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(54) **Ignition module push ring**

(57) This invention is related with the push ring that can be assembled directly on the gas valve stem and enables the control of the ignition unit known as push type and assembled optionally on the gas valve used

with domestic cookers. The invention is made of aluminum, plastics and such parts by the injection method and it is assembled and utilized directly on the gas valve stem without requiring any extra operations.

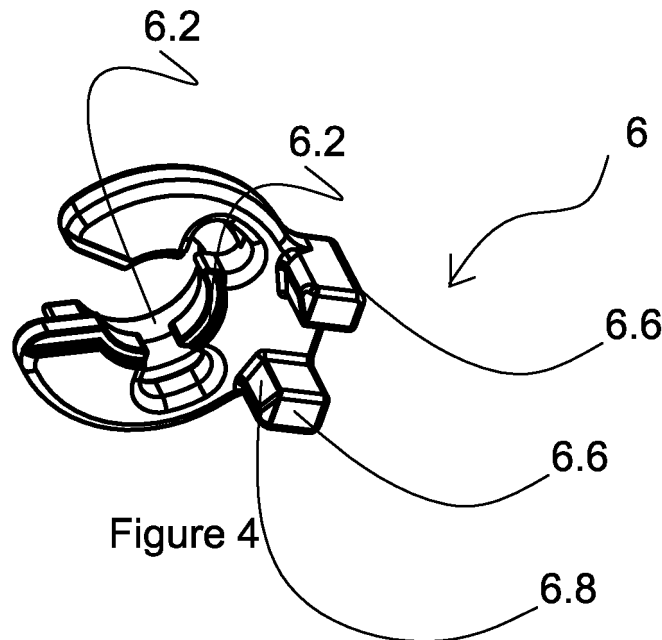


Figure 4

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Description

TECHNICAL FIELD

[0001] This invention is related with the push ring that can be assembled directly on the gas valve stem and enables the control of the ignition unit known as push type and assembled optionally on the gas valve used with domestic cookers. The invention is made of aluminum, plastics and such parts by the injection method and it is assembled and utilized directly on the gas valve stem without requiring any extra operations. Design of the invention enables its utilization easy and clear.

PRIOR ART

[0002] Today, there are generally two application fields of the gas valves using push type ignition module. The first is; providing ignition by pushing directly the button in push type ignition module to fire the oven. With systems using this type of control button, it is not possible to use ignition module as standard type because the buttons are changed producers-based. It is necessary to provide individual ignition modules for all types of cooking devices. And this increases the expenses of the method.

[0003] The second and more accepted system today is; the pin, stem ring or ring are enabled to move together with the stem with forward motion given to the gas valve stem, by placing at least one pin, stem ring or ring on the gas valve stem in the cooker and in push type ignition module. With this motion, pin, stem ring or ring move push type ignition module and the circuit in the ignition module is completed and ignition takes place. Oven and cooker producers rather prefer second method. The reason of this is oven or cooker producers can freely make button designs that are a visual element on the oven. By this way, oven or cooker producers can design a button as they wish. As design has become a significant element today, this has become a preferable system for oven or cooker producers.

[0004] Patent applications for state of art and examples showing how our invention overcomes the current technique are mentioned below.

[0005] A solution with state of art is a method mentioned in TR 2007 01793 patent applications. In this method, the washer used as a standard to make pressure to push type ignition module is used as retaining ring for fixing to gas valve stem. This system requires more expense and more workmanship. But our invention can be assembled directly on gas valve stem without using a second fixing element and works.

[0006] Another method developed for push type ignition modules is, a push washer belonging to ITW Industrial Components S.r.l. with 23/07/2004 date and 1 500 881 number. The aforementioned washer in this document is valid for 08 mm stems and nails on this washer into which stems are chained continue radially along a certain surface. Washer is cut from end to end within a

certain cross-section. At the same time, as this material is plastic and also with help of the slot it is settled on the stem in desired way. But if the slot is much on the stem, full touch to ignition module head that is chained to the gas valve's lid cannot be obtained and so ignition cannot be made. At the same time a little strength is required with the use of devices like screwdriver to remove washer. This is a method which is not preferred by many of the oven manufacturers. In our invention for the mentioned installation method there are columns enabling clamping the firing module. Thanks to these wings, the invention is easily passed to the stem and enabled to operate. Besides when it is required to be taken off it can be easily uninstalled from the clearance located at the front. Thanks to this the invention can be uninstalled without any supportive devices.

