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(54) A gas cooker with a transformer mounted to a gas pipe

(57) The present invention is a cooker (10) comprising a main gas pipe (11) carrying gas, a burner (15), at least one spark plug (17) positioned near said burner (15) in order to ignite the gas coming to the burner (15) and a lighter transformer (19) coupled to the spark plug and a holder (20) having at least one clamping part (22) coupled to the lighter transformer (19) from one end and mounted to the main gas pipe (11) from the other end.

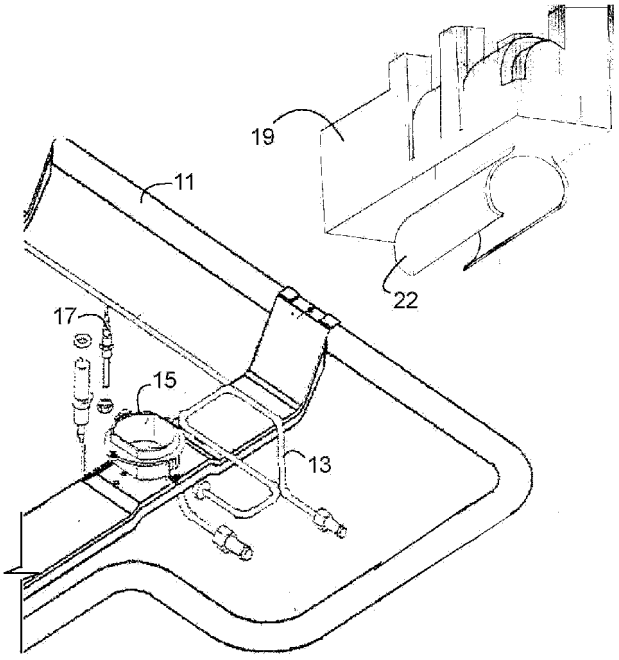

Fig. 2

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Description

[0001] The present invention relates to cookers and especially at least one lighter transformer positioned in the interior components of gaseous stoves of ovens and stoves and the positioning of said lighter transformer on a pipe.

PRIOR ART

[0002] As known, at the present day, in order for gaseous stoves to form blaze, the gas coming from a gas collector pipe should be ignited. In some of gaseous cooker equipment, there is a stove lighter positioned under a burner and coupled to at least one spark plug which ignites the gas in the cooker equipment by providing spark. The oven lighter positioning which can be realized under the present conditions is in the form of fixing with metal sheet welding or spot welding or fixing to an oven panel in addition to collectors. The lighter transformer is engaged to the metal sheet by means of the tabs. Mounting of the lighter transformer with tabs is problematic in respect of laboring and also time consuming.

[0003] In the application US6796792, an isolated casing is disclosed which is mounted in a removable manner to the conductive metal frame elements of the home appliances like oven and wherein an electronic high voltage generator used for ignition is positioned.

[0004] In a similar way, in the application EP1859203, a gas ignition equipment is disclosed which is integrated with a socket casing.

[0005] In the light of the above mentioned statements, the lighter transformer which will be coupled according to the novel mounting form that will eliminate said disadvantages and that will bring new advantages to the related technical field is an improvement needed in the related technical field.

BRIEF DESCRIPTION OF THE INVENTION

[0006] In the light of the known state of the art, the main object of the invention is to ease the mounting process of the lighter transformer coupled to the interior components of the stove part of the cookers.

[0007] Another object of the invention is to provide that interior component section of the cooker is suited to several mounting manners by means of mounting the lighter transformer to any point on the gas collector pipe, preferably that of in the vicinity of the control panel, in the interior components of the cooker.

[0008] Another object of the invention is to obtain cost advantage in the product by shortening the mounting time of the cooker interior components.

[0009] In order to realize all the objects above mentioned and that will be obtained from the detailed explanation below, the present invention is a cooker having a main gas pipe carrying gas, at least one burner to which the gas is transferred with said main gas pipe and/or a gas collector pipe, at least one spark plug positioned at the vicinity of the burner in order to ignite the gas fed to the burner and a lighter transformer coupled to the spark plug, characterized by comprising a holder having at least one clamping part coupled to the lighter transformer from one end and mounted to the main gas pipe and/or a gas collector pipe from the other end.

[0010] In a preferred embodiment of the present invention, said holder comprises a clamping element having at least one jaw member.

