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(54) **ROTATABLE KITCHEN**

(57) Rotatable kitchen, which comprises at least one kitchen furniture piece (2), provided with a bottom wall (21) intended to be directed towards a floor (P), an opposite upper wall (22), adapted to define a work plane of said kitchen furniture piece (2) and on which at least one kitchen application (3) is mounted, e.g. a sink (31) and/or a stovetop (32), and a lateral wall (23), placed as a connection between the bottom wall (21) and the upper wall (22) and delimiting with the latter an internal volume (V) of the kitchen furniture piece (2).

The kitchen (1) also comprises a slewing bearing (4), mechanically connected to the kitchen furniture piece (2) and arranged for allowing the rotation of the kitchen furniture piece (2), with respect to the floor (P), around a

rotation axis (R) substantially orthogonal to the bottom wall (21).

The slewing bearing (4) is provided with a fixed portion (41), which is intended to be fixed to the floor (P), and a movable portion (42), rotatably connected to the fixed portion (41) and fixed to the kitchen furniture piece (2).

The rotatable kitchen (1) also comprises a support frame (5), mechanically fixed to the movable portion (42) of the slewing bearing (4) and to the kitchen furniture piece (2) and supporting the kitchen furniture piece (2) projecting, spaced and suspended with respect to the floor (P).

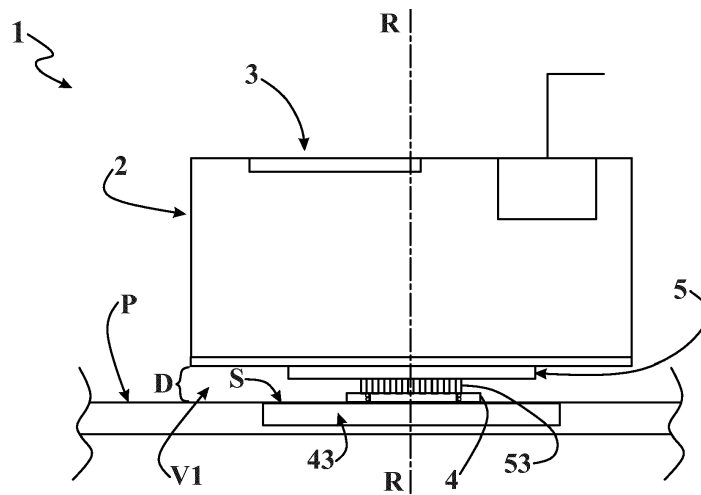


Fig. 1

Description

Field of application

[0001] The present invention regards a rotatable kitchen, according to the preamble of the independent claim 1.

[0002] The present rotatable kitchen has particular application as kitchen of "island" type, employable within a modular kitchen.

[0003] More in detail, such rotatable kitchen is preferably of the type positionable at the center of a setting intended for kitchen use and usable as work plane or as abutment plane, as well as of course usable as container furniture piece.

[0004] The present kitchen furniture piece is therefore inserted in the field of furnishing and in particular in the field of production of kitchen furniture pieces, in particular modular.

State of the art

[0005] So-called wall-mounted kitchen furniture pieces are known, which are adapted to be abutted against a perimeter wall or an internal dividing wall of a home or of a business. Such wall-mounted kitchen furniture pieces can in turn be of column or cupboard type, employable for example as pantry furniture pieces or container furniture pieces for refrigerators, or of bed type, hence also employable as work plane or abutment plane, exploiting a plane fixed at the upper top thereof.

[0006] For several years, in particular in modern homes where the living room and the kitchen are attained in a single setting known also as "open space", kitchen furniture pieces of "island" type are increasingly diffused, i.e. adapted to be placed at the center of a setting so as to allow obtaining a greater continuity between the kitchen and the living room.

[0007] The island kitchen furniture pieces usually have rectangular or square base and they are usually installed in combination with a linear kitchen portion, i.e. comprising multiple wall-mounted furniture pieces that face each other.

[0008] The island kitchen furniture pieces are in particular usually placed parallel to the linear kitchen portion, spaced from the latter between 80 and 100 cm, so as to allow an easy passage by a user between the island furniture piece and the linear portion of the kitchen without however being excessively bulky for the rest of the environment.

[0009] The island kitchen furniture pieces of known type described briefly herein have in fact proven in practice to be not free of drawbacks.

[0010] A first drawback lies in their difficult placement within an environment, for which it is necessary to carefully study the sizes and most of the time compromise between the functional practical requirements and the aesthetic needs.

