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(71) Applicant: **Niro-Plan AG
4663 Aaburg (CH)**

(72) Inventor: **Moretto, Piero
36045 Lonigo /VI (IT)**

(74) Representative: **Lemcke, Brommer & Partner
Patentanwälte
Bismarckstrasse 16
76133 Karlsruhe (DE)**

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(54) **Cooking hob with heat shield**

(57) A cooking hob comprising at least one burner positioned on said hob and at least one knob positioned on said hob, characterised by comprising a structural el-

ement positioned on said hob, said structural element being coupled to said hob by a magnetic coupling. (Figure 1)

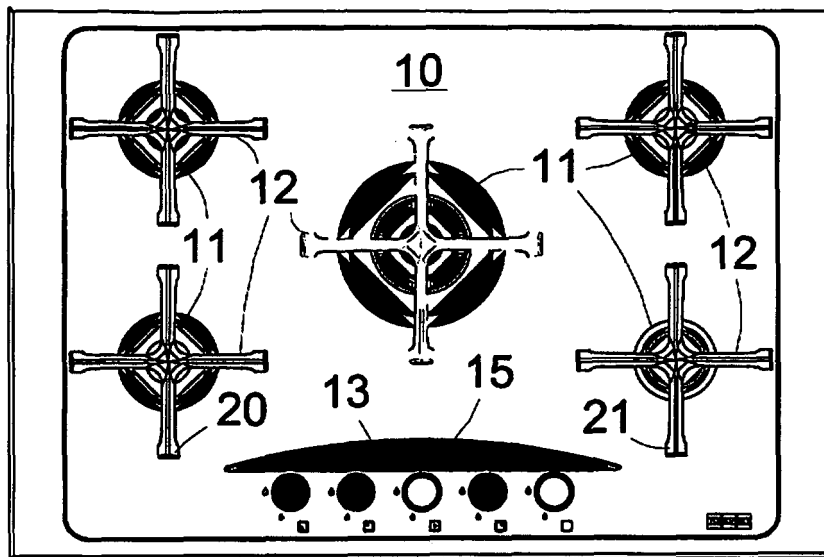


Fig. 1

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Description

[0001] The present invention relates to a cooking hob comprising a heat shield, and to a method for fixing a knob heat shield to a cooking hob.

[0002] Cooking hobs formed of glass, ceramic or glass-ceramic are available commercially.

[0003] These cooking hobs have a perfectly smooth surface which facilitates cleaning to a maximum extent.

[0004] Those hobs which have their knobs at the front, i.e. positioned directly on the hob, are also aesthetically more attractive.

[0005] However, when the burners are all in operation with pans present on the grids, the burner flame tends to widen and to partly approach the knobs. With time, these latter heat up, with annoyance to the user operating the knobs, who can also suffer burns.

[0006] An object of the present invention is to provide a cooking hob comprising a heat shield which is of simple construction and easy to remove.

[0007] This and other objects are attained according to the invention by a cooking hob comprising at least one burner positioned on said hob and at least one knob positioned on said hob, characterised by comprising a structural element positioned on said hob, said structural element being coupled to said hob by a magnetic coupling

[0008] These objects are also attained by a heat shield characterised by being coupled to a cooking hob by a magnetic coupling.

[0009] The objects are also attained by a method for fixing a knob heat shield structure to a cooking hob, comprising the steps of equipping said heat shield element with a first device and equipping said hob with a second device, said first and second device being arranged to provide a magnetic coupling.

[0010] Further characteristics of the invention are described in the dependent claims.

[0011] By fixing a normal heat shield to a cooking hob, in particular to a glass hob, even if removable, the presence of holes, pins or other means for its connection frustrates the characteristic principle of glass hobs, i.e. their ease of cleaning.

[0012] According to the present invention, the facility for fixing the heat shield by magnets enables it to be removed, to leave a perfectly smooth surface.

[0013] Moreover, its positioning is facilitated by the magnetic force, which seeks to always achieve maximum force, this occurring when the magnets are perfectly aligned. In other words, the heat shield is self-centering. If not positioned in its ideal position, it automatically positions itself in the predefined position, either automatically or with the aid of a small manual thrust.

[0014] The characteristics and advantages of the present invention will be apparent from the ensuing detailed description of one embodiment thereof, illustrated by way of non-limiting example in the accompanying drawings, in which:

Figure 1 shows a cooking hob of the present invention, seen from above;

Figure 2 is a perspective view of a heat shield according to the present invention;

5 Figure 3 is a view of a heat shield of the present invention, seen from below;

Figure 4 is a section through a cooking hob of the present invention.

10 **[0015]** With reference to the accompanying figures, a cooking hob 10 of the present invention comprises a plurality of burners 11, five being shown in the figure, inclusive of their respective support grids 12. It also comprises a plurality of frontal knobs 13, i.e. positioned on the cooking hob 10, for controlling the burners 11.