[0011] In a preferred embodiment of the present invention, said holder comprises a clamping part having at least two jaw members which have a form so as to form a semi peripheral figure link and which is preferably positioned mutually.

[0012] In a preferred embodiment, the present invention, said holder comprises a clamping part having more than one jaw member aligned as diagonal to each other along the clamping part so as to engage the main gas pipe and/or a gas collector pipe.

[0013] In a preferred embodiment of the present invention, said holder comprises a clamping part having at least one clamp.

[0014] In a preferred embodiment of the present invention, said holder comprises a clamping part formed in the form of clamp capable of locking via at least one pin.

[0015] In a preferred embodiment of the present invention, said holder comprises a clamping part having different geometric forms like square, triangle, hexagon and oval.

[0016] A preferred embodiment of the present invention comprises at least one latch arm formed on said lighter transformer in order to couple the holder to the lighter transformer.

[0017] A preferred embodiment of the present invention comprises at least one fixing projection formed on the lighter transformer in order to fix said fixing surface to the lighter transformer.

[0018] A preferred embodiment of the present invention comprises a fixing surface in the part where the holder is coupled to the lighter transformer.

[0019] In a preferred embodiment of the present invention, the fixing surface comprises at least one fixing projection formed on the lighter transformer for the fixing of the fixing surface to the lighter transformer.

[0020] In order to understand the embodiment of the present invention with the additional elements in the best way, it had to be evaluated with the figures that are explained below. The properties and the advantages of the invention are obtained from the example embodiments with references to the accompanying figures.

BRIEF DESCRIPTION OF THE FIGURES

[0021]

Figure 1 is the perspective view of a subject matter cooker having a lighter transformer.

Figure 2 is the partial perspective view of the illustrative gas distribution and ignition mechanism of the embodiment illustrated in Figure 1.

Figure 3 is the lateral view of the holder used in a representative embodiment of the subject matter invention.

Figure 4 is the perspective view of the lighter transformer used in a representative embodiment of the subject matter invention.

Figure 5 is the lateral view of the holder used in an alternative embodiment of the subject matter invention.

Figure 6 is the perspective view of the holder used in a representative embodiment of the subject matter invention coupled on the lighter transformer.

Figure 7 is the dismantled bottom view of the holder of a representative embodiment of the invention as positioned so as to be coupled to the lighter transformer.

Figure 8 is the dismantled bottom view of the holder of another representative embodiment of the invention as positioned so as to be coupled to the lighter transformer.

Figure 9 is the perspective mounted view of the holder on a lighter transformer where the holder used in a representative embodiment of the subject matter invention.

Figure 10 is the lateral view of the jaw members having different geometries forming the clamping part of the holder used in a representative embodiment of the subject matter invention.

