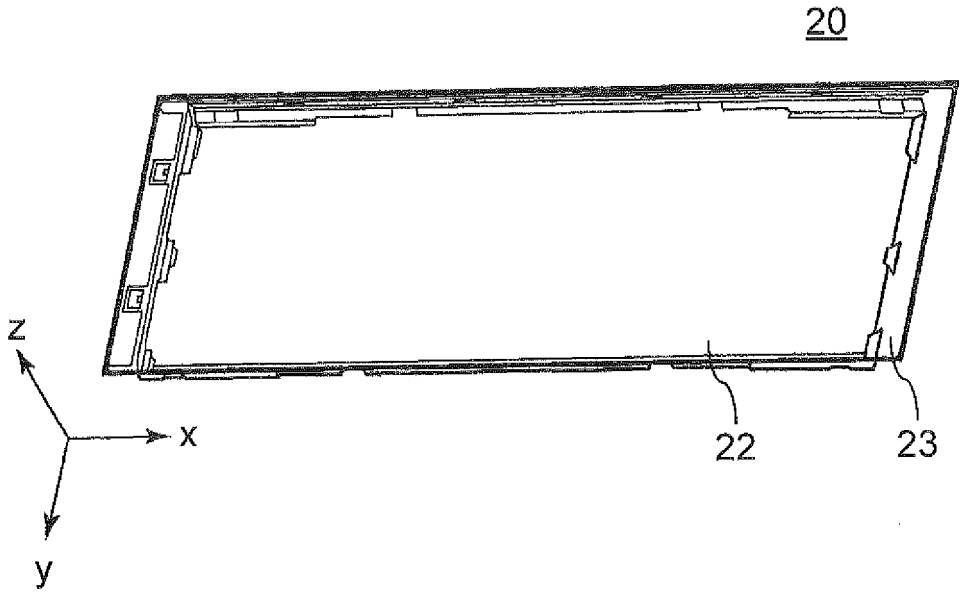


FIG. 6B

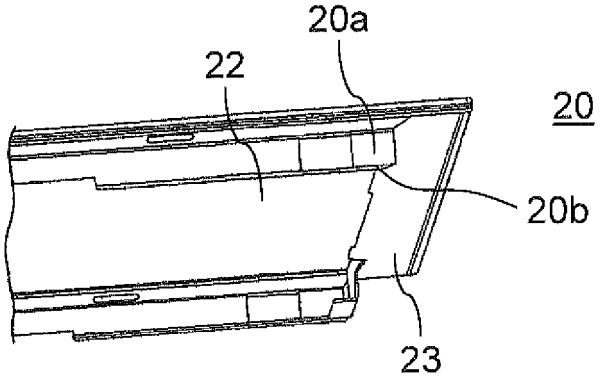


FIG. 7

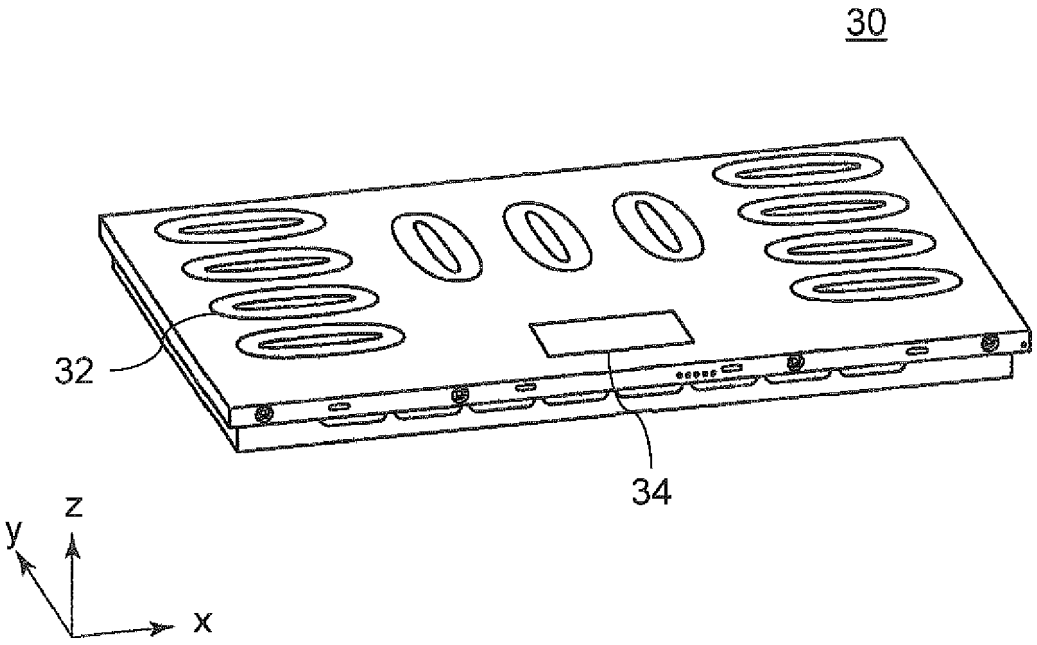


FIG. 8A

