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(57) **ABSTRACT**

The present invention relates to a kitchen furniture (1) comprising a counter (2), a housing (3) disposed on the counter (2) suitable for placing the cooktop (C) therein, an opening (4) providing access into the housing (3), a chamber (5) disposed under the counter (2) and near the housing (3), a cover (6) that enters into the chamber (5) in the first position and that covers the opening (4) by coming over the housing (3) in the second position and a movement mechanism (7) that is suitable for moving the cover (6) between the first and second positions and moving the cooktop (C) upwards and downwards inside the housing (3).

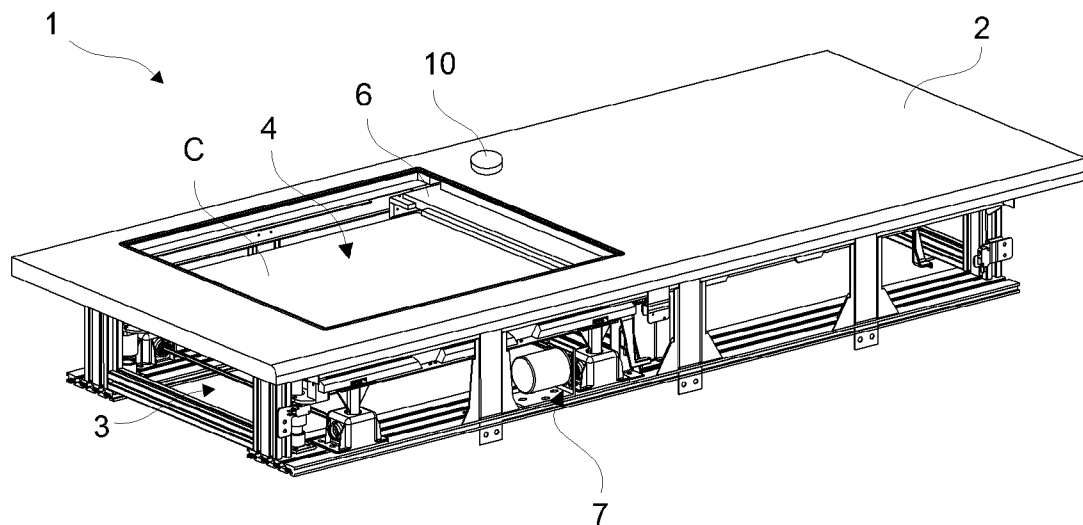


Figure 1

