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(54) **A COOKING DEVICE HAVING A COVER WITH AN ELECTRICAL CONNECTION**

KOCHVORRICHTUNG MIT EINER ABDECKUNG MIT EINER ELEKTRISCHEN VERBINDUNG

APPAREIL DE CUISSON ÉQUIPÉ D'UN COUVERCLE AVEC UNE CONNEXION ÉLECTRIQUE

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Description

[0001] The invention relates to cooking devices comprising means providing electrical transmission through a functional member functioning by using electrical energy like a LED illumination.

[0002] The present invention particularly relates to a cooking device comprising means providing electrical transmission through a functional member disposed on a cover hinged on a body of the cooking device.

[0003] At the prior art, there are some devices as being household appliances having a cover, like a microwave oven, a dishwasher, a cooking device and etc.

[0004] Household cooking devices are usually manufactured in a structure as only a hob or an range with a hob having a top plate part integrated to an oven part. The hobs have a cover covering the top plate while the hob is not in use or retaining open while the hob is in use. The cover is manufactured from ceramic and particularly glass materials. Similarly, the oven part of the cooking device has a door. The door is manufactured from glass material and heat isolation is provided on the door.

[0005] Generally, cables are used for transmitting the electrical energy from one point to another point on the household appliance. An electric transmission member instead of the cable is mentioned at our previous application having the application number; TR201408916 and the title; "A Cooking Device Having an Electric Transmission Member ". As it is mentioned at the abstract of the specification of the invention; the cooking device comprises at least one conductive strip arranged directly on the ceramic-based panel in a manner that transmitting the electricity to the functional member. The conductive strips are loaded with positively or negatively charges. The functional member can be an illumination member or a motor which can be actuated at low voltages.

[0006] As it can be seen from the patent application with the publication number; EP1808561, there is a hinge attaching a member of the cooking device in a rotatable manner. As it is mentioned at the abstract of the specification of the invention; a hinge bearing has a snap connector which rests and can be insertable into an opening of a domestic appliance. The snap connector is connected to a hinge holder for hinge axis of a cover plate. The snap connector and the hinged holder are united as a one piece part construction unit. The construction unit consists of a plastic, such as plastic injection molded part. The construction unit is manufactured from a glass-fiber reinforced plastic. The hinge holder has, on one side, a mounting groove for a bearing pin having a hinge rotational axis.

[0007] Prior art document EP 0 088 670 A1 discloses a household appliance in form of a refrigerator, wherein a constant electrical transmission is achieved via the door hinge, the door hinge consisting of two terminal being in contact (see page 4, line 31 to page 5, line 31).

[0008] A household appliance being a refrigerator and a door having a hinge that allows constant electric trans-

mission via sliding contacts is disclosed in prior art document DE 10 2013 206622 A1 (see paragraph [0020]).

[0009] Prior art document US 2002/009903 A1 reveals to a household appliance, in particular a refrigerator, wherein a constant electric transmission is realized at the hinge portion of the door via a pair of annular coils, allowing electrical power to be transferred by magnetic induction (see paragraphs [0016] to [0019]).

[0010] Prior art document EP 1 170 562 A2 discloses a device for electrically powering electrical members positioned on a refrigerator. In particular prior art document EP 1 170 562 A2 discloses a refrigerator having a body; a cover (being a door) hinged to the body (see paragraph [0002]), and; a functional member disposed on the cover (see paragraph [0003]). Said refrigerator comprises at least one switch having a first terminal (6) attached to the body and a second terminal (5) attached to the door corresponding to the first terminal. The body and the cover engaging with each other and completing an electrical transmission circuit for transmitting electric to the functional member (see paragraphs [0010] to [0013] describing the transmission between the two terminals).

[0011] Object of the invention is to provide an electrical or signal transmission towards a cover of a hob.

[0012] In order to achieve above object, the invention relates to a cooking device having a body; a cover being a cover of a hob hinged to the body and; a functional member disposed on the cover. The cooking device comprises at least one switch having a first terminal attached to the body and a second terminal attached to the cover corresponding to the first terminal, engaging with each other and completing an electrical transmission circuit for transmitting electric to the functional member.

[0013] Thus electrical or signal transmission is provided on a part where at least two embodiments of the cooking device pivoted to each other. The electrical transmission is provided to a functional member. The functional member can be a motor, a sensor, a signal member or an illumination device for example LED. And the cover is a cover of a hob. The electrical transmission members on the cover are charged positively or negatively.

[0014] In a possible embodiment of the invention, the first terminal is an electrical transmission member in an elbow form. Thus, the first terminal reaches to the second terminal and the first terminal stays durable during the connection.

[0015] In another possible embodiment of the invention, the first terminal is disposed on the body, extending outward from the body. Thus, the first terminal reaches to the second terminal easily.

[0016] In another possible embodiment of the invention, the first terminal is disposed on a hinge bearing on the body. Thus, the first terminal is set reliably on the hinge bearing.

[0017] In another possible embodiment of the invention, the hinge bearing comprises a housing formed on the hinge bearing for fixing the first terminal. Thus, the first terminal is secured in the housing.

[0018] In another possible embodiment of the invention, the first terminal is elastically movable in the housing during rotation of the cover in a manner that providing electrical contact with the second terminal. Thus, first terminal moves elastically with the movement of the cover and keeps its recent shape at a recent position of the cover.

[0019] In another possible embodiment of the invention, the first terminal comprises an attaching end for securing the first terminal in the housing. Thus, the attaching end provides to fix the first terminal in the housing.

[0020] In another possible embodiment of the invention, the first terminal comprises a contact part coming into contact with the second terminal for completing the electrical transmission circuit. Thus, the first terminal can contact to the second terminal by means of a contact part of the first terminal.

[0021] In another possible embodiment of the invention, the first terminal comprises a connection end connected to an electrical transmission member on the body. Thus, first terminal is connected to the electrical transmission member.

[0022] In another possible embodiment of the invention, the second terminal is an end of an electrical transmission member disposed on the cover. Thus, the electrical transmission is provided by an electrical transmission member connected to the functional member.

[0023] In another possible embodiment of the invention, the second terminal is a profile member fixed to the cover. Thus, the contact of the first terminal is provided by the profile member on the cover. The profile member provides a reliable transmission.

[0024] In another possible embodiment of the invention, the profile member is in contact with the electrical transmission member disposed on the cover. Thus, the electrical transmission is realized towards the electrical transmission member from over the profile member. And the electrical transmission member transmits the electricity to the functional member.

[0025] In another possible embodiment of the invention, the electrical transmission member is in a form of a conductive strip. Thus, the electrical energy is provided to parts which need the electrical energy at low voltage via the conductive strips. The conductive strips are more reliable and esthetic according to the cables.

[0026] In another possible embodiment of the invention, in an opened position of the cover on the body, the first terminal is configured to contact the second terminal. Thus, the electrical transmission is provided in an opened position of the cover. Said cover is preferably a cover on a table top of the cooking device.

[0027] In another possible embodiment of the invention, in a closed position of the cover on the body, the first terminal is configured to contact the second terminal. Thus, the electrical transmission is provided in a closed position of the cover. Said cover is preferably a door for closing an opening of a cooking chamber of the cooking device.

[0028] In another possible embodiment of the invention, the cover hinged to the body detachably. Thus, the cover can be cleaned easily by means of removing the cover from the hinge.

5 **[0029]** Explanation of Diagrams:

Fig. 1 is a perspective view from lateral side of a hinge bearing where a first terminal of a switch is disposed.

10 Fig. 2 is a perspective view from the front of a hinge bearing.

Fig. 3 is a perspective view from the front of a uniform first terminal of a switch.

15 Fig. 4 is a perspective view from above of a hinge bearing having the first terminal of the switch.

Fig. 5 is a A'-A section view from figure 4.

Fig. 6 is a perspective view from lateral side of a first terminal.