[0011] Indeed if on one hand the island kitchen furni-

ture pieces with large size are aesthetically more appreciable and easier to use since they provide a work plane or abutment plane that is more spacious, on the other hand they have the problem of bulk, since they limit the useful space of the living room or dining room.

[0012] In such situation, therefore, as set forth above, most of the users require compromising between ease of work (and general appearance) and the spaciousness of the kitchen and of the environments surrounding the latter.

[0013] In order to at least partially overcome such drawback, known from patent EP 363324 is a kitchen provided with a rotatable work plane.

[0014] More in detail, the kitchen described in the aforesaid patent comprises a kitchen furniture piece, which defines a containment volume at its interior and is abutted against the ground directly by means of a base wall that acts as pedestal. Within the containment volume, a slewing bearing is housed, fixed in abutment against the upper face of the base wall of the furniture piece. Fixed to such slewing bearing, integral in rotation with the movable portion of the same slewing bearing, are two column elements which are vertically extended and on which the work plane is fixed, in a manner such that the latter is rotatable with respect to the kitchen furniture piece.

[0015] In this manner, it is therefore possible to vary the position of the work plane or abutment plane as a function of the different requirements and situations.

[0016] Nevertheless, even such kitchen solution has proven in practice to not lacking in drawbacks. The main drawback lies in the fact that such kitchen of known type does not allow the user to suitably reorganize the settings as a function of the different needs, for example in the case of a high number of guests or in the event in which there is the need to have a greater space in the environment for a certain time period.

[0017] Indeed, the aforesaid kitchen of known type does not allow modifying the arrangement of the entire kitchen furniture piece, since on the contrary it only allows placing the work plane or abutment plane in different positions as a function of the needs, but without however modifying the planar size of the kitchen furniture piece, so as for example to free space in the kitchen or in the living room.

[0018] Indeed, on the contrary, the rotation of the work plane with respect to the furniture piece increases the total size of the kitchen, being extremely impacting and inconvenient to use.

[0019] In order to at least partly overcome such drawback, a rotatable kitchen was developed, described in the patent JP 2005143521, which comprises a kitchen furniture piece and rotation means for allowing the rotation of the kitchen furniture piece around a vertical rotation axis. More in detail, the rotation means described in the patent JP 2005143521 comprise multiple wheels, fixed below the kitchen furniture piece and adapted to allow the latter to slide on the floor, and a rotary fixed

element, which is provided with a fixed tubular portion, partially inserted within the floor and fixed to the latter, and a movable annular portion, mounted on the tubular portion and rotatably connected to the latter. The movable annular portion is fixed to the kitchen furniture piece, in particular it is partially inserted within the latter, in order to allow the rotation of the kitchen furniture piece around the fixed tubular portion. Nevertheless, also such rotatable kitchen solution has proven in practice that it is not free of drawbacks.

[0020] The main drawback lies in the fact that such kitchen solution has proven in practice to be extremely inconvenient to use.

[0021] If the wheels are rotatably connected below the kitchen furniture piece, in fact, they can around a vertical rotation axis thereof, causing jamming and rendering the furniture piece extremely inconvenient and difficult to rotate.

[0022] Otherwise, if the wheels are on the lower part fixed to the furniture piece, the risk of jamming is reduced, but on the other hand this considerably increases the difficulty of installation, and in particular the risk of errors in such installation step. In such case, it is in fact necessary that the wheels are positioned with their rotation axes placed perfectly radially with respect to the rotation center of the furniture piece, so as to allow the rotation, and not the driving, of the wheels during the rotation of the furniture piece.

[0023] A further drawback of the above-described rotatable kitchen lies in the fact that the wheels can slide and ruin the floor on which they rest during their movement, in particular in the case of a delicate floor such as wood.

[0024] Such drawback is also accentuated in the event in which the wheels intercept, during their movement, objects that are found on the floor, below the kitchen furniture piece.

[0025] In such case in fact a locking of the wheels can occur in the event in which the objects have large size or, otherwise, if the objects are of small size, this can cause dragging of the same objects under the action of the wheels, with consequent possible damage of the floor.

[0026] A further drawback lies in the fact that the rotatable kitchen of known type described above has proven in practice to be inconvenient during the normal cleaning operations, in particular of automated modern robots are employed.

[0027] A further drawback lies in the fact that the rotatable kitchen of known type described above has proven in practice to not be especially aesthetically pleasing, since the wheels are installed in proximity to a lateral portion of the furniture piece in order to allow an improved support, still being visible from the outside and negatively affecting the aesthetic and furnishing character that a kitchen must have.

Presentation of the invention

[0028] In this situation, the problem underlying the present invention is therefore to eliminate the problems of the above-described prior art, by providing a rotatable kitchen, in particular of island type, which is easily and simply movable, in particular rotatable, so as to modify its position in the environment where it is situated.

