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(11)

EP 2 426 416 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

07.03.2012 Bulletin 2012/10

(51) Int Cl.:

F24C 3/10 (2006.01)

(21) Application number: **11159987.4**

(22) Date of filing: **28.03.2011**

(84) Designated Contracting States:

**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

Designated Extension States:

BA ME

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(30) Priority: **27.08.2010 TR 201007174**

(54) Carrier for ignition module on gas valve

(57) The invention is related to a plastic carrier (4) designed to carry the ignition module (5) enabling the furnace burners to be flamed in the gas taps (1) and the ignition modules enabling constant electricity transmittance to the electric grill part at the bottom part of the furnaces. This carrier can be mounted at the tap (1) with-

out requiring any extra processes. The switches of the ignition modules (5) mounted on the carrier (4) that is easily mounted on the system without requiring any screws are enabled to touch each other and electricity current is enabled to pass by means of the disc (6) mounted on the tap shaft.

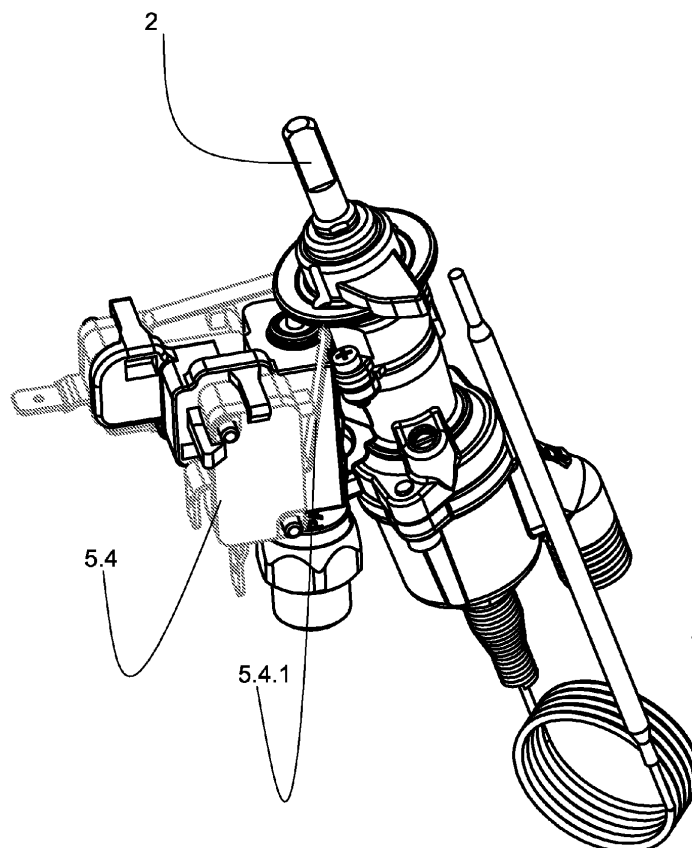


figure 2

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Description

TECHNICAL FIELD

[0001] The invention is related to plastic carrier designed to carry the ignition module enabling the furnace burners to be flamed in the gas taps and the ignition modules enabling constant electricity transmittance to the electric grill part at the bottom part of the furnaces. This carrier can be mounted at the tap without requiring any extra processes. The switches of the ignition modules mounted on the carrier that is easily mounted on the system without requiring any screws are enabled to touch each other and electricity current is enabled to pass by means of the disc mounted on the tap shaft.

[0002] These types of carriers are known and used currently. However, no study similar to our invention is encountered in the literature. However similar examples are given in the background art section below.

BACKGROUND ART

[0003] There is a patent application regarding a press type ignition module in the application by the company BSPARKS S.P.A. no WO 01/02776A1 on 23.06.2000. As seen from figure 1 in this application, the flaming module is adjusted in a way to pass into the cap part. Ignition modules are generally made of plastic so as for this ignition module to pass easily. This design is the ignition module and it can be mounted directly on the tap cap. The subject matter of the invention is only about the ignition module, wherein it does not mention of any carriers making carrying process.

[0004] There is a patent application regarding a rotary type electric ignition module in the application by the company CROUZET no DE1971110UU on 30.09.1966. This type of a ignition module requires a carrier system. The carrier that we developed for these types of ignition modules enables this ignition module to be integrated into the system by means of being mounted on the system.

THE OBJECT OF THE INVENTION

[0005] The object of our invention is to mount the press type ignition module that will enable the other part to be heated by electricity while enabling a part to be heated by gas and the ignition module to enable the burners to be flamed in a way without screw.

[0006] Another object of the invention is for the carrier part to have a system that enables for it to be mounted on the tap without requiring any mechanic member and that prevents it from coming off easily after being mounted.

[0007] Another object of the invention is to enable more stable location of the ignition modules by means of providing the carrier part that is the subject of the invention to be centred by the pins on the tap stem. In current technique these types of ignition modules cannot be mounted

as stable and ignition problem is encountered.

[0008] Another object of the invention is to enable the preventing of an arc to occur in the ignition modules as a result of making the carrier from plastic in the tap.

[0009] Another object of the invention is to allow for a single ignition module when desired. One or more ignition modules can be mounted on the tap by the help of this carrier optionally.

[0010] Another object of the invention is to end the consumption of screw used in the montage of the modules and to provide a cost advantage by means of enabling an easy montage.

[0011] Another object of the invention is to be able to use the same ignition modules for different purposes without requiring different ignition modules.