[0007] Another method developed for pushing type ignition modules is the push ring registered on 13/11/2008 with number W02008/135839A2 on behalf of ITW Industrial Components S.r.l. Company. At the design of this push ring, it was inspired from the moon stem ring having a standard registered number as 6799 number in DIN norm and used as a standard at present. This washer is a washer which can be installed on the gas valve stem without any fixing stem ring and can move with the gas valve stem on its own. The washer overcomes aforementioned technical problems. Whereas, installing this washer reversely means not functioning of the system. Besides the washer has little nails which help to stay stable during the turning of the gas valve stem. But the user can not notice this and can install the washer reversely and still in that case the system will not operate. Mentioned problems were eliminated with our invention completely. The user will be able to install the washer to the system easily and will be able to uninstall without the help of any device (such as screwdriver). As it is the case in the patent application W02008/135839A2. Whereas, with the clamping wing clearly seen and applied in our invention the user can see where to install immediately and the invention are settled on the stem as it should be.

AIMS OF THE INVENTION

[0008] The aim of the invention is to enable a control device which can be used at gas valves aiming to solve aforementioned technical problems. This device will be isolated from indicated disadvantages. Especially the aim of this device is providing a standard type push ring.

[0009] Another aim of the invention is having a design giving an idea to the user about how to install it.

[0010] Another aim of the invention is having a quick and cost free push ring installation. It will be possible to manufacture it in all sizes and will have an extreme reliability rate.

[0011] The structural and characteristic features and all advantages of the invention can be better understood thanks to figures and reference made to figures and consequently it is required to make the evaluation by taking

into consideration these figures and detailed explanation.

BRIEF DESCRIPTION OF FIGURES

[0012]

Figure 1, perspective appearance of push washer installed on secure gas valve

Figure 2, perspective appearance from the other side of push washer installed on secure gas valve

Figure 3, perspective appearance of push washer

Figure 4, perspective appearance of push washer from the other side

Figure 5, side appearance of push washer

Figure 6, sectional appearance of push washer

Figure 7, perspective appearance of gas valve stem

REFERENCE SIGNS LIST

[0013]

1. Gas valve

1.1. Gas valve stem

1.1.1. Gas valve stem channel

2. Ignition Module

2.1. Head of ignition module

2.2. Neck of ignition module(2)

2.3. Outer diameter of the neck(2.2) of ignition module(2)

3. Main gas distribution pipe

4. Clamp

5. Screws

6. Push ring

6.1. Clearance located at the front side

6.2. Circular bearing on above and down sides

6.3. Push washer above surface

6.4. Holes on above surface(6.3)

6.5. At least one, three nails

6.6. Columns at the back side

6.7. Surface supporting columns

6.8. Counter bones inside the columns(6.6)

DETAILED EXPLANATION OF THE INVENTION

[0014] The positive advantages and other features of this invention will be clearly understood with explanations

done below. Limitless examples and references with attached pictures will provide a better understanding. Figure 1, which is indicating a perspective appearance of the push washer installed on the gas valve, is the appearance enabling to form an idea about the invention. Figure 2, 3 and 4, are the horizontal and vertical appearances of the push washer in Figure 1. These appearances are the ones enabling to see the important details in a large scale.

[0015] Indicated appearance in Figure 2, 3, 4 and 1 clearly reveals that this push ring is designed so as to secure control of the ignition module of cooking devices, when evaluated (most of the details are already known, so in order to obtain simplicity no deep detailing is done).

[0016] As can be understood from Figure 1, a gas valve (1) with an ignition module(2) is simply connected to the main gas distribution pipe(3) with the help of a clamp(4) and screws(5). So as to place the push ring(6) inside the stem(1.1) located inside the gas valve, a channel(1.1.1) is formed on the stem(1.1). The deepness and height of this channel(1.1.1) is structured in compliance with the use of the invention.

[0017] The push ring(6) subject to the invention has a design giving an idea to the user about how to install it.

