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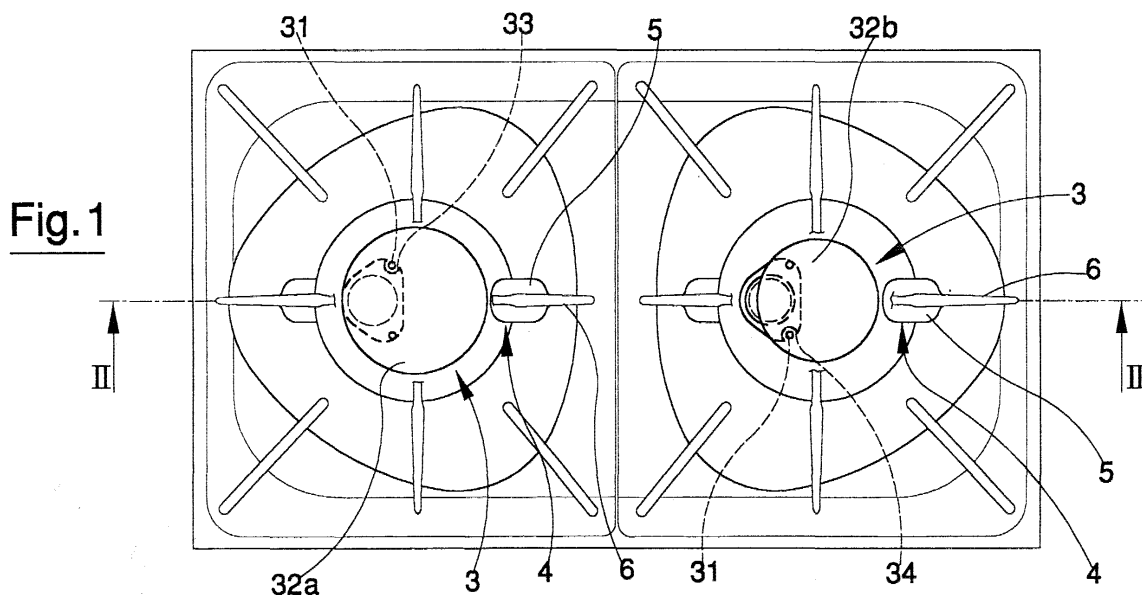
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(54) **A cooking range with gas burners for food cooking apparatus**

(57) The cooking range with gas burners for cooking apparatus, in which each burner uses a mixer pipe in which gas issuing from a nozzle is mixed with a part of combustion air and sent to a gas ring, is characterised

in that it comprises a drip-tray (2) on which the burners (3) are sealedly mounted. The burners (3) are housed in identical seatings (30), each of which can house burners (3) of various power ratings.



Description

[0001] The invention is of the type in which each burner uses a mixer or Venturi pipe in which the gas issuing from a nozzle is mixed with a part of combustion air and sent on to a head, or a ring.

[0002] Prior art realisations exhibit a cooking range, comprising cooking burners, which is constituted by a dismountable drip tray which enables access to inside the apparatus for maintenance or cleaning purposes.

[0003] It is in fact quite easy for liquids in the cooking recipients to spill over the barrier, which in effect is the drip-tray, and penetrate into the apparatus, reaching areas which are difficult to access for cleaning.

[0004] The tray, then, must be removable so that normal and not easy cleaning operations can be carried out below the cooking range.

[0005] It is also very likely that, while removing the tray for cleaning, further dirt will drop down onto the apparatus, penetrating inside it and causing even more cleaning problems.

[0006] It is worthy of note that in the prior-art realisations, the burner arrangement is fixed, as is the disposition of the spill trays, which exhibit various and different seatings which are specially predisposed for the single burners - usually there are bigger and smaller burners necessitating differently-sized seatings.

[0007] In other words, each tray is made specially for a predetermined burner arrangement in which the burners are not identical.

[0008] This obviously leads to producing, for each cooking range, a number of trays, different among themselves, which correspond to the combination and arrangement of the burners (of different sizes and power) on a single cooking range.

