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(54) A cooking device

(57) The present invention relates to a cooking device (10) and particularly relates to a cooktop, comprising a main gas pipe (15) carrying gas; at least one gas burner (13) whereto the gas is transmitted by means of this gas pipe (15) or by means of a gas collector pipe (16); at least one spark plug (14) which is positioned at a vicinity of the gas burner (13) in order to provide flaming of the gas arriving at the gas burner (13); a transformer (20) which is in connection to the spark plug (14) and whereon at least one socket (24) is provided; and a support piece (30) which provides the transformer (20) to be positioned on the pipes (15, 16) and which is connected onto the transformer (20).

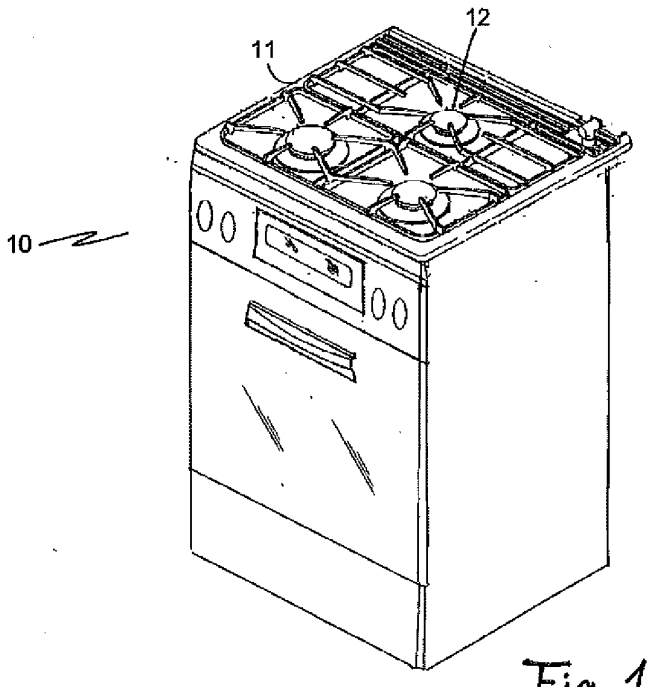

Fig. 1

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Description

[0001] The present invention relates to cooking devices and particularly relates to preserving the position of the lighter transformer on a pipe, whereon the lighter transformer is disposed, in the inner fixture of gas cooktops of ovens.

KNOWN STATE OF THE ART

[0002] Cookers provide cooking or heating of foodstuff. There is a cooktop part in most of the cookers. The cooktop part has one or more heaters depending on the needs of the user. By means of the transmission line which is laid under the cooktop plate defining the cooktop part, gas transmission is realized to all of the heaters. The gas, which is transmitted to the heater, is ignited by means of a spark plug positioned at a vicinity of the gas burner. The heater provides the pot, disposed thereon, to be heated as gas is burnt.

[0003] There is a transformer which is in connection to the spark plug and which provides the production of the required spark in order for the spark plug to burn the gas. The transformer is positioned by being connected to a plate which is provided under the sheet forming the cooktop part. The connection of the transformer to the sheet is generally realized by the welding process.

[0004] In relation to the subject, in the patent application 2008/10102, a holder embodiment is described which provides positioning of the transformer on the collector pipe. The holder, which is added onto the transformer, provides the transformer to capture the collector pipe by means of the jaws providing grabbing. However, in said application, the transformer cannot grab the collector pipe substantially, and the unintentional movement of the transformer on the collector pipe cannot be prevented.

BRIEF DESCRIPTION OF THE INVENTION

[0005] The present invention relates to a support piece, in order to eliminate the abovementioned problems and to bring new advantages to the related technical field.

[0006] An object of the subject matter invention is to provide a support piece which provides the transformer to preserve the position thereof on the pipe whereto it is connected.

[0007] In order to realize the above mentioned object and the objects which are to be obtained from the detailed description below, the subject matter invention relates to a cooking device and particularly relates to a cooktop, comprising a main gas pipe carrying gas; at least one gas burner whereto the gas is transmitted by means of this gas pipe or by means of a gas collector pipe; at least one spark plug which is positioned at a vicinity of the gas burner in order to provide flaming of the gas arriving at the gas burner; a transformer which is in connection to the spark plug and whereon at least one socket is provided; a connection part which provides the transformer to be positioned on the pipes; a jaw which provides clamping to the pipe in the connection part. Said cooktop is characterized by comprising a support piece having a connection end disposed into the socket; a body which begins from the connection end and which extends towards the jaw; a tightening part which extends to the inner surface of the jaw at the continuation of the body and which applies pressure force to the pipe surface whereto the transformer is connected.