[0012] The structural and characteristic features and all of the advantages of the invention will be more clearly understood from the figures given below and the detailed description written with reference to these figures and therefore the evaluation should be made regarding these figures and the detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013]

Figure 1 is the perspective view showing the carrier and ignition modules mounted on the tap,

Figure 2 is another side perspective view showing the carrier and the ignition modules mounted on the tap,

Figure 3 is the side perspective view showing the carrier and a single ignition module mounted on the tap,

Figure 4 is the sectional view showing the carrier and the ignition modules mounted on the tap,

Figure 5 is the 1st step view showing the montage of the carrier on the tap,

Figure 6 is the side view showing the carrier and the ignition modules mounted on the tap and the ignition of the ignition modules enabling the burners to be flamed by means of giving the tap shaft forward,

Figure 7 is the side view showing the carrier and the ignition modules mounted on the tap and ignition of the ignition module by means of rotating the tap shaft to the grill electricity part,

Figure 8 is the perspective view of the carrier,

Figure 9 is the other side perspective view of the carrier,

Figure 10 is the other side perspective view of the carrier,

Figure 11 is the perspective view of the ignition module,

Figure 12 is the perspective view of the tap stem,

Figure 13 is the perspective view of the segment

REFERENCE SIGNS LIST

[0014]

1. Gas tap

1.1. Pressing pin

1.2. Tap record

1.3. Tap stem

1.3.1. Pins on the tap stem (1.3.)

1.3.1.1. Outer diameter of the pin

2. Shaft

3. Segment

4. Carrier

4.1. Breach of the carrier

4.2. Diameter at the breach (4.1.) part

4.3. Key hole form

4.3.1. Angled surface at the inlet part

4.3.2. Inner diameter of the key hole form

4.4. Pins on the carrier

4.4.1. Centres of the pins

4.5. Tabbed bulges preventing the ignition module (5) from coming off

4.5.1. Tabs at the end part of these bulges (4.5.)

5. Ignition module

5.1. Montage hole centres

5.2. Height of the ignition module

5.3. Ignition module going to burners

5.3.1. Sheet of the ignition module going to burners

5.4. Ignition module going to the grill

5.4.1. Sheet of the ignition module going to the grill

6. Disc

6.1. Disc cam

15 DETAILED DESCRIPTION OF THE INVENTION

[0015] The carrier that is the subject of the invention will now be tried to be explained in detail. There is a longitudinal breach (4.1.) at the front enabling the carrier (4) to be mounted on the tap (1) and preventing the carrier (4) from coming off after being mounted on the tap (1). The width of this breach (4.1.) is bigger than the outer diameter of the pressing pin (1.1.) on the tap. The diameter (4.2.) at the breach (4.1.) part should be in a way to be bigger than the outer diameter of the tap record (1.2.) and exceed the centre axis. By this means as shown on Figure 5, the breach (4.1.) passes over the pressing pin (1.1.). At the second step of the carrier (4) montage, the carrier (4) is pushed until the lock form (4.3.) resembling key hole at the bottom part of the carrier (4) is penetrated on the pin (1.3.1.) on the tap stem (1.3.) by means of pushing the carrier (4) downwards. There is an angled surface (4.3.1.) at the inlet part of this key hole form (4.3.). This angled surface (4.3.1.) enables the inner diameter (4.3.2.) of the key hole form (4.3.) to be penetrated on the outer diameter (1.3.1.1.) of the tap stem pin (1.3.1.) by means of reaching to the key hole form (4.3.) in the case when the carrier (4) is pushed downwards. After the carrier (4) is completely penetrated, the inner diameter (4.3.2.) of the key hole form on the carrier exceeds the centre axis of the pin (1.3.1.) on the tap stem. Therefore, the coming off and rotation of the carrier (4) is prevented.

[0016] One of the important features of the invention is that after the carrier (4) is mounted it is mounted without using any connecting members (screw, segment, clips).

[0017] If desired, the ignition modules (5) can be mounted before or after the carrier (4) is mounted at the tap (1). The carrier that is the subject of the invention offers this optional choice freedom to the user. Ignition modules (5) can be easily mounted and demounted without requiring any mechanic connection (screw, segment, clips and etc.). There are two pins (4.4.) on the carrier so as to be able to mount a ignition module (5) on the carrier (4). The centres (4.4.1.) of these pins are the same with the montage hole centres (5.1.) of the ignition module. Also the outer diameters of these pins (4.4.1.) are smaller than the inner diameter of the montage holes of

the ignition module. The lengths of these pins (4.4.1.) are higher than the height (5.2.) of the ignition module. By this means, the pins guide the flaming module while the ignition module (5) is mounted. These pins (4.4.) can be one or more according to the design.

[0018] There are tabbed bulges (4.5.) on the carrier (4) preventing the ignition module (5) from coming back. There are tabs (4.5.1.) at the end part of these bulges (4.5.). These tabs (4.5.1.) prevent the ignition module (5) from coming off by means of standing on the ignition module (5). These bulges (4.5.) can be made one or more. Their amount can be increased or decreased according to the ignition module (5) to be placed.

[0019] Optionally, segment (3) can be put so as to prevent the carrier (4) from coming off by means of putting a groove (1.2.1.) to the tap record (1.2.). However, the carrier (4) will not come off in the case that the segment (3) is not used in this design. It can be mounted as an extra safety precaution.

[0020] There is a disc (6) on the tap shaft (2) so as to activate the ignition module (5.3.) going to the burners and to make pressure to the ignition module (5.3.) after the montage process is completed. Upon giving the tap shaft (2) forward, the switch mechanism is flamed (figure 6) by means of pushing the ignition module sheet (5.3.1.) downwards. If the ignition module (5.4.) going to the grill is desired to be flamed, the tap shaft (2) is rotated about 62° clockwise and the cam (6.1.) of the of the disc (6) pushes the sheet (5.4.1.) of the grill ignition module (5.4.) and electricity passage is allowed by means of turning on the switch. As long as the tap shaft (2) is in this position electricity current flow continues (Figure 7).