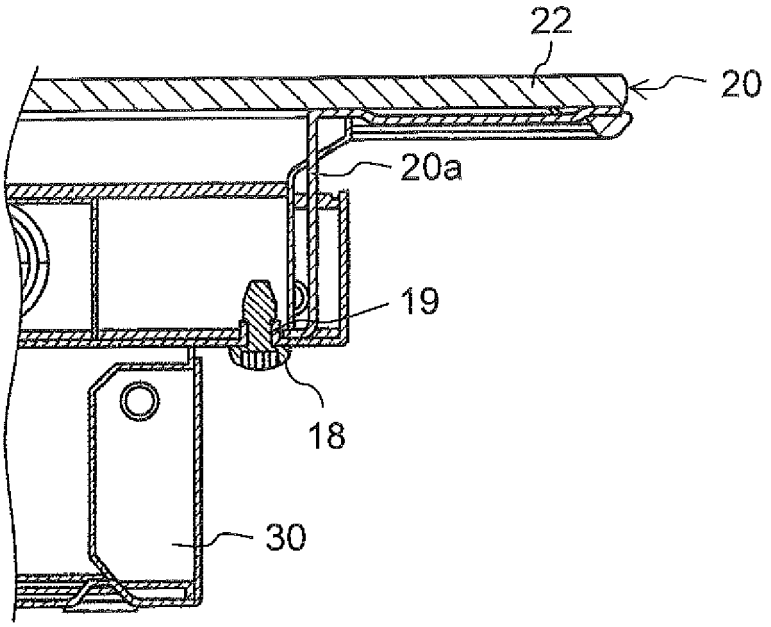


FIG. 8B

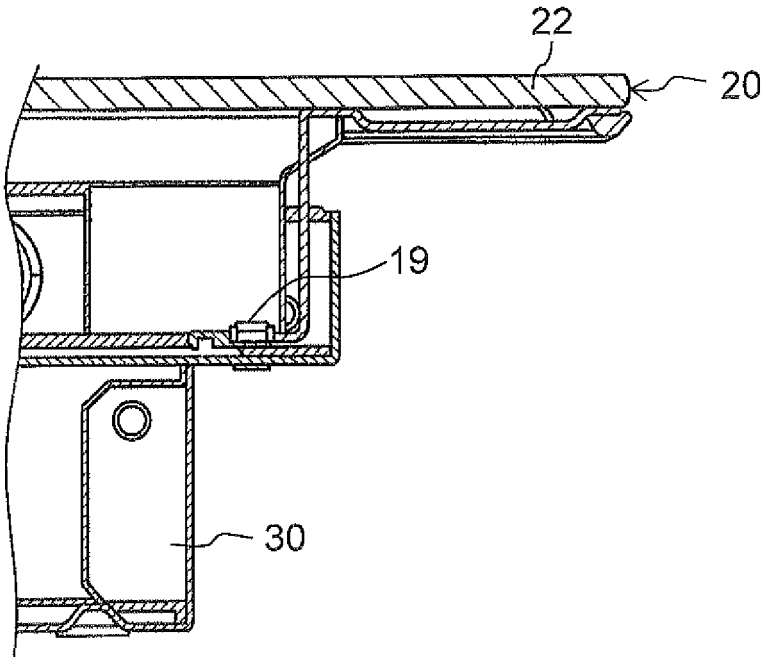


FIG. 9A

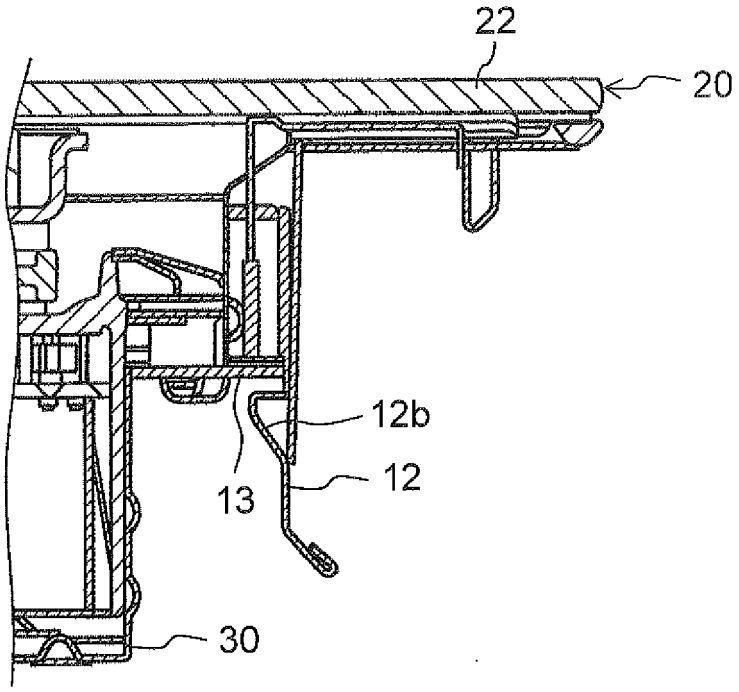


FIG. 9B

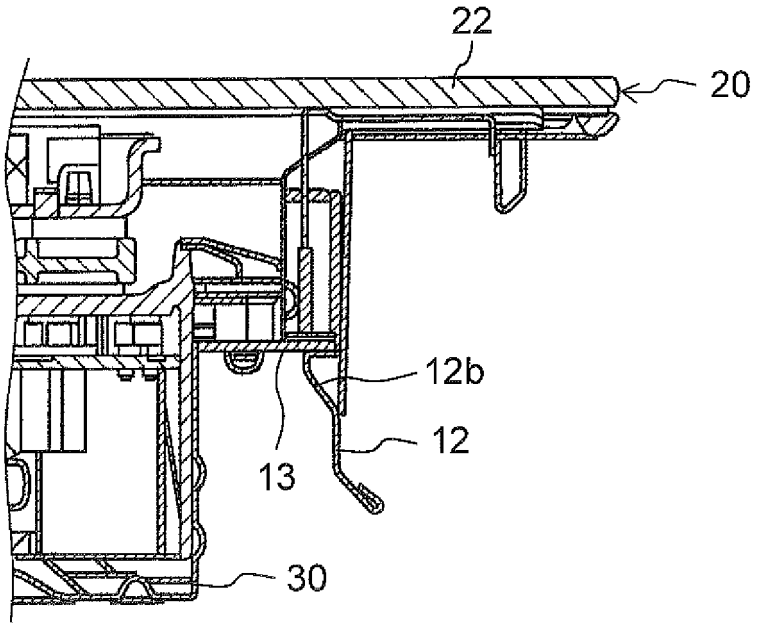