THE DETAILED DESCRIPTION OF THE INVENTION

[0022] In this detailed explanation, the invented subject matter is explained with figures in order to make the subject more understandable without forming any restrictive effect. As can be seen in Figure 1, the cooker (10) which the subject matter invention is applied comprises at least one burner (15) which is a gaseous heating element and at least one spark plug (17) positioned preferably near each burner (15) in order for the gas coming from the burner (15) to be flamed. In a representative embodiment of the invention, said cooker (10) can be selected as any kind of gaseous oven stove and stove having at least one burner or oven which is in mixed type comprising electrical, induction or other heating elements which is combined with this burner. With reference to Figure 2, in a representative application of the invention, the gas transmission system in the interior components of the cooker (10) comprises a main gas pipe (11) and/or gas collector pipe (13). At the end of the gas transmission system, there is at least one burner (15) where the burning process is realized where the gas coming from the pipes (11, 13) burns. In order to realize the burning process, an ignition system is needed. In a representative embodiment of the invention, the ignition system comprises at least one spark plug (17) and at least one lighter transformer (19) which provides a spark for the spark plug. In a representative embodiment, said lighter transformer (19) is mounted to a direct gas pipe (11) and/or gas collector (13) by means of a holder (20) comprising a clamping part (22). In the fixing system in the interior components of the lighter transformer (19) of the subject matter representative embodiment, said clamping part (22) can be realized so as to be coupled to the desired point on the gas collector (13) and/or main gas pipe by means of a novel improved separate holder (20) on the lighter transformer (19). Figure 3 is the lateral view of the holder (20) used in a representative embodiment of the invention. This holder (20) comprises preferably a clamping part (22) and preferably a fixing surface (21). The clamping part (22) and the fixing surface (21) can be produced in different structures providing the subject matter technical solution. In a preferred embodiment of the subject matter invention, said clamping system (22) is in the form of two jaw members (23) positioned preferably mutually. Again in a preferred application of the subject matter invention, said jaw members (23) have a preferably semi-circular form and because of the two jaw members (23) facing one another formed in this form, the gas pipes (11, 13) are grabbed and the holder (20) holds the gas pipes (11, 13). In order to fix the holder (20) to the lighter transformer (19), a fixing surface is formed on the holder (19). This fixing surface is fixed on the lighter transformer (19) and the holder (20) is fixed to any desired place on the gas pipe (11) and/or gas collector pipe (13) as coupled to the lighter transformer (19) because of the clamping part (22). This holder (20) coupled to the subject matter lighter transformer (19) can easily be fixed to the other cooker (10) interior component parts close to the burner because of the pipe like geometry of the interior components of the holder. In Figure 4, preferably a plurality of jaw members (23) which belongs to the clamping part (22) in a representative application of the invention are positioned along a monobloc fixing surface (21) with a lighter transformer (19) in a preferably traverse form. The jaw members (23) positioned in this way increase the holding capability. Figure 5 and 6 illustrate the clamp (24) embodiment forming the clamping part (22) in another alternative application of the invention. This clamp (24) preferably has a form so as to completely encircle the part it clamps preferably to the gas pipes (11, 13). The part where the arms of the clamp (24) combine is fixed by means of preferably at least one pin (25) so that it will not move when it is not dismantled. In the clamped (24) system which is mounted, the movement of the lighter transformer (19) is restricted and preferably two mutual

holes are opened on the projection at the end of the clamp (24). The clamp (24) is secured onto the pipes (11, 13) firmly by means of the pin (25) passed through this hole so as to ensure securing. In Figure 7 and Figure 8, in a representative embodiment of the invention, in the application where the holder (20) and the lighter transformer (19) are separate two pieces, during the fixing of the holder (20) to the lighter transformer (19), the preferred applications of these two pieces in a dismantled form are given. In a representative application given in Figure 7, there are at least two latches (26) positioned preferably at least parallel to each other in order to fix the holder (20) to the lighter transformer (19). The holder (20) is fixed to the lighter transformer (19) by being squeezed by means of these latches (26) on the lighter transformer (19). In Figure 8, in another representative application of the invention, the coupling formed for the fixing of the holder (20) and the lighter transformer (19) to each other is in the form of at least one latch (27) and preferably two mutual latch arms (27) formed preferably on the holder (20). There is at least one and preferably two fixing projections (28) squeezed to said latch arm (27) on the lighter transformer. In Figure 9, in a representative embodiment of the invention, the mounted form of the lighter transformer (19) and the holder (20) to each other preferably by means of a latch arm (26) is seen. In another representative application of the invention, the holder (20) and the lighter transformer (19) are all in one piece and one side of the lighter transformer (19) forms itself the fixing surface (21) of the holder (20) and the clamping part comprises the clamping part having preferably the jaw member (23) and/or clamp (24) form formed on this side of the transformer (19). The clamping part (22) can have a flexible or rigid structure and it is preferably made of flexible material. As can be seen in Figure 10, in a representative application of the invention, the clamping part (22) can have forms such as square, triangle, hexagon and oval.

[0023] The protection scope of the present invention is set forth in the annexed Claims and cannot be restricted to the illustrative disclosures given above, under the detailed description. It is because a person skilled in the relevant art can obviously produce similar embodiments under the light of the foregoing disclosures, without departing from the main principles of the present invention.

REFERENCE NUMBERS

[0024]

10. Cooker
11. Main gas pipe
13. Gas collector pipe
15. Burner
17. Spark plug
19. Lighter transformer
20. Holder
21. Fixing surface
22. Clamping part
23. Jaw member
24. Clamp
25. Pin
26. Latch arm
27. Latch arm
28. Fixing projection
29. Tab

Claims

1. A cooker (10) having a main gas pipe (11) carrying gas, at least one burner (15) to which the gas is transferred with this gas pipe (11) and/or a gas collector pipe (13), at least one spark plug (17) positioned near said burner (15) in order to ignite the gas coming to the burner (15) and a lighter transformer coupled to the spark plug, **characterized by** comprising a holder (20) having at least one clamping part (22) coupled to the lighter transformer (19) from one end and mounted to the main gas pipe (11) and/or a gas collector pipe (13) from the other end.