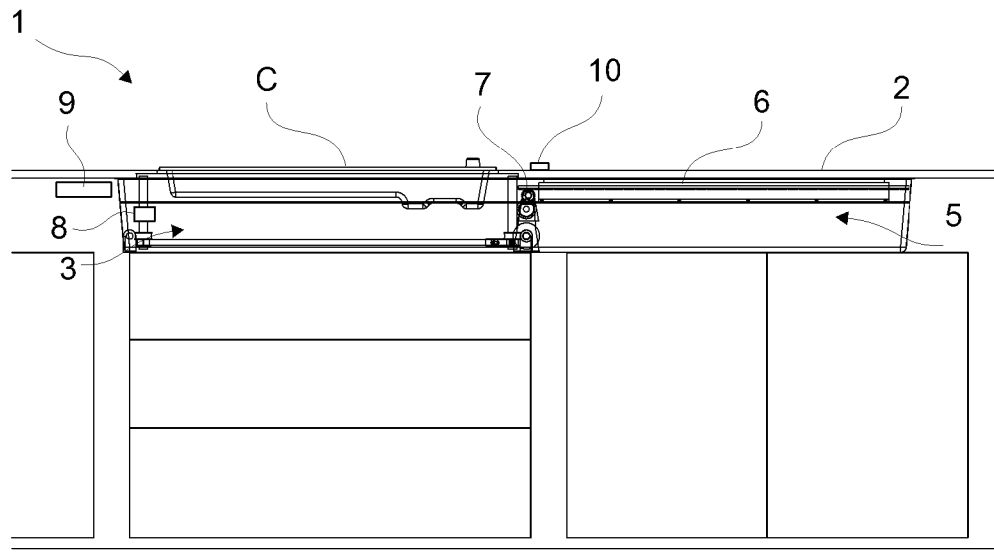


Figure 2

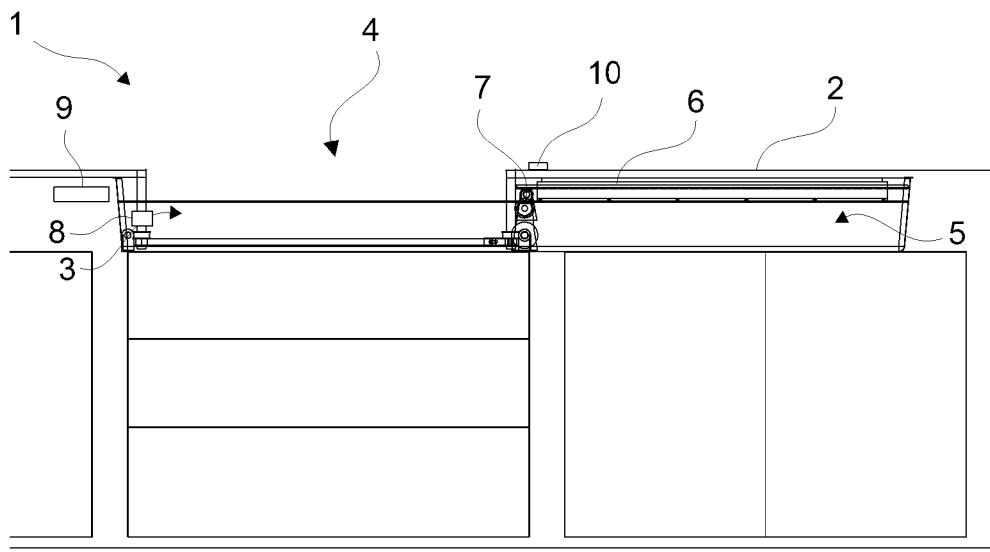


Figure 3

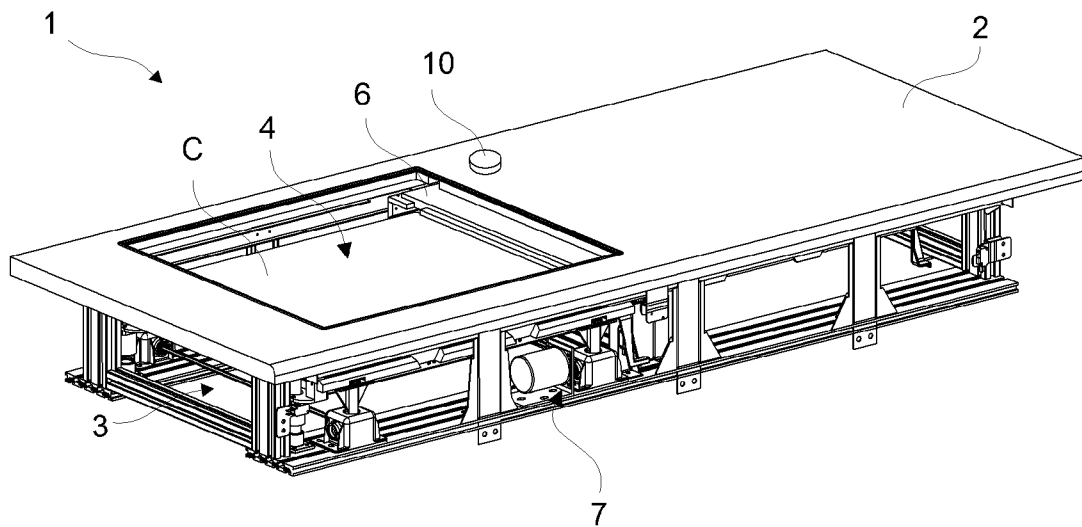


Figure 4

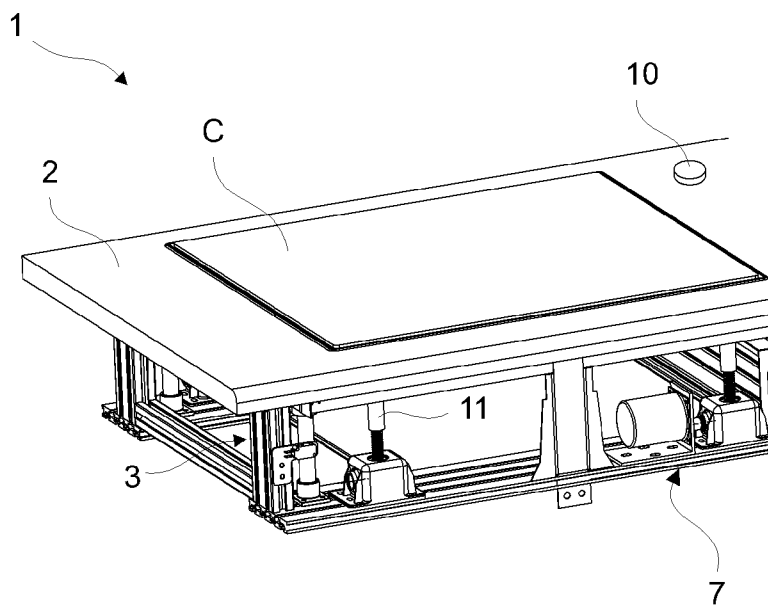
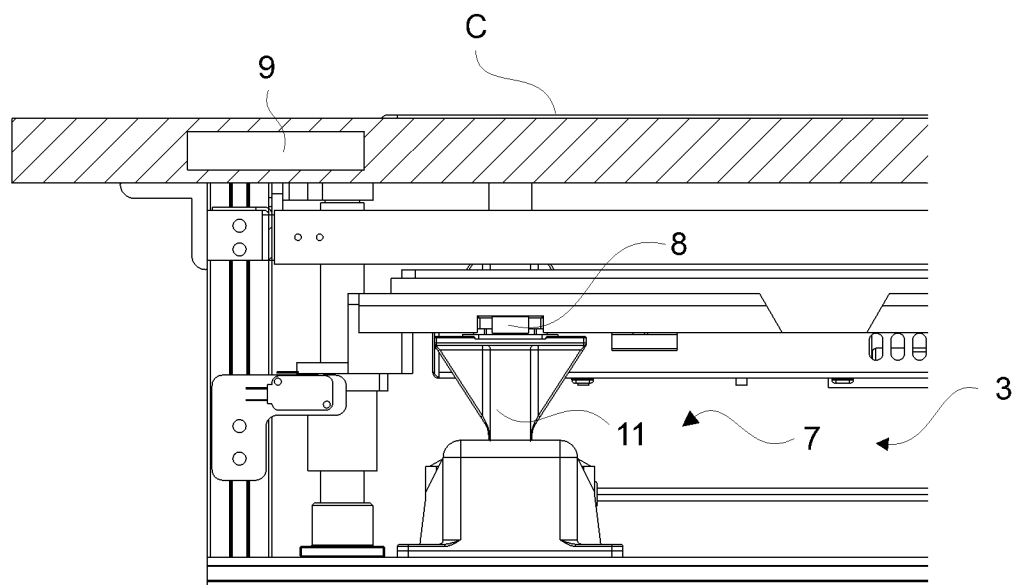


Figure 5



KITCHEN FURNITURE

[0001] The present invention relates to a kitchen furniture, on the counter of which a cooktop is placed.