FIG. 10

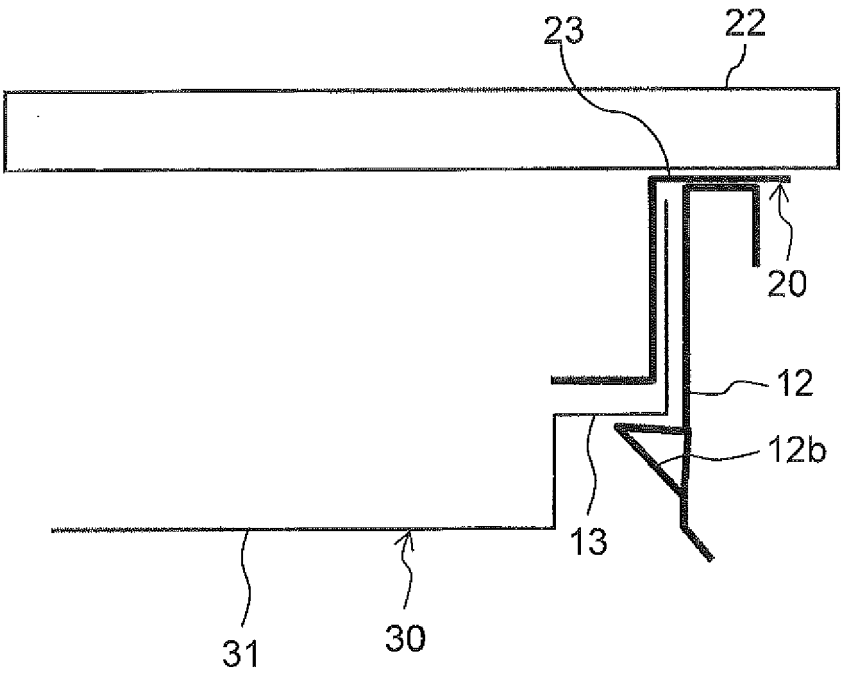


FIG. 11A

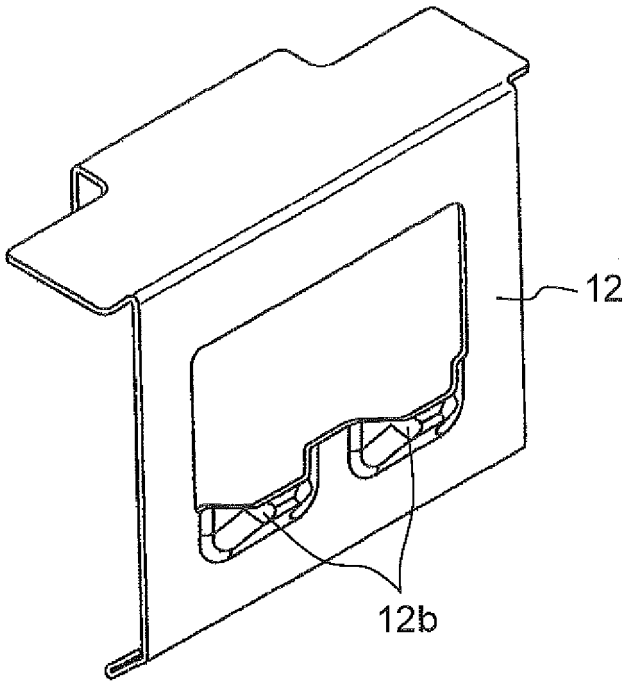


FIG. 11B

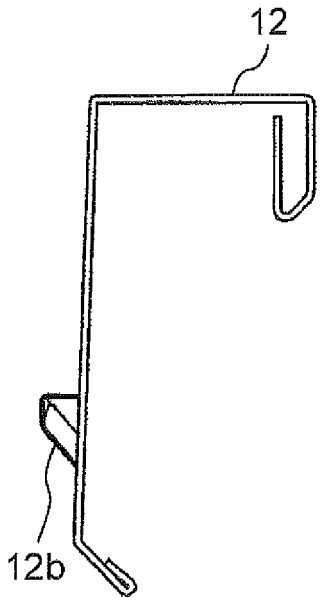