[0029] A further object of the present invention is to provide a rotatable kitchen which is stable and safe during its use and in particular during its movement.

[0030] A further object of the present invention is to provide a rotatable kitchen which allows eliminating or reducing the damage of the floor on which it is installed.

[0031] A further object of the present invention is to provide a rotatable kitchen which is simple and inexpensive to attain and/or to mount and disassemble.

[0032] A further object of the present invention is to provide a rotatable kitchen which facilitates the normal operations of cleaning the environment where it is intended to be installed.

Brief description of the drawings

[0033] The technical characteristics of the invention, according to the aforesaid objects, can be clearly seen in the contents of the below-reported claims and the advantages thereof will be more evident in the followed detailed description, made with reference to the enclosed drawings, which represent a merely exemplifying and non-limiting embodiment of the invention, in which:

- figure 1 shows a front view of a rotatable kitchen according to the present invention;
- figure 2 shows a front view of the rotatable kitchen of figure 1, with several parts transparent in order to better illustrate other parts;
- figure 3 shows a top plan view of the rotatable kitchen of figure 1, with several parts transparent in order to better illustrate other parts, in which the kitchen is shown in different angular positions;
- figure 4 shows a top plan view of the rotatable kitchen of figure 1, with a kitchen furniture piece removed in order to better illustrate a support frame;
- figure 5 shows a detail of the rotatable kitchen of figure 4, relative to a slewing bearing.

Detailed description of a preferred embodiment

[0034] With reference to the enclosed figures, reference number 1 overall indicates a rotatable kitchen according to the present invention.

[0035] More in detail, with the term "rotatable" it must be intended hereinbelow a kitchen which is adapted to vary its arrangement within a setting in which it is installed, and in particular its angular position with respect to a center of rotation, so as to allow adapting the kitchen and the aforesaid environment to the different require-

ments and/or to the different situations. Advantageously, the present rotatable kitchen 1 is employable both in residential settings and in professional settings, such as or example bars and restaurants.

[0036] Advantageously, the rotatable kitchen 1 according to the invention has particular use as kitchen of island type, i.e. installable at the center of a room, spaced from perimeter walls and from other furniture pieces so as to be accessible by a user from all sides thereof.

[0037] In accordance with the invention, the rotatable kitchen comprises at least one kitchen furniture piece 2, which is provided with a bottom wall 21 intended to be directed towards a floor P, an opposite upper wall 22, adapted to define a work plane 220 of the furniture piece 2, and a lateral wall 23, placed as a connection between the bottom wall 21 and the upper wall 22 and delimiting, with the latter, an internal volume V of the kitchen furniture piece 2.

[0038] Of course, the rotatable kitchen 1 can comprise multiple kitchen furniture pieces 2 that are fixed to each other and brought close to each other to form a single rotatable kitchen 1.

[0039] More in detail, the kitchen furniture piece 2 preferably comprises a substantially box-like body, internally delimiting the aforesaid internal volume V, within which kitchen objects are susceptible of being contained, such as dishware, plates, food supplies or other kitchen objects.

[0040] The kitchen furniture piece 2 advantageously has a polygonal plan, preferably rectangular or square, and consequently preferably has four lateral sides, which define the aforesaid lateral wall 23 and delimit, with the upper wall 22 and with the bottom wall 21, the internal volume V of the furniture piece 2.

[0041] Advantageously, the kitchen furniture piece 2 has at least one wing, which partially defines the lateral wall 23 of the furniture piece 2 and is preferably hinged to the box-like body.

[0042] More in detail, the wing is selectively openable and closeable in order to allow a user to access within the kitchen furniture piece 2 in order to grasp or put back the tools or other objects contained therein. Of course, in a per se known manner, the kitchen furniture piece 2 can also be provided with one or more extractible drawers, slidably mounted on the box-like body by means of guides in order to allow the opening or closing thereof.

[0043] Advantageously, therefore, hereinbelow with the expression "kitchen furniture piece" it will be intended the entire furnishing structure defining the ground size of the kitchen, whose rotation therefore allows varying such ground size, by modifying the walkable planimetry of the room in which the kitchen is situated.

[0044] The rotatable kitchen 1 also comprises at least one kitchen application 3, e.g. a sink 31 and/or a stovetop 32 mounted on the upper wall 22 of the kitchen furniture piece 2, preferably at least partially embedded in such upper wall 22 and at least partially housed within the internal volume V of the kitchen furniture piece 2.