[0002] In kitchen furniture, the cooktop can be placed by opening a housing on the counter. The user prefers the cooktop embedded in the housing because the cooktop does not have the problem of sliding on the counter and no problem of dirt accumulation between the counter and the cooktop exists. However, the cooktop occupies space on the counter unnecessarily when not in use and decreases the usable area of the counter for the user. Furthermore, the top surface of the cooktop that is always open gets dirty and cleaning the dust and dirt collected particularly on the sides of the heaters becomes difficult. In the state of the art for this purpose covers are present that are closed over the cooktop. However, these covers, since closed over the cooktop, occupy space by forming a protrusion over the area occupied by the cooktop on the counter. This causes the user not to be satisfied with the kitchen furniture.

[0003] The kitchen furniture explained in the state of the art Turkish Patent Application No. TR200910074 comprises a cooktop disposed in a housing opened on the counter, a movement mechanism that moves the cooktop towards inside of the housing by being actuated when the cooktop is not used and a cover that is placed in a chamber disposed under the counter in the first position and that is brought over the cooktop in the second position after the cooktop is placed under the housing. Thus, the cooktop is moved downwards when not in use and the cover conceals the cooktop by being changed from the first position to the second position.

[0004] One of the problems encountered in the embodiments where the cooktop is concealed under the counter is that the cooktop enters into the housing and the top thereof is covered by the cover when a cooking container such as pot, pan, coffee pot, is present on the cooktop. In this case, the cover that covers over the cooktop hits the cooking containers on the cooktop and causes them to fall and break.

[0005] The kitchen furniture realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof comprises at least one presence sensor detecting the object on the cooktop or the cover and a control unit preventing the cooktop and the cover from moving by controlling the movement mechanism when an object is detected on the cooktop or the cover by the presence sensor.

[0006] Thus, the cooktop and the cover are prevented from moving when there is an object thereon and inconveniences such as the objects on the cooktop or the cover falling and breaking or the hand of the user getting stuck therebetween are eliminated.

[0007] In the preferred embodiment of the present invention, the presence sensor is a weight sensor. The weight sensor detects the weight of the cooktop and in the second position, that is where the cooktop is concealed under the counter by the cover, detects the combined weight of the cooktop and the cover.

[0008] In another embodiment of the present invention, the weight sensor is positioned so as to remain between the cooktop and the shaft that supports the weight of the cooktop and supports the total weight of the cooktop and the cover when the cover is in the second position.

[0009] In an embodiment of the present invention, the presence sensor is an optical sensor. In different derivatives of this embodiment, the presence sensor is positioned on the counter

so as to detect the objects placed on the cover or positioned at the edges of the housing so as to detect the objects placed on the cooktop.

[0010] By means of the kitchen furniture of the present invention, the movement mechanism moves the cooktop and the cover by being activated by the control unit only when there is no object on the cooktop and the cover. If there is any object on the cooktop and/or the cover, the movement mechanism is not activated by the control unit and the cooktop and the cover are provided to remain stationary in their positions. Thus, the cooktop and the cover are prevented from being moved when there is any object on the cooktop and the cover, preventing the objects from falling and breaking and preventing the hand of the user from getting stuck between the cover and the cooktop and thus the cooktop that can be concealed under the counter is provided to operate in a safe manner.

[0011] A kitchen furniture realized in order to attain the aim of the present invention is illustrated in the attached figures, where:

[0012] FIG. 1—is the schematic view of a kitchen furniture when the cover is in the first position.

[0013] FIG. 2—is the schematic view of a kitchen furniture when the cover is in the second position.

[0014] FIG. 3—is the perspective view of a kitchen furniture when the cover is in the first position.

[0015] FIG. 4—is the partial perspective view of a kitchen furniture when the cover is in the second position.

[0016] FIG. 5—is the partial cross-sectional view of a kitchen furniture when the cover is in the second position.