[0009] The main aim of the present invention is to obviate the above-mentioned limitations and drawbacks in the prior art.

[0010] More specifically, the invention both provides a cooking range which prevents dirt from fouling the underlying parts and enables easy and rapid cleaning, as well as simplifying production by standardising the characteristics of the drip tray which is the base of the cooking range.

[0011] An advantage of the invention, connected with the ease of cleaning, is that the internal part of the apparatus is protected from fouling, and is therefore free of unhygienic matter.

[0012] Another advantage of the invention is the flexibility of burner arrangement on the cooking range, which is not restricted by conformational necessities.

[0013] These aims and advantages and others besides are all attained by the invention as it is characterised in the appended claims.

[0014] Further characteristics and advantages of the present invention will better emerge from the detailed description that follows of a preferred but non-exclusive embodiment of the invention, illustrated purely by way

of nonlimiting example in the accompanying figure of the drawing, in which:

figure 1 is a schematic plan view from above of the invention;

figure 2 is a schematic section made according to line II-II of figure 1;

figure 3 is a schematic section made according to line III-III of figure 2.

[0015] With reference to the figures of the drawings, 1 denotes in its entirety a cooking range with gas burners 3 for apparatus for food cooking.

[0016] Each gas burner 3 uses a mixer pipe, scientifically known as a Venturi pipe, in which the gas issuing from a nozzle is mixed with a predetermined quantity of combustion air before being sent on to a ring 32a or 32b.

[0017] The gas burners 3 are sealedly mounted on a drip-tray 2 in which they are housed in seatings 30.

[0018] In particular, a terminal part (outlet mouth) of the mixer pipe of each burner 3 is stably and sealedly coupled in each seating 30, while the head or gas ring 32a or 32b is coupled by simple resting, and can be removed in a vertical direction.

[0019] The seatings 30 of the drip tray 2 are identical to one another, so that each of them can house different burners 3 of different power rating.

[0020] Each seating 30 can be equipped with fittings that enable them to couple only with one kind of burner 3, of a predetermined power rating.

[0021] In the illustrated embodiment two fittings can be equipped, characterised by two different positions with respect to the seatings 30, inasmuch as it is envisaged that in each seating 30 two different types of burner 3 can be coupled, characterised by two different power ratings.

[0022] In other embodiments of the invention, it is possible to provide a system of fittings which allows each seating 30 to receive a predetermined number of burners 3 (more than 2) characterised by having different power ratings.

[0023] Each fitting is predisposed to enable coupling with only the gas ring 32a or 32b of a burner 3 of predetermined power rating and is constituted by a pivot 31 which can be fixed to the drip-tray 2 in one of the two predetermined positions with respect to the seating 30.

[0024] These two different positions are determined by the two coupling holes 35 and 36 located by the side of the seatings 30 in each of which the pivot 31 can be inserted.

[0025] The pivot 31 couples in special seatings 33, 34 afforded in two different types of gas rings 32a and 32b which are parts of two differently-rated burners (ring 32a is larger and equips a higher-rated burner).

[0026] Since each type of burner 3 has a precise and single coupling position in a single seating 30, the presence of the reference pivot 31 in the hole 36 enables coupling in the seating 30 corresponding only to the gas

ring 32a of the burner mounted on the same seating 30.

[0027] Similarly, the presence of the reference pivot 31 in the hole 35 enables coupling of only the gas ring 32b of the burner mounted in the same seating 30.

[0028] Thus no error can be made during assembly.

[0029] In a further embodiment (not illustrated) of the invention at least one fitting for a burner of a given power rating is constituted by a plurality of pivots positioned in a plurality of holes by the side of the seatings 30. The relative positions of the pivots enable a dedicated fitting for only one type of burner to be set up.

[0030] The accessories for igniting and controlling the flame (thermocouple, ignition and pilot light) are located at a same distance from the respective seatings 30 on a single drip-tray 2 and form, for each burner 3, a flame ignition and control group 4 which, located at a fixed distance from the respective seating 30, is removably connected to the drip-tray 2 by means of a fixed and sealed coupling.