15 **[0016]** The cooking hob 10 comprises a heat shield 15 positioned to separate the burners 11 from the knobs 13.

[0017] The heat shield 15 is provided to shield the heat transmitted towards the knobs 13 by the burners 11 during their operation.

20 **[0018]** The cooking hob 10 is preferably constructed of glass or ceramic or glass-ceramic.

[0019] The heat shield 15, of preferably slightly arched shape, has a length of about 35 cm, a height of about 4 cm, and a thickness of about 0.5 cm.

25 **[0020]** It comprises four magnets 16, positioned within the base of the heat shield 15, preferably equidistant from each other. In the base of the heat shield 15, holes are provided into which the magnets 16, of cylindrical shape, of diameter about 0.3 cm and height about 0.8 cm, are inserted and maintained therein by a silicone cement.

30 **[0021]** A further four magnets 18 are provided below the cooking hob 10 in suitable positions close to the knobs to cooperate with the magnets 16, and are fixed preferably by silicone cement.

[0022] The magnets 18 have a diameter of about 1 cm and a height of about 0.5 cm.

35 **[0023]** The use of magnets 16, 18 both in the heat shield 15 and below the cooking hob 10 is preferable, in order to achieve good magnetic coupling. Alternatively a magnet could be used either in the heat shield 15 or below the cooking hob 10, with a ferromagnetic metal element in the other position, to again achieve a magnetic coupling.

40 **[0024]** Again alternatively, if the cooking hob 10 is made of steel or another (ferromagnetic) metal, the magnets could be installed only in the heat shield 15, without positioning any below the cooking hob 10.

45 **[0025]** The grids 12 are normally made of cast iron, which is a ferromagnetic material, hence if the magnets are positioned in the heat shield 15, laterally on the side facing the grids 12, and if the heat shield is of sufficient length, it can be fixed magnetically by resting it against the extensions 20 and 21 of the grids 12.

50 **[0026]** The cooking hob comprising a heat shield with magnetic coupling to the cooking hob, conceived in this manner, is susceptible to numerous modifications and variants, all falling within the scope of the inventive con-

cept. Moreover all details can be replaced by technically equivalent elements.

Claims

1. A cooking hob comprising at least one burner positioned on said hob and at least one knob positioned on said hob, **characterised by** comprising a structural element positioned on said hob, said structural element being coupled to said hob by a magnetic coupling. 5
2. A cooking hob as claimed in claim 1, **characterised in that** said structural element is a heat shield for said at least one knob. 10
3. A cooking hob as claimed in claim 1, **characterised in that** said structural element comprises at least one first magnet. 15
4. A cooking hob as claimed in claim 3, **characterised in that** said cooking hob comprises at least one second magnet arranged to form a magnetic connection with said first magnet. 20
5. A cooking hob as claimed in claim 4, **characterised in that** said at least one second magnet is positioned below said cooking hob. 25
6. A cooking hob as claimed in claim 3, **characterised in that** said cooking hob comprises at least one first metal element arranged to form a magnetic connection with said first magnet. 30
7. A cooking hob as claimed in claim 6, **characterised in that** said at least one first metal element is positioned below said cooking hob. 35
8. A cooking hob as claimed in claim 3, **characterised in that** said at least one burner comprises at least one grid, said at least one grid comprising at least one metal element arranged to form a magnetic connection with said first magnet. 40
9. A cooking hob as claimed in claim 1, **characterised in that** said structural element comprises at least one second metal element. 45
10. A cooking hob as claimed in claim 9, **characterised in that** said cooking hob comprises at least one third magnet arranged to form a magnetic connection with said second metal element. 50
11. A cooking hob as claimed in claim 9, **characterised in that** said at least one third magnet is positioned below said cooking hob. 55
12. A cooking hob as claimed in claim 9, **characterised in that** said at least one burner comprises at least one grid, said at least one grid comprising at least one fourth magnet arranged to form a magnetic connection with said second metal element. 5
13. A cooking hob as claimed in claim 1, **characterised in that** said cooking hob is constructed of glass, or ceramic, or glass-ceramic. 10
14. A heat shield **characterised by** being coupled to a cooking hob by a magnetic coupling. 15
15. A method for fixing a knob heat shield structure to a cooking hob, comprising the steps of equipping said heat shield element with a first device and equipping said hob with a second device, said first and second device being arranged to provide a magnetic coupling. 20