20 Fig. 7 is a two-dimensional view from lateral side of a first terminal.

Fig. 8 is a perspective view from lateral side of an alternative first terminal.

25 Fig. 9 is a perspective view from the front of an alternative hinge bearing.

Fig. 10 is a perspective view from the front of a first terminal connected to a terminal member.

Fig. 11 is a perspective view from back side of a first terminal connected to a terminal member.

30 Fig. 12 is a perspective view from back side of a hinge bearing with the first terminal fixed on the hinge bearing.

Fig. 13 is a perspective view from below of a hinge bearing with the first terminal fixed on the hinge bearing.

35 Fig. 14 is a perspective view from the lateral side of a hinge bearing which belongs to a prior art.

Fig. 15 is a perspective view from the lateral side of a hinge bearing of a cooking device mounted on the cooking device which belongs to a prior art.

40 Fig. 16 is a perspective view from the lateral side of a top plate of a hob of a cooking device.

Detail-A is a close view from the figure 16 and it shows a part where a connection of a first terminal on the body and a second terminal on the cover is realized.

45 Fig. 17 is an alternative embodiment to "Detail-A, figure 16" and a close view from the lateral side of a cooking device having a profile member transmitting the electricity to an electrical transmission member on the cover and functioning as a second terminal.

50 Fig. 18 is a perspective view from the front of a cooking device.

[0030] The invention relates to a cooking device (1) comprising a switch (3) providing electrical transmission

to a functional member (20) disposed on a cover (19) hinged to a body (11).

[0031] The cooking device (1) comprises at least one switch (3) having a first terminal (31) fixed to the body (11) and a second terminal (321) fixed to the cover (19) correspondingly to the first terminal (31), engaging to each other for completing an electrical circuit for providing electrical transmission to the functional member (20).

[0032] The cooking device can be structured as a hob (13) or a cooking device with an oven having at least one cooking chamber (12) and the hob integrated on the same body (11) (figure 18). A hob (13) of this kind of a cooking device is set on a top plate (14). The top plate (14) is integrated to the body (11). There is a pan-support (16) which will support a cooking pan and burners (15) on the top plate (14). A control panel (17) is disposed on a front side of the body (11) where easy to reach. Buttons (18) adjusting properly a heat of the cooking chamber (12) and/or a gas flow for the burners (15), are disposed on the control panel (17).

[0033] A hinge (7) provides to pivot the cover (19) of the cooking device (1) on the body (11) of the cooking device (1). The cover (19) is structured as a cover which can be closed onto the hob (13). Two hinges (7) are used for pivoting one cover (19). The cover (19) is pivoted to the body (11) of the cooking device, detachably. A hinge bearing (71) of the hinge (7) provides to fix the hinge (7) to the body (11). Hence, the hinge bearing (71) is disposed onto the top plate (14) by passing a snap connector (713) of the hinge bearing (71) through a plug-in opening (141) formed on the top plate (14).

[0034] A handrail (23) is formed in a manner being adaptable to an upper side of the cover (19) of the hob (13). The handrail (23) is manufactured from a metal material. The cover (19) is manufactured from a ceramic-based material particularly a glass material. The hinge bearing (71) is manufactured from a non-conductive material particularly a glass-fiber reinforced plastic. In an alternative embodiment, the hinge bearing (71) can be manufactured from a conductive material, in this case, security measures are taken by applying electrical insulation on the hinge bearing (71).

[0035] Figure 1 is a perspective view from lateral side and figure 2 is a perspective view from the front of a hinge bearing (71) where a first terminal (31) of a switch (3) is disposed. Figure 4 is a perspective view from above of a hinge bearing (71) having the first terminal (31) of the switch (3). Figure 5 is an A'-A section view from figure 4. The hinge bearing (71) comprises a hinge holder (711) and a snap connector (713) integrated to the hinge holder (711). A mounting groove (712) is formed on the hinge holder (711). A bearing member (73) is fixed to the hinge bearing (71) by means of passing a bearing pin (731) of the bearing member (73) of the hinge (7) through the mounting groove (712). Latching tongues (714) are formed on wall portions (715) of the snap connector (713) in various types. Latching tongues (714) provides to fix the hinge bearing (71) to the top plate (14) by means of

latching tongues (714) are passed through the plug-in opening (141). As it can be seen from the figure 2, there is a housing (716) formed on a lateral wall of the hinge bearing (71) corresponding to the cover (19). An attaching end (312) of the first terminal (31) is in a bended form and fixed to a tab (719) in the housing (716). A connection end (313) extends towards an inner part (720) of the hinge bearing (71) by passing through an opening (718) of the housing (716) (figure 5, A'-A cross section). A top part (717) of the hinge bearing (71) is integrated to the hinge bearing (71) and therefore the top part (717) is non-conductive, too. Also, the top part (717) is in a semicircular form. The first terminal (31) does not extend to the top part (717) of the hinge bearing (71). Thus, the first terminal (31) does not contact the second terminal (321) as the cover (19) is in a close position onto the top plate (14). Therefore, the electric transmission is switched off. In an alternative embodiment of the invention, the switch (3) and/ or the hinge bearing (71) can be constructed as in a form that the first end (31) contacting the second terminal (321) when the cover (19) is in a close position.

[0036] Figure 3 is a perspective view from the front; figure 6 is a perspective view from lateral side and; figure 7 is a two-dimensional view from lateral side of a uniform first terminal (31) of a switch (3). As it can be seen from the figures that are given, the first terminal (31) is in an "L" form or similar to an elbow form. An end of the first terminal (31) on a short part of the "L" form is bended and the bended end is the attaching end (312). Another end of the first terminal (31) is a connection end (313). A connection hole (314) is formed on the connection end (313). A long part of the "L" form has a straight form and the straight form is a contact part (311). There is a bend angle of the first terminal (β) as an obtuse interior angle between the long part and the short part of the "L" form.

[0037] Figure 8 is a perspective view from lateral side of an alternative first terminal (31). As it can be seen from the given figure, a part of the first terminal (31) is bended in a semicircular form. An outer part of the semicircular form is a contact part (311) and one tip part is a connection end (313). There is an alternative bend angle of the first terminal (α) as an obtuse exterior angle between the semicircular part and the straight part.

[0038] The first terminal (31) can be manufactured from a resilient spring steel metal or the like conductive material. The first terminal (31) extends on the body (11) towards the cover (19) in a manner contacting the second terminal (321) on the cover (19). In one of the embodiment of the invention, the first terminal (31) disposed on the hinge bearing (71) is in a bended form. The switch (3) is designed according to an open position of the cover (19) for contacting the first terminal (31) to the second terminal (321). In an alternative embodiment of the invention, the switch (3) can be designed according to a close position of the cover (19).

[0039] A wall thickness and a width of the first terminal (31) or the second terminal (321) can be changed according to an electrical current density and a width of a

contact surface.

[0040] Figure 10 is a perspective view from the front and figure 11; is a perspective view from back side of a first terminal (31) connected to a terminal member (4). The terminal member (4) connects the connection end (313) of the first terminal (31) with an electrical transmission member. The electrical transmission member is preferably a cable (5). The terminal member (4) comprises a housing (41). The connection end (313) of the first terminal (31) and the cable (5) are held in the housing (41) of the terminal member (4) in a manner that contacted each other and fixed. In an alternative embodiment of the invention, the electrical transmission member on the body (11) can be a conductive strip.

[0041] Figure 9 is a perspective view from the front of an alternative hinge bearing (71). The alternative first terminal (31) given in figure 8 is fixed to an alternative hinge bearing (71) given in figure 9. The hinge bearing (71) comprises a housing (716) formed on the hinge holder (711) for fixing the first terminal (31). The housing (716) comprises two openings (718). The attaching end (312) of the first terminal (31) is inserted into the housing (716) by passing through the opening (718) at an upper part of the housing (716) and, the connection end (313) of the first terminal (31) is inserted into the housing (716) by passing through the opening (718) at a lower part of the housing (716).