FIG. 12A

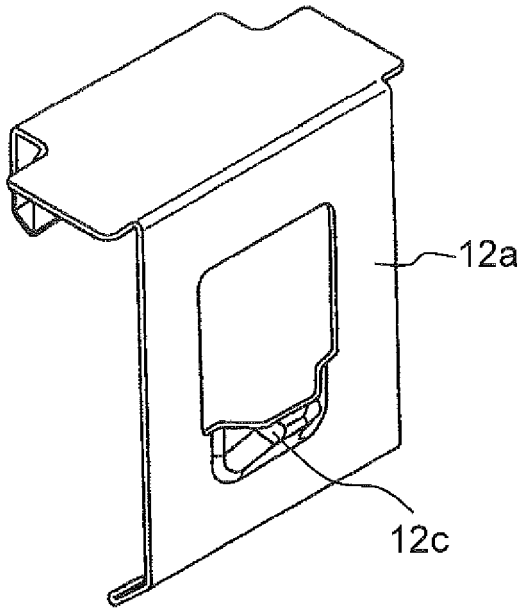


FIG. 12B

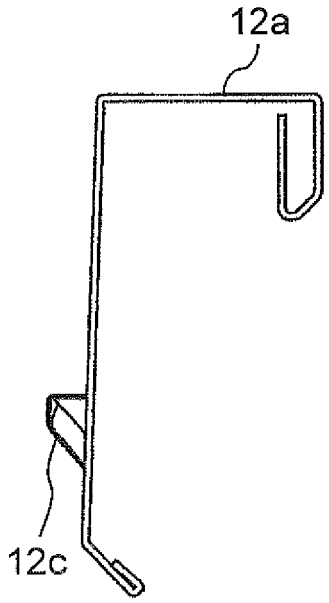


FIG. 13A

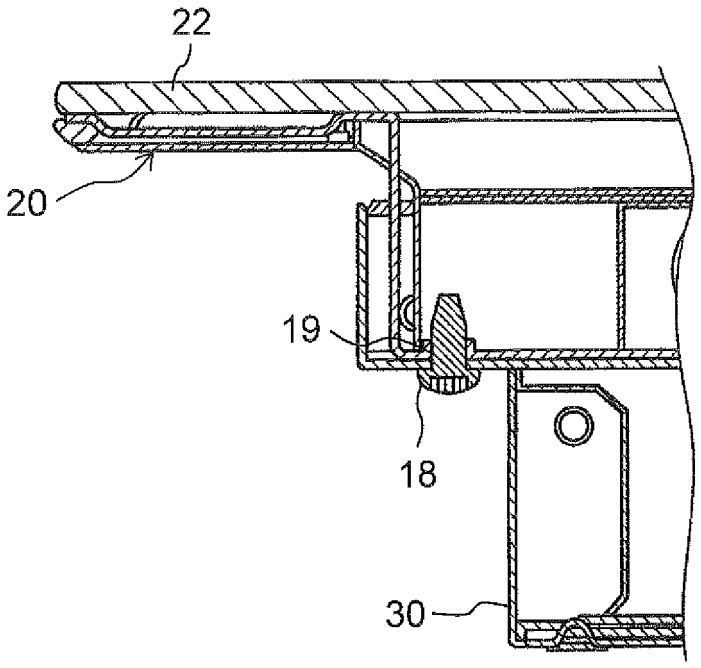


FIG. 13B

