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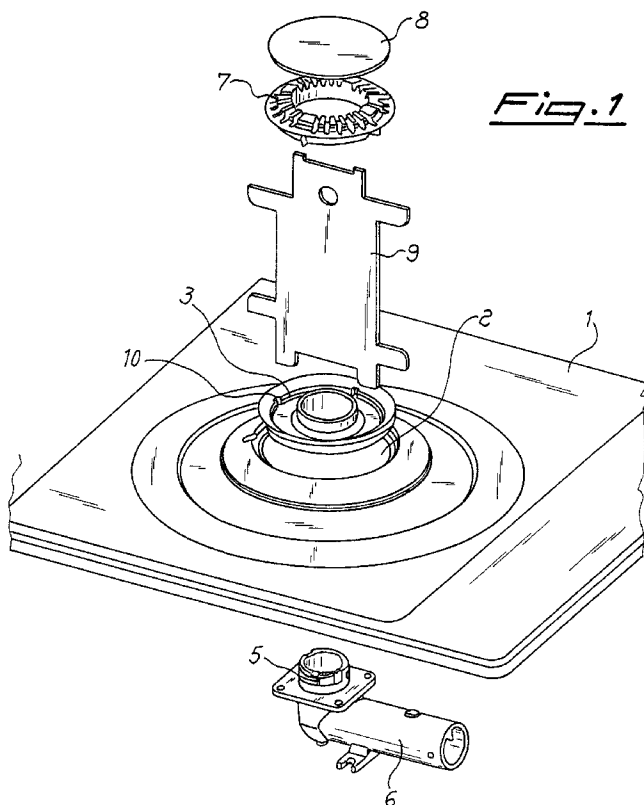
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AL LT LV MK RO SI(30) Priority: **09.01.1998 IT MI980019**(71) Applicant: **SMEG S.p.A.****Guastalla (Reggio Emilia) (IT)**(72) Inventor: **Bertazzoni, Roberto****Guastalla (Reggio Emilia) (IT)**(74) Representative: **Concone, Emanuele et al****Società Italiana Brevetti S.p.A.****Via Carducci 8****20123 Milano (IT)****(54) Gas-cooking apparatus with burners provided with bayonet coupling**

(57) A gas-cooking apparatus includes a plurality of burners arranged on a plate (1) at holes (2) communicating with the relevant gas supply ducts (6) located below said plate (1), and each of the burners includes a ring (3) abutting from above into the relevant hole (2)

and having a lower tooth (4) which achieves a bayonet coupling by engaging a corresponding seat (5) formed on the end portion of the supply duct (6). The engaging and disengaging of the ring (3) are carried out by means of a key (9) which engages notches (10) formed on the internal surface of the ring.

**Fig. 1****EP 0 928 928 A2**

Description

[0001] The present invention relates to gas-cooking apparatuses, and in particular to a cooking hob or the like with burners provided with bayonet coupling. Specific reference will be made hereafter to a cooking hob, while being clear that what is said equally applies to a gas cooker or any other apparatus with gas burners.

[0002] It is known that a cooking hob includes a plurality of burners resting on a plate at shaped areas which are slightly raised and have a central hole. The gas supplied through the ducts located below the plate reaches the burner through said hole, the adjustment of the flow rate being carried out by means of nozzles also located below the plate.

[0003] Each burner is merely placed on the plate and centered with respect to the hole by abutting along the periphery of the latter, or it can abut directly on the end collar of the supply duct. On the contrary, the plate is fixed to the structure of the cooking hob by a plurality of screws. This mounting arrangement makes the removal of the burners for their cleaning very easy, but also makes quite inconvenient the removal of the plate for the maintenance operations.

[0004] In fact, in order to adjust or replace the nozzles and for any other intervention on the supply ducts it is necessary to unscrew the plate from the structure and subsequently screw it back at the end of the operations. This implies not only a certain waste of time, but particularly the risk that some screws be very difficult to unscrew. This is a result of the difficult operating conditions of the screws, which undergo repeated heating and cooling cycles and are exposed to liquids, vapors and the accumulation of various types of dirt. As a consequence, the possibility of seizure is not remote and can be a significant problem during the dismounting of the plate.