[0031] Each flame ignition and control group 4 is also protected from above by a cover 5 fixed to the support grill for the cooking recipients, usually located removably above the drip-tray 2 and the burners 3.

[0032] The drip-tray 2 is fixed and, being sealed, does not allow any dirt to permeate through into the parts underlying the apparatus.

[0033] The whole assembly is easy to clean and problem-free as far as the remounting of the gas rings is concerned, which is error-proof in the sense that no ring can be inserted in a seating housing a burner which is different from that on which the ring is to be fitted.

Claims

1. A cooking range with gas burners for cooking apparatus, in which each burner uses a mixer pipe in which gas issuing from a nozzle is mixed with a part of combustion air and sent to a gas ring, **characterised in that** it comprises a drip-tray (2) on which the burners (3) are sealedly mounted.
2. The range of claim 1, **characterised in that** seatings (30) for housing the burners (3) are identical to one another, so that each of the seatings (30) is able to house burners (3) of various power ratings.
3. The range of claim 2, **characterised in that** it comprises, associable to each of the seatings (30), a plurality of means for setting, each of which is predisposed to enable a coupling with only one of the burners (3), of a predetermined power rating.
4. The range of claim 3, **characterised in that** each of the means for setting is predisposed to enable coupling with only one gas ring (32a, 32b) which is suitable for coupling with a burner (3) of a predetermined power rating.

5. The range of claim 4, **characterised in that** each of the means for setting is constituted by one or more pivots (31) which can be fixed on the drip-tray (2) in predetermined positions, which positions are identified by one or more holes, in the seating (3); the pivots (31) being couplable in a special seating afforded in a corresponding gas ring.
6. The range of any one of the preceding claims, **characterised in that** accessories for igniting and controlling a flame are located at a same distance from all of the seatings (30) present on a same drip-tray (2).
7. The range of claim 6, **characterised in that** the accessories for igniting and controlling the flame, comprising a thermocouple, an ignition and a pilot flame, form, for each burner (3) a flame ignition and control group (4) which is located at a fixed distance from the respective seatings (30) and which is removably connected to the drip-tray (2) by means of a sealed coupling.
8. The range of claim 7, **characterised in that** each of the flame ignition and control groups (4) is superiorly protected by a cover (5) fixed on a removable grill of the range which is for supporting cooking recipients, which grill is located removably above the drip-tray (2) and the burners (3).
9. The range of any one of the preceding claims, **characterised in that** the drip-tray (2) is fixed.