[0045] Advantageously, in accordance with the preferred embodiment illustrated in figure 1, the rotatable kitchen 1 comprises both a sink 31 and a stovetop 32, which are operatively connected to respective water pipes 310 and gas pipes 320 (or to electrical cables in the case of induction stovetop) as better described hereinbelow.

[0046] Of course, the rotatable kitchen 1 can comprise further kitchen applications, for example a household appliance such as a dishwasher, which is preferably embedded within the internal volume V of the kitchen furniture piece 2.

[0047] In accordance with the invention, the rotatable kitchen 1 also comprises a slewing bearing 4, which is mechanically connected to the kitchen furniture piece 2 and is arranged for allowing the rotation of the kitchen furniture piece 2, with respect to the floor P, around a rotation axis R substantially orthogonal to the bottom wall 21 of the same furniture piece 2.

[0048] In this manner it is possible to modify the position of the kitchen furniture piece 2 within a setting in which it is placed, in particular its angular position with respect to a center of rotation passing through the aforesaid rotation axis R.

[0049] The slewing bearing 4 is provided with a fixed portion 41, which is intended to be fixed to the floor P, and a movable portion 42, rotatably connected to the fixed portion 41 and fixed to the kitchen furniture piece 2.

[0050] In particular, the movable portion 42 of the slewing bearing 4 is rotatable together with the kitchen furniture piece 2 itself with respect to the fixed portion 41.

[0051] In accordance with the idea underlying the present invention, the rotatable kitchen 1 comprises a support frame 5, which is fixed to the movable portion 42 of the slewing bearing 4 and to the kitchen furniture piece 2 and supports the kitchen furniture piece 2 projecting, spaced and suspended with respect to the floor P.

[0052] More in detail, with the expression "projecting" it is to be intended that the kitchen furniture piece 2 is supported by the slewing bearing 4 and by the support frame 5 without the aid of further support elements.

[0053] In this manner, it is possible to make a rotatable kitchen 1, which allows stably varying the position of the entire kitchen furniture piece 2 within the setting in which it is placed, simultaneously maintaining the furniture piece itself spaced with respect to the floor P, allowing a high functional advantage and a high aesthetic value.

[0054] Advantageously, the rotatable kitchen 1 is configured for being placed on the floor P only by means of the slewing bearing 4, in particular at the latter.

[0055] Advantageously, the slewing bearing 4 is placed below the kitchen furniture piece 2, with the movable portion 42 thereof fixed below the bottom wall 21 of the kitchen furniture piece 2 and preferably the slewing bearing 4 is placed entirely outside the internal volume V of the kitchen furniture piece 2.

[0056] More in detail, the bottom wall 21 of the kitchen furniture piece 2 is provided with a connection portion

210, preferably placed centrally, which is fixed to the slewing bearing 4, and a remaining projecting portion 211, which encloses the connection portion 210, is extended to cover the entire bottom wall 21, and is placed spaced with respect to the floor P on which the rotatable kitchen 1 is installed.

[0057] In particular, the slewing bearing 4 is extended along a direction parallel to the rotation axis R, between the floor P and the bottom wall 21 of the kitchen furniture piece 2, for an extension D, and the rotatable kitchen 1 lacks other elements which project from the bottom wall 21 of the same kitchen furniture piece 2, or from the support frame 5 connected thereto, towards the floor P for an extension equal to or greater than the extension D introduced above.

[0058] Therefore, the kitchen furniture piece 2 is advantageously susceptible of defining, between the bottom wall 21 thereof and the floor on which it is installed, a free volume VI which is extended over the entire extension of the bottom wall 21, to exclude the connection portion 210 of the latter, at which the slewing bearing 4 is installed.

[0059] Advantageously, the slewing bearing 4 comprises two concentric rings 410, 420, which are rotatably connected to each other.

[0060] More in detail, the fixed portion 41 of the slewing bearing 4 comprises a first ring 410, and the movable portion 42 of the slewing bearing 4 comprises a second ring 420, placed inside and concentric with respect to the first ring 410.

[0061] Advantageously, between the first ring 410 and the second ring 420, a bearing element is interposed, preferably ring-shaped and adapted to allow the rotation between the first ring 410 and the second ring 420, reducing the friction. The bearing element is for example of the type comprising a plurality of balls or a plurality of rollers.

