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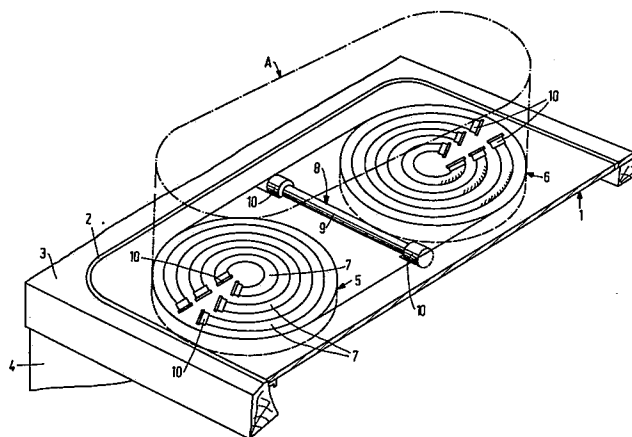
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⑤④ **Heating unit for cooking hob with Infra-red heating lamps.**

⑤⑦ A heating unit for a cooking hob comprising two spaced sources (5, 6) of infra-red radiation for heating two circular areas of the cooking top (1). To increase the efficiency of the heating unit there is provided at least one additional infra-red source (8) in the form of a straight lamp (9) arranged between the two heating sources (5, 6).



"Heating unit for cooking hob with infra-red heating lamps"

The invention relates to a heating unit for a cooking hob comprising at least two spaced-apart heat sources, each of which is formed by at least one infra-red heating lamp for heating substantially circular areas of the hob surface.

5 Such a heating unit for a cooking hob is known from French Patent No. 2.138.464. This hob comprises a glass ceramic cooking top and two heat sources. One source is formed by two concentric quartz glass tubes, the other by three concentric quartz glass tubes.

10 The object of the invention is to enable the user to make more effective use of the cooking hob, i.e. to have the possibility of using different types of pans and effect heating of each pan in an energy-saving manner.

 According to the invention the heating unit is characterized in that an intermediate heat source is disposed between the two
15 spaced-apart heat sources, which intermediate heat source is formed by at least one infra-red heating lamp of a rectilinear type. On such a cooking hob not only the conventional circular pans of different diameter can be used, but also rectangular or oblong pans, either on an oblong area heated by the straight intermediate infra-red heating lamp
20 or on a combination of one or two circular areas and the oblong area.

 In one embodiment of the heating unit the one or more rectilinear lamps are arranged substantially perpendicular to a line interconnecting the centres of the two circular heating areas.

25 By way of example, a particular embodiment of the invention will now be described with reference to the accompanying drawing, the single figure of which shows a perspective view, partly in sections of a cooking hob having a heating unit according to the invention.

 In the figure, the reference numeral 1 indicates a glass ceramic cooking top rigid with a perimetral metal frame 2 which abuts
30 on to the wooden worktop 3 of a kitchen unit 4. Below the cooking top 1 there is a heating unit comprising two spaced-apart heat sources 5, 6 which in this example are identical and are each constituted by three infrared lamps 7 of open circular ring form, disposed so as to be

substantially concentric with one another for heating substantially circular areas of the top, and a third heat source 8 between the two preceding sources.

5 The third heat source is constituted by a single infrared lamp 9 of a rectilinear type which is substantially perpendicular to the straight line passing through the centres of the two groups of circular lamps 7. It is also possible to have more than one intermediate infra-red heating lamp of the rectilinear type.

10 The various lamps have moulded ceramic end-caps 10 from which insulated conductors (not shown) emerge for feeding the electrical energy.

Each of the heat sources 5, 6 is controlled by its own multi-position electrical rotary switch which enables the relevant lamps to be fed in various series and/or parallel combinations or individually. Alternatively, the power of each of the heat sources 5, 6 can be regulated
15 by devices for modifying the sinusoidal wave of the supply voltage, commonly known as choppers or light dimmers.

The intermediate heat source 8 can be controlled in a manner analogous to that indicated, especially where the lamps are more than
20 one in number, or by means of a simple mechanically retained pushbutton, i.e. such that on being pressed it connects the lamp, and on being again pressed it disconnects it.

If a cooking utensil with an oblong base is to be heated, such as a fish pan, indicated by dashed and dotted lines and by A in the
25 figure, the three heat sources 5, 6 and 8 are fed, and if required their heating power is regulated by one or more of the aforesaid regulator members. Alternatively, use can be made of only the intermediate heat source if only a small oblong cooking utensil is used.

As described, a circular area of the cooking top can be
30 heated by circular infra-red heating lamps. It is also possible to use a heating source of three or four infra-red heating lamps of the rectilinear type which are disposed parallel to each other. When the outer lamps are shorter than the inner lamp or lamps a substantially circular heating area will be obtained.

1. A heating unit for a cooking hob comprising at least two spaced-apart sources, each of which is formed by at least one infra-red heating lamp for heating substantially circular areas of the hob surface, characterized in that an intermediate heat source is disposed between the two spaced-apart heat sources, which intermediate
5 heat source is formed by at least one infra-red heating lamp of a rectilinear type.