[0005] Therefore the object of the present invention is to provide a cooking hob suitable to overcome the above-mentioned drawbacks.

[0006] This object is achieved by means of a cooking hob whose burners are provided with bayonet coupling so as to provide themselves the fixing of the plate.

[0007] A first fundamental advantage of the present invention is to achieve the fixing of the plate in a simple and effective way, without risks of seizure of the bayonet coupling. In fact, the latter has ample tolerances sufficient to provide it with resistance to the thermal cycles and the other potential seizure factors.

[0008] A second advantage is that it makes quicker the dismounting and re-mounting operations of the plate, while maintaining the easy removal of the burners.

[0009] Still another advantage is that it simplifies the manufacturing of the cooking hob, in that the plate does not require the holes for the screws and also the structure does not need to have the corresponding threaded bores.

[0010] These and other advantages and characteris-

tics of the device according to the present invention will be clear to those skilled in the art from the following detailed description of an embodiment thereof, with reference to the annexed drawings wherein:

Fig. 1 is a top perspective exploded view showing a burner of the cooking hob according to the invention; and

Fig. 2 is a bottom perspective exploded view of the cooking hob of fig. 1.

[0011] With reference to said figures, only one burner of the present cooking hob is shown, while being clear that the other burners are different only in size.

[0012] The burner rests on a shaped and raised area of the plate 1 with a central hole 2, in which the burner ring 3 abuts from above, said ring having a tooth 4 formed on its lower internal circular surface. This tooth 4 in combination with a corresponding seat 5, formed on the external surface of the end portion of the supply duct 6, forms a bayonet coupling. Since the ring 3 abuts from above into the hole 2 of the plate 1 and is then bayonet-coupled to the terminal of the duct 6 which is secured to the structure below the plate 1, also the latter is restrained to the structure without possibility of lifting.

[0013] The burner is then completed by a flame divider 7 placed on the ring 3, and by a cap 8 placed in turn on the divider 7. The coupling and uncoupling of the ring 3 are carried out by means of a suitable key 9 (placed in the figure in the operating position but clearly not a part of the cooking hob) shaped so as to adapt to the different burners. The key 9, by engaging proper notches 10 formed on the internal upper surface of the ring 3, allows to rotate the ring 3 through a small angle (even smaller than 90°) which is sufficient for engaging and disengaging the latter.

[0014] It is clear that the above-described and illustrated embodiment of the cooking hob according to the invention is just an example susceptible of various modifications. In particular, the bayonet coupling can be reversed by forming the tooth 4 on the terminal of the supply duct 6 and the seat 5 on the ring 3. Moreover, the coupling surfaces of the two members can be reversed by achieving the contact between the external lower surface of the ring 3 and the internal surface of the terminal of the duct 6.

Claims

1. A gas-cooking apparatus including a plurality of burners arranged on a plate (1) at holes (2) communicating with the relevant gas supply ducts (6) located below said plate (1), characterized in that each of said burners includes a ring (3) suitable to abut from above into the relevant hole (2) and having a lower portion shaped so as to form a bayonet coupling in combination with the terminal portion of

the relevant supply duct (6).

2. An apparatus according to claim 1, characterized in that on the internal lower circular surface of the ring (3) of the burner there is formed a tooth (4) suitable to engage a corresponding seat (5) formed on the external surface of the end portion of the supply duct (6). 5
3. An apparatus according to claim 1, characterized in that on the internal lower circular surface of the ring (3) of the burner there is formed a seat (5) suitable to receive a corresponding tooth (4) formed on the external surface of the end portion of the supply duct (6). 10 15
4. An apparatus according to claim 1, characterized in that on the external lower circular surface of the ring (3) of the burner there is formed a tooth (4) suitable to engage a corresponding seat (5) formed on the internal surface of the end portion of the supply duct (6). 20
5. An apparatus according to claim 1, characterized in that on the external lower circular surface of the ring (3) of the burner there is formed a seat (5) suitable to receive a corresponding tooth (4) formed on the internal surface of the end portion of the supply duct (6). 25 30
6. An apparatus according to one or more of the preceding claims, characterized in that the ring (3) of the burner has notches (10) formed on the internal upper surface thereof. 35