[0021] The invention is suitable for use in the gas taps in the domestic cooking devices; it is mounted during the montage of the ignition module to the tap without screw.

resembling a key hole preventing the carrier (4) from coming off and rotating.

3. Key hole lock form (4.3.) according to Claim 2; intended that the inner diameter (4.3.2.) of the key hole form (4.3.) is penetrated on the outer diameter (1.3.1.1.) of the tap stem pin (1.3.1.) by means of an angled surface (4.3.1.) at the inlet part reaching to the key hole form (4.3.) in the case of pushing the carrier (4) downwards.
4. Key hole lock form (4.3.) according to Claim 2; intended that the inner diameter (4.3.2.) of the key hole form on the carrier exceeds the centre axis of the pin (1.3.1.) on the tap stem after the carrier (4) is completely penetrated.
5. Carrier according to Claim 1; intended that there are one or more pins (4.4.) on the carrier so as to mount a ignition module (5) on the carrier (4) and depending on the amount of the carrier module (5).
6. Pins (4.4.) of the carrier (4) according to Claim 5; intended that the centres (4.4.1.) of these pins are the same with the montage hole centres (5.1.) of the ignition module.
7. Carrier according to Claim 1; intended that there are tabbed bulges (4.5.) preventing the ignition modules from coming off and preventing the ignition module (5) from coming off one or more carriers (4) on the carrier depending on the amount of the ignition modules (5).

Claims

1. Ignition module (5) carrier (4) which is suitable for use in the gas taps (1) used in the domestic cooking devices, which can be mounted on the tap without requiring any mechanic connection (screw, segment and etc.) and which enables the montage of the ignition modules (5) on the tap without being connected via any mechanic connectors (screw, segment and etc.); intended that there is a longitudinal breach (4.1.) at the front part enabling the carrier (4) to be mounted on the tap (1) and preventing the carrier (4) from coming off after being mounted on the tap (1) and that the width of this breach (4.1.) is bigger than the outer diameter of the pressing pin (1.1.) on the tap and that the diameter (4.2.) at the breach (4.1.) part is bigger than the outer diameter of the tap record (1.2.) and in a way to exceed the centre axis.
2. Carrier according to Claim 1; intended that there is a lock form (4.3.) at the bottom part of the carrier