[0062] Advantageously, the first ring 410 and the second ring 420 of the slewing bearing 4 are provided with the same vertical extension, measured along a direction parallel to the rotation axis R, and are preferably provided with respective upper faces 410', 420', directed towards the bottom wall 21 of the kitchen furniture piece 2, which are preferably coplanar. Advantageously, the fixed portion 41 of the slewing bearing 4 also comprises a support base 43, preferably with polygonal section, e.g. square, which is susceptible of being fixed to the floor P. For example, in accordance with the preferred embodiment illustrated in figure 1, the support base 43 is fixed within a seat S made in a depression on the floor P, preferably to size, and is fixable to the latter by means of screws and/or bolts or alternatively through cement or a chemical binder.

[0063] Preferably, the base plate 43 and the first ring 410 of the fixed portion 41 of the slewing bearing 4 are not attained in a single body but rather are separate elements that are fixed together.

[0064] More in detail, in accordance with the aforesaid

preferred embodiment, the support base 43 is provided with a visible face thereof, directed upward and towards the bottom wall 21 of the kitchen furniture piece 2, which is provided with a plurality of threaded holes, preferably placed circumferentially.

[0065] In the same manner, the first ring 410 of the fixed portion 41 of the slewing bearing 4 is provided along a circumferential edge thereof with the same number of through holes 411, preferably threaded, which are attained at and aligned with the threaded holes made on the support base 43, in order to allow a stable and safe fixing of the first ring 41 to the support base 43 by means of bolts or screws.

[0066] Of course, without departing from the protective scope of the present invention, it is also possible to provide for attaining the support base 43 and the first ring 410 of the fixed portion 41 integral with each other and directly fixing the assembly thus attained to the floor P. Advantageously, the first ring 410 is provided with an external diameter equal to or greater than 300 mm, and preferably greater than 450 mm.

[0067] Advantageously, the support base 43 is provided with an equivalent diameter equal to or greater than 350 mm and preferably equal or greater than 550 mm.

[0068] Advantageously, moreover, the second ring 420 is provided with an external diameter equal to or greater than 250 mm, and preferably greater than 400 mm.

[0069] In this manner, it is possible to attain a slewing bearing 4 that allows stably and projectingly supporting the entire kitchen furniture piece 2, even in the case of furniture pieces provided with high size and even in the event in which the slewing bearing 4 is placed in a non-centered position with respect to the center of gravity of the furniture piece 2 itself. Advantageously, the second ring 420 of the movable portion 42 of the slewing bearing 4 is provided, on an upper face thereof, with a plurality of first fixing holes 421, placed spaced from each other circumferentially on the aforesaid upper face.

[0070] Advantageously, in accordance with the preferred embodiment, the support frame 5 comprises at least one support plate 51, which is fixed to the movable portion 42 of the slewing bearing 4, above the latter, and is placed parallel to the bottom wall 21 of the kitchen furniture piece 2.

[0071] More in detail, the support plate 51 is preferably provided with a through passage opening 510, substantially counter-shaped with respect to the second ring 420 of the movable portion 42 of the slewing bearing 4, and a plurality of through second fixing holes 511, which are placed circumferentially with respect to the passage opening 510 and aligned with respect to the corresponding first fixing holes 421 made on the second ring 420 of the slewing bearing 4. In particular, the support plate 51 is fixed to the second ring 420 of the slewing bearing 4 by means of bolts or screws placed to engage the first and the second fixing holes 511, 421. Preferably, the support plate 51 of the support frame 5 has a smaller planar extension than the extension of the kitchen furni-

ture piece 2, and in particular with respect to the planar extension of the bottom wall 21 of the latter.

[0072] In this manner, only one portion of the kitchen furniture piece 2 abuts against the support plate 51 while the rest of the portion is extended projecting from the latter.

[0073] Advantageously, the support frame 5 also comprises a metal frame 52, fixed to the movable portion 42 of the slewing bearing 4 and provided with a plurality of tubular elements.

[0074] More in detail, with the expression "tubular elements" it will be intended hereinbelow elements provided with an elongated extension, of bar or column type, regardless of their planar shape and regardless of whether they are internally hollow or otherwise.

[0075] More in detail, the aforesaid metal frame 52 is preferably fixed above to the support plate 51 and comprises a stiffening portion 520, which is formed by at least two crosspieces 521 and at least two uprights 522 intersecting each other and, preferably, as visible in figure 4 by four crosspieces 521 and two uprights 522.

[0076] Advantageously, the stiffening portion 520 is at least partly extended laterally projecting from the support plate 51.

[0077] Preferably, part of the crosspieces 521 of the stiffening portion 520 abuts against the support plate 51, so as to improve the fixing between the stiffening portion 520 of the metal frame 52 and the support plate 51.

[0078] In this manner it is also possible to stably support the portion of the kitchen furniture piece 2 which is placed projecting with respect to the support plate 51.

