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(54) **COOKTOP AND METHOD FOR PRODUCING COOKTOP**

(57) A cooktop (MC) is described comprising:
- a frame (60) which constitutes the perimetral edges of the cooktop;
- a panel (40) which constitutes the central part of the

cooktop;
the frame and the panel being distinct elements joined together stably

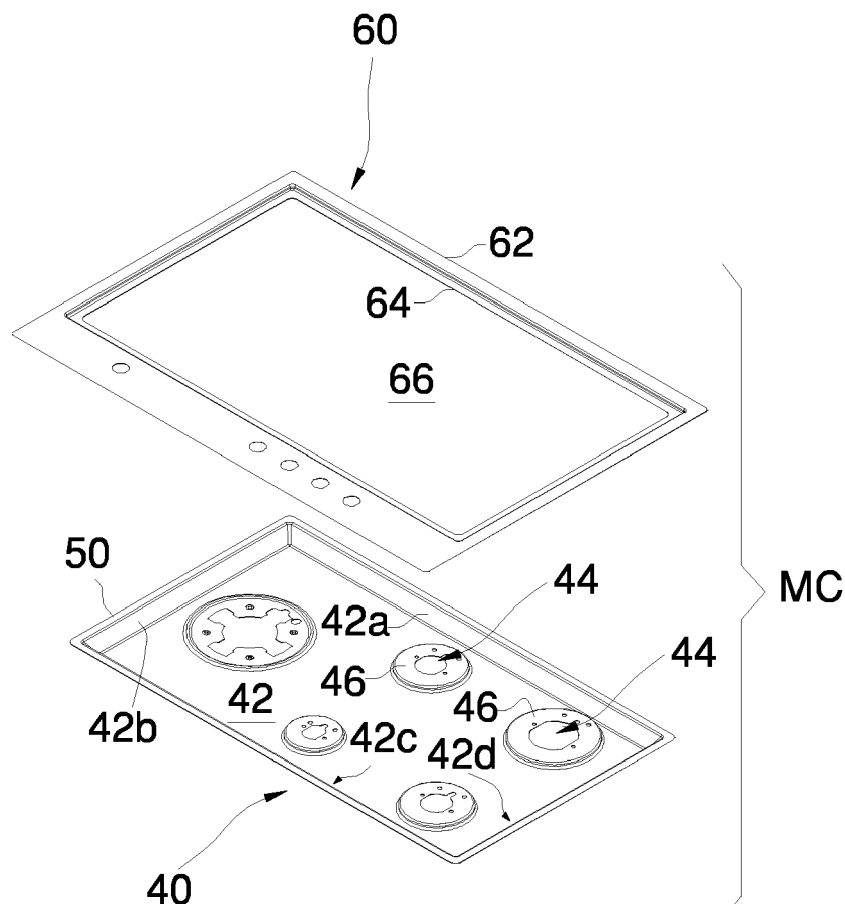


Fig. 5

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Description

[0001] The invention relates to a cooktop and a method for producing it.

[0002] The following description will refer to an exemplary built-in cooktop, a sector in which the invention has been proven particularly effective.

[0003] A cooktop, that is the top plane of the stove underlying the heat sources for cooking, is ordinarily made of steel, and so imposed itself for its impact strength and ease of production (see e.g. JP2011237090). Nevertheless, during cooking, the cooktop becomes always dirty, and inevitably upon cleaning it the steel scrapes and consumes. At the points subjected to high thermal power, e.g. on the edges near the heat sources or across the cooktop of a professional kitchen, the steel changes color, yellowing or forming halos.

[0004] The present invention aims to improve this state of art.

[0005] A first aspect of the invention is a cooktop that forms the top plane (of a stove) underlying (in use) the heat sources for cooking. The cooktop comprises:

- a frame which constitutes the perimetral edges of the cooktop;
- a panel which constitutes the central part of the cooktop;

the frame and the panel being distinct elements joined together stably, and in particular permanently to avoid detachment.

[0006] The cooktop according to the invention has the advantage of being able to be produced in many variants, each with its own merits. In general, advantageous combinations can be generated by choosing the material that constitutes the panel and/or frame in the following group of materials: steel, stainless steel, an enameled metal sheet, copper, aluminum, wood, resin, resin incorporating marble powders, tempered glass or glass ceramic. Even though for brevity's sake this description does not list explicitly all the 10*10 possible combinations, all are to be considered variants included in the invention.

