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54 **Automatic unit for igniting appliances containing gas rings.**

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Description

This invention relates to a gas cooking appliance comprising an automatic ignition unit.

More specifically, the invention relates to those appliances provided with at least one gas ring with which a known feed tap is associated.

For safety reasons, the tap can only be opened after axially pushing the corresponding operating knob against elastic means which oppose said knob.

In this respect, the stem which operates the valve part for opening and closing the tap is associated with the body of the tap by a bayonet connection which prevents undesirable rotation of the stem when the tap is closed.

For igniting the gas rings of such appliances there has for some time been a general use of devices comprising for each gas ring an electrical ignition head connected to a convenient source of electricity via a control member.

However, such ignition devices have proved unsatisfactory from both the safety and constructional viewpoints.

Firstly, the use of one control member per gas ring results in constructional complexity and additional cost.

Secondly, to ignite each gas ring two operations have to be carried out, namely the opening of the corresponding tap and the operation of the respective ignition control member, and it can happen that a tap is opened without the ignition member being automatically operated.

In addition, if a previously ignited gas ring becomes extinguished, to reignite it the user has firstly to identify the corresponding tap and then operate the respective control member.

It follows that under such circumstances identifying the open tap associated with the extinguished gas ring is not always simple and quick, and a gas leakage can occur which can be dangerous and is certainly annoying to the user.

In order to obviate the aforesaid drawbacks, in FR-A-1382571 an automatic ignition unit is shown, associated with gas opening and closure taps which is sensitive to the axial sliding of each individual tap, and which in its turn operates a common electrical operating member for the ignition means associated with each gas ring.

The automatic ignition unit comprises a common gas ring ignition control member which is hinged to the body of the cooking stove or cooking hob on an axis parallel to the line on which the taps lie, is disposed transversely to the sliding direction of the respective stems, and is coupled to each of these latter in such a manner that engagement occurs in only one direction.

Said common ignition control member is made to rotate in one direction by the opening action of any

one of said stems, and in the opposite direction by elastic repositioning means acting against the axial sliding of the stems.

A common control device is also provided by which all the gas ring ignition heads are energized and de-energized when the common control member is made to rotate by the axial movement of at least one of the tap stems.

Many advantages are attained by the aforesaid means.

In this respect, firstly, to ignite a gas ring it is necessary only to open the respective tap.

Again, because of the presence of said common control member, to reignite a gas ring which has accidentally been extinguished it is no longer necessary to identify the corresponding tap, it being sufficient merely to press the knob of any tap.

The object of the present invention is to improve the above automatic ignition unit in order that it is simple and inexpensive to manufacture it and it is of little encumbrance. This object is attained by the present invention as it is characterised in claim 1.

The characteristics and constructional merits of the invention will be apparent from the detailed description given hereinafter with reference to the accompanying figures, which show a particular preferred embodiment thereof by way of non-limiting example.

Figure 1 is a partial perspective view of the invention associated with a cooking hob of the built-in type. Figures 2 and 3 are sections on the lines II-II and III-III of Figures 1 and 2 respectively, to an enlarged scale.

Said figures show a cooking hob indicated overall by 1, comprising two superposed half-casings 2 and 3 respectively, these latter consisting of two punched and drawn metal sheets.

Although not shown it should be noted that the two half-casings 2 and 3 are conveniently fixed together and are spaced apart such as to receive the elements stated hereinafter.

Whether or not the cooking hob 1 is intended to be built into a working top or another equivalent such, as a kitchen unit is unimportant.

In the usual manner the upper half-casing 2 is provided with a sunken portion 20 for collecting liquids which spill for example during cooking, a series of gas rings 21 being associated with said sunken portion.

Each individual gas ring 21 is connected to a feed pipe 4 which branches from a front manifold 40 via a respective tap 5. The manifold 40 and taps 5 are fixed to a common support 6 by a series of clamping devices 60 (see Figure 2), the operating stems 50 of said taps 5 extending above the upper half-casing and above an overlying masking plate 7 to receive the corresponding operating knobs 51.

According to the invention, to the rear of each

knob 51 there is provided a thrust ring 8, which is mounted on the respective stem 50 to lie between a shoulder on this latter and a circlip 9.

In addition, in contact with the lower face of said thrust ring 8 there are provided two diametrically opposing salient teeth 10 which branch from the arms of a fork-shaped element 11 embracing the stem 50.

As can be seen in Figure 1, the fork-shaped elements 11 are formed integrally with an elongate member 12 which is positioned to the side of the taps 5 and is bent to form a double step when viewed in cross-section (see Figure 2).

On the opposite side to said elements 11 the member 12 comprises at least two slots 13 (Figures 1 and 3) which receive respective tongues 14, these latter having an end portion which can be bent to prevent withdrawal of the member 12 (Figures 1 and 2).