[0079] Advantageously, the metal frame 52 also comprises further uprights 522, preferably made in a single body with the uprights 522 of the stiffening portion 520, and crosspieces 521 which are fixed above and perimetrically to the support plate 51.

[0080] In accordance with an embodiment variant not illustrated in the enclosed figures, the support frame 5 comprises only the metal frame 52, which is preferably provided with a connection portion, attained by means of a plurality of crosspieces which are fixed directly to the second ring 420 of the movable portion 42 of the slewing bearing 4 and are extended, e.g. radially, away from the latter. In accordance with the aforesaid embodiment variant, the stiffening portion 52 is placed at the connection portion 210 of the bottom wall 21 of the kitchen furniture piece 2 and is extended from both sides of the latter, in order to support the kitchen furniture piece 2 along the entire width thereof.

[0081] Advantageously, the support frame 5 also comprises at least one spacer element 53, which is fixed above the movable portion 42 of the slewing bearing 4, in particular above the second ring 420, projects above from the movable portion 42 and supports, fixed thereto, the metal frame 52 and/or the support plate 51.

[0082] Preferably, the support frame 5 comprises a plurality of spacer elements 53, which are fixed circumferentially along a perimeter edge of the movable portion 42 of the slewing bearing 4, and in particular along the

perimeter edge of the second ring 420.

[0083] Preferably, the spacer elements 53 are placed at the first fixing holes 421 provided on the second ring 420 and for such purpose are provided with corresponding third fixing holes, aligned with the first fixing holes 421 present on the second ring 420 and with the second fixing holes 511 provided on the support plate 51 (or possibly on the metal frame 52), so as to be interposed and fixed between the latter.

[0084] Advantageously, each of the spacer elements 53 has a substantially column-shaped form, and is provided with a main extension along a main extension direction Y, substantially parallel to the rotation axis R of the slewing bearing 4.

[0085] Preferably, the extension of the spacer elements 53 along the aforesaid main extension direction Y is comprised between 40 and 110 mm, and still more preferably between 60 and 90 mm.

[0086] Nevertheless, it is also possible to install the kitchen furniture piece 2 substantially flush with the floor, spaced by only a few millimeters from the floor itself.

[0087] The possibility of easily varying such distance, in particular by simply substituting the spacer elements without having to substitute any component, allows attaining a rotatable kitchen 1 that is extremely versatile and personalizable based on the single needs of the client.

[0088] Advantageously, the kitchen comprises actuation means 6, arranged for moving the movable portion 42 of the slewing bearing 4 and consequently the kitchen furniture piece 2 in rotation around the rotation axis R, in order to vary the position thereof in the setting in which it is intended to be placed.

[0089] Advantageously, the actuation means comprise a motor 6, connected to the movable portion 42 of the slewing bearing 4 in order to move it in rotation and consequently for moving in rotation the box-like body.

[0090] More in detail, the motor 6 comprises a fixed body susceptible of being fixed to the floor, and a rotor 61, rotatable with respect to the fixed body and mechanically connected to the second ring 420 of the movable portion 42 of the slewing bearing 4 and integral in rotation with the latter.

[0091] Advantageously, the motor 6 is an electric motor, preferably a synchronous motor with permanent magnets which is in particular provided with a nominal power comprised between 0.4 kw and 0.7 kw.

[0092] Advantageously, the second ring 420 of the movable portion 42 of the slewing bearing is extended between an external perimeter edge and an internal perimeter edge, and on the internal perimeter edge thereof it is provided with a toothing 422, which in particular radially projects towards the center of the second ring 420. Advantageously, the motor 6 comprises a toothed wheel 62, or a pinion, which is integral in rotation with the rotor 61 and is adapted to collaborate with the toothing 422 of the second ring 420 in order to move in rotation the movable portion 42 of the slewing bearing 4.

[0093] Advantageously, in accordance with an embodiment not illustrated in the enclosed figures, the motor 6 is provided with a rotary arm, which is hinged to the movable portion 42 of the slewing bearing 4, such as for example a motor employable for the movement of a swing gate, preferably of embeddable type.

[0094] Advantageously, the motor 6 is switchable between an operative configuration, in which it is actuatable to move in rotation the kitchen furniture piece 2 around the rotation axis R, and an idle configuration, in which the rotor 61 of the motor 6 is free to rotate with respect to the fixed body, for example following a manual rotation by the user of the kitchen furniture piece 2.

[0095] Advantageously, the kitchen 2 comprises an engagement element, which can be interposed between the rotor 61 of the motor 6 and the portion of the furniture piece 42 of the slewing bearing or alternatively integrated within the motor 6, and such engagement element is actuatable for selectively engaging and disengaging the rotor 61 of the motor 6, allowing the motor 6 to be switchable between the operative configuration and the idle configuration.