[0007] Preferably, the panel has an overall shape of a tray with rectangular plan, and the material constituting the panel is stainless steel and the frame is made of enameled metal sheet.

[0008] The combinations having particular value are those in which both the material that constitutes the panel and the one constituting the frame is chosen in the aforementioned group of materials. For example, if one chooses steel for the frame and for the panel an enameled sheet, altogether the cooktop has the advantage that the enameled sheet does not scrape while cleaning, does not change color if exposed to extreme heat, and is easily colored by varying the enamel die. Instead, the frame of the cooktop, which statistically is the part getting more bumps, is formed by adequately resistant material. Or, if one chooses for the frame and for the panel an enameled

sheet, overall the cooktop has the advantage that each of its enameled sheets can have different color and features, with variety of models and performance.

[0009] Before assembling them, on the cut parts there can also be performed other processing, e.g. silk-screen printing or burr removal.

[0010] The structure of a cooktop according to the invention

- is applicable to a kitchen or built-in stove, or may be an integrated component in a professional kitchen, in a camping stove or a portable cooker; and/or
- can accommodate various types of heat sources such as gas burners, electric coils, induction heating circuits, etc.

[0011] Preferably, the frame and the panel are coupled to each other by an adhesive element, e.g. silicone, and/or through mechanical fastening means like screws, rivets or clamps.

[0012] Preferably, the frame comprises a flat outer rectangular edge, lying in a first imaginary plane, which is introflexed toward the center of the frame forming an inner step. The end of such step delimits a central opening with a flat rectangular edge, lying in a second imaginary plane parallel to the first.

[0013] Preferably, the panel or insert has the overall shape of a rectangular-plan tray, in particular comprises an outer flat rectangular edge, lying in a third imaginary plane, which is introflexed towards the center of the insert by means of walls that make up the side walls of the tray and connect to a bottom.

[0014] A second aspect of the invention is a method for producing a cooktop, comprising the steps of

- obtaining two identical monolithic copies of the cooktop, one copy made of steel and one copy made of metal sheet;
- cutting the two copies along an equal profile to separate from each a frame and a central part;
- enameling the central part;
- coupling the central enameled part with the frame.

[0015] A third aspect of the invention is a method for producing a cooktop, comprising the steps of

- producing a frame constituting the edges of the cooktop;
- producing a panel constituting the central part of the cooktop;
- stably coupling, and in particular permanently to avoid detachment, the frame and the panel.

[0016] To further illustrate the advantages of the invention, a preferred embodiment will now be described with reference to the annexed drawings, wherein

fig. 1 shows a view from above of a kitchen stove;

fig. 2 shows a cross-sectional view according to plane II-II;

fig. 3 shows an enlarged view of fig. 2;

fig. 4 shows an exploded view of a component of the stove;

fig. 5 shows an exploded view of a component in fig. 4.

[0017] In the figures, equal numbers indicate equal parts. To not crowd the drawing, sometimes not all equal elements are numbered.

[0018] The stove (fig. 1) comprises a cooktop MC on which grids 12 are laid to keep a pot suspended over a flame generated by burners 14 (fig. 2).

[0019] The cooktop MC is made up of two parts secured to each other by a perimetral silicone cord. The first part is a frame 60, and the second an insert or panel 40.

[0020] The frame 60 comprises (fig. 5) a flat, outer rectangular edge 62, lying in a first imaginary plane, which is introflexed towards the center of the frame 60 forming an inner step. The end of such step delimits a central opening 66 with a flat rectangular edge 64, lying in a second imaginary plane parallel to the first.

[0021] The frame 60 is made of stainless steel.

[0022] The insert 40 has the overall shape of a rectangular-plan tray, and comprises an outer flat rectangular edge 50, lying in a third imaginary plane, which is introflexed toward the center of the insert 40 by means of walls 42a, 42b, 42c, 42d constituting the side walls of the tray and connect to a bottom 42. In the bottom 42 there are embossed reliefs 46 whose center corresponds to a pass-through opening 44 in the bottom 42 which serves to place the burners 14.