2. A heating unit as claimed in Claim 1, characterized in that the one or more rectilinear lamps are arranged substantially perpendicular to a line interconnecting the centres of the two circular heating
10 areas.

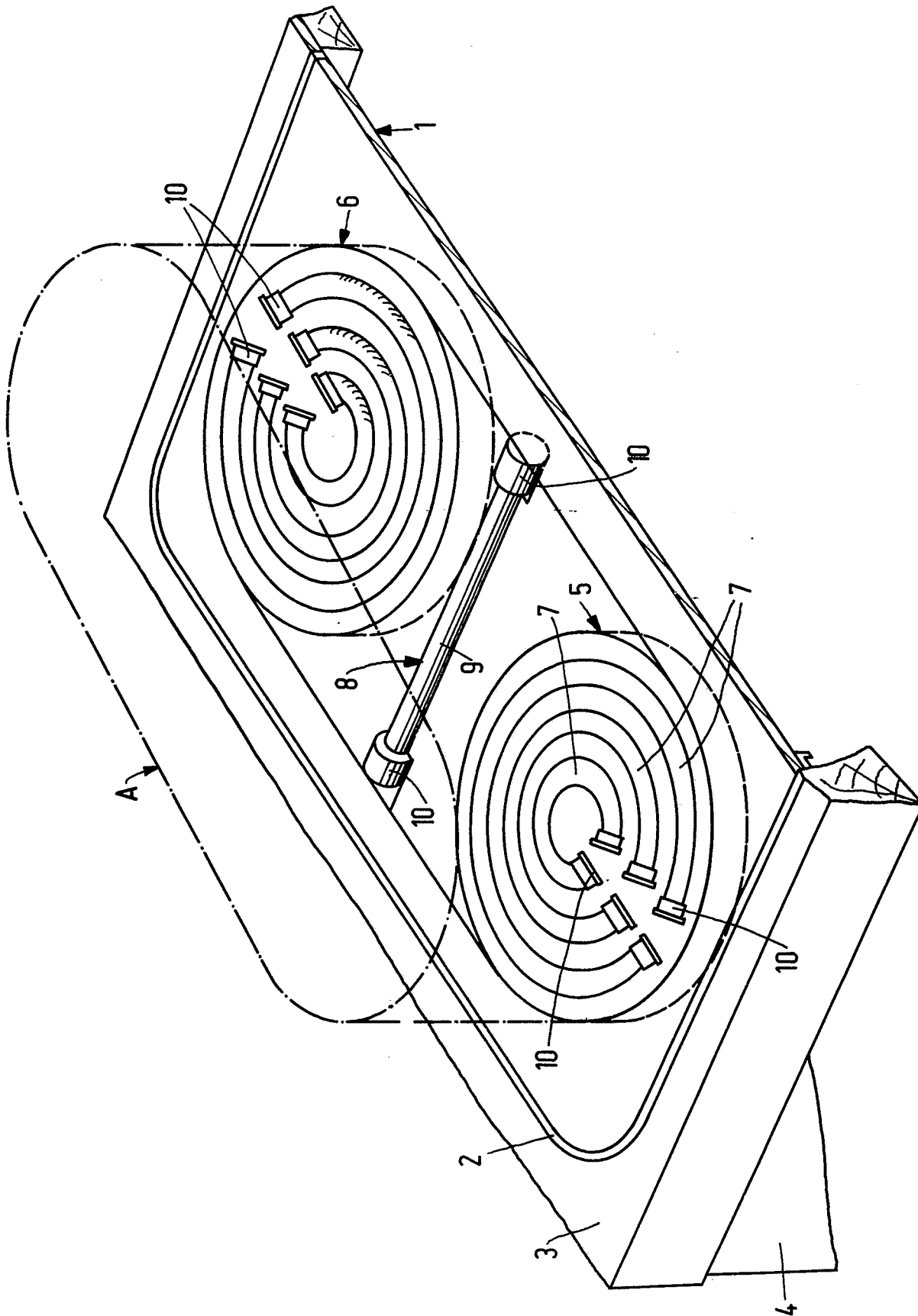
3. A cooking hob having a glass ceramic cooking top, characterized in that at least one heating unit according to any previous claim is disposed beneath the top.

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DOCUMENTS CONSIDERED TO BE RELEVANT			EP 86200230.0
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Y	<u>GB - A - 2 137 060</u> (GENERAL ELECTRIC) * Abstract; page 2, lines 56-86; fig. 2 *	1-3	H 05 B 3/68 F 24 C 7/06 H 05 B 3/74

D,Y	<u>FR - A - 2 138 464</u> (ETABLISSEMENTS EUGENE SCHOLTES) * Page 4, line 20 - page 6, line 31; fig. 2-4 *	1-3	

A	<u>DE - A1 - 2 947 408</u> (GAGGENAU-WERKE) * Claim 1; fig. *	1-3	

			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			F 24 C 7/00 H 05 B 3/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 27-05-1986	Examiner TSILIDIS
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	