[0096] Preferably, the rotatable kitchen 1 comprises a first electrical or electronic actuator, operatively connected to the motor 6 (or to the engagement element) and actuatable by a user for driving the motor 6 to pass from the operative configuration to the idle configuration, therefore allowing the movement of the kitchen furniture piece 2 in a motorized manner (when the motor 6 is in the operative configuration) or in a manual manner (when the motor 6 is in the idle configuration).

[0097] In particular, the kitchen 2 advantageously comprises an electronic control unit, operatively connected to the aforesaid actuator and to the motor 6 and configured for receiving a corresponding signal from the actuator and for driving the motor 6 to pass from the operative configuration to the idle configuration.

[0098] Of course, the motor 6 can also be configured for being normally in the idle configuration with the rotor 61 free to rotate and for being in the operative configuration only when turned on and actuated, returning immediately into the idle configuration once the motion has stopped. Advantageously, the kitchen comprises stop means, adapted to stop the rotation of the movable portion 42 of the slewing bearing 4. For example, the stop means can comprise a mechanical stop, adapted to mechanically collaborate with the movable portion 42 of the slewing bearing 4 in order to prevent the rotation of the latter, for example upon reaching a rotation angle greater than 360°, in particular so as to prevent breakage or damage of the pipes and of the electrical cables.

[0099] Otherwise, it is also possible that the stop means are of electronic type, which are configured for sending a stop signal to the motor 6 following the detection of a position of maximum rotation. For example, the electronic stop means can comprise an optical sensor, which is configured for detecting the rotation angle completed by the kitchen furniture piece 2, for example by

detecting a graphical sign, reported on the movable portion 42 of the slewing bearing 4 or on the kitchen furniture piece 2, indicative of the maximum rotation that the furniture piece 2 can complete, and sending a stop signal of the motor 6 in order to prevent a further rotation of the furniture piece 2.

[0100] Alternatively, the electronic stop means can comprise an encoder operatively connected to the motor 6, and such encoder is well-known to the man skilled in the art and therefore will not be described hereinbelow.

[0101] Of course, the stop means can comprise both a mechanical stop which in case of emergency or in case of manual movement of the furniture piece 2 intervenes in order to stop the rotation, and an electronic stop, employable when the movement occurs in a motorized manner by means of the motor 6.

[0102] As set forth above, in fact, the kitchen, object of the invention, advantageously comprises at least one kitchen application 3, such as for example a sink 31 and/or a stovetop 32. Advantageously, the slewing bearing 4 and the support frame 5 are provided with respective passage holes adapted to allow the passage of a cable and/or a connection tube from the floor to the aforesaid kitchen application 3.

[0103] Preferably, the aforesaid passage holes are provided with a diameter greater than or equal to 300 mm and preferably greater than 450 mm.

[0104] The invention thus conceived therefore attains the pre-established objects.

Claims

1. Rotatable kitchen, which comprises:

- at least one kitchen furniture piece (2), provided with a bottom wall (21) intended to be directed towards a floor (P), an opposite upper wall (22), adapted to define a work plan of said kitchen furniture piece (2) and on which at least one kitchen application (3) is mounted, e.g. a sink (31) and/or a stovetop (32), and a lateral wall (23), placed as a connection between said bottom wall (21) and said upper wall (22) and delimiting with the latter an internal volume (V) of said kitchen furniture piece (2);
- a slewing bearing (4), mechanically connected to said kitchen furniture piece (2) and arranged for allowing the rotation of said kitchen furniture piece (2), with respect to said floor (P), around a rotation axis (R) substantially orthogonal to said bottom wall (21); said slewing bearing (4) being provided with a fixed portion (41), which is intended to be fixed to said floor (P), and a movable portion (42), rotatably connected to said fixed portion (41) and fixed to said kitchen furniture piece (2);