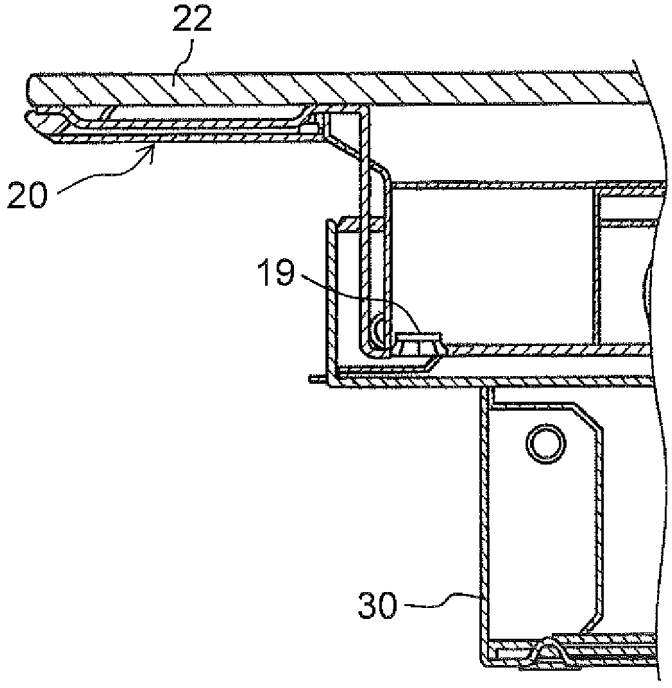


FIG. 14A

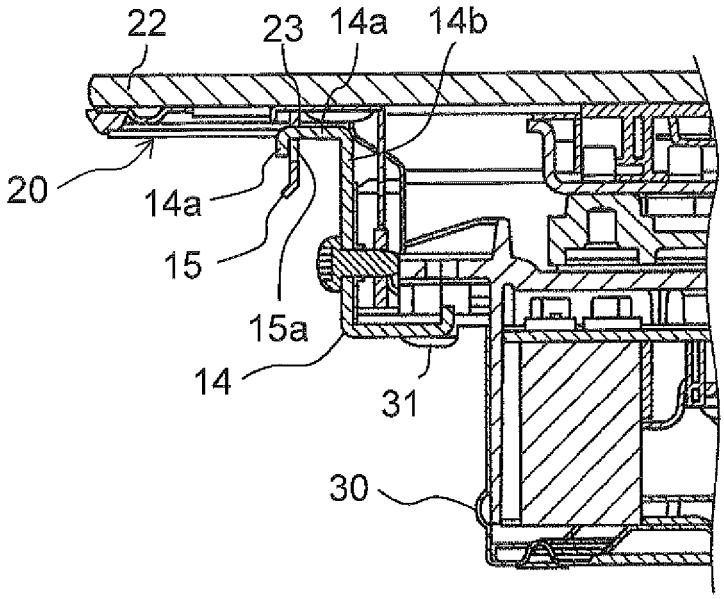


FIG. 14B

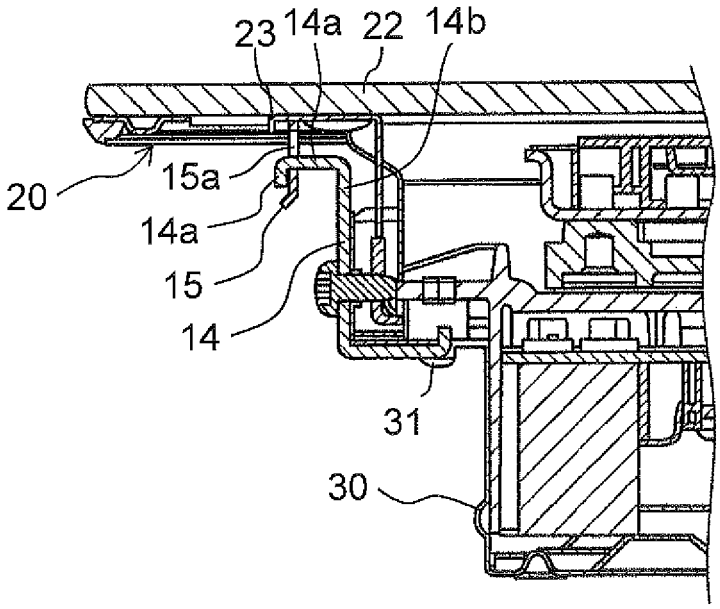


FIG. 15A