25 The clearance(6.1) located at the front of the invention is open enough to perform bearing in the channel(1.1.1) on the stem(1.1). From that clearance(6.1) the push ring (6) can easily be installed to the stem (6). There are circular bearings to prevent the bearing upwards and downwards of the push ring(6) against reactive power to come from the ignition module during the forward movement of the stem(1.1). Thanks to this, at reactive power to come from the ignition module, the bearing of the push ring(6) is prevented. There are holes(6.3) to ease the flexion of the push ring(6) while the stem(1.1) is installed. Thanks to these holes(6.4) the flexion of the push ring(6) is eased. There are three nails(6.5) with the condition of having at least one, enabling the push ring(6) to clamp the stem (1.1) strongly.

40 [0018] The part of the push ring(6) enabling the user to understand how to install and to use is the columns (6.6) located at the back side. These columns are designed so as to have a wider space from the head of the ignition module(2.1). In addition the length of the surface supporting columns(6.7) is longer than the width/distance from the head of the ignition module(2.1) to the center of the gas valve. As it can be understood from the figures these columns(6.6) give an idea to the user about how to install as it is like a locking mechanism.

50 [0019] The length of these columns(6.6) are designed so as to prevent any crash to the neck(2.2) of the ignition module(2) when the gas valve stem(1.1) In addition counter bones inside the columns(6.8) are designed so as to prevent any crash to the outer diameter(2.3) of the neck (2.2) of the ignition module(2).

[0020] The push ring invented can be used in all gas valves where the push type ignition module is used.

[0021] This application protection scope cannot be lim-

ited with aforementioned examples. It is clear that an expert in technique can implement the innovation put forward at the invention for similar structuring at different field. As a consequence it is obvious that these kinds of structuring will lack innovation criterion.

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Claims

1. At gas valves used at domestic cookers the push type ignition module is push ring(6) used with ignition module and **characterized in that** it has a clearance (6.1) enabling the easy installation to the gas valve stem. 10
2. The push ring(6) according to claim 1, **characterized in that** circular bearings(6.2) preventing the movements of the bearing upwards and downwards of the push ring(6) against reactive power to come from the ignition module during the forward movement of the stem(1.1). 15 20
3. The push ring(6) according to claim 1, **characterized in that** holes(6.3) are located on the above surface(6.4) to ease the flexion of the push ring(6) while the stem(1.1) is installed. 25
4. The holes(6.4) on the above surface of the push ring (6.3) according to claim 3 **characterized in that** it can be applied once or more than once on the above surface of the push ring(6.3). 30
5. The push ring(6) according to claim 1, **characterized in that** there are three or more than three nails (6.5) with the condition of having at least one in the inner side of the push ring(6). 35
6. The push ring(6) according to claim 1, **characterized in that** columns enables the user to understand how to install and to use is the columns(6.6) located at the back side. 40
7. The columns(6.6) according to claim 6, **characterized in that** the distance among the columns(6.6) are wider than the head of the ignition module(2.1). 45
8. The columns(6.6) according to claim 6, **characterized in that** counter bones(6.8) are designed so as to prevent any crash to the outer diameter(2.3) of the neck(2.2) of the ignition module(2). 50
9. The push ring(6) according to claim 1, **characterized in that** the length of the surface supporting columns(6.7) is longer than the width/distance from the head of the ignition module(2.1) to the center of the gas valve. 55