2. A cooker (10) according to Claim 1, **characterized in that** said holder (20) comprises a clamping part (20) having at least one jaw member (23).

3. A cooker (10) according to any of the claims mentioned above, **characterized in that** said holder (20) comprises a clamping part (20) having at least two jaw members (23) which have a form so as to form a semi peripheral figure link and which is preferably positioned mutually.

4. A cooker (10) according to any of the claims mentioned above, **characterized in that** said holder (20) comprises a clamping part (20) having more than one jaw member (23) aligned as diagonal to each other along the clamping part (20) so as to engage the main gas pipe (11) and/or a gas collector pipe (13).

5. A cooker (10) according to Claim 1, **characterized in that** said holder (20) comprises a clamping part (22) having at least one clamp (24).

6. A cooker (10) according to Claim 1 and Claim 5, **characterized in that** said holder (20) comprises a clamping part (22) formed in the form of clamp (24) capable of locking via at least one pin (25).

7. A cooker (10) according to any of the claims mentioned above, **characterized in that** said holder (20) comprises a fixing surface (21) coupled to the lighter transformer (19).

8. A cooker (10) according to any of the claims men-

tioned above, **characterized in that** said holder (20) comprises at least one latch arm (27) formed on said lighter transformer (19) in order to couple the holder to the lighter transformer (19).

9. A cooker (10) according to any of the claims mentioned above, **characterized in that** said holder (20) comprises at least one latch arm (26, 27) formed on the holder (19) and/or on the lighter transformer (19) in order to couple the holder (20) to the lighter transformer (19).

10. A cooker (10) according to Claim 8, **characterized in that** for the fixing of said fixing surface (21) to the lighter transformer (19), it comprises at least one fixing projection (28) formed on the lighter transformer (19).

11. A cooker (10) according to Claim 8, **characterized in that** for the fixing of said fixing surface (21) to the lighter transformer (19), it comprises at least one tab (29) which is formed on the fixing surface (21) and held on the lighter transformer.