[0008] In another preferred embodiment of the subject matter invention, the form of the connection end is compliant to the cut-out provided on the socket. By means of this, the support piece is provided to be connected to the transformer.

[0009] In another preferred embodiment of the subject matter invention, the body comprises a connection extension and a connection plate provided at the continuation of the connection extension.

[0010] In another preferred embodiment of the subject matter invention, the width of the connection plate is greater than the width of the connection extension. By means of this, the support piece is provided to grab the external surface of the transformer and particularly the support piece is provided to grab the socket.

[0011] In another preferred embodiment of the subject matter invention, a bending part is provided which begins from the connection end and thereby which extends towards the connection extension. By means of this, the body of the support piece is provided to reach the external surface of the transformer and the support piece is provided to grab the transformer.

[0012] In another preferred embodiment of the subject matter invention, the connection plate comprises a curved part which provides directing of the jaw towards the inlet part.

[0013] In another preferred embodiment of the subject matter invention, at the continuation of the connection plate, a bending part is provided which provides extending of the tightening part towards the inner surface of the jaw. By means of this, a second point is obtained which provides the support piece to grab the transformer.

[0014] In another preferred embodiment of the subject matter invention, the tightening part is bendable on the bending part. By means of this, the tightening part is provided to apply a pressure force on the pipe surface.

[0015] In another preferred embodiment of the subject matter invention, the form of the tightening part is circular so as to be compliant to the inner surface of the jaw. By means of this, the transformer is provided to be engaged on the pipe in an easy manner.

[0016] In another preferred embodiment of the subject matter invention, the support piece is produced in a one-piece manner.

[0017] In another preferred embodiment of the subject matter invention, the support piece is made of metal. By means of this, the support piece is provided to discharge the electrical charge formed on the transformer.

BRIEF DESCRIPTION OF THE FIGURES

[0018]

In Figure 1, the isometric view of a cooker to which the subject matter invention is applied is given.

In Figure 2, the isometric view of the gas distribution system belonging to the cooker illustrated in Figure 1 is given.

In Figure 3, the isometric view of the transformer is given.

In Figure 4, another perspective view of the transformer illustrated in Figure 3 is given.

In Figure 5, the profile view of the transformer illustrated in Figure 3 is given.

In Figure 6, the general view of the support piece is given.

In Figure 7, the general view of the symmetric embodiment of the support piece illustrated in Figure 6 is given.

In Figure 8, the profile view of the transformer is given.

REFERENCE NUMBERS

[0019]

10 Cooker
- 11 Cooktop Part
- 12 Heater
- 13 Gas burner
- 14 Spark Plug
- 15 Main Gas Pipe
- 16 Gas Collector Pipe

20 Transformer
- 21 Connection Part
- 211 Short Edge
- 212 Short Edge
- 22 Jaw
- 221 Inlet Part
- 222 Inner Surface
- 23 Transformer Part
- 24 Socket
- 241 Inlet
- 25 Terminal
- 251 Opening

30 Support Piece
- 31 Connection End
- 32 Tightening Part
- 33 Upper Bending Part
- 34 Curved Part
- 35 Connection Plate
- 351 First Corner
- 352 Second Corner
- 36 Connection Extension
- 37 Lower Bending Part

B: Press Direction

THE DETAILED DESCRIPTION OF THE INVENTION

[0020] In this detailed description, the subject matter improvement is explained with references to examples without forming any restrictive effect in order to make the subject more understandable. Accordingly, in the detailed description below, the subject matter support piece (30) is assumed to be applied to a cooktop part (11) of a cooker (10).

[0021] With reference to Figure 1, the general view of a cooker (10) is given where the subject matter improvement is applied. The cooker (10) comprises a cooktop part (11) at the upper region thereof. The heaters (12) are functioning as gas is burnt. The heaters (12), provided on the cooker (10), can function using different principles like electricity, etc. depending on the user demand.

[0022] With reference to Figure 2, a cross sectional view of the distribution system is given which is provided under the sheet defining the cooktop part (11) and which provides gas to the heaters (12). The distribution line comprises a main gas pipe (15) or a gas collector pipe (16) and a gas burner (13) provided at the end of the pipes (15, 16). The gas burner (13) provides burning of gas inside the heater (12) part. There is a spark plug (14) provided at a vicinity of the gas burner (13) in order for the gas to be burnt. The spark plug (14) is in connection to a transformer (20) which provides sufficient voltage for producing arc. The spark plug (14) provides arc to the gas burner (13) and provides the gas, arriving at the gas burner (13), to be flamed and to begin burning.