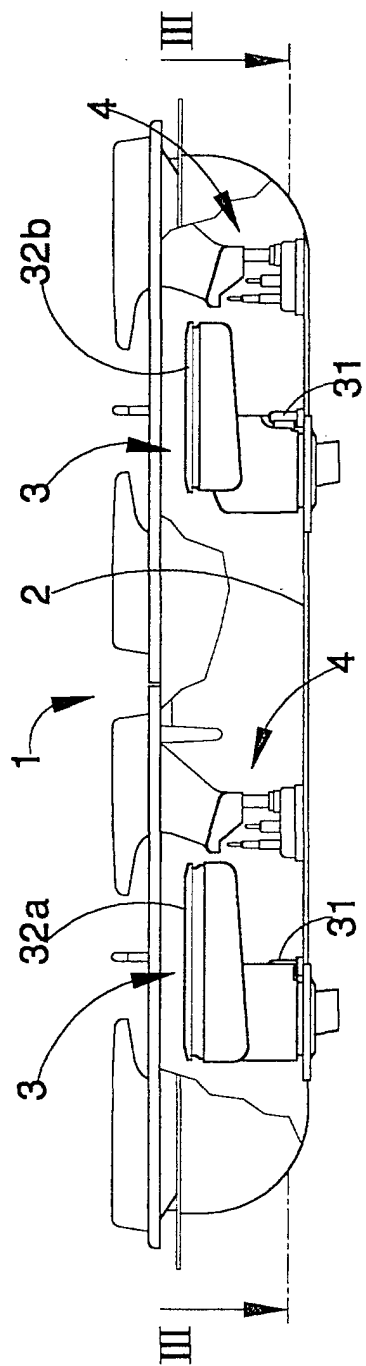


Fig. 2

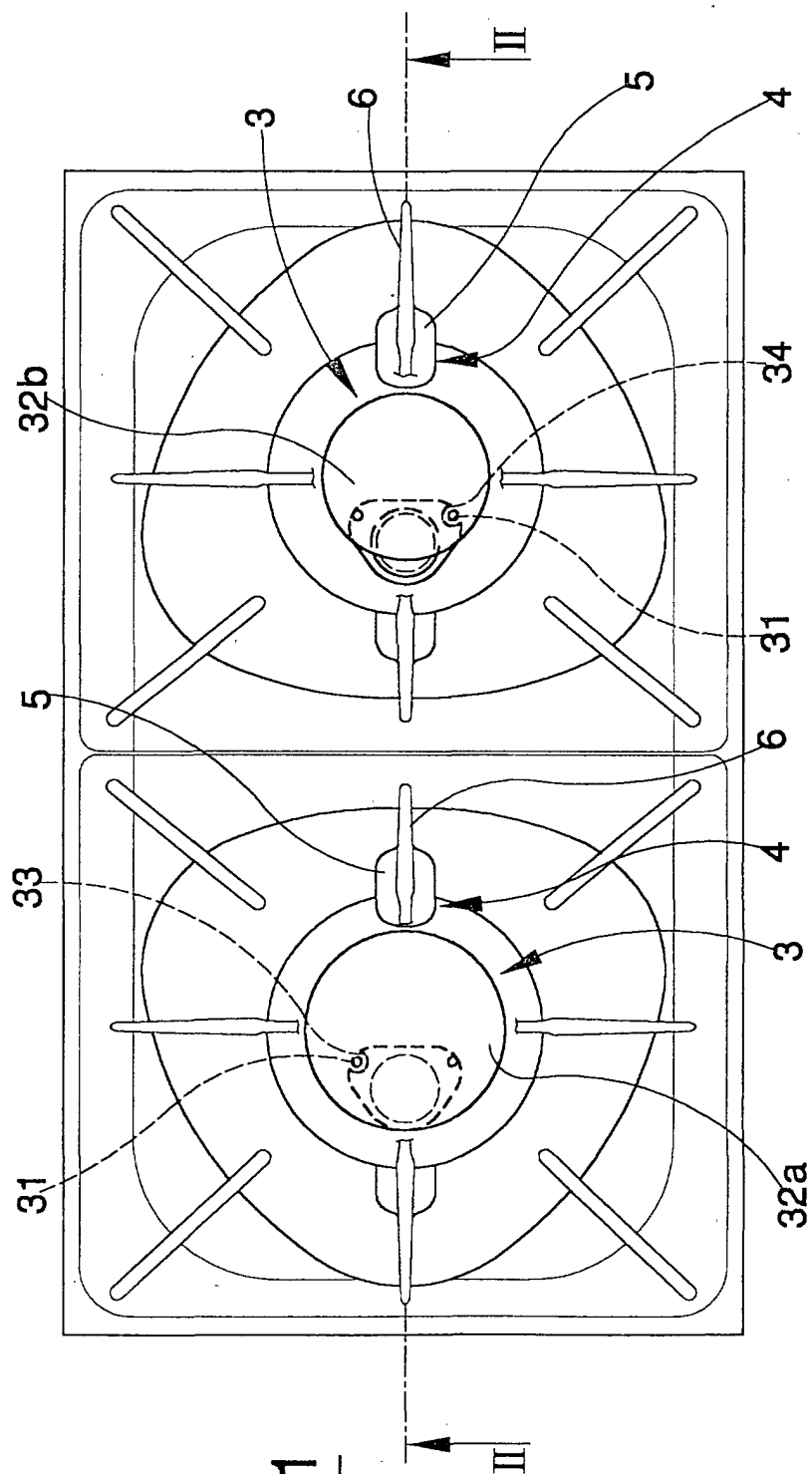


Fig. 1

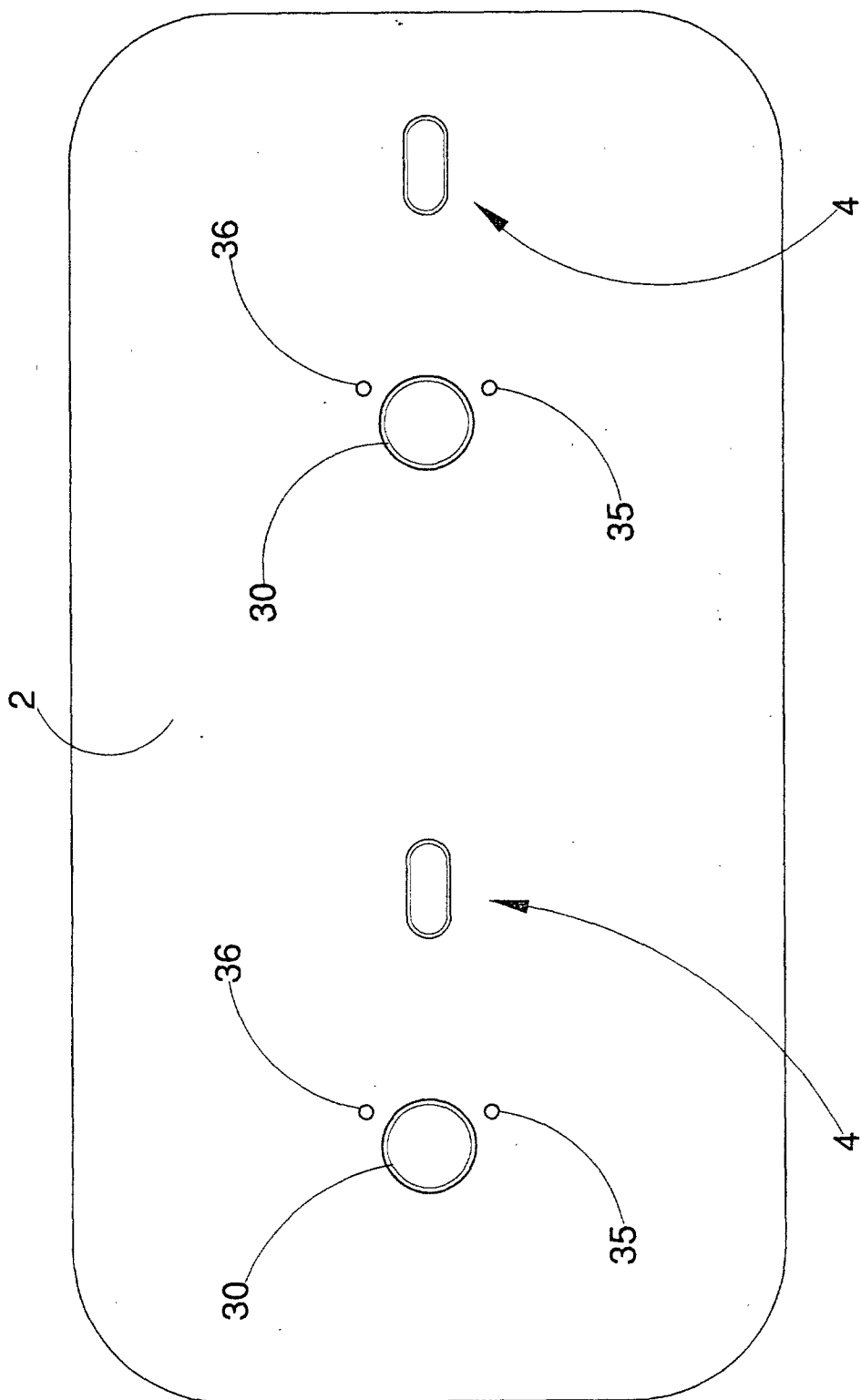


Fig. 3



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 01 83 0046

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 11 May 2001	Examiner Theis, G
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 01 83 0046

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