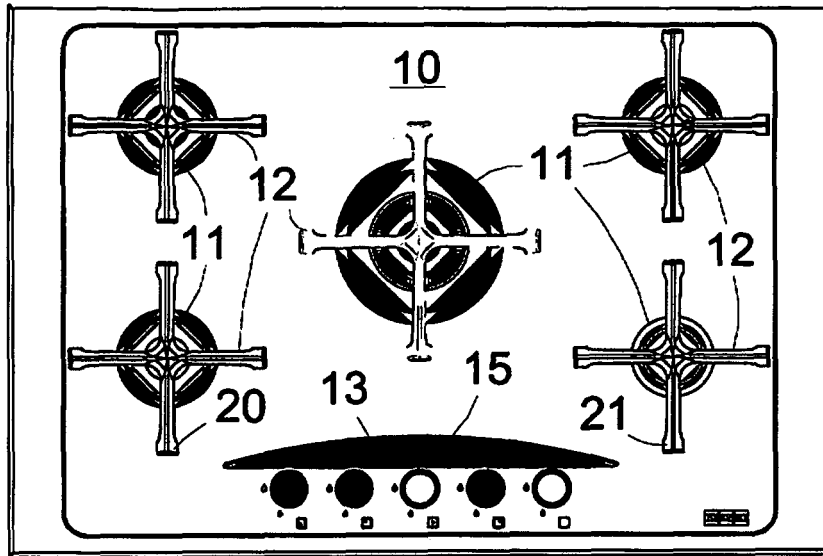


Fig. 1

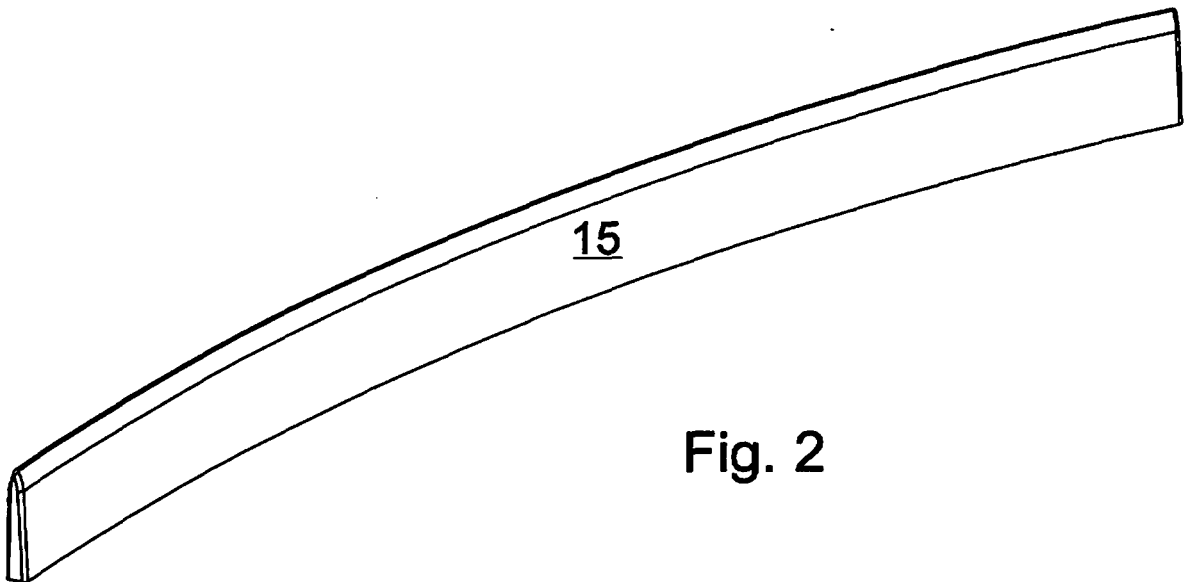


Fig. 2

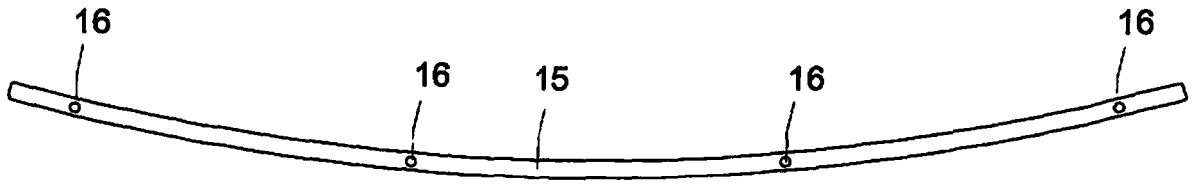


Fig. 3

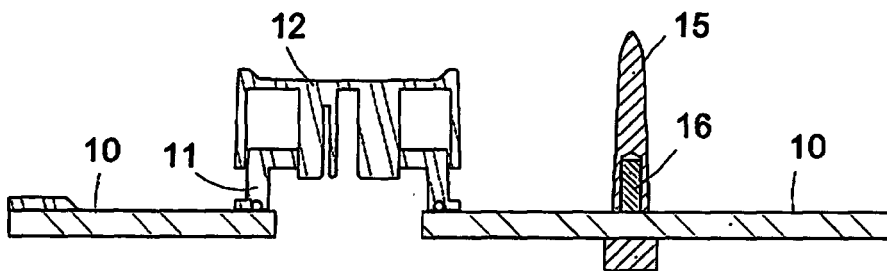


Fig. 4