[0023] With reference to Figure 3, the general top view of the transformer (20) is given. The transformer (20) has a connection part (21). The connection part (21) comprises two jaws (22) which are provided on a rectangular plate so as to be adjacent to the short edges (211, 212). The jaw (22) has a crescent-like circular form so that an inlet (221) is defined between the two ends.

[0024] With reference to Figure 4, the general view of the transformer part (23) provided on the other surface of the connection part (21) is given. The transformer part (23) comprises a terminal (25) which is provided so as to be adjacent to the short edge (212). The terminal (25) comprises openings (251) which are embodied in a quadrangular manner and which are adjacent to each other. There are sockets (24) which are embodied at a certain arrangement so as to exist between the short edge (211) and the terminal (25). The sockets (24) have a quadrangular cross section and there is an inlet (241) in between which is embodied so as to define an opening.

[0025] In Figure 6 and 7, the general view of a support piece (30) which is connected onto a transformer (20) is

given. The support piece (30) comprises an inlet (241); or a connection end (31) which is disposed into the opening (251); and a tightening part (32) which is disposed to the inner surface (222) of the jaw (22). At the continuation of the connection end (31), there is a lower bending part (37) which is provided so as to extend towards the external surface of the transformer (20) and there is a connection extension which is provided at the continuation of the lower bending part (37). The other end of the connection extension (36) is connected to a connection plate (35) which is wider than the connection extension (36). The connection plate (35) comprises a curved part (34) which extends from the plate, whereon the connection part (21) is provided, towards the inlet part (221). The support piece (30) comprises an upper bending part (33) which provides the tightening part (32) to reach the inner surface (222) of the jaw (22), when the connection plate (35) reaches the inlet (221). The tightening part (32) has a circular structure so as to complete the form of the jaw (22).

[0026] With reference to Figure 8, the connection extension (36) is connected to the connection plate (35) from a different corner, depending on the jaw (22) whereto the support piece (30) will be connected. If the support piece (30) is to be connected to the jaw (22) provided so as to be adjacent to the first short edge (211), the connection extension (36) is connected to the connection plate (35) from the first corner (351). If the support piece (30) is to be connected to the jaw (22) which is provided in an adjacent manner to the second short edge (212), the connection extension (36) is connected to the connection plate (35) from the second corner (352). Depending on the connection point of the connection extension (36), there are two different support pieces (30) so as to be symmetrical to each other. The support piece (30) has a one-piece form and it is made of metal.

[0027] With reference to Figure 5, the tightening part (32) is in flexible form with the help of the bending part (33). Even if the tightening part (32) is compliant to the form of the jaw (22) inner surface (222), there is no contact of the tightening part (32) while the inner surface (222) of the jaw (22) is empty. When the transformer (20) is positioned on the main gas pipe (15) or on the gas collector pipe (16), the tightening part (32) applies press force onto the pipe (15, 16) surface at a certain direction (B). This pressure force, formed by the tightening part (32), prevents the transformer (20) from moving on the pipe (15, 16).

[0028] With reference to Figure 3, 4 and 8, the support piece (30) provides the grounding process as the connection end (31) is inserted into the inlet (241) and into the opening (251). The members, existing inside the transformer part (23), produce a certain amount of electrical voltage. Since the support piece (30) is made of metal, it transfers the electrical load, which it receives by means of the connection end (31), to the pipes (15, 16) through the connection extension (36), connection plate (35) and the tightening part (32). In this manner, the formation of electrical voltage inside the transformer (20) is prevented and grounding is provided.

Claims

1. A cooking device (10) and particularly a cooktop, comprising a main gas pipe (15) carrying gas; at least one gas burner (13) whereto the gas is transmitted by means of this gas pipe (15) or by means of a gas collector pipe (16); at least one spark plug (14) positioned at a vicinity of the gas burner (13) in order to provide flaming of the gas arriving at the gas burner (13); a transformer (20) which is in connection to the spark plug (14) and whereon at least one socket (24) is provided; a connection part (21) which provides the transformer (20) to be positioned on the pipes (15, 16); a jaw (22) providing clamping to the pipe (15, 16) in the connection part (21), **characterized by** comprising a support piece (30) having a connection end (31) disposed into the socket (24); a body which begins from the connection end (31) and which extends towards the jaw (22); a tightening part (32) which extends to the inner surface (222) of the jaw (22) at the continuation of the body and which applies pressure force to the pipe (15, 16) surface the transformer (20) is connected thereto.

2. A cooker according to Claim 1, wherein the form of the connection end (31) is compliant to the inlet (241) provided on the socket (24).

3. A cooker according to any one of the preceding claims, wherein the body comprises a connection extension (36) and a connection plate (35) provided at the continuation of the connection extension (36).