[0042] Figure 12 is a perspective view from back side; figure 13 is a perspective view from below of a hinge bearing (71) with the first terminal (31) fixed on the hinge bearing (71). Furthermore as it can be seen from the figures given, the terminal member (4) provides continuation of the electric transmission by means of connecting the cable (5) to the first terminal (31).

[0043] Steps (not given in the figures) are formed at a periphery of the openings (718) of the housing (41) on the hinge bearing (71). During a rotational movement of the cover (19), the second terminal (321) applies a press and an impulse force to the first terminal (31). The steps obstruct getting the first terminal (31) out of the housing (716). Furthermore the first terminal (31) can flex during the rotational movement of the cover (19). During flexing of the first terminal (31), the connection end (313) moves into the housing (716).

[0044] Figure 14 is a perspective view from the lateral side of a hinge bearing (71) which belongs to the prior art. The hinge bearing (71) is uniform and does not comprise a housing (716) for a first terminal (31). Figure 15 is a perspective view from the lateral side of a hinge bearing (71) of a cooking device mounted on the cooking device which belongs to a prior art. Bearing member (73) is mounted to the hinge bearing (71) by the bearing pin (731). The bearing member (73) comprises a profile part (732) integrated to the bearing member (73) and disposed at a rear side of the bearing member (73), facing to the cover (19). The profile part (732) is formed like having a "U" cross-section and as extending along the bearing member (73). A cover housing (733) is formed

on the profile part (732). The cover housing (733) has a U-shaped cross section. The cover (19) fits on the profile part (732) by means of one edge of the cover (19) is passed into the cover housing (733). Thus, the cover (19) is mounted to the hinge (7) detachably. The cover (19) is mounted to the body (11) by attaching the one edge of the cover (19) to two hinges (7).

[0045] Figure 16 is a perspective view from the lateral side of a top plate (14) of a hob (13) of a cooking device (1). Electrical transmission members (32) are mounted onto both sides of the cover (19) of the top plate (14). An end of the electrical transmission member (32) which is corresponding to the first terminal (31) on the top plate (14) is the second terminal (321) of the switch (3). The second terminal (321) is in contact the first terminal (31) on the hinge bearing (71) during switching on. For providing contact and electrical transmission, the cover (19) is mounted and fixed to the profile part (732) of the bearing member (73). The cover (19) is detachable to the profile part (732). When the cover (19) is detached, the switch (3) can not transmit the electrical energy. Therefore, the electrical current is cut off while the first terminal (31) and the second terminal (321) are not in contact. The first terminal (31) has flexibility like a spring. According as the flexibility increases a contact surface area of the contact part (311) of the first terminal (31) which is contacting the second terminal (321), increases. A flexibility adjustment of the first terminal (31) on the hinge bearing (71) can be arranged via the bend angles of first terminal (β , α). Also, the bend angles of first terminal (β , α) facilitates to dispose the first terminal (31) into the housing (716) of the hinge bearing (71). Detail-A is a close view from the figure 16 and it shows a part where a connection of a first terminal (31) on the body (11) and a second terminal (321) on the cover (19) is realized. The first terminal (31) is directly in contact with the second terminal (321) of an electrical transmission member (32). The electrical transmission member (32) is preferably in a form of a conductive strip.

[0046] Figure 17 is an alternative embodiment to "Detail-A, figure 16" and a close view from the lateral side of a cooking device having a profile member (6) transmitting the electricity to an electrical transmission member (32) on the cover (19) and functioning as a second terminal (321). The profile member (6) has a "U" shaped cross-section. The first terminal (31) of the switch (3) is in contact with the U-shaped profile member (6). Furthermore, the profile member (6) is disposed on the electrical transmission member (32) and in contact with the electrical transmission member (32) on the cover (19).

[0047] Figure 18 is perspective view from the front of a cooking device (1). Parts on the body (11) on which parts the switching on for the electrical current can be applied are the parts where the cover (19) is pivoted to the body (11). One of these parts is the cover (19) of the table top (14) of the hob (13) and the other one is the cover (19) of the cooking chamber (12). The cover (19) of the table top (14) of the cooking device (1) comprise(s)

the electrical transmission members (32). The second terminals (321) of the electrical transmission members (32) are disposed on the part where the cover (19) is engaged to the body (11). Other terminals of the electrical transmission members (32) are extending towards the functional member (20) or contacted directly to the functional member (20). A switching member (21) is set for switching on/off to the functional member (20). A contact with an energy supply is controlled by means of the switching member (21). The switching member (21) can be a button with touch or mechanical operated. Else, instead of these switching member (21) can be operated with voice command.

[0048] The electrical transmission member (32) on the cover (19) is preferably a conductive strip. Each conductive strip is solely loaded with positively or negatively charged at both two ends. The conductive strip can be coated with a nonconductive material. In an alternative embodiment of the invention, the electrical transmission member (32) on the cover (19) can be a cable (5).

[0049] The electrical transmission members (32) charged negatively or positively, transmit the electrical energy to the functional member (20). The functional member (20) operates at low voltages. For instance, the functional member (20) can be a LED illumination element, a signal, a display illumination or a button operating with electrical energy.

[0050] If an alternating current (AC) will be transmitting on lines of the electrical transmission members (32), the electrical transmission members (32) are charged as phase (positive and negative loads) or neutral. If a direct current (DC) will be transmitting on lines of the electrical transmission members (32), the positive and negative charged lines are formed separately.

In this way, an occurrence of a short circuit is prevented. The electronic card (22) converts the current from AC to DC at a desired voltage value. The voltage value on the conductive strips is between 0-60 volts. The conductive strips are manufactured from a metal material comprising silver ion or/and copper ion having a high electrical conductivity capacity. A wall thickness and a length of the conductive strips are formed and adjusted considering a predetermined voltage value which will be transmitted from one end to the another end of the conductive strip.

[0051] Fixing of the conductive strips onto the cover (19) is provided via coating the conductive strip onto the cover (19). In an alternative embodiment of the invention, the fixing can be done in different methods. The conductive strips can adhered onto the cover (19) by an adherent.

[0052] In the case of transforming a direct current (DC), the energy supply is chosen as a SELV (safety extra low voltage/ separated extra low voltage) system. Thus, the user can touch reliably to the low voltage charged conductive strips.

[0053] In a detailed description of the invention, the subject matter cooking device (1) operates as explained below. The cooking device (1) comprises a functional

member (20) disposed on the cover (19). The cover (19) of the cooking device (1) is attached to the body (11) by hinges (7). An electrical transmission is provided from the body (11) towards the cover (19) for providing electrical transmission to the functional member (20). The body (11) and the cover (19) are disposed as engaging to each other. An electrical transmission circuit comprises at least one switch (3) having a first terminal (31) fixed on the body (11) and a second terminal (321) fixed on the cover (19), corresponding to the second terminal (321). When the cover (19) engages to the body (11), the electrical transmission will be realized. When the cover (19) is taken out of the profile part (732) the connection will not be realized. In an opened position of the cover (19), the electrical transmission is realized. In the opened position, the first terminal (31) contacts to the second terminal (321). Thus an electrical transmission circuit is being completed.

[0054] In an opened position of the cover (19) on the top plate (14), an angle between the cover (19) and the top plate (14) is 90° or approximately 100°. Thus switching on the switch (3) is realized and the electrical energy is supplied to the functional member (20).

[0055] In a closed position for the cover (19) in which position of the cover (19) is closed down onto the top plate (14), the switch (3) is switched off. However in alternative embodiments of the invention, the switch (3) is formed as switching on and providing electrical current transmission when the cover (19) is in a closed position on the top plate (14).