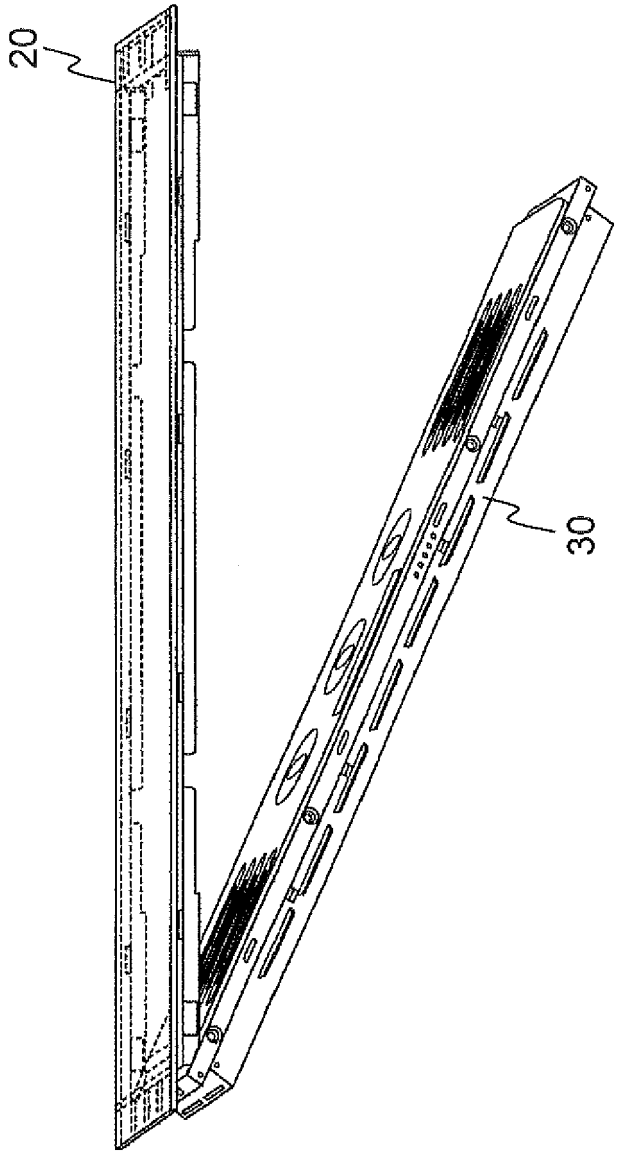


FIG. 15B

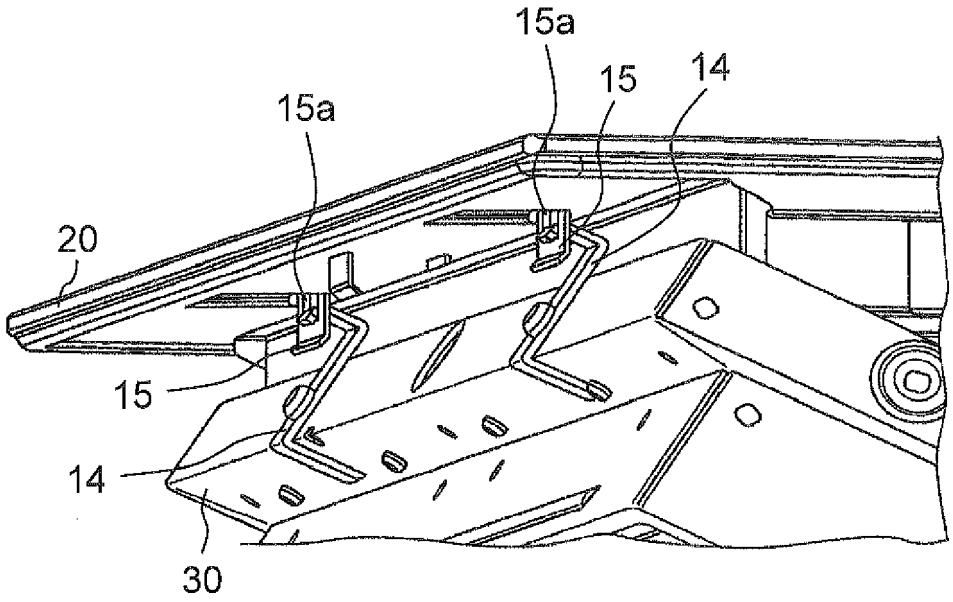


FIG. 16

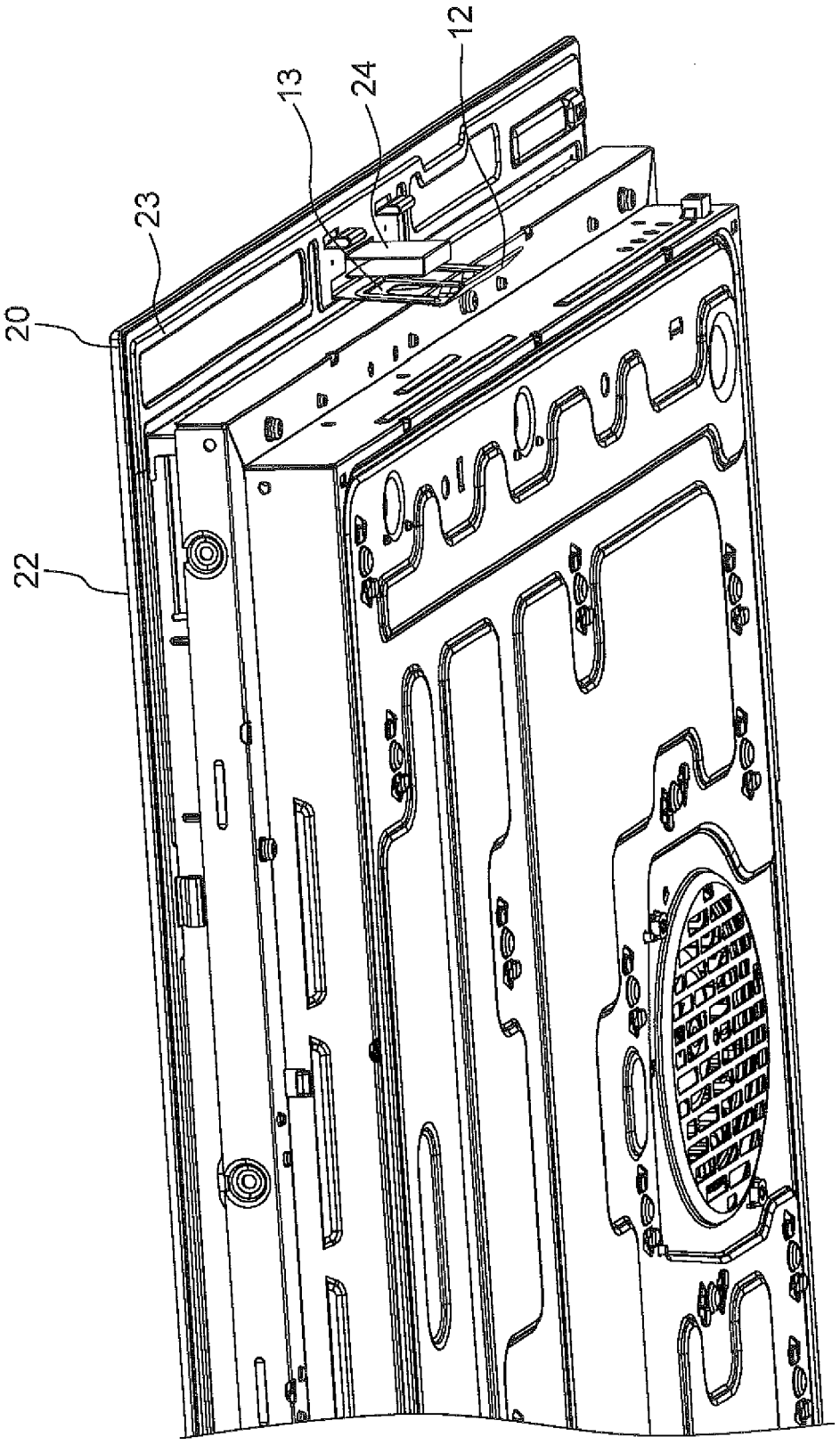


FIG. 17

