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⑤④ **Safety device for cooking hobs to prevent vessels from overturning when cooking.**

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⑤⑥ References cited :
DE-C- 859 060
DE-C- 1 139 956
DE-U- 8 525 126
FR-A- 2 315 665
US-A- 4 583 518

EP 0 274 365 B1

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Description

The present invention relates to a safety device, to be applied to cooking hobs provided with gas-burners or electric hot-plates, and being either of the built-in type to be recessed in a piece of furniture or formed of a household cooker top, which is capable of preventing vessels placed on the hob itself from overturning, in particular when cooking foods.

It is known that the vessels used for cooking, and especially pots having a considerable height in comparison with their diameter, are susceptible to overturning when accidentally struck and of falling from the cooking hob, thus pouring the liquid therein, often boiling. This leads to a dangerous situation for people standing near by, especially when children are present who, besides causing this type of accidents more frequently, due to their restlessness and less care taken, may be burnt more seriously by the poured liquid, owing to their height which approximately corresponds to the hob level.

It is true that sometimes attempts have been made to anchor vessels onto the support top surface, such as by means of snap fastening devices, which however have proved to be complex and/or cumbersome, with the additional drawback of easily heating while cooking, so as to be difficult to handle when these devices have to be released for leaving free the associate vessel as soon as the cooking is over.

Other anti-tilting devices are known, for the above-mentioned purpose, being formed of a protective metal section which, at a front position, restrains onto the hob the vessels placed over the burners. However these known devices show various disadvantages, such as the fact that at rest, in the backward position they are situated over the rear burners or anyway due to their overall dimensions are of hindrance to the complete lowering of the cover onto the cooking top. In addition sometimes these devices comprise a plurality of members and thereby constructional complications are required to keep, during operation, a higher position with respect to the cooking top surface that is more efficient against the tilting of the adjacent vessels.

From DE-C-859 060 a device is known to prevent vessels placed on a cooking hob, from being accidentally overturned, comprising a number of metal bars substantially parallel to each other and to the front edge of the hob, which are connected on each side to respective arms being hinged at the back side of the cooking hob. Such a device however cannot be used with a hob having a tiltable cover which is also hinged at the back side of the hob.

An object of the present invention is therefore that of providing an anti-tilting device for pots and the like, which is easily applicable onto cooking surfaces, of simple construction in a single piece and of good functional capacity and handiness, without the need of a

releasing operation for leaving free vessels, while being at the same time perfectly reliable and capable of allowing, at a rest condition, the hob cover to be lowered without interference therewith.

Such an object of the invention is obtained with a device according to the characterizing features of the claim.

US-A-4 583 518 shows a device of a similar configuration to that described in the present claim as to the approximately middle position of hinges and the profile of the lateral shaped arms, but such a device is applied by hinging to the lower extremity of a space heating appliance in the vertical plane for the purpose, completely different from the technical problem of this invention, of maintaining a minimum gap between the heater and combustible objects such as furniture.

For a better understanding of the present invention through a preferred embodiment thereof, by way of example, reference will be made to the following description and drawing, the single figure of which shows a perspective view of a hob provided with a device of the invention.

With reference to the figure, a device 2 according to the invention is mounted to a cooking hob 1 which may be either of the built-in type to be recessed in a piece of furniture thereunder, or such as to form the top plane of a self-contained cooker, being here represented with gas-burners, whereas it could also comprise at least one electric hot plate. The device comprises shaped metal bar, hinged at its end portions 3, 3' to the elevated side edges 4, 4' of the hob at approximately the middle zone along the direction of depth of the hob itself. Preferably the bar forming the device 2 has a round cross-section, so that its end portions 3, 3' can rotate freely in associate holes formed in the side edges 4, 4' without the necessity of separate hinges.

At position A the device 2 has been shown by continuous lines as in use, i.e. turned to the front side of the hob, whereas at position B it is turned rearwards, in a rest situation. The device 2 substantially comprises a metal bar 6, substantially rectilinear and parallel to the front edge or width side of the hob, being joined at each side to the associate end portion 3, 3', useful as a hinger through a shaped arm, respectively 8, 8'.

The protection against possible tilting or overturning of vessels on the front burners of the cooking hob 1 is mainly provided by the elongated bar 6 which, thanks to a particularly angled shape of the side shaped arms 8, 8', with parts 5, 5' results to be raised with respect to the hob, thus forming an actual hindrance to a forward tilting of the vessels on the front burners. At the same time also the shaped arms 8, 8' give a protection, even if partial, against a possible tilting in a lateral direction.

Furthermore the particular configuration of the shaped arms 8 is useful to a lateral grasping of the

device to cause it to rotate from position A to B and vice versa.

The shaped arms 8 are upwardly bent at A, starting from parts 5, 5' which are slightly recessed to the inside with respect to the end portion 3, 3' and parallel to the side edges 4, 4' of hob 1. Such a configuration, when the device 2 is rotated backward by 180° to the position B, causes the elongated bar 6 to completely rest on the rear side of the hob, while the shaped arms 8, 8' remain partially raised therefrom. A designer will then be able to dimension the various parts so that the height by which arms 8, 8' are raised at the position B will be within the tolerance range allowed between hob and cover 10 without hindering the complete lowering of the latter.