4. A cooker according to Claim 1 and 3, wherein the width of the connection plate (35) is greater than the width of the connection extension (36).

5. A cooker according to any one of the preceding claims, wherein a bending part (37) is provided which begins from the connection end (31) and thereby which extends towards the connection extension (36).

6. A cooker according to any one of the preceding claims, wherein the connection plate (35) comprises a curved part (34) which provides the directing of the jaw (22) towards the inlet part (221).

7. A cooker according to any one of the preceding claims, wherein at the continuation of the connection plate (35), a bending part (33) is provided which provides extending of the tightening part (32) towards the inner surface of the jaw (22).

8. A cooker according to Claim 1 or 6, wherein the tightening part (32) is bendable on the bending part (33).

9. A cooker according to Claim 1, wherein the form of the tightening part (32) is curved so as to be compliant to the inner surface (222) of the jaw (22).

10. A cooker according to any one of the preceding claims, wherein the support piece (30) is produced in a one-piece manner.

11. A cooker according to any one of the preceding claims, wherein the support piece (30) is made of metal.

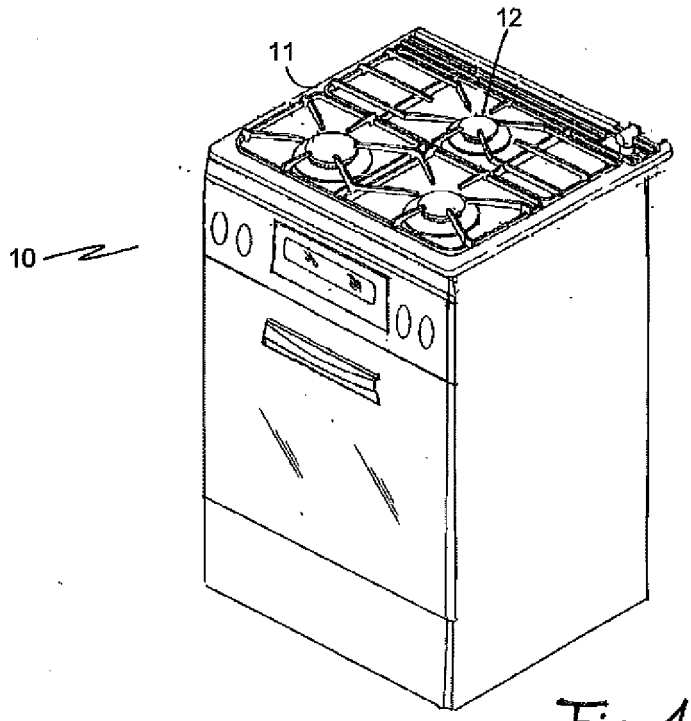

Fig. 1

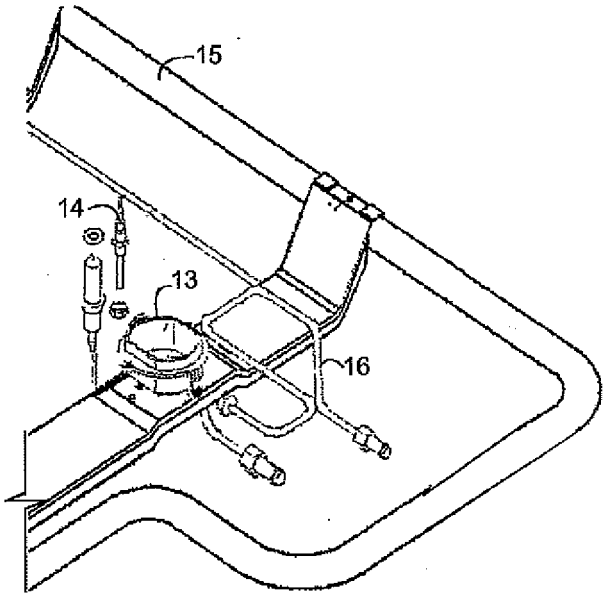

Fig. 2

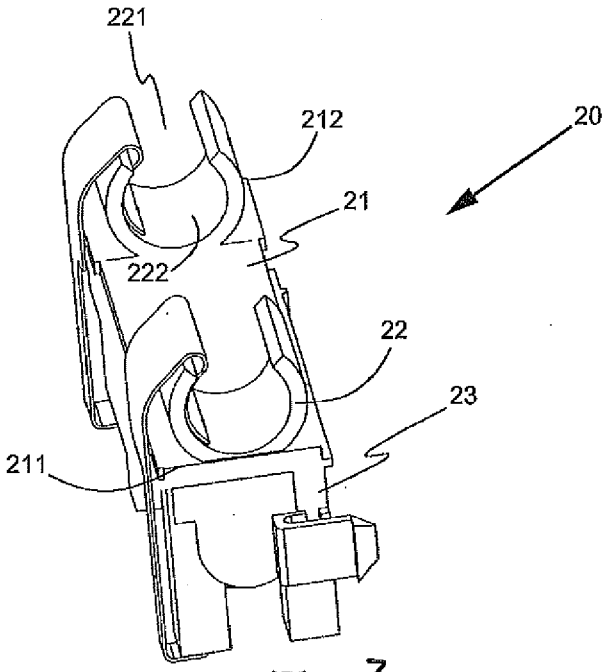

Fig. 3

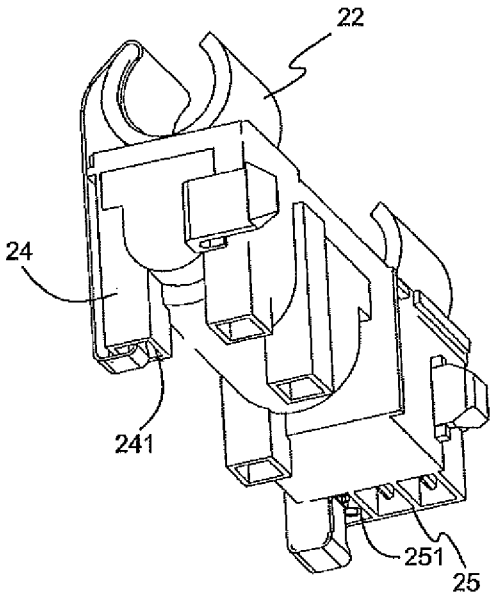

Fig. 4

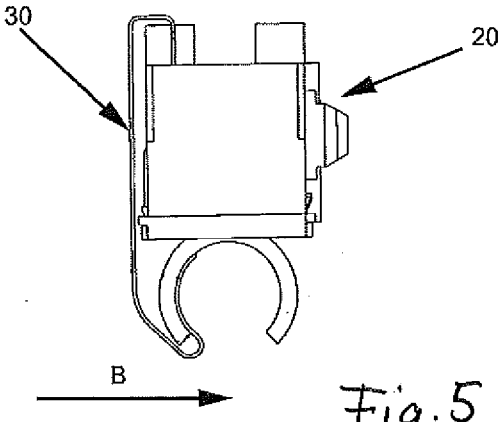

Fig. 5

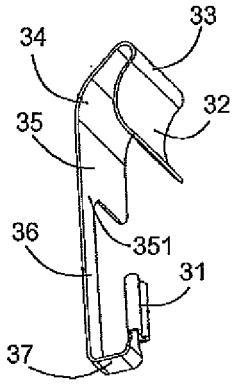

Fig. 6

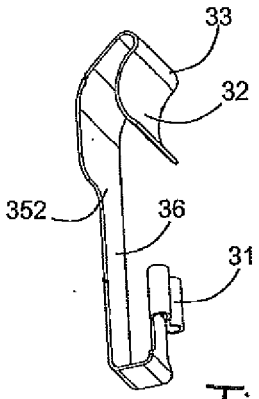

Fig. 7

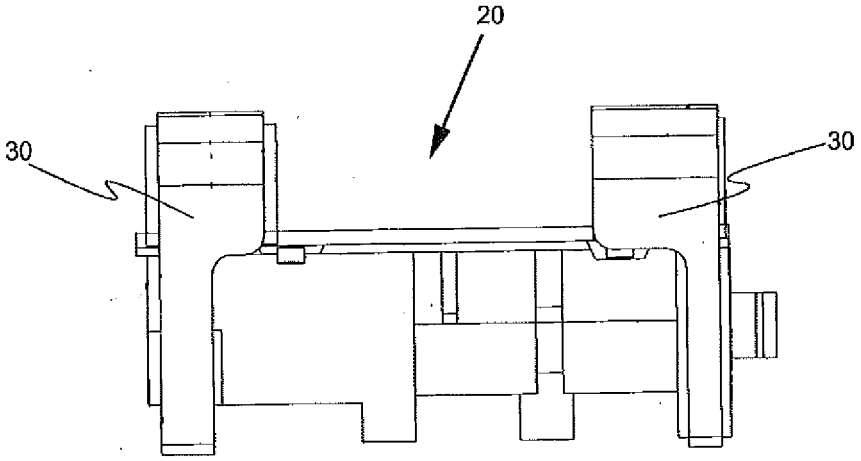

Fig. 8