[0023] The insert 40 is an enameled metal sheet.

[0024] As can be seen from fig. 5, the cooktop MC is created by resting the edge 50 above the edge 64, after having arranged on one of the two an adhesive element or a glue (fig. 3).

[0025] The cooktop MC so assembled is then mounted on a rectangular-plan parallelepiped tray 30, which comprises a bottom 32 and side walls 34a, 34b, 34c, 34d. The body of the burners 14, supported by the bottom 32, protrudes from the cooktop MC through the openings 44.

[0026] Note that the stove of fig. 1 is easily mountable or arranged as a built-in unit inside a kitchen cabinet, or it can be the main component of a stove of other, e.g. portable, type.

[0027] The frame 60 and the tray 30 may be produced e.g. by pressing or molding a sheet of stainless steel. The insert 40 is producible e.g. by pressing or molding a sheet of metal, which then gets enameled.

[0028] Or, to avoid two different molds, one can produce, for example, by pressing or molding, two equal mono-material copies of the same cooktop with the same shape as that indicated with MC. One copy is produced starting from a sheet of stainless steel, the other copy starting from a sheet of metal sheet. Both copies, e.g. by

laser, are cut along a rectangle so as to detach from each copy two parts corresponding to the frame 60 and the insert 40.

[0029] The cut central portion of the copy made of sheet is glazed, and becomes the insert 40. The cut perimetral margin of the steel copy becomes the frame 60.

[0030] In general, the cooktop MC or the components may have different shapes than those shown, e.g. square or polygonal.

Claims

1. Cooktop (MC) comprising:

- a frame (60) which constitutes the perimetral edges of the cooktop;
- a panel (40) which constitutes the central part of the cooktop;

the frame and the panel being distinct elements joined together permanently.

2. Cooktop (MC) according to claim 1, wherein the material which constitutes the panel and/or the frame is one of: steel, stainless steel, an enameled sheet metal, copper, aluminum, wood, resin, resin incorporating marble powder, tempered glass or glass ceramic.

3. Cooking cooktop (MC) according to claim 2, wherein the material which constitutes the panel is stainless steel and the frame is constituted by an enameled metal sheet.

4. Cooking cooktop (MC) according to claim 2, wherein the panel and the frame are each constituted by an enameled metal sheet.

5. Cooktop (MC) according to any one of the preceding claims, wherein the frame and the panel are coupled to each other by an adhesive element, e.g. silicone.

6. Cooktop (MC) according to any one of the preceding claims, wherein the frame and the panel are coupled together by means of mechanical fastening means such as screws, rivets or clamps.

7. Recessed kitchen stove or furniture, or portable stove comprising a cooktop according to any one of the preceding claims.

8. Method for producing a cooktop (MC), comprising the steps of

- obtaining two identical monolithic copies of the cooktop, one copy made of steel and one copy made of metal sheet;

- cutting the two copies along an equal profile to separate from each a frame and a central part;
- enameling the central part;
- coupling the central enameled part with the frame.

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9. Method for producing a cooktop (MC), comprising the steps of

- producing a frame (60) constituting the edges of the cooktop; 10
- producing a panel (40) constituting the central part of the cooktop;
- permanently coupling the frame and the panel.

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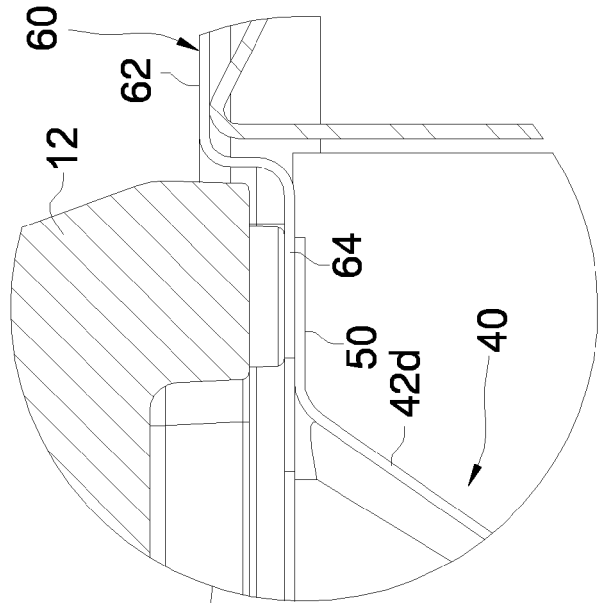