[0056] In alternative embodiments of the invention, in case of the cover (19) is in the opened position, a blocker member can be disposed between the first terminal (31) and the second terminal (321) when the electrical transmission is un-desirable. The blocker member is manufactured from a nonconductive material.

[0057] In an alternative embodiment of the present invention, the first terminal (31) of the switch (3) can be disposed in a housing member (not given in the figures). The housing member is disposed on or inside the body (11). In said alternative embodiment, the second terminal (321) of the switch (3) is formed as extending to the first terminal (31).

Reference Numbers

[0058]

1. Cooking device
11. Body
12. Cooking chamber
13. Hob
14. Top plate
141. Plug-in opening
15. Burner
16. Pan-support
17. Control panel
18. Button

- | | | | |
|--|--------------------------------|----|---|
| 19. | Cover | | with the first terminal (31) on the hinge bearing (71) during switching on. |
| 20. | Functional member | | |
| 21. | Switching member | | |
| 22. | Electronic card | | |
| 23. | Handrail | 5 | 2. The cooking device (1) according to claim 1, wherein the first terminal (31) is an electrical transmission member in an elbow form. |
| 3. | Switch | | |
| 31. | First terminal | | 3. The cooking device (1) according to claim 1 or 2, wherein the first terminal (31) is disposed on the body (11), extending outward from the body (11). |
| 311. | Contact part | 10 | |
| 312. | Attaching end | | |
| 313. | Connection end | | |
| 314. | Connection hole | | 4. The cooking device (1) according to any one of the preceding claims, wherein the hinge bearing (71) comprises a housing (716) formed on the hinge bearing (71) for fixing the first terminal (31). |
| 32. | Electrical transmission member | 15 | |
| 321. | Second terminal | | |
| 4. | Terminal member | | 5. The cooking device (1) according to claim 4, wherein the first terminal (31) is elastically movable in the housing (716) during rotation of the cover (19) in a manner that providing electrical contact with the second terminal (321). |
| 41. | Housing | 20 | |
| 5. | Cable | | |
| 6. | Profile member | | 6. The cooking device (1) according to claim 4 or 5, wherein the first terminal (31) comprises an attaching end (312) securing the first terminal (31) in the housing (716). |
| 7. | Hinge | | |
| 71. | Hinge bearing | | |
| 711. | Hinge holder | 25 | |
| 712. | Mounting groove | | |
| 713. | Snap connector | | |
| 714. | Latching tongue | | |
| 715. | Wall portion | | |
| 716. | Housing | | |
| 717. | Top part | 30 | 7. The cooking device (1) according to any one of the preceding claims, wherein the first terminal (31) comprises a contact part (311) coming into contact with the second terminal (321) for completing the electrical transmission circuit. |
| 718. | Opening | | |
| 719. | Tab | | |
| 720. | Inner part | | |
| 73. | Bearing member | | |
| 731. | bearing pin | 35 | 8. The cooking device (1) according to any one of the preceding claims, wherein the first terminal (31) comprises a connection end (313) connected to an electrical transmission member on the body (11). |
| 732. | Profile part | | |
| 733. | Cover housing | | |
| Bend angle of first terminal: β | | | |
| Alternative bend angle of first terminal: α | | 40 | 9. The cooking device (1) according to any one of the preceding claims, wherein the second terminal (321) is an end of an electrical transmission member (32) disposed on the cover (19). |

Claims

- | | | |
|-----|--|----|
| 1. | A cooking device (1) having a body (11), a hob (13) and a cover (19) hinged to the body (11), wherein the cover (19) is a cover (19) of the hob (13) of the cooking device (1),
characterized in that the cooking device (1) comprises at least one switch (3) having a first terminal (31) attached to the body (11), wherein the first terminal (31) is disposed on a hinge bearing (71) on the body (11), and a second terminal (321) attached to the cover (19) corresponding to the first terminal (31), engaging with each other and completing an electrical transmission circuit for transmitting electric to a functional member (20) disposed on the cover (19), wherein the second terminal (321) is in contact | 45 |
| | | 50 |
| | | 55 |
| 10. | The cooking device (1) according to any one of the preceding claim 1-9, wherein the second terminal (321) is a profile member (6) fixed to the cover (19). | |
| 11. | The cooking device (1) according to claim 10, wherein the profile member (6) is in contact with the electrical transmission member (32) disposed on the cover (19). | |
| 12. | The cooking device (1) according to claim 9 or 11, wherein the electrical transmission member (32) is in a form of a conductive strip. | |
| 13. | The cooking device (1) according to any one of the preceding claims, wherein in an opened position of | |

the cover (19) on the body (11), the first terminal (31) is configured to contact the second terminal (321).

14. The cooking device (1) according to any one of the preceding claim 1-12, wherein in a closed position of the cover (19) on the body (11), the first terminal (31) is configured to contact the second terminal (321).
15. The cooking device (1) according to any one of the preceding claims, wherein the cover (19) is hinged to the body (11) detachably.

Patentansprüche

1. Kochgerät (1) mit einem Körper (11), einem Kochfeld (13) und einem an den Körper (11) angelenkten Deckel (19), wobei es sich bei dem Deckel (19) um einen Deckel (19) des Kochfelds (13) des Kochgeräts (1) handelt, **dadurch gekennzeichnet, dass** das Kochgerät (1) mindestens einen Schalter (3) mit einem an dem Körper (11) befestigten ersten Anschluss (31), der an einem Scharnierlager (71) an dem Körper (11) angeordnet ist, und einem zweiten Anschluss (321), der dem ersten Anschluss (31) entsprechend an dem Deckel (19) befestigt ist, umfasst, welche eng einander anliegen und einen Stromkreis für die elektrische Energieübertragung zum Übertragen von Strom zu einem an dem Deckel (19) angeordneten Funktionselement (20) schließen, wobei sich der zweite Anschluss (321) beim Einschalten mit dem ersten Anschluss (31) an dem Scharnierlager (71) in Kontakt befindet.
2. Kochgerät (1) nach Anspruch 1, wobei es sich bei dem ersten Anschluss (31) um ein ellenbogenförmiges Element für die elektrische Energieübertragung handelt.
3. Kochgerät (1) nach Anspruch 1 oder 2, wobei der erste Anschluss (31) an dem Körper (11) angeordnet ist und von dem Körper (11) aus nach außen verläuft.
4. Kochgerät (1) nach einem der vorhergehenden Ansprüche, wobei das Scharnierlager (71) ein an dem Scharnierlager (71) ausgebildetes Gehäuse (716) zum Fixieren des ersten Anschlusses (31) umfasst.
5. Kochgerät (1) nach Anspruch 4, wobei der erste Anschluss (31) in dem Gehäuse (716) beim Drehen des Deckels (19) so federnd beweglich ist, dass es zu einem elektrischen Kontakt mit dem zweiten Anschluss (321) kommt.
6. Kochgerät (1) nach Anspruch 4 oder 5, wobei der erste Anschluss (31) ein Befestigungsende (312)

umfasst, welches den ersten Anschluss (31) in dem Gehäuse (716) sichert.