It is clear that a safety device as described and illustrated can be easily applied to whichever cooking hob having upraised lateral edges of sufficient height, and affords an extremely good handiness and ease of utilization without showing the known drawbacks due to an excessive heating, when it is also considered that the vessels thereby protected from overturning can be removed from the burners, upon cooking, without the necessity of touching by hands the device itself. In fact the same does not prevent pots and the like from lifting from the rest surface, but only from tilting, especially towards the front side.

Claims

1. A device to prevent vessels, placed on a cooking hob (1) with elevated hob side edges (4, 4') and a cover (10), from being accidentally overturned, said device (2) comprising a metal bar (6), substantially parallel to the front edge of the hob (1), which is hingedly connected on each side to said hob (1) through an end portion (3, 3'), characterized by said end portions (3, 3') being parallel to the metal bar (6), to which are connected through respective shaped arms (8, 8') with parts (5, 5') and hinged to approximately the middle of each of the respective elevated hob side edges (4, 4'), said shaped arms (8, 8') being angled to both said bar (6) and parts (5, 5') in order to maintain the metal bar at a different parallel level to the parts (5, 5'), said parts (5, 5') being joined to, coplanar with and perpendicular to said end portions (3, 3') and rotatable about the longitudinal axis of said end portions in a parallel vertical plane to that of the respective hob side edge (4, 4'), whereby said bar (6) can take two opposite positions, upon a rotation of about 180°, at the first of which (A) said bar (6) is raised with respect to the front edge of hob (1) and at the second of which (B) it is resting on the rear position of said hob (1) from which said shaped arms (8, 8') are partially raised, at such a height to allow the complete lowering of cover (10) onto the hob.

Ansprüche

1. Schutzvorrichtung an Kochherden (1) mit hochgezogenen Seitenkanten (4, 4') und einer Abdeckung (10), um zu verhindern, daß auf dem Herd stehende Gefäße umkippen, die eine Metallstange (6) aufweist, welche im wesentlichen parallel zu der Vorderkante des Kochherdes (1) verläuft und mittels ihrer Enden (3, 3') auf jeder Seite des Kochherdes ausgebildet ist, dadurch gekennzeichnet, daß die Enden (3, 3') parallel zu der Metallstange (6) verlaufen, die über entsprechend geformte Arme (8, 8') mit Teilen (5, 5') verbunden ist, wobei die Enden (3, 3') etwa in der Mitte jeder hochgezogenen Seitenkante (4, 4') angelenkt sind, die geformten Arme (8, 8') zu der Metallstange (6) und den Teilen (5, 5') angewinkelt sind, um die Metallstange (6) auf einer anderen parallelen Ebene als die Teile (5, 5') zu halten, die Teile (5, 5') in einer Ebene und senkrecht verlaufend mit den Enden (3, 3') verbunden sind und um eine Längsachse der Enden (3, 3') schwenkbar sind in einer parallelen Vertikalebene zu jener der entsprechenden Seitenkanten (4, 4'), wodurch die Metallstange (6) beim Schwenken um 180° zwei Positionen einnehmen kann, wobei sie in der ersten Position (A) in Bezug auf die Vorderkante des Kochherdes (1) erhöht ist und in der zweiten Position (B) auf dem hinteren Teil des Kochherdes (1) ruht, wobei die geformten Arme (8, 8') teilweise nach oben abstehen, ohne das vollständige Absenken der Abdeckung (10) auf den Kochherd zu behindern.

Revendications

1. Dispositif destiné à empêcher des récipients placés sur une table de cuisson (1) comportant des bords latéraux surélevés (4, 4') et un couvercle (10), de basculer accidentellement, ledit dispositif (2) comprenant une barre métallique (6), sensiblement parallèle au bord avant de la table de cuisson (1), qui est reliée de façon à pivoter comme sur des charnières à chaque côté de ladite table de cuisson par une partie d'extrémité (3, 3'), caractérisé par le fait que lesdites parties d'extrémité (3, 3') sont parallèles à la barre métallique (6), à laquelle elles sont reliées par des bras respectifs de configuration particulière (8, 8') comportant des parties (5, 5') et sont montées pour pivoter approximativement au milieu de chacun des bords latéraux surélevés respectifs (4, 4') de la table de cuisson, lesdits bras (8, 8') de configuration particulière formant un angle par rapport aussi bien à la barre (6) qu'aux parties (5, 5') afin de maintenir la barre de métal à un niveau parallèle différent aux pièces (5, 5'), lesdites pièces (5, 5') étant reliées auxdites parties d'extrémité (3, 3') auxquelles elles sont perpendiculaires, et avec lesquelles elles se trouvent dans un même plan, et étant susceptibles d'être tour-

nées autour de l'axe longitudinal desdites parties d'extrémité, dans un plan vertical parallèle à celui du bord latéral respectif (4, 4') de la table de cuisson ladite barre (6) pouvant prendre deux positions opposées, en tournant de 180°, ladite barre étant, dans la première (A) de ces positions, surélevée par rapport au bord avant de la table de cuisson, et restant dans la seconde (B) de ces positions à l'arrière de ladite table de cuisson (1), à partir de laquelle les bras (8, 8') de configuration particulière sont partiellement surélevés, à une hauteur telle qu'ils permettent l'abaissement complet du couvercle (10) sur la table de cuisson.

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