[0017] The elements illustrated in the figures are numbered as follows:

- [0018] 1. Kitchen furniture
- [0019] 2. Counter
- [0020] 3. Housing
- [0021] 4. Opening
- [0022] 5. Chamber
- [0023] 6. Cover
- [0024] 7. Movement mechanism
- [0025] 8. Presence sensor
- [0026] 9. Control unit
- [0027] 10. Button
- [0028] 11. Shaft

[0029] The kitchen furniture (1) of the present invention comprises a counter (2), a housing (3) disposed on the counter (2) suitable for placing the cooktop (C) therein, an opening (4) providing access into the housing (3), a chamber (5) disposed under the counter (2) and near the housing (3), a cover (6) that enters into the chamber (5) in the first position and that covers the opening (4) by coming over the housing (3) in the second position and a movement mechanism (7) that is suitable for moving the cover (6) between the first and second positions and moving the cooktop (C) upwards and downwards inside the housing (3).

[0030] The kitchen furniture (1) furthermore comprises at least one presence sensor (8) detecting the object on the cooktop (C) or the cover (6) and a control unit (9) preventing the cooktop (C) and/or the cover (6) from moving by controlling the movement mechanism (7) when an object is detected on the cooktop (C) or the cover (6) by the presence sensor (8).

[0031] The cooktop (C) is placed inside the housing (3) which is disposed on the counter (2). When the cooktop (C) is at the upper side of the housing (3) food can be cooked thereon (FIG. 1). In the meantime, the cover (6) is inside the chamber (5) in the first position. When not in use, the cooktop

(C) is moved in the downward direction by the actuation of the movement mechanism (7) and goes down into the housing (3) (FIG. 2). The opening (4) is situated at the upper side of the cooktop (C) that comes to a level lower than that of the counter (2) inside the housing (3). The cover (6) covers the opening (4) by being changed to the second position by the movement mechanism (7) (FIG. 3). However, this movement of the cooktop (C) and the cover (6) becomes possible when no object is detected on the cooktop (C) or the cover (6) by the presence sensor (8). Thus, the cooktop (C) is seated inside the housing (3) so as to be accessible by the user when in use, goes into the housing (3) and is concealed under the cover (6) that is brought over the housing (3) when not in use. Thus, the cooktop (C) is protected from external factors when not in use and is prevented from getting dirty.

[0032] When the cooktop (C) is desired to be used when the cover (6) is in the second position, the movement mechanism (7) is actuated once more. When no object is detected on the cooktop (C) or the cover (6) by the presence sensor (8), the movement mechanism (7) brings the cover (6) to the first position and then moves the cooktop (C) upwards so that it can be used.

[0033] When any object is detected on the cooktop (C) or the cover (6) by the presence sensor (8), the movement mechanism (7) is not operated by the control unit (9) even if it is actuated by the user and the cooktop (C) and the cover (6) maintain their positions. Thus, inconveniences such as the objects on the cooktop (C) or the cover (6) falling and breaking or getting stuck between the cooktop (C) and the cover (6) and the like are eliminated, thus providing the movement mechanism (7) to work in a safe manner.

[0034] In an embodiment of the present invention, the presence sensor (8) is a weight sensor. The weight sensor (8) detects the weight of the cooktop (C) and the cover (6) and transmits the data related to the presence of any object on the cooktop (C) or the cover (6) to the control unit (9).

[0035] In an embodiment of the present invention, the kitchen furniture (1) comprises at least one button (10) disposed on the counter (2), providing energy to be supplied to the movement mechanism (7) by being actuated by the user.

[0036] In an embodiment of the present invention, the movement mechanism (7) comprises at least one shaft (11) supporting the total weight of the cooktop (C) and the cover (6) when the cooktop (C) and the cover (6) are in the second position. When the user pushes the button (10), the movement mechanism (7) provides the cooktop (C) to move in the downward direction by means of the shaft (11). When the cooktop (C) is desired to be brought to its former position, the movement mechanism (7) operates in the reverse direction, providing the cooktop (C) to rise on the shaft (11). In this embodiment of the present invention, weight sensor is used as the presence sensor (8). Also in the second position of the cooktop (C) and the cover (6), the presence sensor (8) is placed on the shafts (11) supporting the whole weight of the cooktop (C) and the cover (6), so as to be between the shaft (11) and the cooktop (C). Thus, the weight of the cooktop (C) and when the cover (6) is in the second position, the combined weight of the cooktop (C) and the cover (6) is detected to be transmitted to the control unit (9).