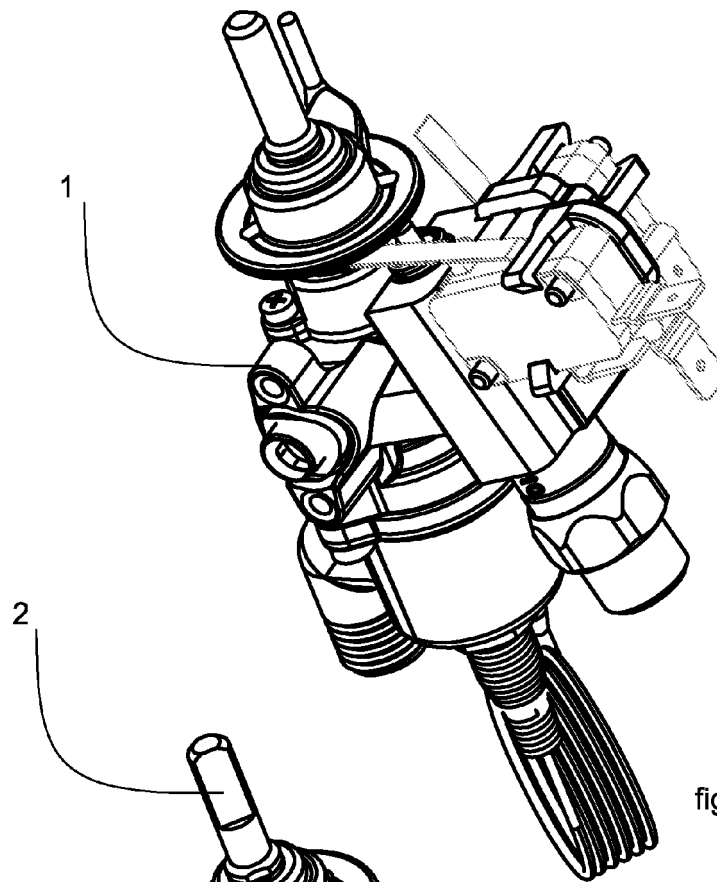


figure 1

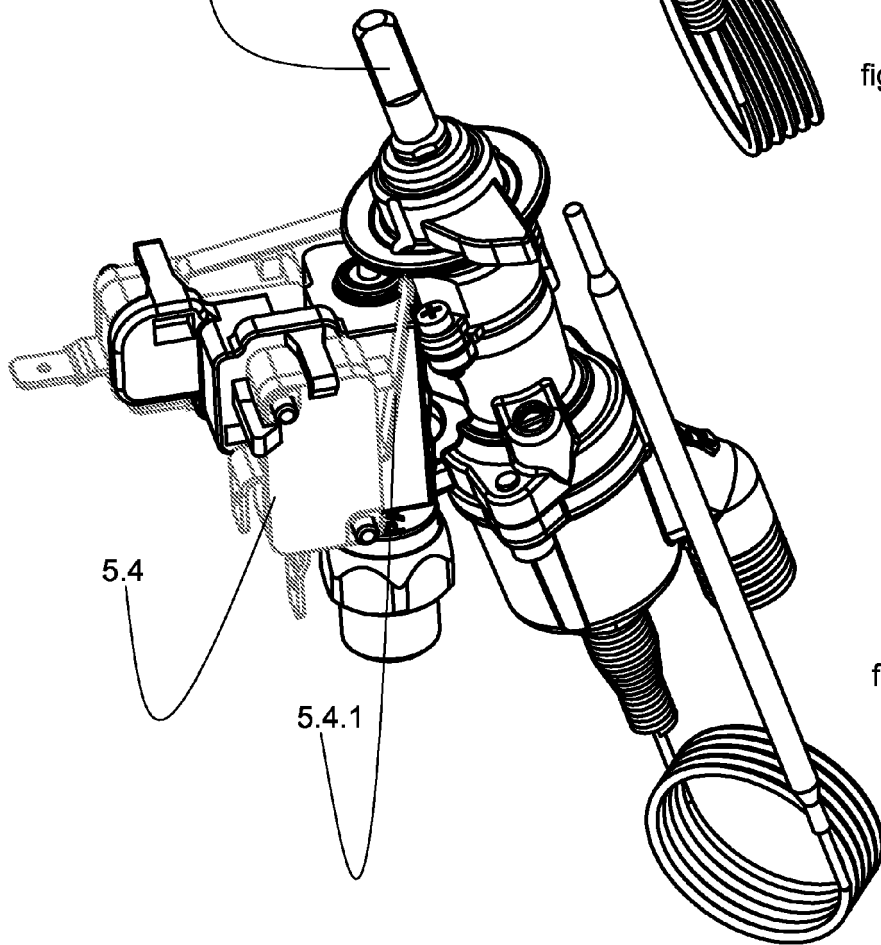


figure 2

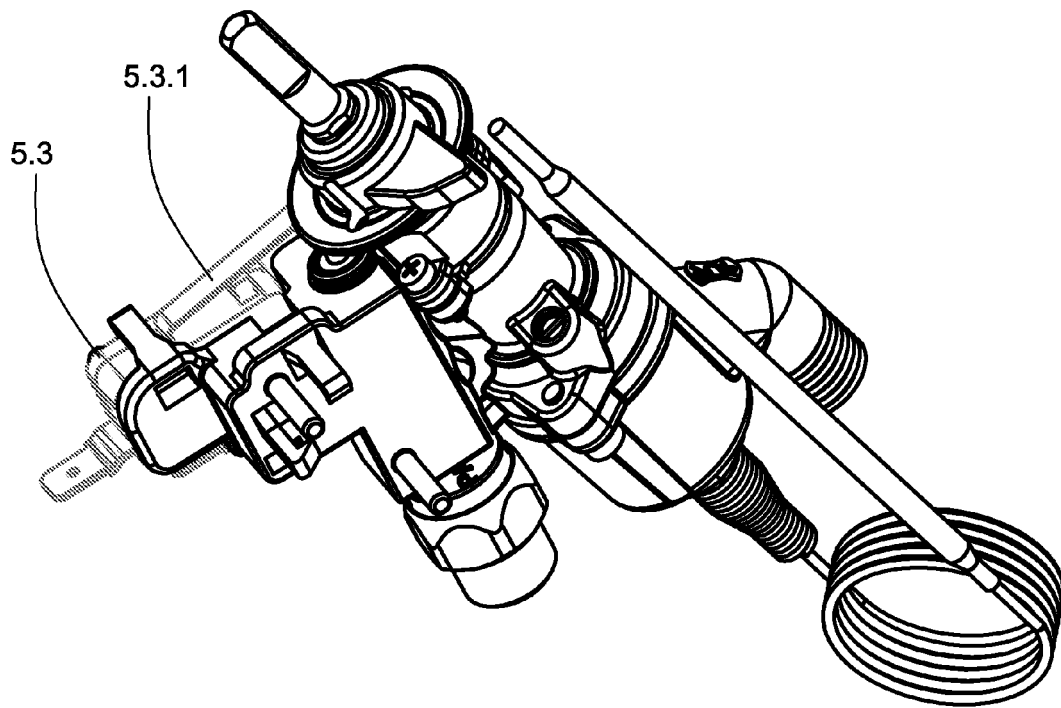