7. Kochgerät (1) nach einem der vorhergehenden Ansprüche, wobei der erste Anschluss (31) einen Kontaktteil (311) umfasst, der zum Schließen des Stromkreises für die elektrische Energieübertragung mit dem zweiten Anschluss (321) in Kontakt kommt.
8. Kochgerät (1) nach einem der vorhergehenden Ansprüche, wobei der erste Anschluss (31) ein Verbindungsende (313) umfasst, das mit einem Element für die elektrische Energieübertragung an dem Körper (11) verbunden ist.
9. Kochgerät (1) nach einem der vorhergehenden Ansprüche, wobei es sich bei dem zweiten Anschluss (321) um ein Ende eines an dem Deckel (19) angeordneten Elements für die elektrische Energieübertragung (32) handelt.
10. Kochgerät (1) nach einem der vorhergehenden Ansprüche 1 bis 9, wobei es sich bei dem zweiten Anschluss (321) um ein an dem Deckel (19) fixiertes Profilelement (6) handelt.
11. Kochgerät (1) nach Anspruch 10, wobei sich das Profilelement (6) mit dem am Deckel (19) angeordneten Element für die elektrische Energieübertragung (32) in Kontakt befindet.
12. Kochgerät (1) nach Anspruch 9 oder 11, wobei es sich bei dem Element für die elektrische Energieübertragung (32) um einen leitfähigen Streifen handelt.
13. Kochgerät (1) nach einem der vorhergehenden Ansprüche, wobei der erste Anschluss (31) so konfiguriert ist, dass er den zweiten Anschluss (321) in einer geöffneten Position des Deckels (19) an dem Körper (11) kontaktiert.
14. Kochgerät (1) nach einem der vorhergehenden Ansprüche 1 bis 12, wobei der erste Anschluss (31) so konfiguriert ist, dass er den zweiten Anschluss (321) in einer geschlossenen Position des Deckels (19) an dem Körper (11) kontaktiert.
15. Kochgerät (1) nach einem der vorhergehenden Ansprüche, wobei der Deckel (19) abnehmbar an den Körper (11) angelenkt ist.

Revendications

1. Appareil de cuisson (1) possédant une carcasse (11), une table de cuisson (13) et un couvercle (19) articulé sur la carcasse (11), dans lequel le couvercle

- (19) est un couvercle (19) de la table de cuisson (13) de l'appareil de cuisson (1), **caractérisé en ce que** l'appareil de cuisson (1) comprend au moins un interrupteur (3) possédant un premier élément terminal (31) fixé à la carcasse (11), dans lequel le premier élément terminal (31) est disposé sur un palier de charnière (71) sur la carcasse (11), et un deuxième élément terminal (321) fixé au couvercle (19) correspondant au premier élément terminal (31), s'engageant l'un dans l'autre et bouclant un circuit de transmission électrique pour la transmission d'électricité à un élément fonctionnel (20) disposé sur le couvercle (19), dans lequel le deuxième élément terminal (321) est en contact avec le premier élément terminal (31) sur le palier de charnière (71) durant l'allumage.
2. Appareil de cuisson (1) selon la revendication 1, dans lequel le premier élément terminal (31) est un élément de transmission électrique en forme de coupe.
 3. Appareil de cuisson (1) selon la revendication 1 ou 2, dans lequel le premier élément terminal (31) est disposé sur le corps (11), s'étendant à l'extérieur au départ du corps (11).
 4. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes, dans lequel le palier de charnière (71) comprend un logement (716) formé sur le palier de charnière (71) pour fixer le premier élément terminal (31).
 5. Appareil de cuisson (1) selon la revendication 4, dans lequel le premier élément terminal (31) est déplaçable élastiquement dans le logement (716) pendant la rotation du couvercle (19) d'une façon établissant un contact électrique avec le deuxième élément terminal (321).
 6. Appareil de cuisson (1) selon la revendication 4 ou 5, dans lequel le premier élément terminal (31) comprend une extrémité de fixation (312) sécurisant le premier élément terminal (31) dans le logement (716).
 7. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes, dans lequel le premier élément terminal (31) comprend une pièce de contact (311) entrant en contact avec le deuxième élément terminal (321) pour boucler le circuit de transmission électrique.
 8. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes, dans lequel le premier élément terminal (31) comprend une extrémité de connexion (313) connectée à un élément de transmission électrique sur la carcasse (11).
 9. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes, dans lequel le deuxième élément terminal (321) est une extrémité d'un élément de transmission électrique (32) disposé sur le couvercle (19).
 10. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes 1 à 9, dans lequel le deuxième élément terminal (321) est un élément profilé (6) fixé au couvercle (19).
 11. Appareil de cuisson (1) selon la revendication 10, dans lequel l'élément profilé (6) est en contact avec l'élément de transmission électrique (32) disposé sur le couvercle (19).
 12. Appareil de cuisson (1) selon la revendication 9 ou 11, dans lequel l'élément de transmission électrique (32) revêt la forme d'une bande conductrice.
 13. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes, dans lequel dans une position ouverte du couvercle (19) sur la carcasse (11), le premier élément terminal (31) est configuré afin de faire contact avec le deuxième élément terminal (321).
 14. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes 1 à 12, dans lequel dans une position fermée du couvercle (19) sur la carcasse (11), le premier élément terminal (31) est configuré afin de faire contact avec le deuxième élément terminal (321).
 15. Appareil de cuisson (1) selon l'une quelconque des revendications précédentes, dans lequel le couvercle (19) est articulé de manière amovible sur la carcasse (11).

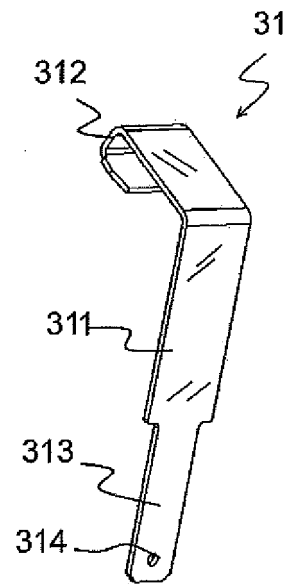
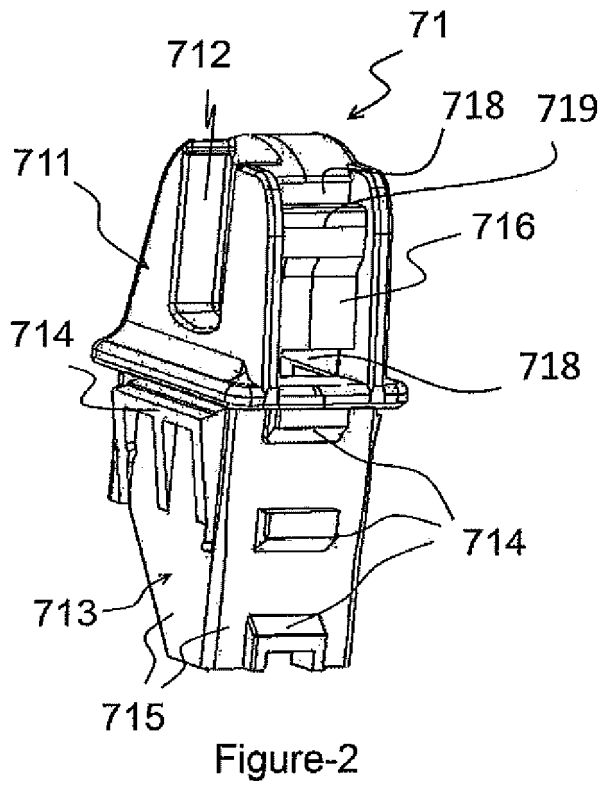
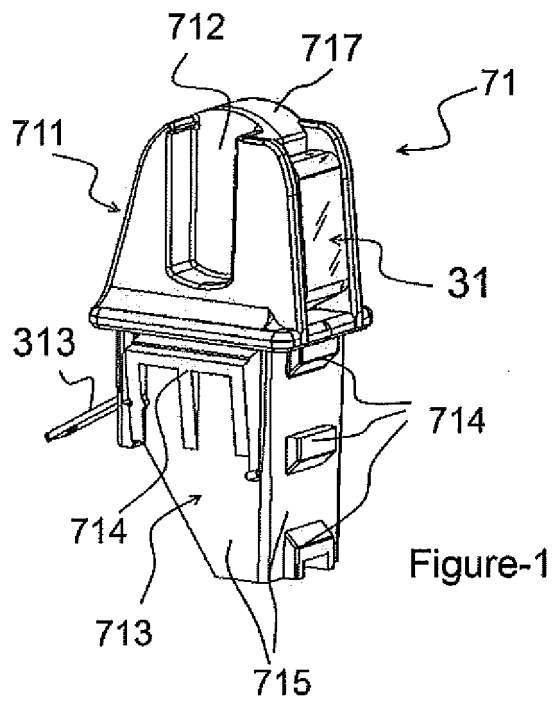