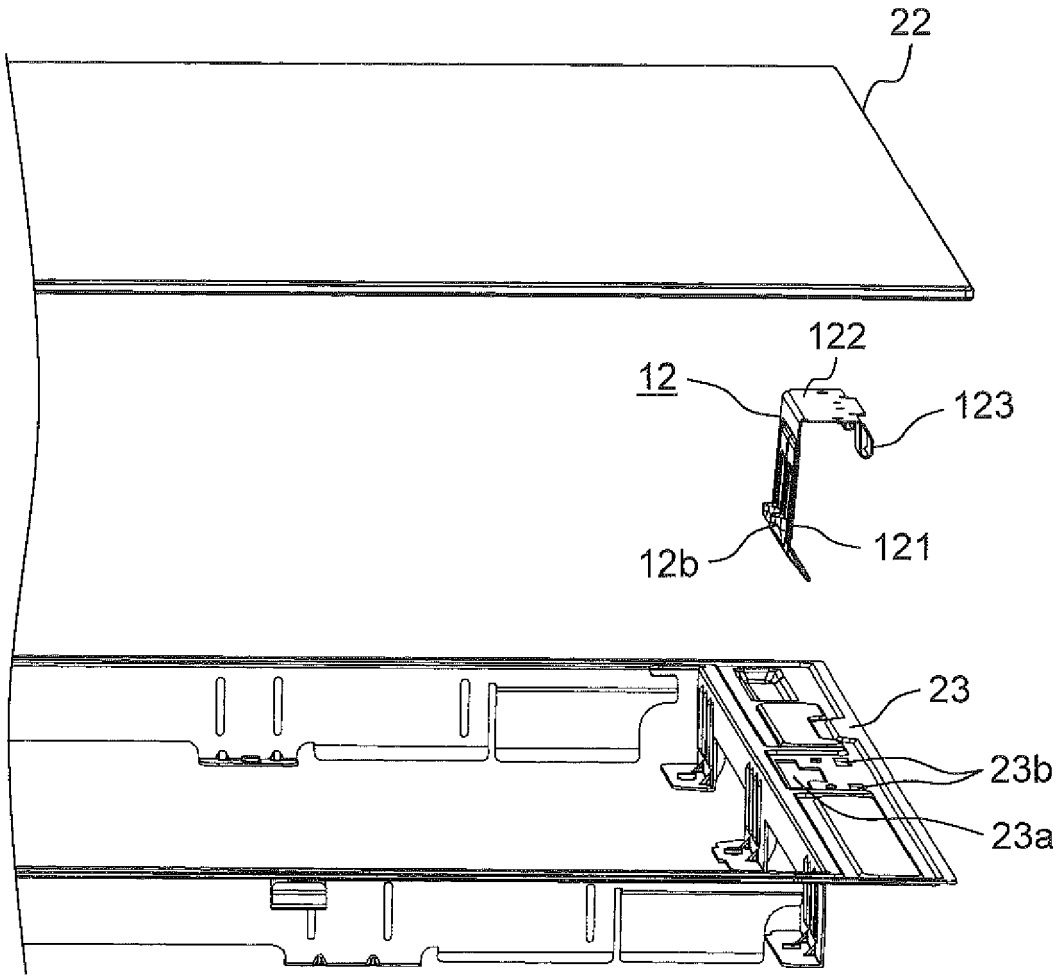


FIG. 18

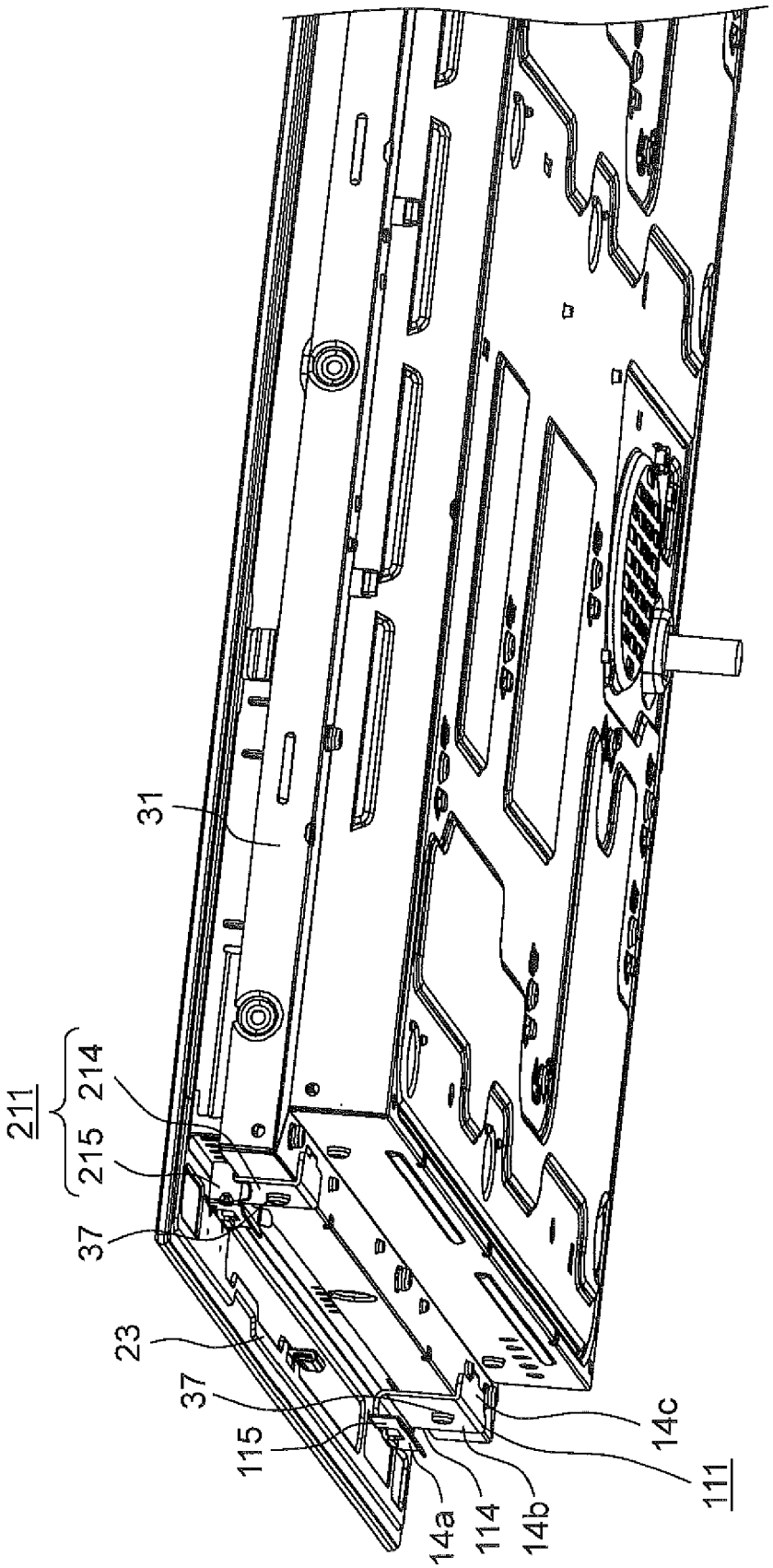


FIG. 19A

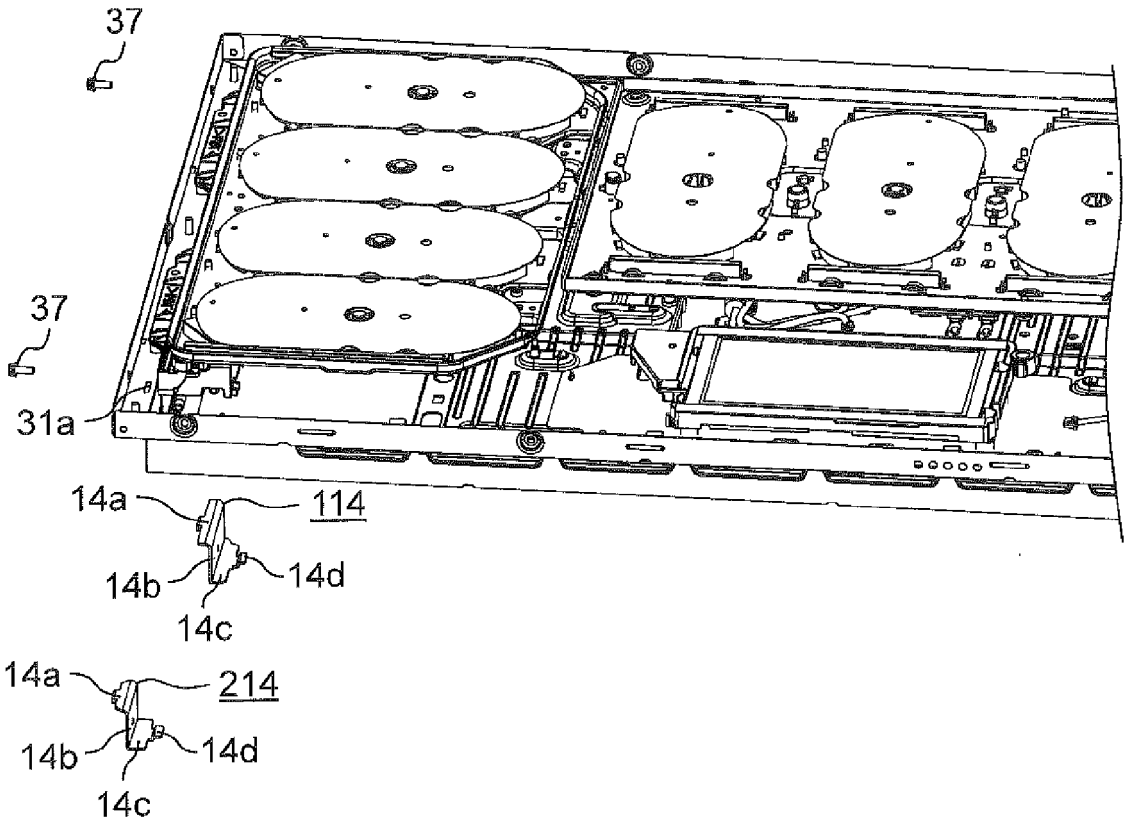
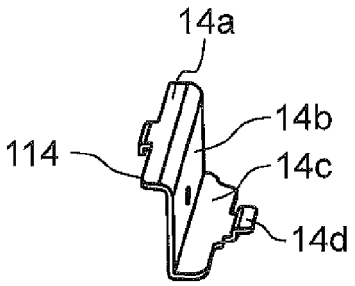