figure 3

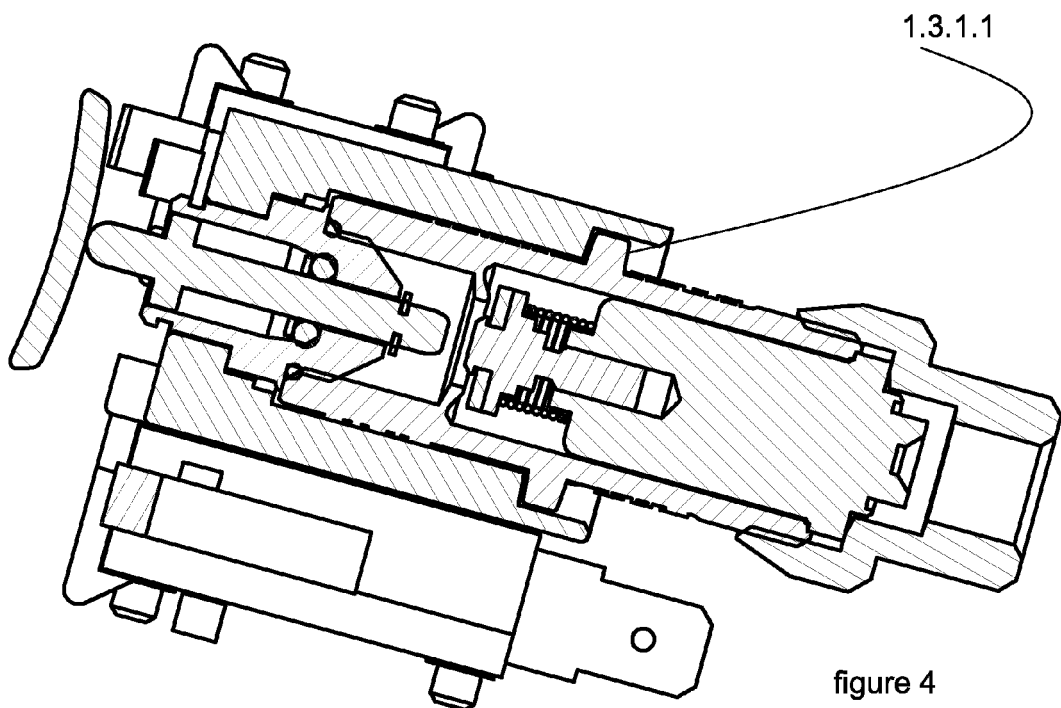


figure 4

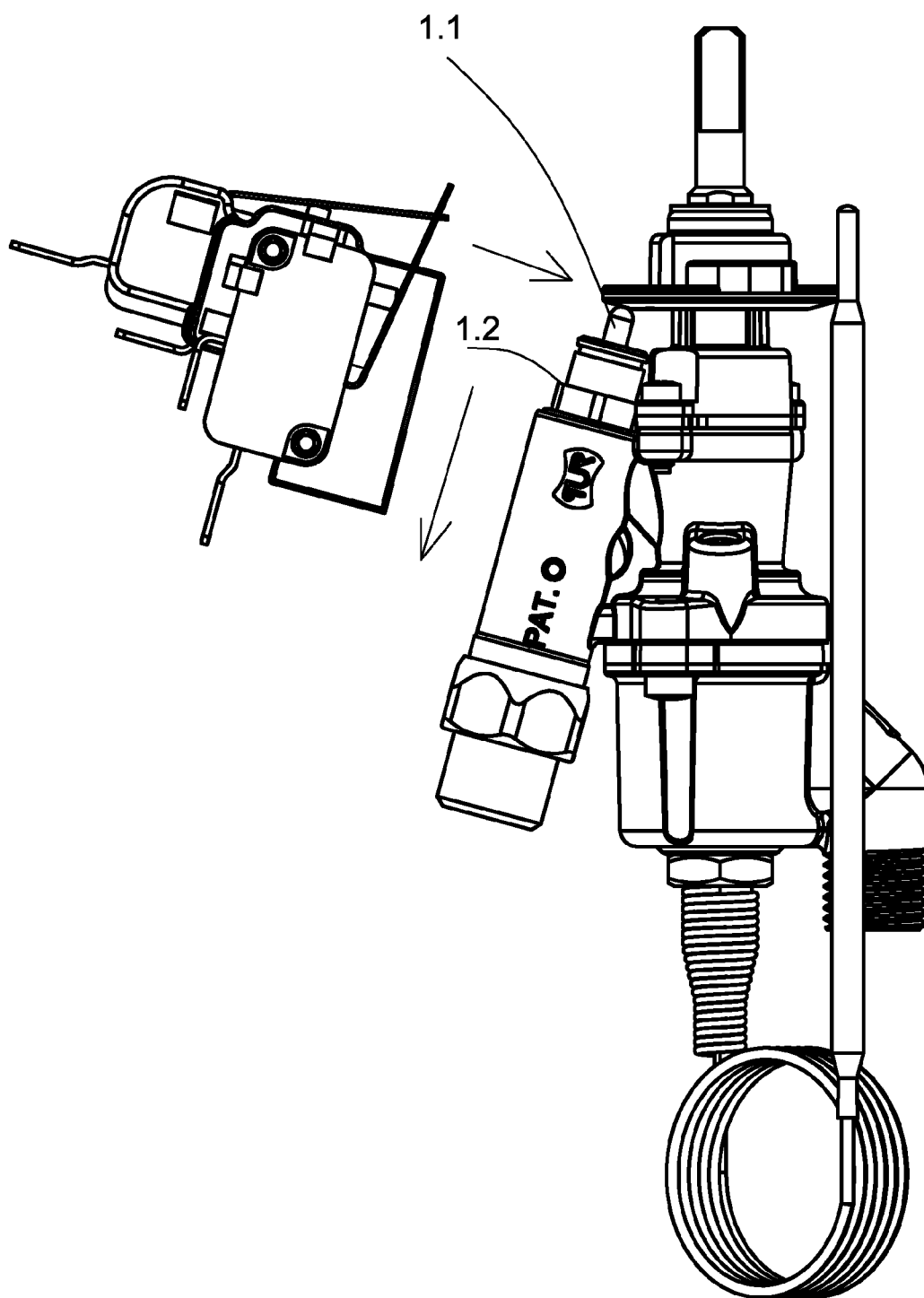


figure 5