Figure-4

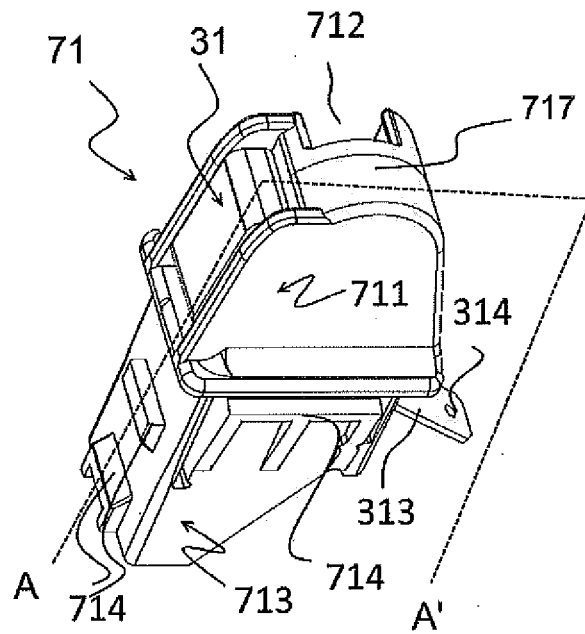
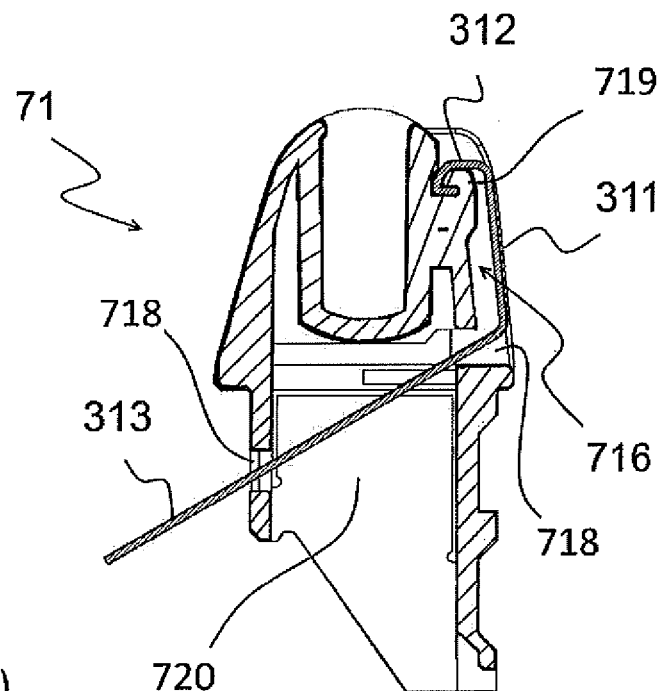


Figure-5
(A'-A cross-section)



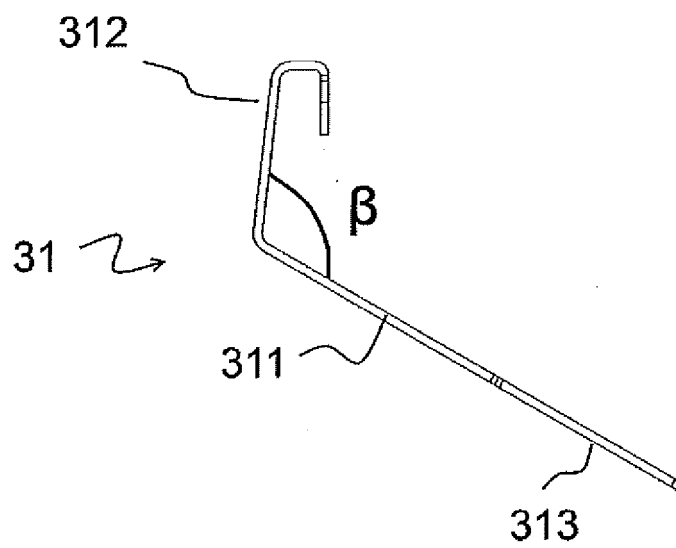
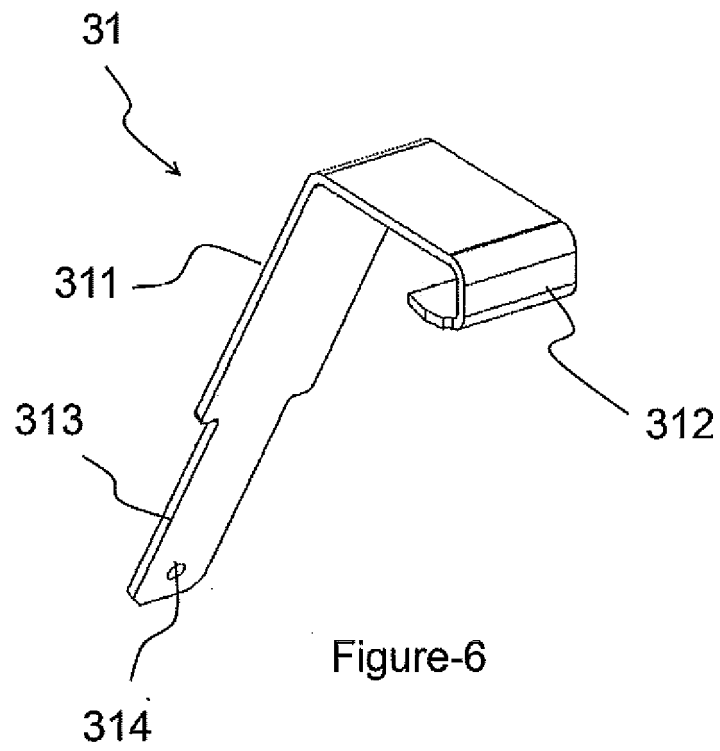
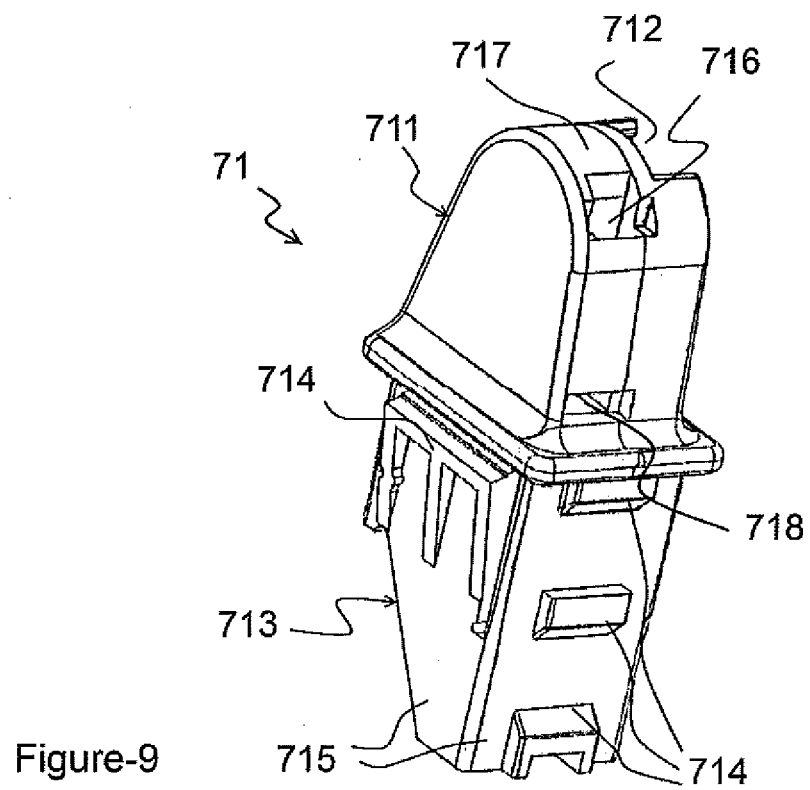
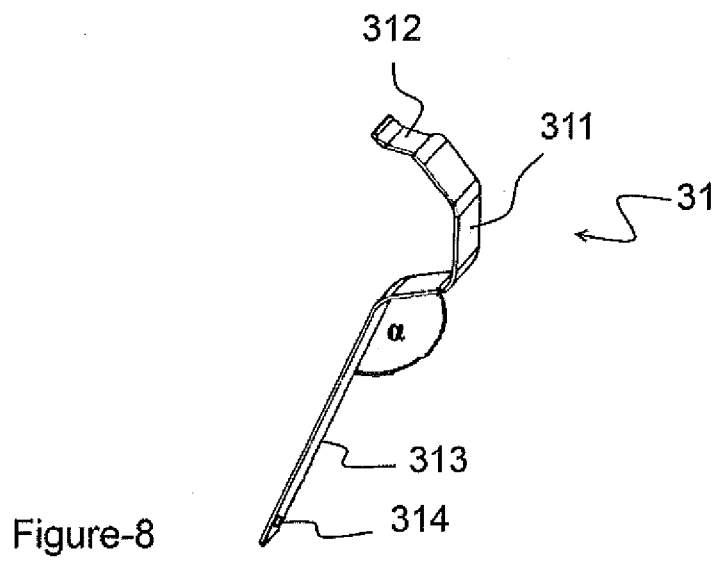