[0037] In a derivative of this embodiment, the cooktop (C) is supported by four shafts (11) so that the balance and the weight detecting are provided in the best manner and presence sensors (8) are disposed at the portions where the shafts (11) and the cooktop (C) contact each other.

[0038] In an embodiment of the present invention, the presence sensor (8) is an optical sensor. In a derivative of this embodiment, the presence sensor (8) is disposed on the counter (2) and detects the object on the cover (6). In another derivative of this embodiment, the presence sensor (8) is disposed at the edge of the housing (3) and detects the object on the cooktop (C).

[0039] By means of the present invention, in the embodiments wherein the cooktop (C) is concealed under the counter (2), the cooktop (C) and the cover (6) are prevented from displacing if there is any object thereon, thus preventing the objects thereon from falling and breaking. Thus, a safety control is obtained in the embodiments wherein the cooktop (C) is concealed under the counter (2).

[0040] It is to be understood that the present invention is not limited to the embodiments disclosed above and a person skilled in the art can easily introduce different embodiments. These should be considered within the scope of the protection postulated by the claims of the present invention.

1. A kitchen furniture (1) comprising a counter (2), a housing (3) disposed on the counter (2) suitable for placing the cooktop (C) therein, an opening (4) providing access into the housing (3), a chamber (5) disposed under the counter (2) and near the housing (3), a cover (6) that enters into the chamber (5) in the first position and that covers the opening (4) by coming over the housing (3) in the second position and a movement mechanism (7) that is suitable for moving the cover (6) between the first and second positions and moving the cooktop (C) upwards and downwards inside the housing (3) characterized by—at least one presence sensor (8) detecting the object on the cooktop (C) or the cover (6) and—a control unit (9) preventing the cooktop (C) and/or the cover (6) from moving by controlling the movement mechanism (7) when an object is detected on the cooktop (C) or the cover (6) by the presence sensor (8).

2. The kitchen furniture (1) as in claim 1, wherein the presence sensor (8) that is a weight sensor,

3. The kitchen furniture (1) as in claim 2, wherein the movement mechanism (7) further comprises at least one shaft (11) supporting the total weight of the cooktop (C) and the cover (6) when the cooktop (C) and the cover (6) are in the second position, wherein the presence sensor (8) placed on the shafts (11) so as to remain between the shaft (11) and the cooktop (C).

4. The kitchen furniture (1) as in claim 2, wherein the presence sensor (8) detecting the weight of the cooktop (C) and when the cover (6) is in the second position, the combined weight of the cooktop (C) and the cover (6).

5. The kitchen furniture (1) as in claim 1, wherein the presence sensor (8) that is an optical sensor.

6. The kitchen furniture (1) as in claim 5, wherein the presence sensor (8) disposed on the counter (2) and detecting the object on the cover (6).

7. The kitchen furniture (1) as in claim 5, wherein the presence sensor (8) disposed at the edge of the housing (3) and detecting the object on the cooktop (C).

8. The kitchen furniture (1) as in claim 1 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

9. The kitchen furniture (1) as in claim 3, wherein the presence sensor (8) detecting the weight of the cooktop (C) and when the cover (6) is in the second position, the combined weight of the cooktop (C) and the cover (6).

10. The kitchen furniture (1) as in claim 6, wherein the presence sensor (8) disposed at the edge of the housing (3) and detecting the object on the cooktop (C).

11. The kitchen furniture (1) as in claim 2 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

12. The kitchen furniture (1) as in claim 3 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

13. The kitchen furniture (1) as in claim 4 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

14. The kitchen furniture (1) as in claim 5 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

15. The kitchen furniture (1) as in claim 6 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

16. The kitchen furniture (1) as in claim 7 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

17. The kitchen furniture (1) as in claim 9 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

18. The kitchen furniture (1) as in claim 10 further comprising a cooktop (C) disposed inside a kitchen furniture (1) and changed to two positions by being moved.

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