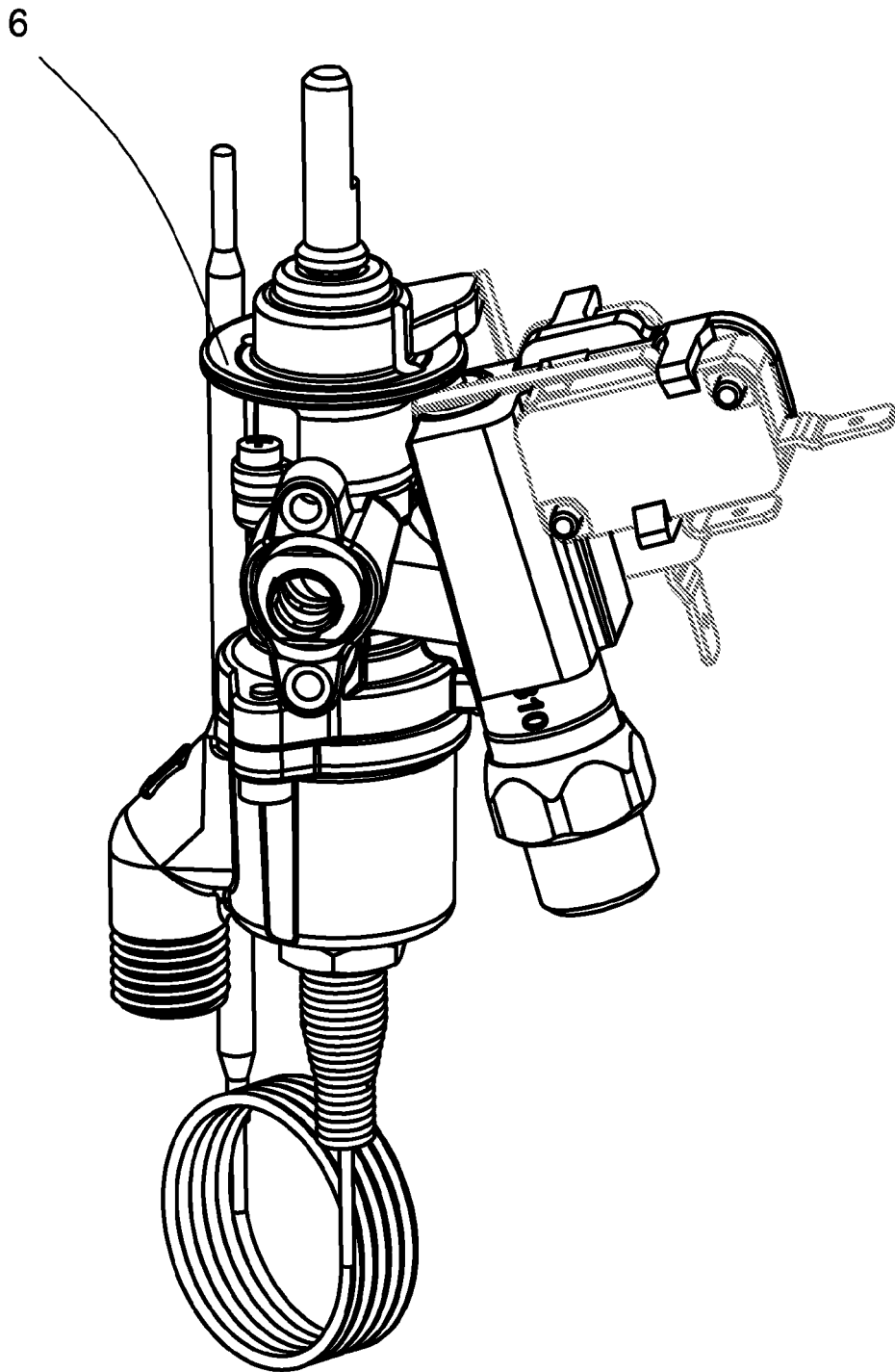


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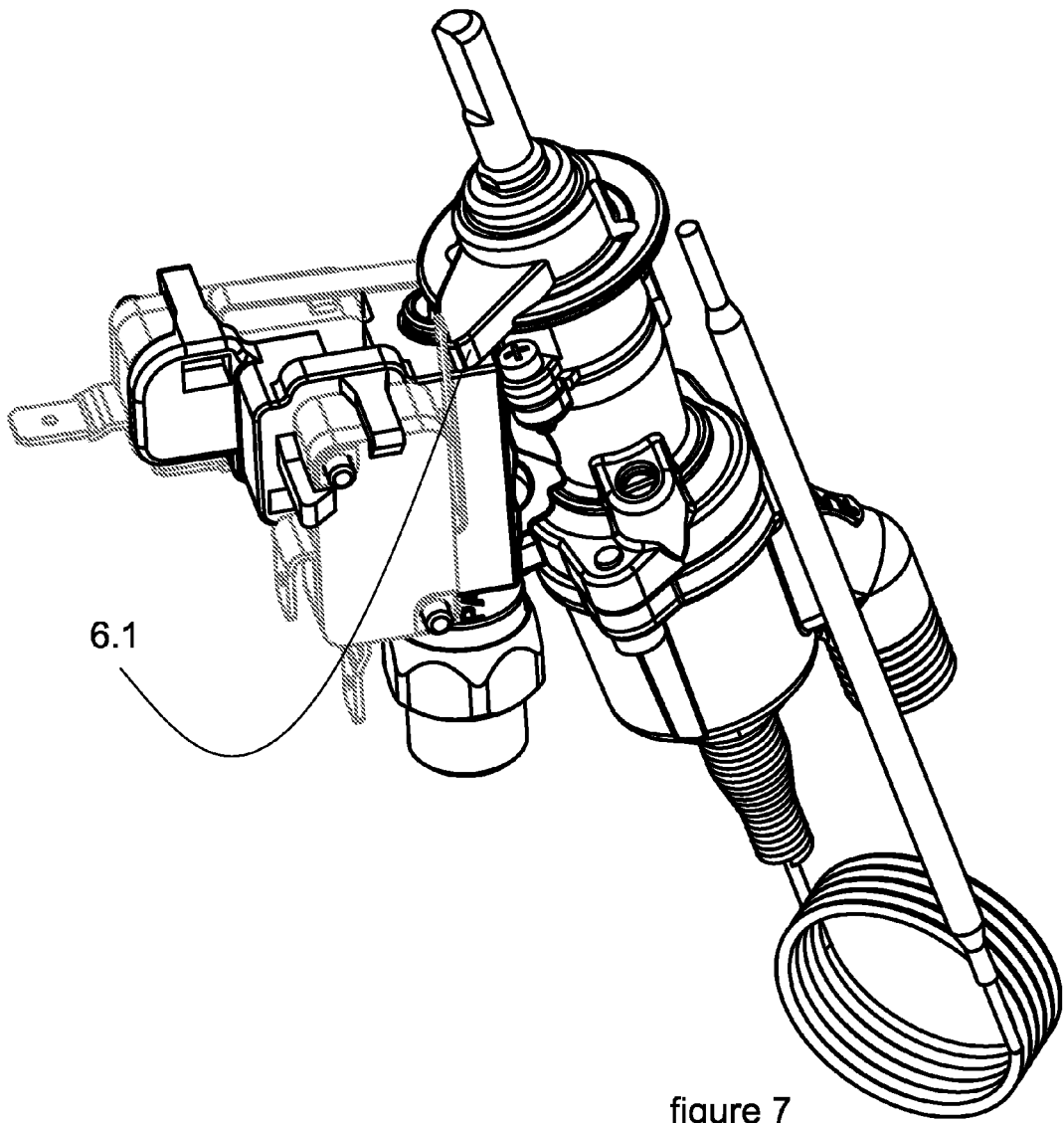