Figure-7



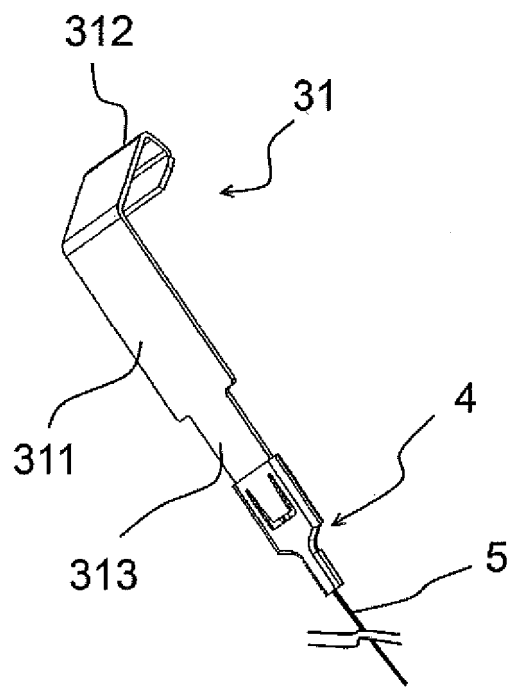


Figure-10

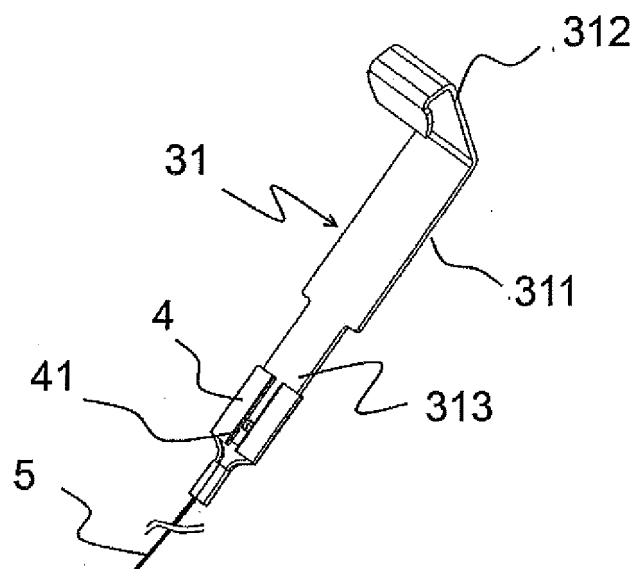


Figure-11

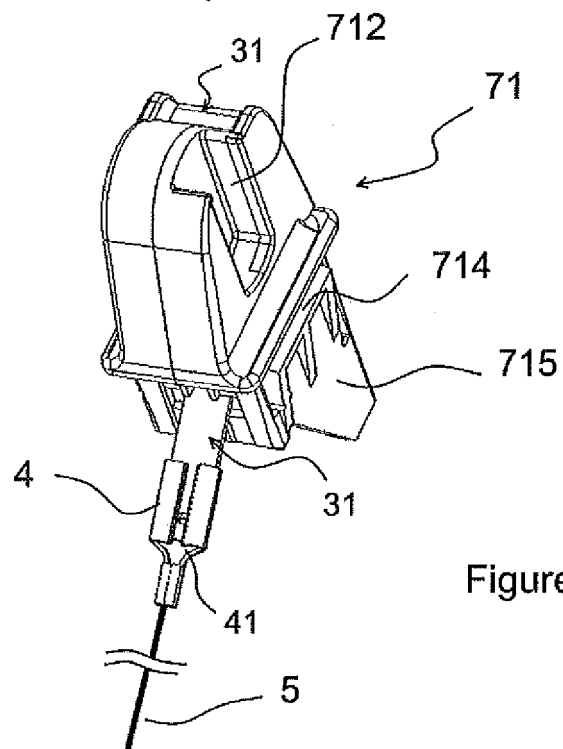


Figure-12

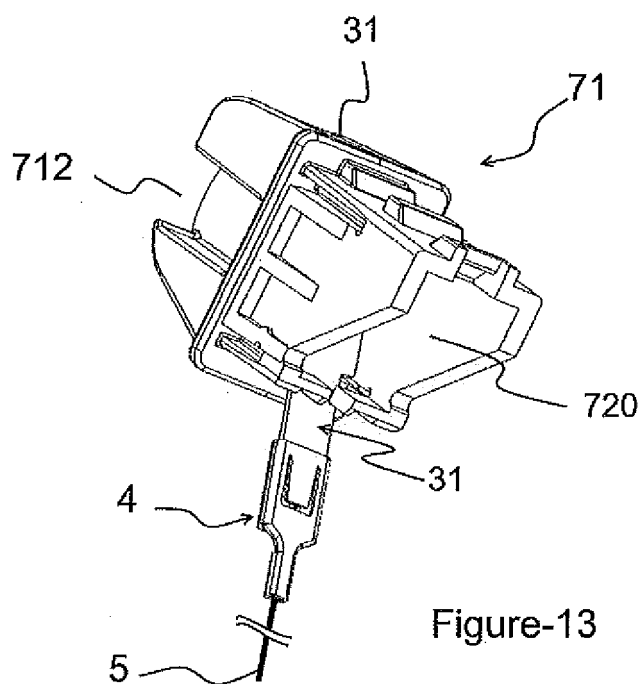


Figure-13

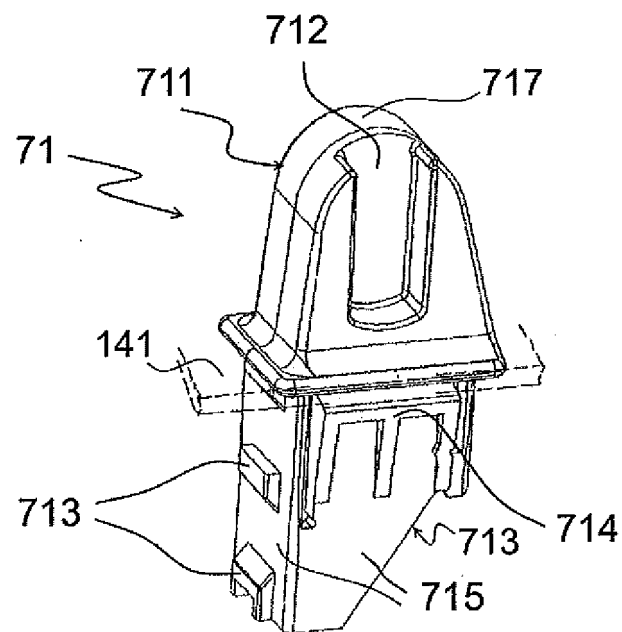


Figure-14
(Prior Art)