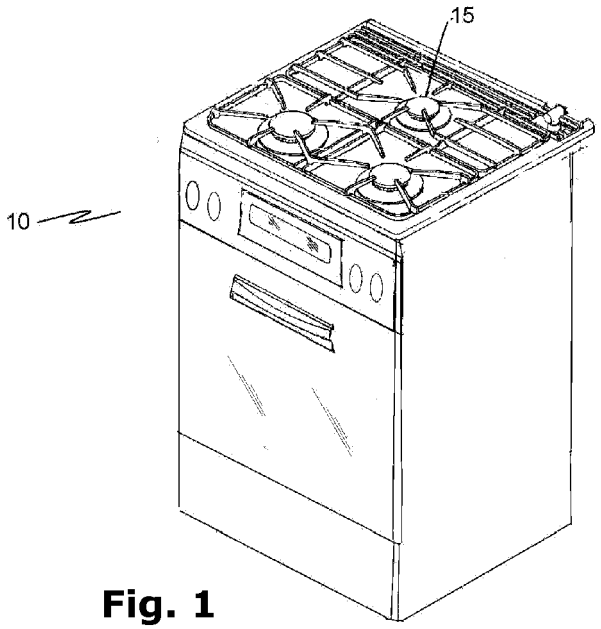

Fig. 1

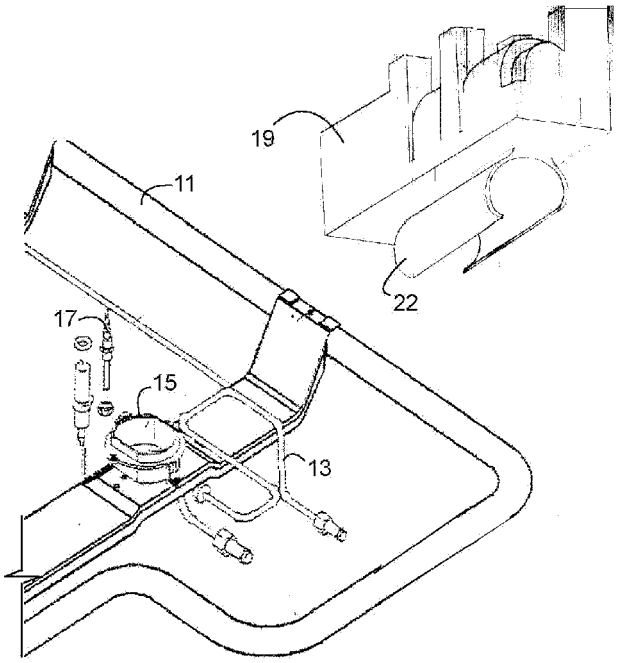

Fig. 2

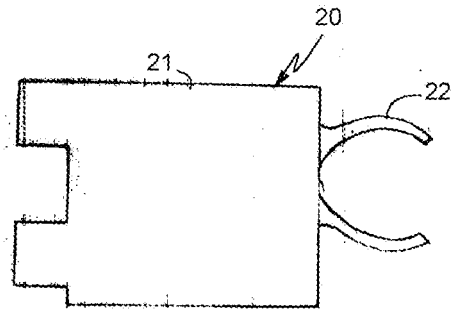

Fig. 3

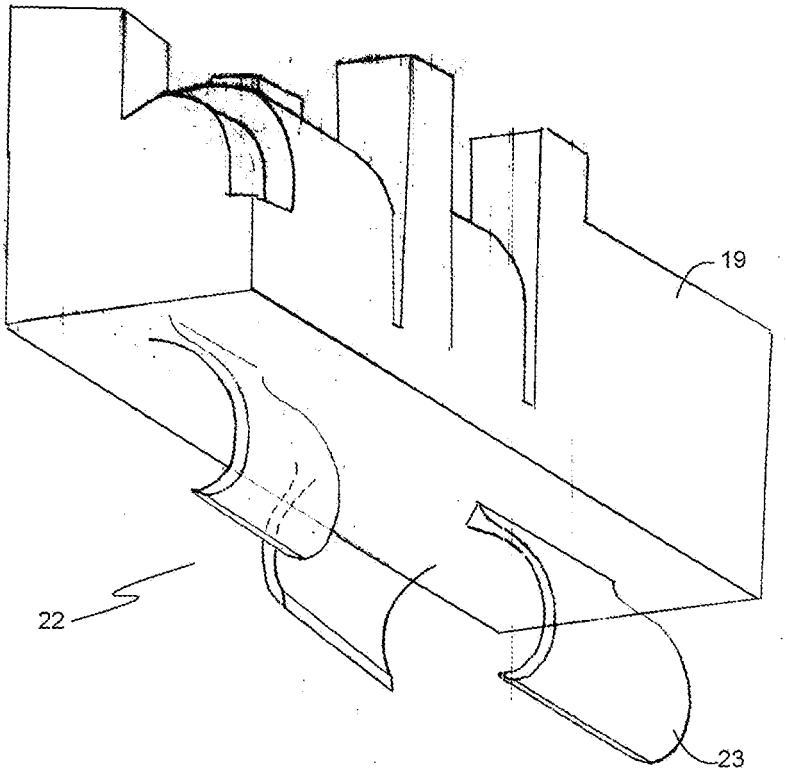

Fig. 4

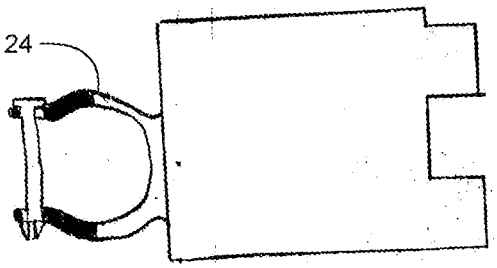

Fig. 5

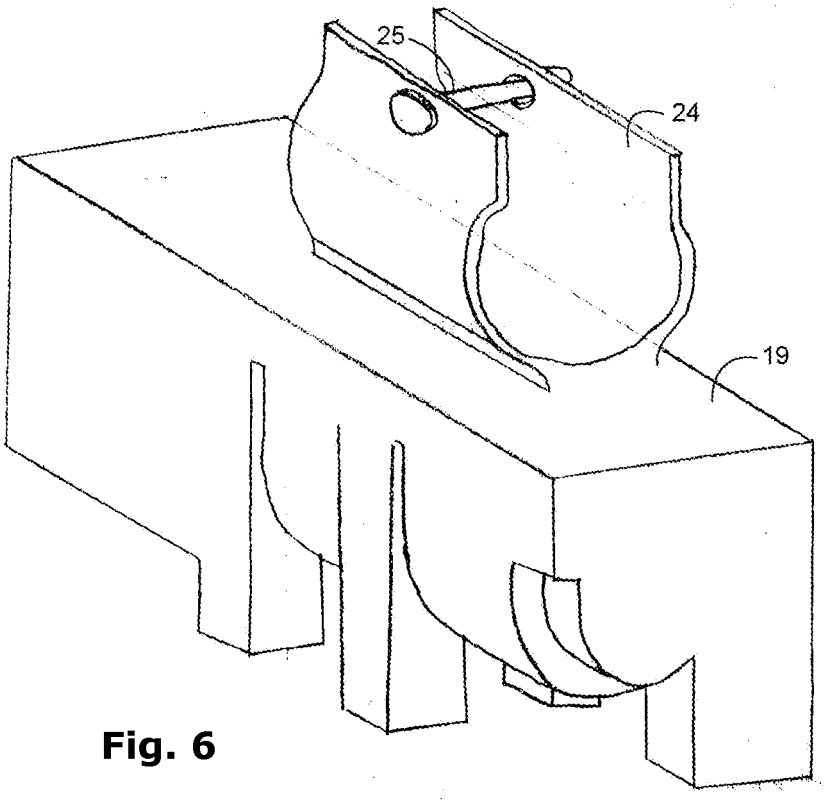

Fig. 6