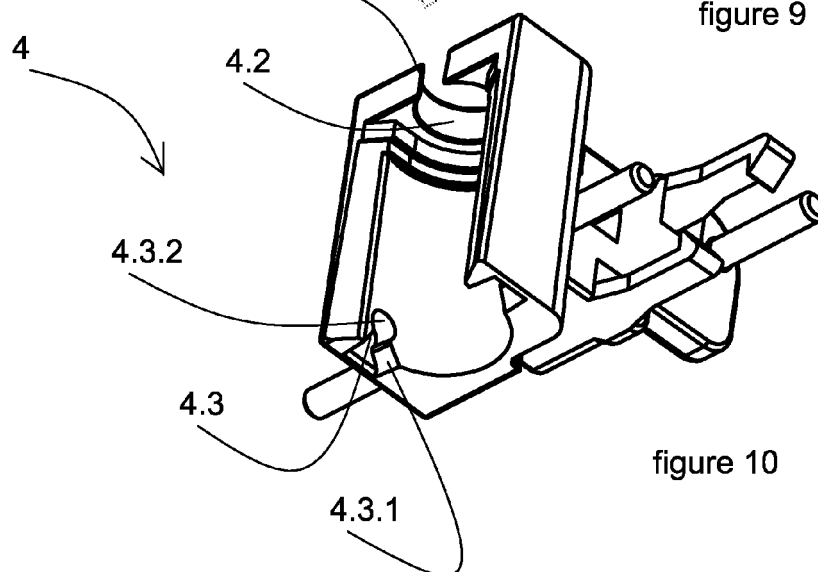
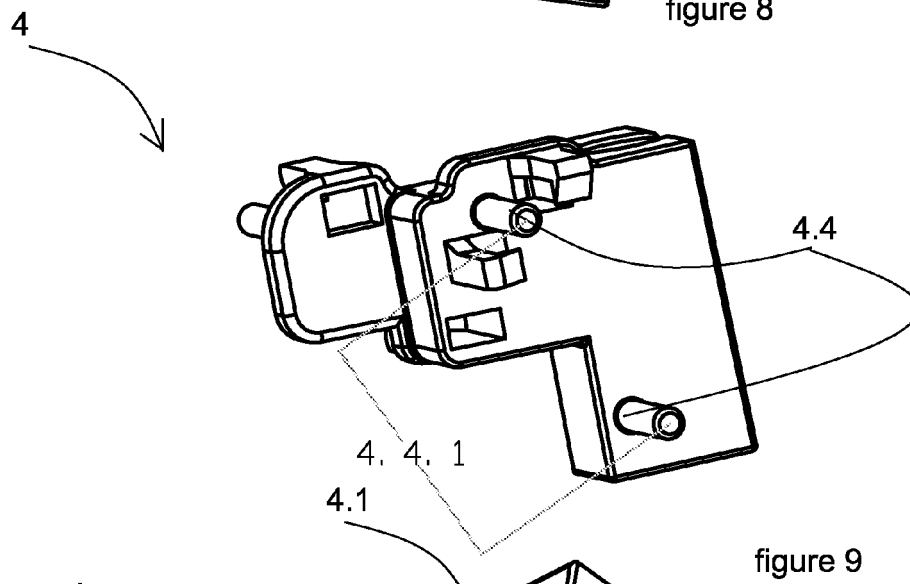
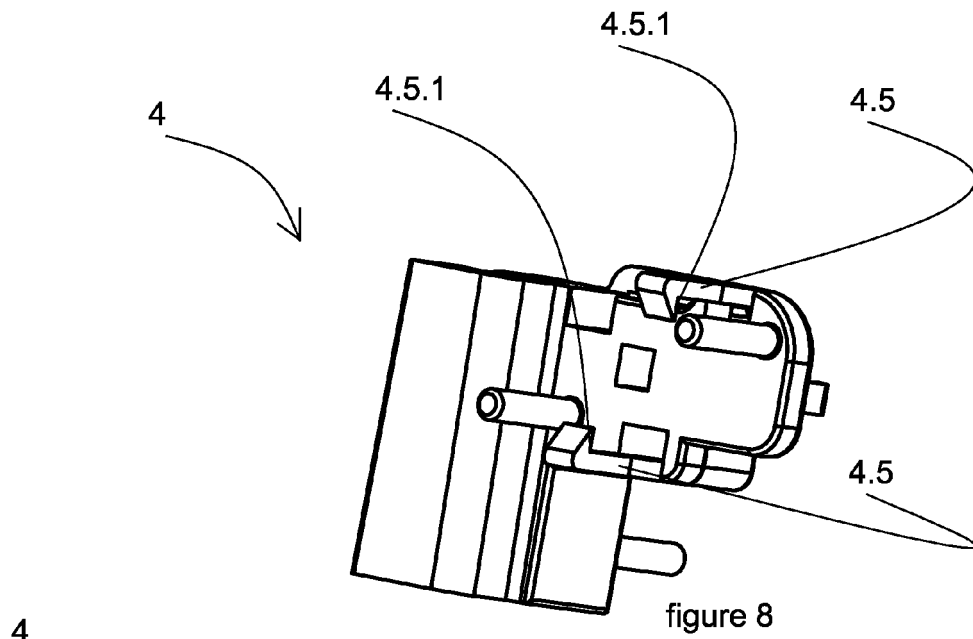