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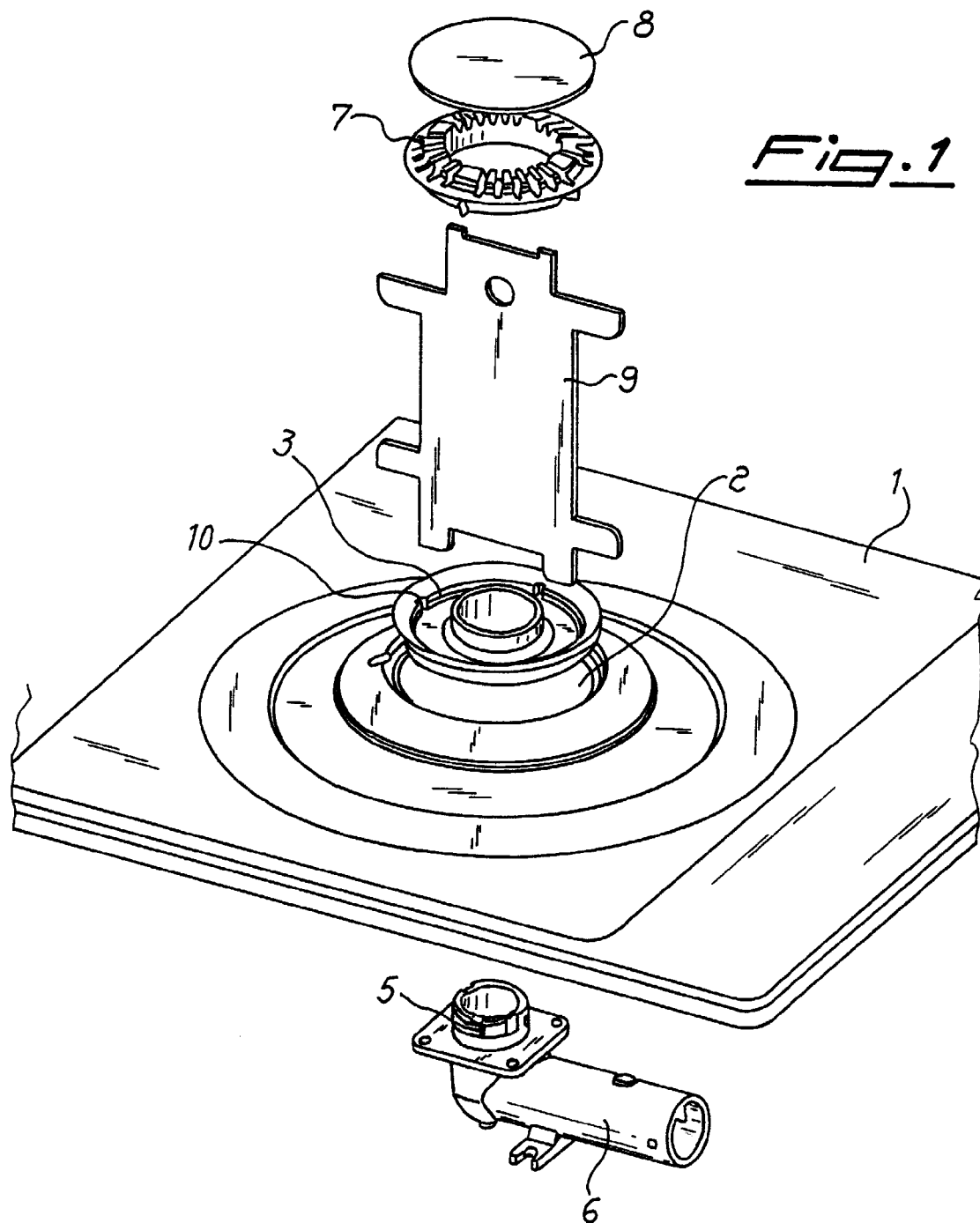


Fig. 2