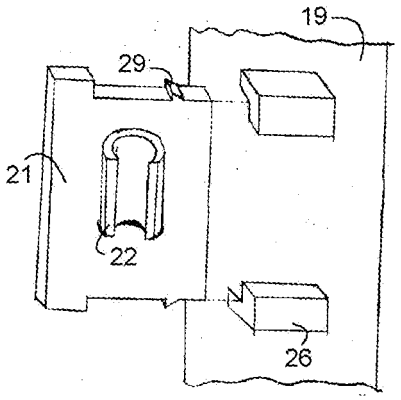

Fig. 7

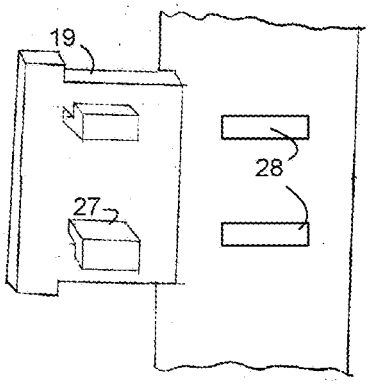

Fig. 8

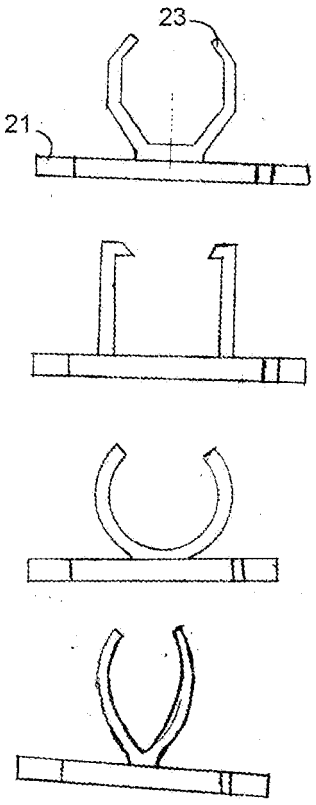

Fig. 10

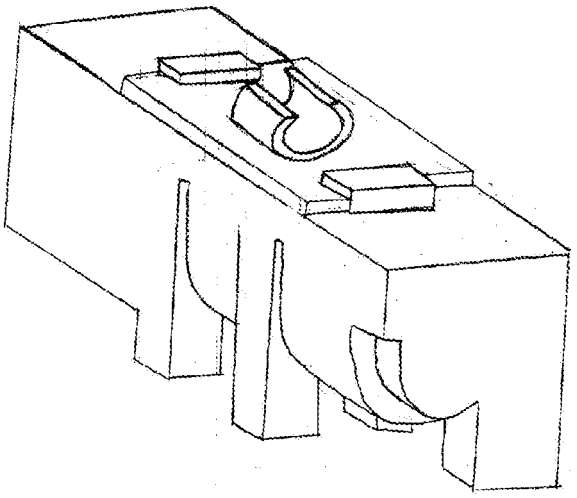

Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 6796792 B **[0003]**
- EP 1859203 A **[0004]**