figure 7



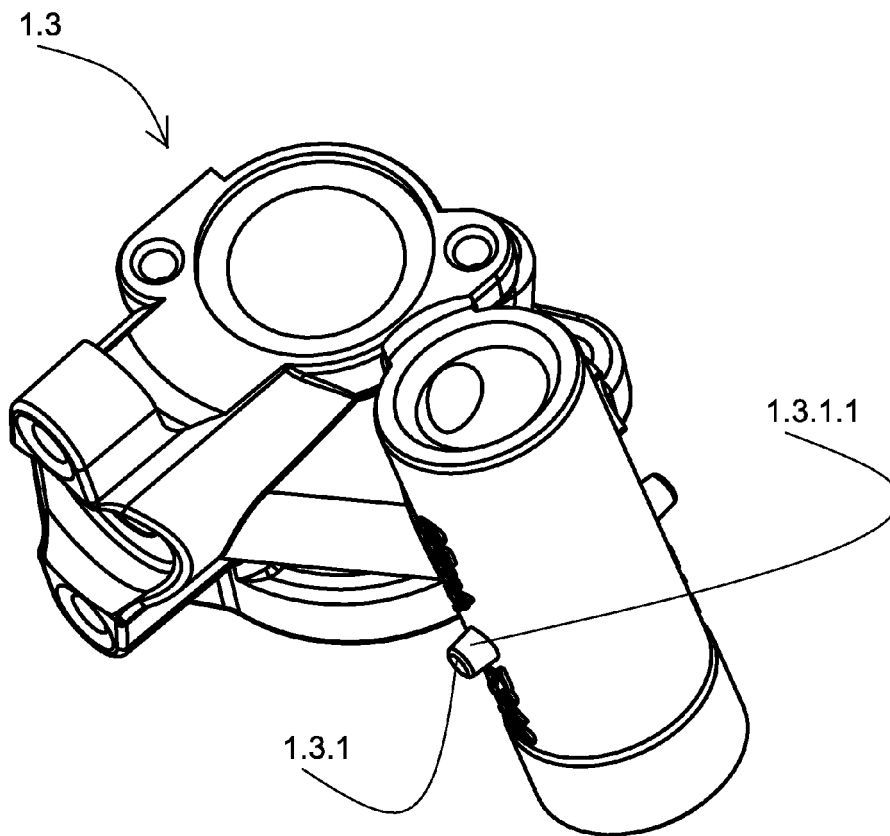


figure 11

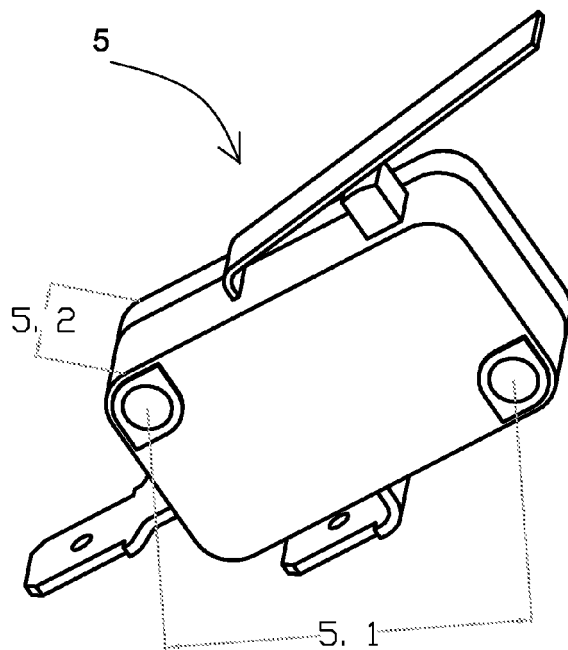


figure 12

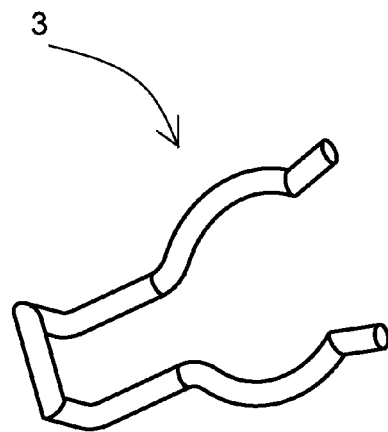


figure 13

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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