Fig. 3

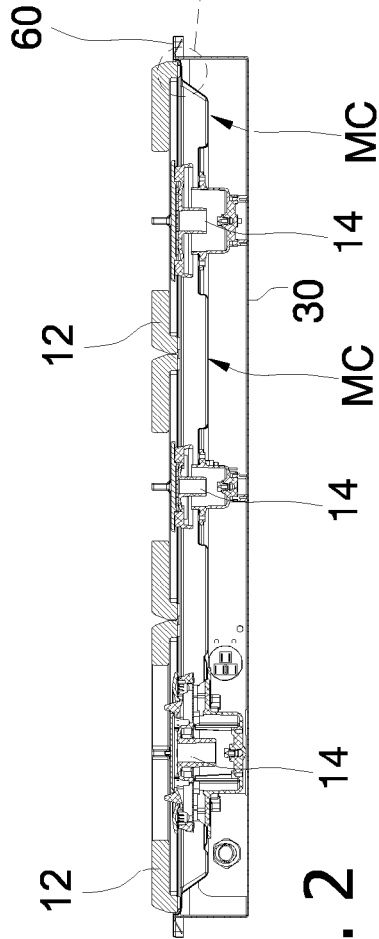


Fig. 2

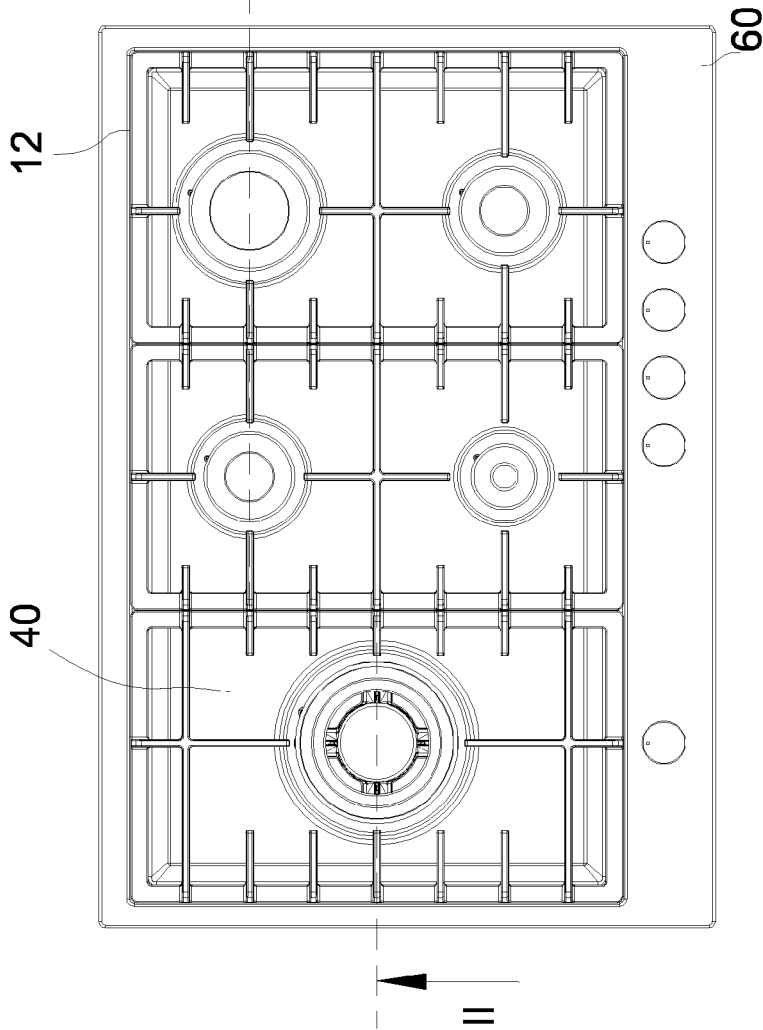


Fig. 1

Fig. 4

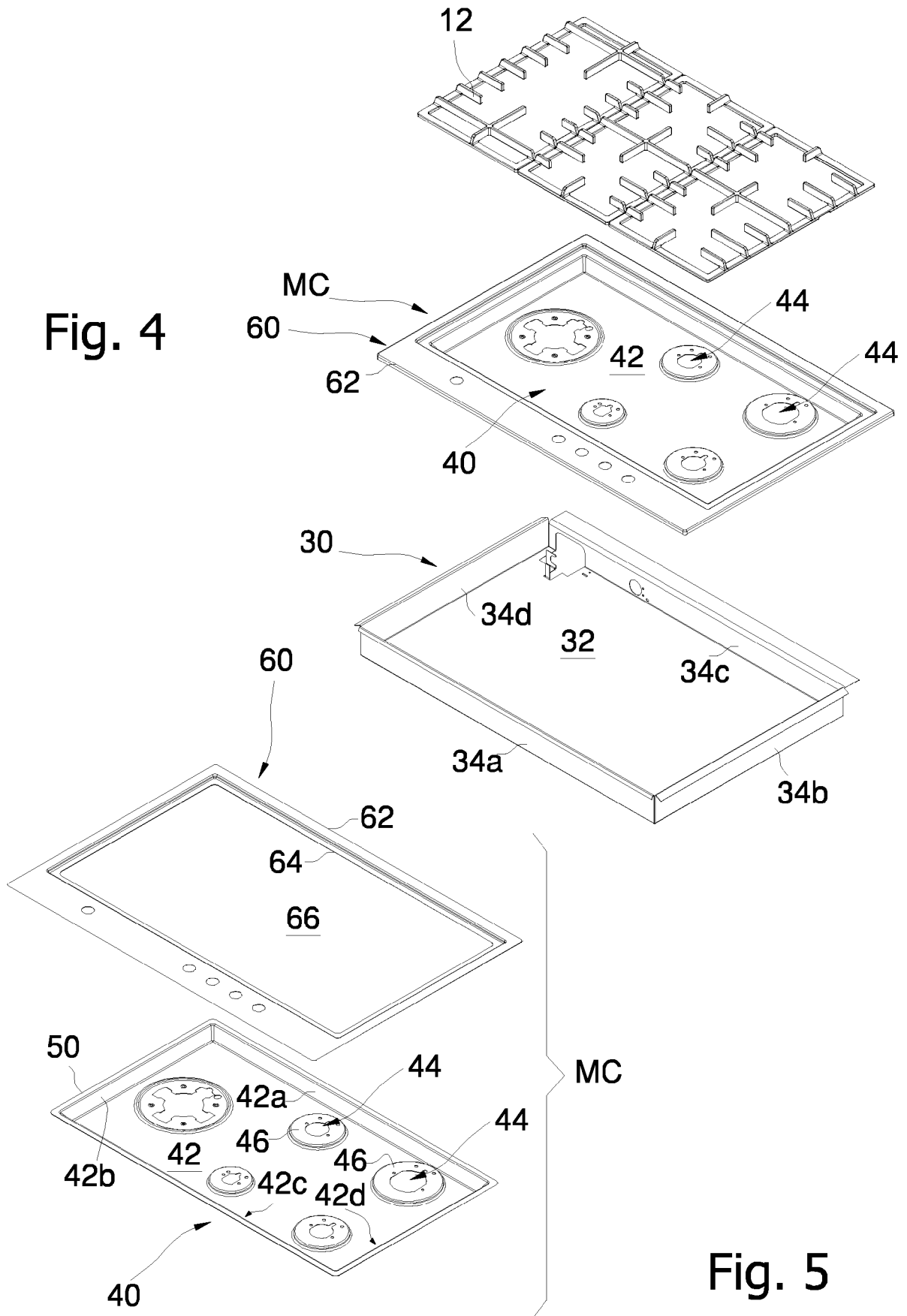


Fig. 5



EUROPEAN SEARCH REPORT

 Application Number
 EP 17 15 9459

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 19 July 2017	Examiner Jalal, Rashwan
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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Place of search The Hague		Date of completion of the search 19 July 2017	Examiner Jalal, Rashwan
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