The engagement between said tongues 14 and slots 13 is such as to enable the member 12 to rotate freely about the upper end of the support 6.

In addition, at one end of the member 12 there is provided an appendix 15 (Figures 1 and 3) which rests on the pushbutton 16.

This latter is associated with an ignition device 17, for example of piezoelectric type, which is connected to the ignition heads 22 provided immediately to the side of the gas rings 21.

The operation of the invention is apparent.

Each time any knob 51 is pressed, rotated and released to open a tap 5, the device 17 is simultaneously operated via the appendix 15 and pushbutton 16, to energize all the heads 22.

The device 17 can be of the type which is operated either on pressing the pushbutton 16 or on releasing the pushbutton 16 after it has been pressed.

The merits and advantages of the invention are apparent from the foregoing and from an examination of the accompanying figures.

Claims

1. A gas cooking appliance comprising an automatic ignition unit and a series of gas rings (21) with which there are associated respective electrical ignition heads (22) and a corresponding number of aligned taps (5), these latter containing an operating stem (50) provided with knob (51) for sliding and rotating it, comprising a common ignition control member (12) which is hinged to the appliance (1) on an axis parallel to the line on which the taps lie, is disposed transversely to said stems (50), and is coupled to each of these latter by lever means (11) against which the stem acts only when translationally moving in one specific direction so that said member (12) is able to rotate in response to the translation movement of any one of the stems (50) to press a common

pushbutton (16) which operates an ignition device (17) common to all the ignition heads; characterised in that said member (12) comprises a flat elongate element which on one side is provided with slots (13) which receive respective tongues (14) for its hinging to the appliance (1) and on the other side is provided with a number of forks (11) equal to the number of appliance taps (5), each individual fork (11) being mounted on a tap stem (50) and embracing this latter to act on a thrust ring (8) mounted on the stem and axially fixed to this latter.

2. A unit as claimed in the preceding claim, characterised by comprising elastic means for repositioning the member (12).

Patentansprüche

1. Ein Gas-Kochapparat mit automatischer Zündung und einer Reihe von Gas-Ausströmern (21), mit denen jeweils elektrische Zündköpfe (22) und eine entsprechende Anzahl von ausgerichteten Hähnen (5) kombiniert sind, welche einen Schaft (50) mit Schiebe- und Drehknopf (51) aufweisen, mit einer herkömmlichen Zündkontrollvorrichtung (12), die mit dem Apparat (1) parallel zu der Achse, auf der die Hähne liegen, verbunden ist, quer zu den genannten Schäften (59) liegt und mit ihnen je durch Hebelvorrichtungen (11) verbunden ist, auf die der Schaft nur drückt, wenn er in eine bestimmte Richtung verschoben wird, so daß die genannte Vorrichtung (12) in Reaktion auf die Verschiebung eines jeden der Schäfte (50) drehen kann, um einen gemeinsamen Druckknopf (16) zu drücken, der die Zündvorrichtung (17) für alle Zündköpfe betätigt; dadurch gekennzeichnet, daß die genannte Vorrichtung (12) ein flaches, längliches Element aufweist, das auf einer seiner Seiten Schlitze (13) aufweist, die entsprechende Zungen (14) zur Befestigung am Apparat (1) aufnehmen, und auf seiner anderen Seite eine der Anzahl der Hähne (5) entsprechende Zahl von Gabeln (11) aufweist, wobei jede einzelne Gabel (11) auf einen Hahn-Schaft (50) befestigt ist und diesen umschließt, um gegen einen Druckring (6) zu wirken, der axial auf dem Schaft befestigt ist.
2. Ein Apparat gemäß dem vorausgehenden Anspruch, dadurch gekennzeichnet, daß er eine elastische Rückführ-Vorrichtung für die Vorrichtung (12) aufweist.

Revendications

1. Appareil de cuisson à gaz comportant une unité d'allumage automatique et une série de brûleurs à gaz annulaires (21) auxquels sont associées des têtes d'allumage électrique correspondantes (22) et un nombre correspondant de robinets alignés (5), ces derniers comportant une tige de commande (50) munie d'un bouton (51) pour la faire coulisser et tourner, comprenant un élément de commande d'allumage commun (12) qui est articulé sur l'appareil (1) selon un axe parallèle à la ligne selon laquelle sont disposés les robinets, est disposé transversalement par rapport auxdites tiges (50), et est couplé à chacune de ces dernières par des moyens formant levier (11) à l'encontre desquels la tige agit seulement lorsqu'elle est déplacée en translation dans une direction spécifique de telle sorte que ledit élément de commande (12) est susceptible de tourner en réponse au mouvement de translation de l'une quelconque des tiges (50) pour presser sur un bouton poussoir commun (16) qui actionne un dispositif d'allumage (17) commun à toutes les tiges d'allumage ; caractérisé en ce que ledit élément de commande (12) comporte un élément allongé plat qui, sur un de ses côtés comporte des fentes (13) qui reçoivent des languettes correspondantes (14) pour son articulation sur l'appareil (1) et, sur son autre côté, comporte un certain nombre de fourches (11) égal au nombre de robinets de l'appareil (5), chaque fourche individuelle (11) étant montée sur une tige de robinet (50) et embrassant cette dernière pour agir sur une bague de poussée montée sur la tige et solidarisée axialement de cette dernière.
2. Unité telle que revendiquée dans la revendication précédente, caractérisée en ce qu'elle comporte un moyen élastique pour repositionner l'élément de commande (12).