FIG. 19B



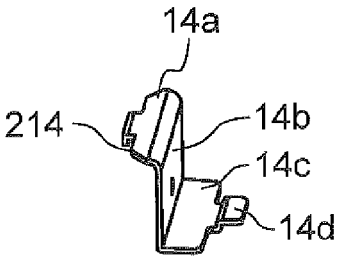


FIG. 20

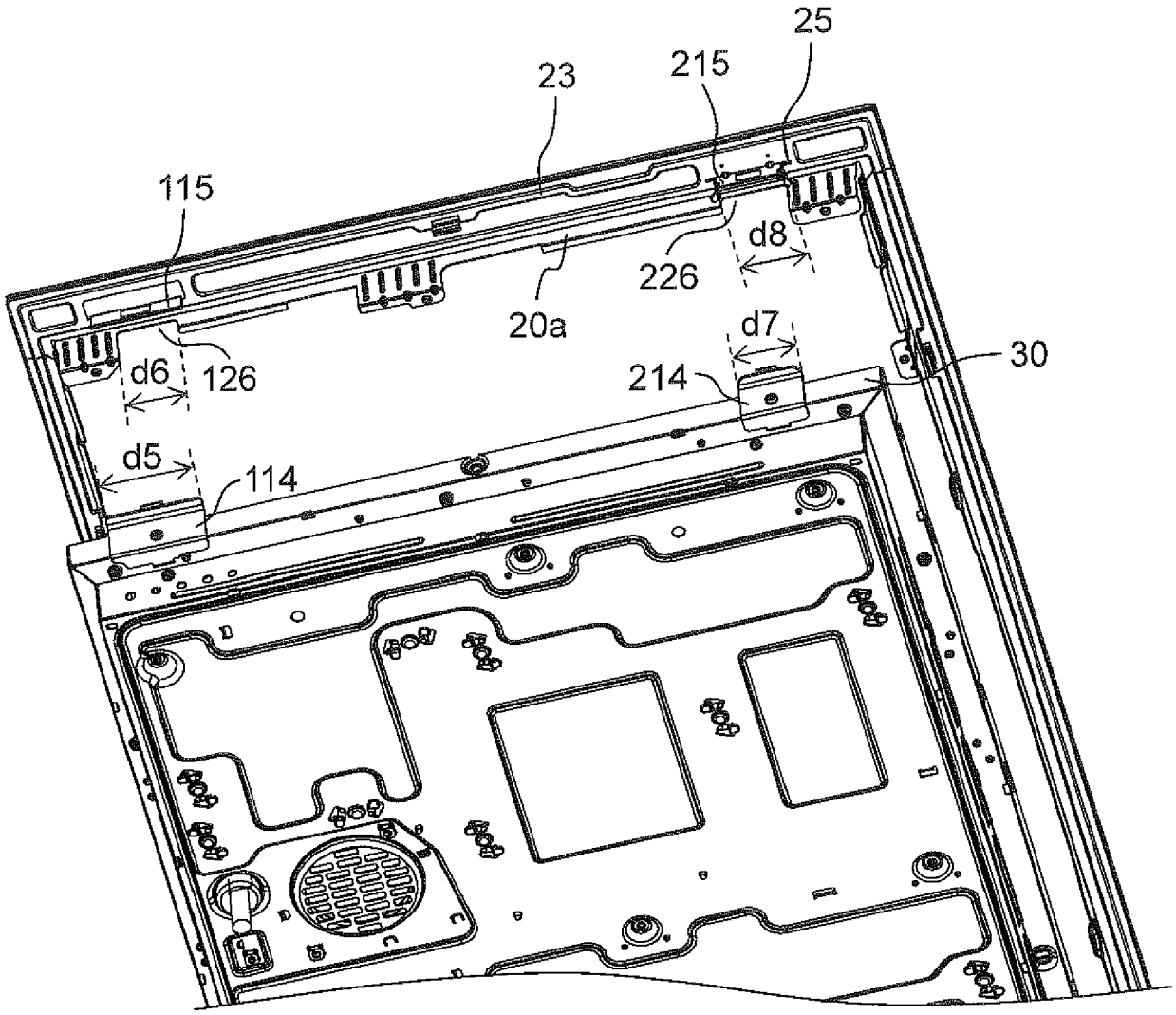
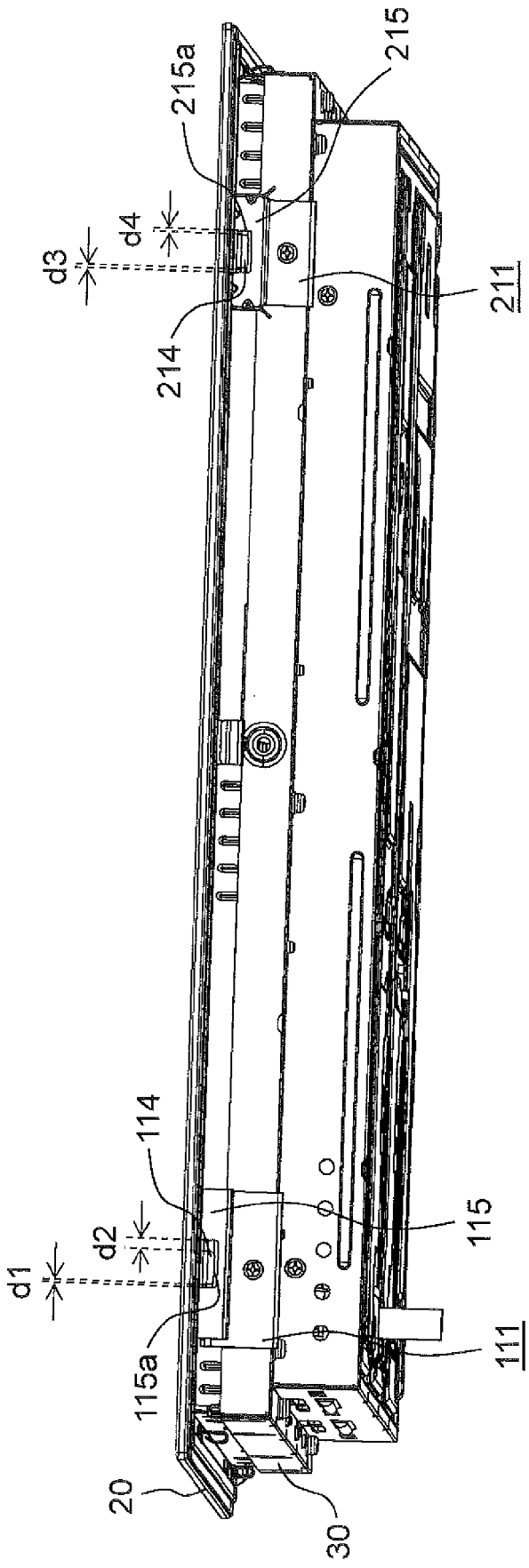


FIG. 21



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EUROPEAN SEARCH REPORT

Application Number
EP 18 17 8786

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	EP 2 099 257 A2 (BSH BOSCH SIEMENS HAUSGERAETE [DE]) 9 September 2009 (2009-09-09) * figures 1-3,4 *	1-13	INV. F24C15/10 H05B6/12
Y	EP 0 996 312 A2 (SCHOTT GLAS [DE]; ZEISS STIFTUNG [DE]) 26 April 2000 (2000-04-26) * figure 5 *	1-13	
Y	DE 10 2012 203380 A1 (BSH BOSCH SIEMENS HAUSGERAETE [DE]) 5 September 2013 (2013-09-05) * figure 1 *	1-13	
Y	EP 2 770 801 A1 (BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH [DE]) 27 August 2014 (2014-08-27) * figures 1,6 * * paragraphs [0001] - [0005] *	1-13	
			TECHNICAL FIELDS SEARCHED (IPC)
			H05B F24C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	16 January 2019	Pierron, Christophe

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16-01-2019

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- EP 2790468 A2 **[0004]**