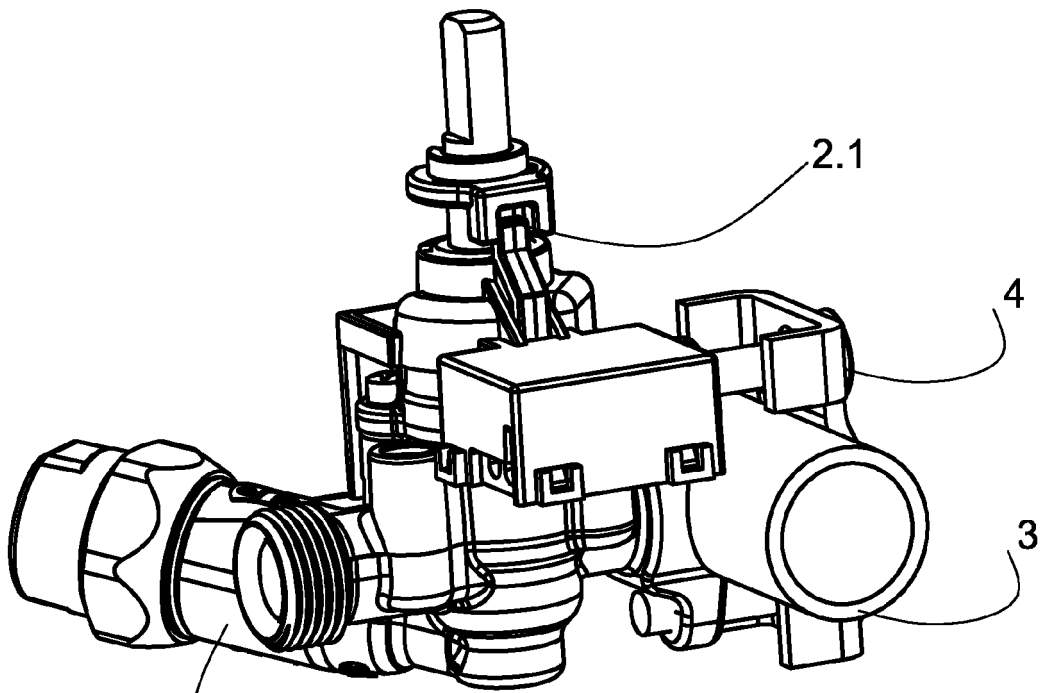


Figure 1

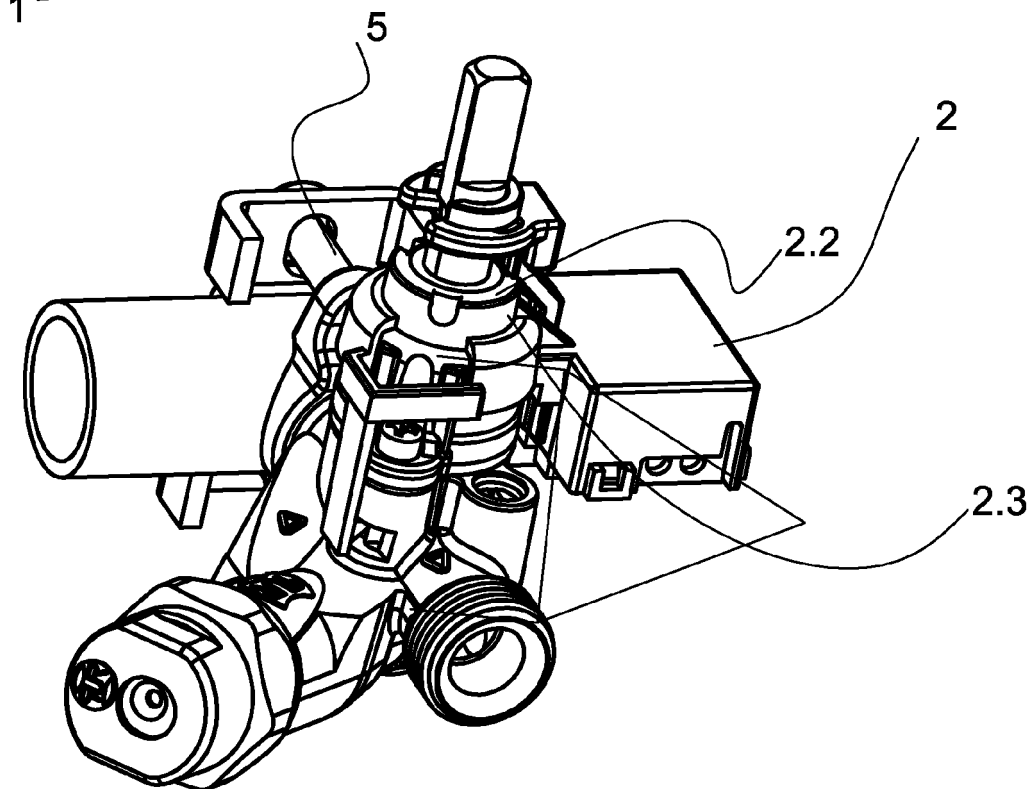
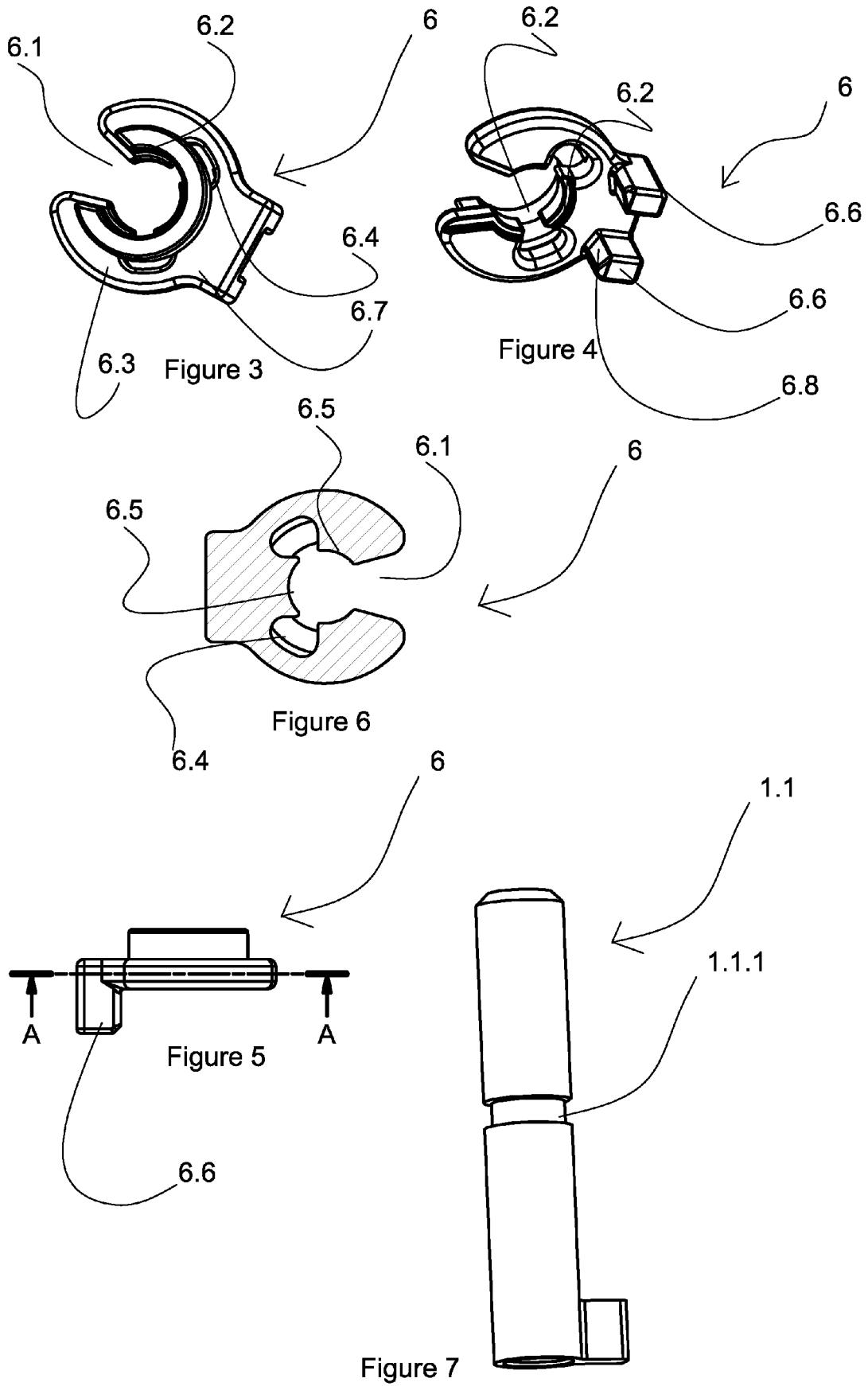


Figure 2



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- TR 200701793 [0005]
- WO 2008135839 A2 [0007]