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(54) **DEVICE FOR FIXING A RESISTANCE ELEMENT TO CATERING EQUIPMENT**

EINRICHTUNG ZUM BEFESTIGEN EINES WIDERSTANDSELEMENTS AN CATERING-GERÄTEN
DISPOSITIF POUR FIXER UN ELEMENT RESISTANT A UN EQUIPEMENT DE CUISINE

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(73) Proprietor: **I.R.C.A. S.p.a. Industria Resistenze
Corazzate e Affini
31020 San Vendemiano (IT)**

(72) Inventors:
• **BUOSI, Alberto**
I-31020 San Vendemiano (IT)
• **DE NONI, Paolo**
I-31020 San Vendemiano (IT)

(74) Representative: **Piovesana, Paolo**
Via F. Baracca, 5/a
30173 Venezia-Mestre (IT)

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Description

[0001] The present invention relates to a device for fixing a resistance element to catering equipment.

[0002] Devices for fixing electrical resistance elements to catering equipment are known, comprising a bush to which the resistance element terminals are welded, these then being inserted into a counter-bush welded to the equipment.

[0003] The seal between the bush and counter-bush is provided by O-rings housed in suitable seats provided on the bush.

[0004] However, this known device presents certain drawbacks, and in particular:

- lengthy construction time for welding the counter-bush to the vessel,
- high risk of deformation of the equipment vessel and of the counter-bush during welding,
- risk of compromising the system seal by welding,
- high cost of these operations.

[0005] GB 1470366 discloses thermally controlled immersion heater comprising a heating unit H and a clamping unit C, the heating unit H having a flat or dished metal mounting head, and the clamping and heating units being mounted on opposite sides of a vessel wall and being clamped around an access aperture therein by a plurality of connecting means.

[0006] An object of the invention is to eliminate these drawbacks by providing a means for fixing the counter-bush to the equipment which ensures bush/counter-bush rotation and the relative hydraulic seal.

[0007] This and further objects which will be apparent from the ensuing description are attained according to the invention by a device for fixing a resistance element to catering equipment as claimed in claim 1.

[0008] The present invention is further clarified hereinafter with reference to the accompanying drawing showing an exploded perspective view of the device of the invention.

[0009] As can be seen from the figure, the fixing device of the invention comprises substantially a bush 2 brazed or welded to the terminals 4 of an electrical resistance element 6, the bush 2 comprising on its outer lateral surface a plurality of annular seats in which O-ring seals 8 are housed.

[0010] The device of the invention comprises a counter-bush 10 presenting a flange 12 and a cylindrical portion 14 insertable through a corresponding hole 16 provided in the wall 18 of the equipment vessel and secured thereto by a ring nut 20.

[0011] When the counter-bush 10 has been fixed to the bottom of the equipment, the bush 2 is inserted into the counter-bush and locked thereto by inserting a set-screw 22 which passes through the portion 14 of the counter-bush and engages in an annular groove 24 provided in the lateral surface of the bush, to enable it to

rotate axially but to prevent its withdrawal.

[0012] From the foregoing it is apparent that the device of the invention presents numerous advantages, and in particular:

- it reduces the counter-bush/vessel assembly time as the former is simply screwed onto the latter,
- it requires no work by third parties as assembly is easily carried out by inexperienced personnel,
- it eliminates any deformation of the vessel and counter-bush,
- it enables the resistance element to be rotated in order to clean the vessel.

Claims

1. A device for fixing a resistance element to catering equipment, comprising:

- a counter-bush (10) insertable into a suitable seat (16) provided in the equipment vessel and removably fixable to it,
- a bush (2) secured to the resistance element (6) and engageable with said counter-bush (10),
- seal means (8) between said bush and said counter-bush,
- engaging means (22) of said bush when inserted into said counter-bush **characterised in that** said means (22) consists of a setscrew (22) which is transversely inserted through the lateral surface (14) of the counter-bush and engages in an annular groove (24) provided in the lateral surface of the bush

2. A device as claimed in claim 1, **characterised in that** the bush (2) is welded to the resistance element terminals.

3. A device as claimed in claim 1, **characterised in that** the bush (2) comprises on its outer lateral surface a plurality of annular seats in which O-ring seals (8) are housed.

4. A device as claimed in claim 1, **characterised in that** the counter-bush comprises a flange (12) and a cylindrical portion (14) insertable into the seat (16) and engageable by a ring nut (20).

Patentansprüche

1. Vorrichtung zum Befestigen eines Widerstandselements an einem Catering-Gerät, umfassend:

- eine Gegenbuchse (10), die in eine geeignete Aufnahme (16) eingesetzt werden kann, die im Gerätekessel vorgesehen ist, und an diesem

lösbar befestigt werden kann,

- eine Buchse (2), die an dem Widerstandselement (6) befestigt ist und mit der Gegenbuchse (10) in Eingriff gebracht werden kann,
- Dichtungsmittel (8) zwischen der Buchse und der Gegenbuchse,
- Eingriffsmittel (22) für den Eingriff der Buchse, wenn sie in die Gegenbuchse eingesetzt ist, **dadurch gekennzeichnet, dass** dieses Mittel (22) aus einem Gewindestift (22) besteht, der quer durch die Seitenfläche (14) der Gegenbuchse eingesetzt ist und in eine Ringnut (24) eingreift, die in der Seitenfläche der Buchse vorgesehen ist.

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2. Vorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** die Buchse (2) an die Endstücke des Widerstandselements geschweißt ist.

3. Vorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** die Buchse (2) auf ihrer äußeren Seitenfläche eine Vielzahl von ringförmigen Sitzen umfasst, in denen O-Ring-Dichtungen (8) untergebracht sind.

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4. Vorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** die Gegenbuchse einen Flansch (12) und einen zylindrischen Abschnitt (14) umfasst, der in die Aufnahme (16) eingesetzt und von einer Ringmutter (20) in Eingriff genommen werden kann.

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Revendications

1. Dispositif pour la fixation d'un élément de résistance à un appareil de cuisine, comprenant :

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- une contre-douille (10) insérable dans un logement (16) approprié prévu dans le récipient d'équipement et pouvant être fixée de manière amovible à celui-ci,

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- une douille (2) fixée à l'élément de résistance (6) et pouvant s'accoupler avec ladite contre-douille (10),

- un moyen d'étanchéité (8) entre ladite douille et ladite contre-douille,

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- un moyen d'accouplement (22) de ladite douille quand elle est insérée dans ladite contre-douille, **caractérisé en ce que** ledit moyen (22) consiste en une vis (22) qui est insérée de manière transversale à travers la surface latérale (14) de la contre-douille et s'engage dans une rainure annulaire (24) prévue dans la surface latérale de la douille.

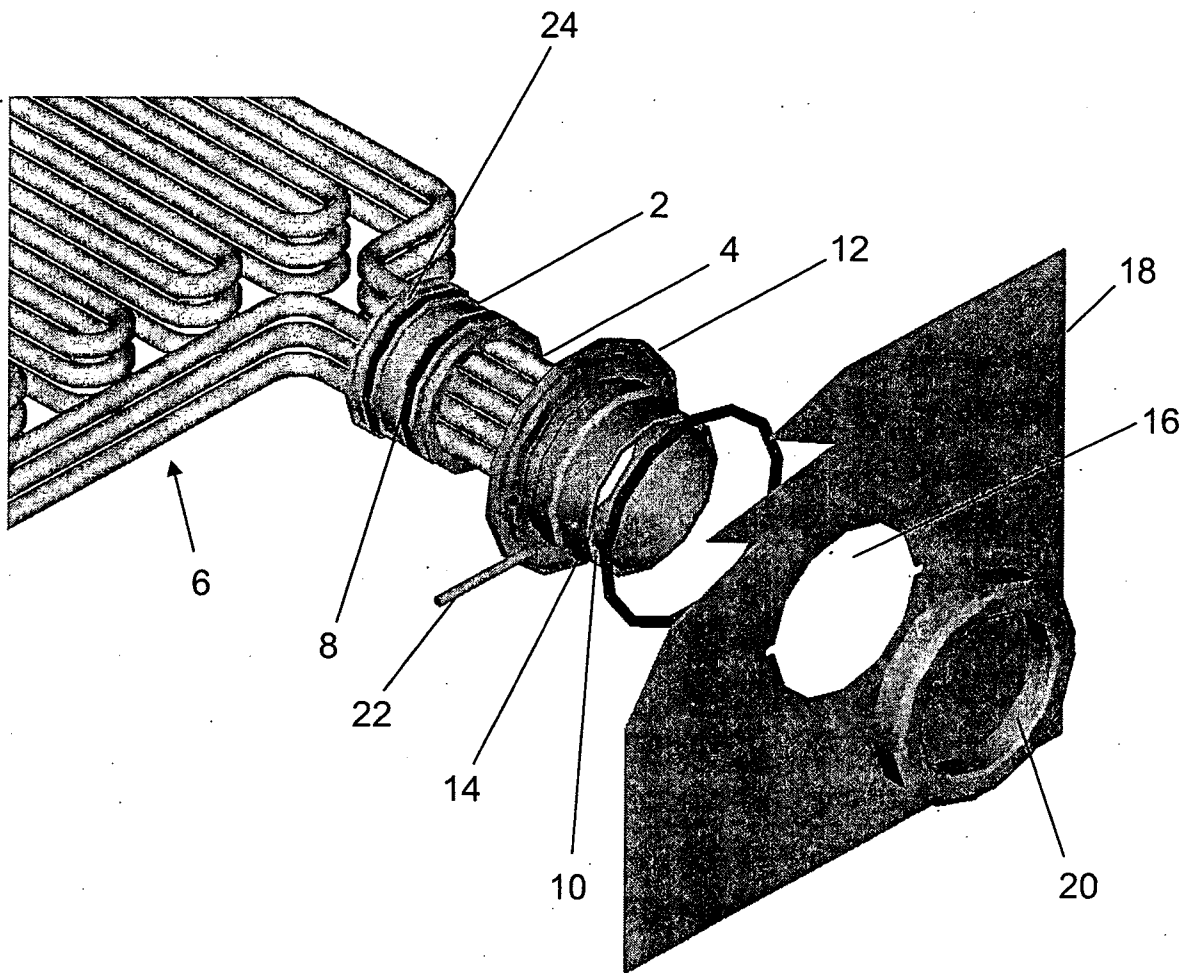
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2. Dispositif selon la revendication 1, **caractérisé en ce que** la douille (2) est soudée aux extrémités de l'élément de résistance.

3. Dispositif selon la revendication 1, **caractérisé en ce que** la douille (2) comprend sur sa surface latérale externe une pluralité de logements annulaires dans lesquels des joints toriques (8) sont logés.

4. Dispositif selon la revendication 1, **caractérisé en ce que** la contre-douille comprend une bride (12) et une partie cylindrique (14) insérable dans le logement (16) et pouvant s'accoupler par un écrou cylindrique (20).



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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