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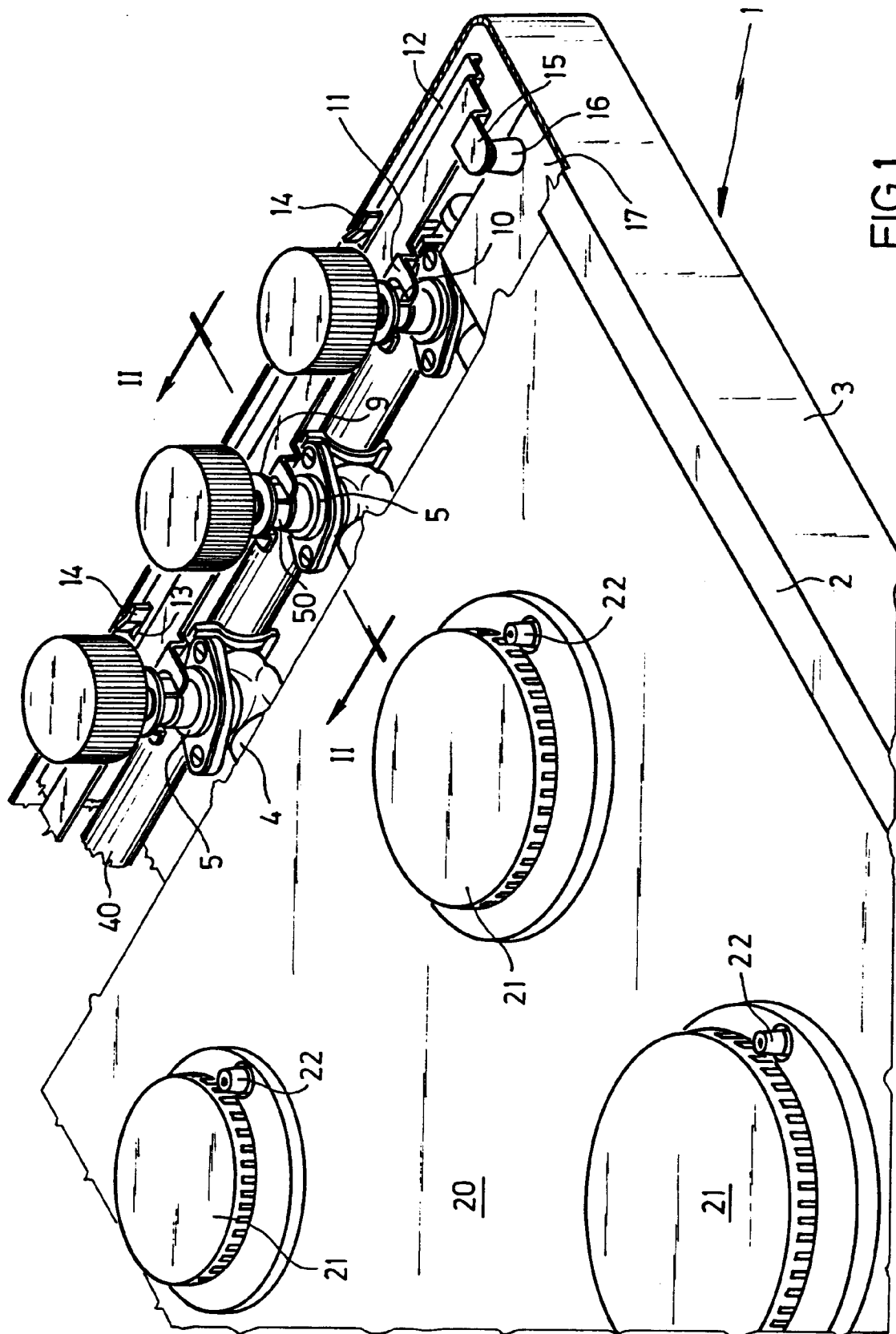


FIG. 1

