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(54) **A hinge system for kitchen ovens**

(57) A door for ovens used in kitchens for cooking meals, characterized in that, it comprises a body (1) bearing the arrangements for opening and closing said door

thereon, at least one wedge (3), which is mounted on the oven door by means of the body (1) and pivotally mounted to the hinge, mounted on the oven housing, and at least one lock plate (5) fixing the hinge to the wedge (3).

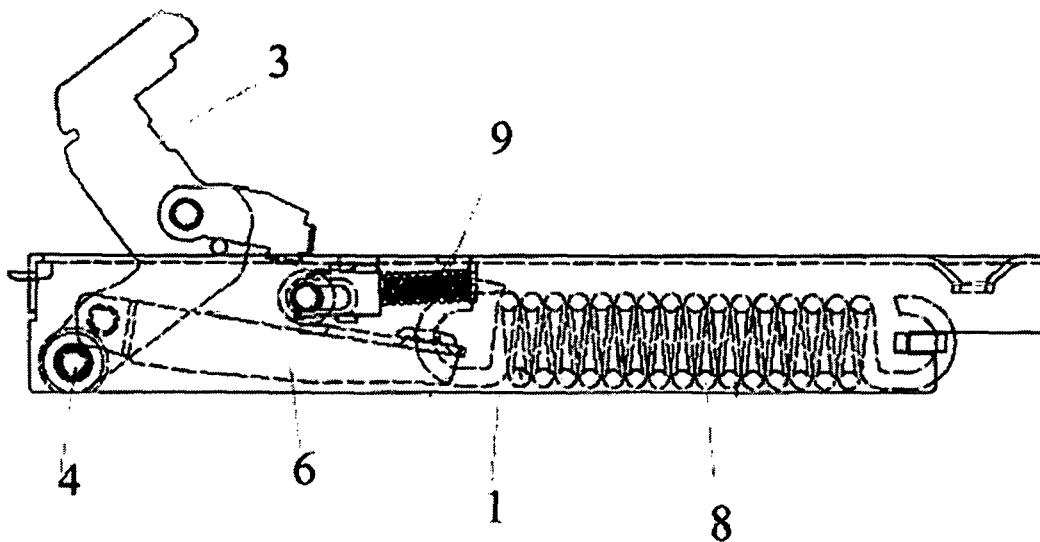


FIG. 1

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Description

Scope of the Invention

[0001] Present invention relates to ovens that enable cooking meals and that are used in all kitchens.

[0002] Said invention particularly relates to a door hinge that enables the front doors to be opened and closed easily, without noise and friction.

State of the Art

[0003] Today, ovens, which are a product from white goods range, are being used for cooking meals and especially where the meals are desired to be cooked in a tray. Ovens are products, which enables the large meal positioning materials, such as trays, to be located and the heat to be dissipated to everywhere homogenously.

[0004] Ovens show differences according to their visual structure, usage differences and systematically features. Oven doors take precedence among the parts that show differences in terms of the system. Present oven doors also show differences in terms of easy opening and closing, advantages and disadvantages they provide to the user and again the system.

[0005] One of the most serious problems experienced about the present oven doors is that the door makes too much noise and more strength is expended in order to open and close the doors related to before. Other problems are respectively, that the doors do not close completely and, as a manifestation of that, the heat escapes to outside. Escape of the heat causes heat losses and extra energy consumption.

Brief description of the invention

[0006] The object of the invention is to have the hinge that enables the front door of the oven to be opened and closed to work noiselessly, to minimize the friction of the working parts and to hold the door in balance during opening angles.

[0007] One of the object of the invention is to close the door completely by means of the hinge system and hence to avoid the heat losses and to provide energy savings.

[0008] Another object of the invention is that it may be easily mounted to the oven door and oven body and it has a resistant and tough structure against possible blows that may come from the outside.

[0009] Another object of the invention is that, for the motions of the hinge within the system during working may take place in a narrower area, a wider area is not allocated for the big spring holder and the tight press force is provided to the required seal by means of two small reel springs and having the big spring holder worked in contact with the reel, the motion is directed to the lower side and it is enabled to the empty space in the lower side to be used.

Short Description of the Drawings

[0010] Figure 1 depicts the three dimension view of the disassembled system.

[0011] Figure 2 depicts the two dimension view of the assembled system.