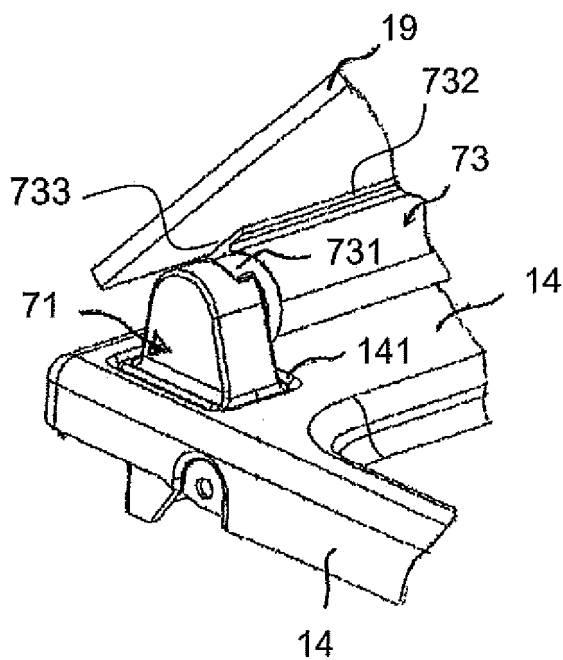


Figure-15
(Prior Art)

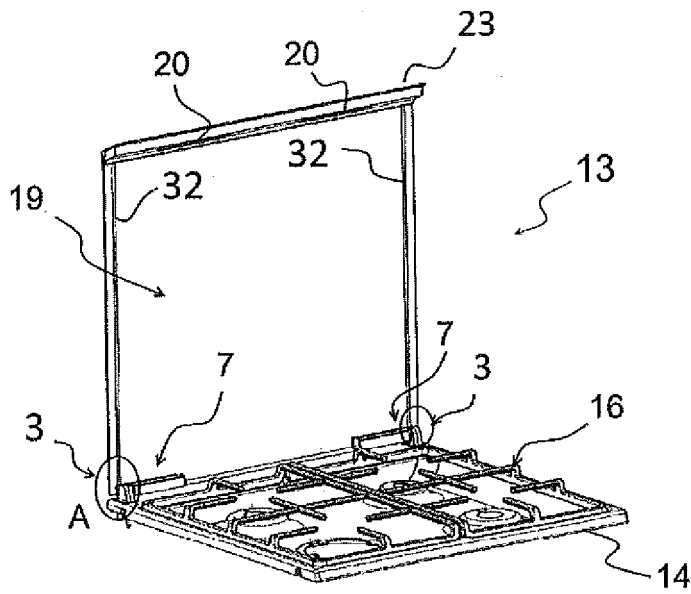
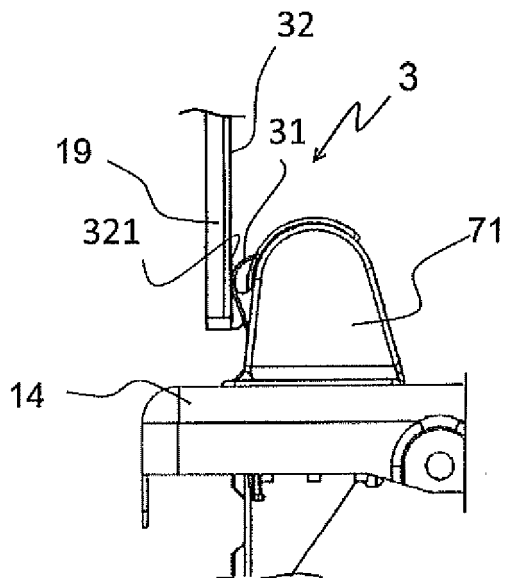


Figure-16



A-Detail

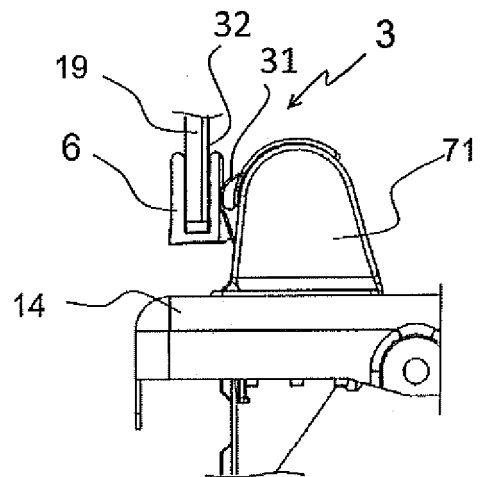


Figure-17

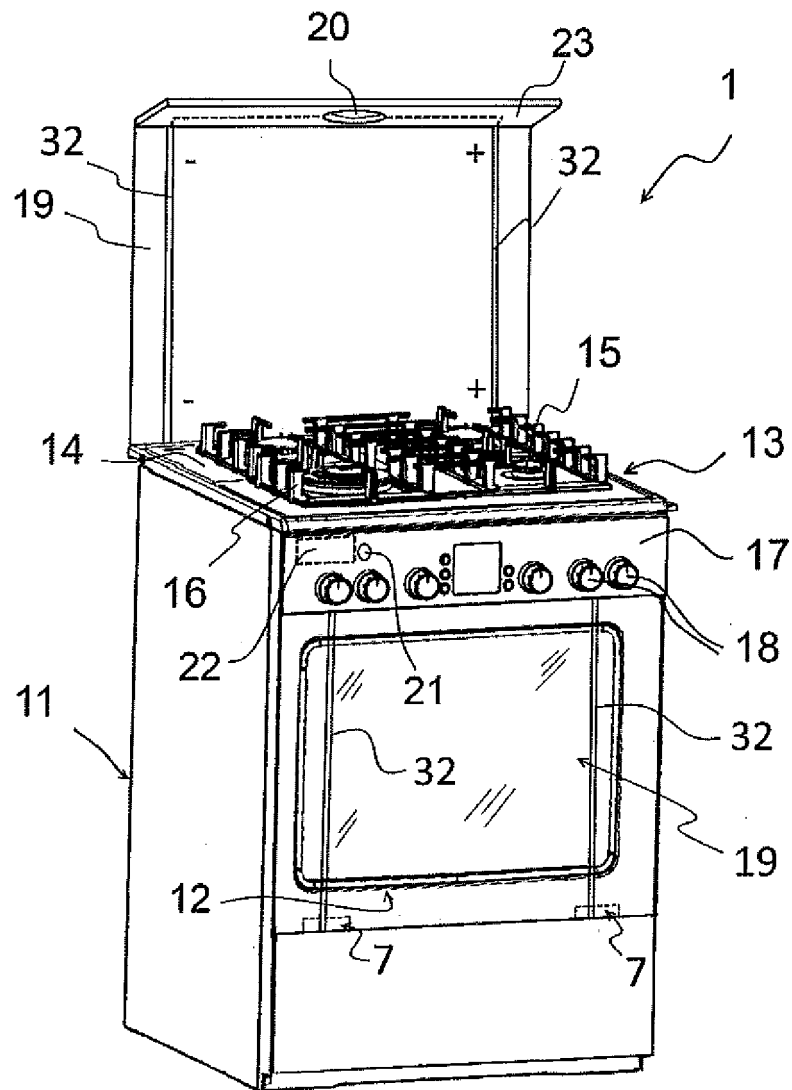


Figure-18

REFERENCES CITED IN THE DESCRIPTION

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