Reference Numbers

10 [0012]

1. body
2. spring holder with reel
3. wedge
- 15 4. pipe pin
5. lock plate
6. big spring holder
7. claw
8. hooked spring
- 20 9. reel spring
10. plastic reel
11. rivet

Detailed Description of the Invention

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[0013] In figure 1 is depicted the dismantled three dimension view of the oven hinge. The hinge comprises a body (1), spring holder with reel (2), wedge (3), pipe pin (4), lock plate (5), big spring holder (6), claw (7), hooked spring (8), reel spring (9), plastic reel (10) and rivets (11). And in figure 2 is depicted the mounted two dimension view of the hinge.

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[0014] According to the features of the oven door, the hinge may be mounted on the mounting area by means of one or several screws. By means of two different spring systems, namely hooked spring (8) and reel spring (9) groups, it differentiates the forces applied on the closing area between 0 and 24 degrees and on the opening are between 24 and 86 degrees and also is a single wedged and single pivoted hinge that enables the proper balancing of the door.

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[0015] Following the hinge configuration has been mounted on the cover, it may be easily mounted into its hinge opposite slot, which has been beforehand mounted on the oven body by means of the hinge wedge (3) and it may be fixed into the hinge opposite slot by means of the lock plate (5).

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[0016] The pipe pin (4), which bears the rotating pivot of the hinge and which is on the rotating pivot of the hinge body may be mounted on the wedge (3). In addition, the lock plate (5), which enables the task of fixing the hinge to the wedge (3), is mounted. To one end of the hooked spring (8), which enables the door to stand balanced between 24 and 86 degrees, the big spring holder (6) is mounted. And the other end of the big spring holder (6) is mounted on the wedge (3).

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[0017] The other end of the hooked spring (8) is mounted on the hinge body (1) by means of the claw (7). The

reel spring, which allows the hinge to stand at 24 degrees when it is in semi-open position and the door to press on the seal on the oven body tightly, is mounted on the hinge body (1) along with the spring holder with reel (2) and plastic reel (10). Rivets (11) are being used as a connector in the mounting process.

[0018] The oven, on which the hinges have been mounted, may hang on in 24 degrees semi-open position, may be opened and closed with a balance between 24 and 86 degrees and also, it may be opened and closed for 20.000 times, which is the minimum lifespan of the hinge, without any problem.

element for enabling the parts to be in contact with each other.

9. A system according to any of the previous claims, **characterized in that**, it comprises at least one pipe pin (4) as a bear for rotating pivot of the hinge and which is also positioned on the rotating pivot of the hinge body and mounted on the wedge.

Claims

1. An opening and closing door of the ovens used in kitchens for cooking meals, **characterized in that**, it comprises a body (1) bearing the arrangements for opening and closing said door thereon, at least one wedge (3), which is mounted on the oven door by means of the body (1) and pivotally mounted to the hinge, mounted on the oven body, and at least one lock plate (5) fixing the hinge to the wedge (3).
2. A system according to claim 1, **characterized in that**, it comprises at least one hooked spring (8), which enables the door to stand balanced between 24 and 86 degrees.
3. A system according to claim 1 and 2, **characterized in that**, it comprises at least one big spring holder (6), which is contacted with the hooked spring (8).
4. A system according to any of the previous claims, **characterized in that**, it comprises a claw (7), which is fixed on the body (1) and to which the hook part of the hooked spring (8) is contacted.
5. A system according to any of the previous claims, **characterized in that**, it comprises at least two reel springs (9), which allows the hinge to stand at 24 degrees when it is in semi-open position and the door to press on the seal on the oven body tightly.
6. A system according to any of the previous claims, **characterized in that**, it comprises at least one spring holder with reel (2), which enables the holding of the reel spring (9) and the contact.
7. A system according to any of the previous claims, **characterized in that**, it comprises at least one plastic reel (9), which is fixed on the body (1) along with the reel spring (9) and the spring holder with reel (2).
8. A system according to any of the previous claims, **characterized in that**, it comprises preferably at least one rivet (11), which is used as a mounting

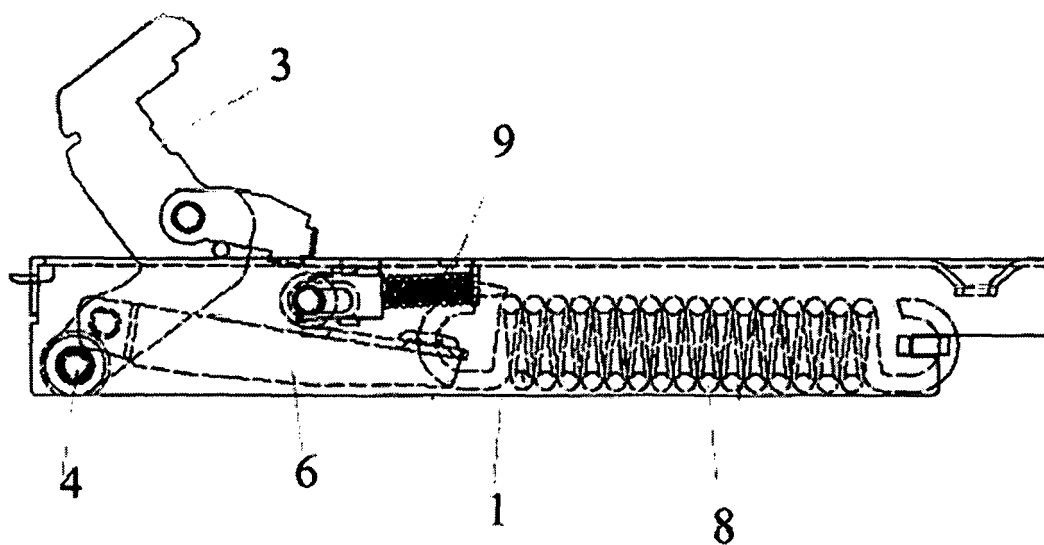


FIG. 1

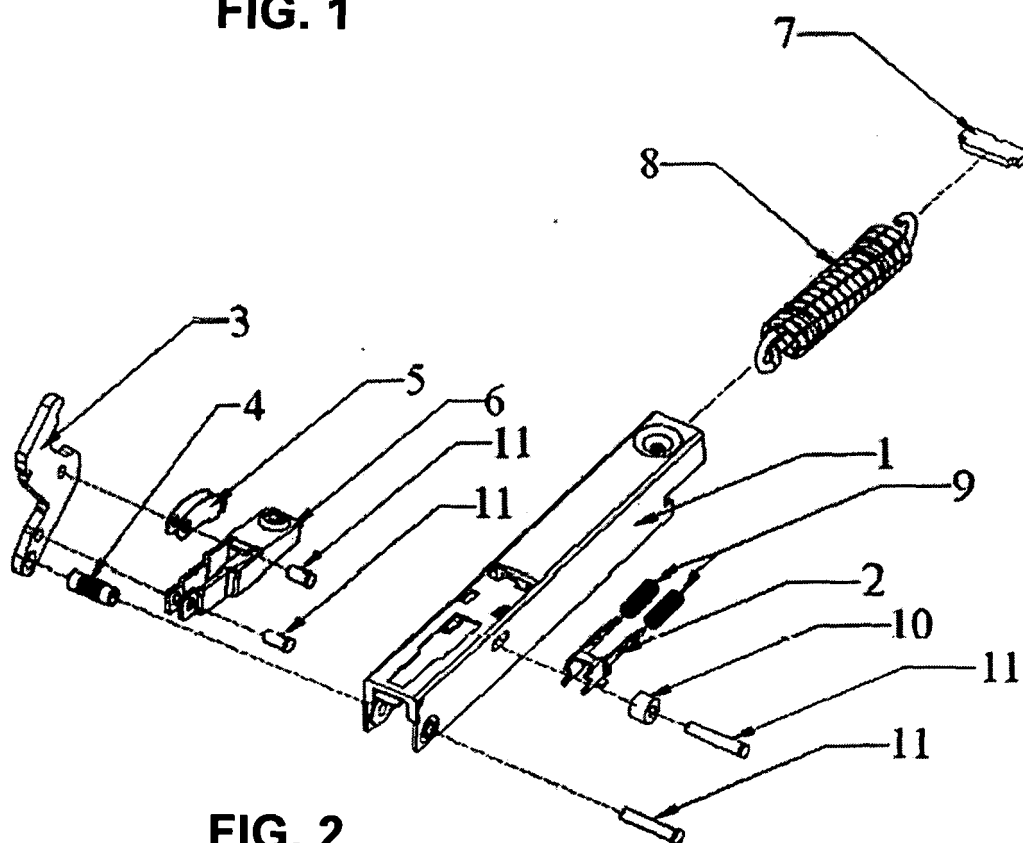


FIG. 2



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EUROPEAN SEARCH REPORT

Application Number
EP 04 02 8422

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 4 November 2005	Examiner von Mittelstaedt, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPC FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 04 02 8422

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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04-11-2005

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