- said rotatable kitchen (1) being **characterized in that** it comprises a support frame (5), mechanically fixed to the movable portion (42) of said slewing bearing (4) and to said kitchen furniture piece (2) and supporting said kitchen furniture piece (2) projecting, spaced and suspended with respect to said floor (P).
2. Kitchen according to claim 1, **characterized in that** it is configured for being abutted against said floor (P) only by means of said slewing bearing (4).
 3. Kitchen according to any one claim 1 or 2, **characterized in that** the fixed portion (41) of said slewing bearing (4) comprises a first ring (410), and the movable portion (42) of said slewing bearing (4) comprises a second ring (420), placed inside and concentric with respect to said first ring (410).
 4. Kitchen according to any one of the preceding claims, **characterized in that** said support frame (5) comprises at least one support plate (51), which is fixed to the movable portion (42) of said slewing bearing (4), above the latter, and is placed substantially parallel to the bottom wall (21) of said kitchen furniture piece (2).
 5. Kitchen according to any one of the preceding claims, **characterized in that** said support frame (5) comprises a metal frame (52), fixed to the movable portion (42) of the slewing bearing (4) and provided with a plurality of tubular elements; the metal frame (52) of said support frame (5) comprising a stiffening portion (520), provided with at least two crosspieces (521) and at least two uprights (522) that intersect each other.
 6. Kitchen according to any one of the preceding claims, **characterized in that** it comprises at least one spacer element (53), which is fixed above the movable portion (42) of said slewing bearing (4), projects above from the latter and supports said support frame (5) fixed thereto.
 7. Kitchen according to claim 6, **characterized in that** it comprises a plurality of spacer elements (53), fixed along a perimeter edge of the movable portion (42) of said slewing bearing (4) and each of which has a column shape provided with a main extension along a main extension direction (Y), substantially parallel to the rotation axis (R) of said slewing bearing (4).
 8. Kitchen according to any one of the preceding claims, **characterized in that** it comprises actuation means (6), which comprise a motor (6) connected to the movable portion (42) of said slewing bearing (4) and arranged for moving in rotation said movable portion (42) and consequently said kitchen furniture piece (2).
 9. Kitchen according to claim 3 and claim 8, **characterized in that** the second ring (420) of the movable portion (42) of said slewing bearing (4) is provided, on an internal perimeter edge thereof, with a tothing (422); said motor (6) comprising a rotor (61) and a toothed wheel (62), which is integral in rotation with said rotor (61) and adapted to collaborate with the tothing (422) of said second ring (420) in order to move in rotation the movable portion (42) of said slewing bearing (4).
 10. Kitchen according to any one of the preceding claims, **characterized in that** it comprises at least one mechanical stop adapted to collaborate with the movable portion (42) of said slewing bearing (4) in order to prevent the rotation of said movable portion (42).

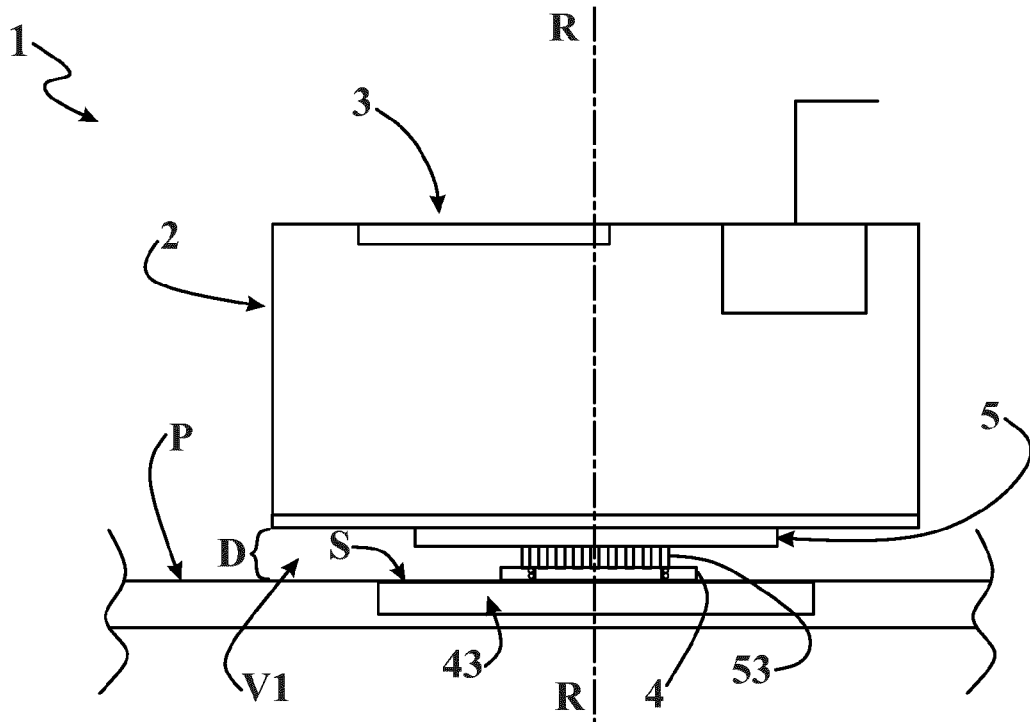


Fig. 1

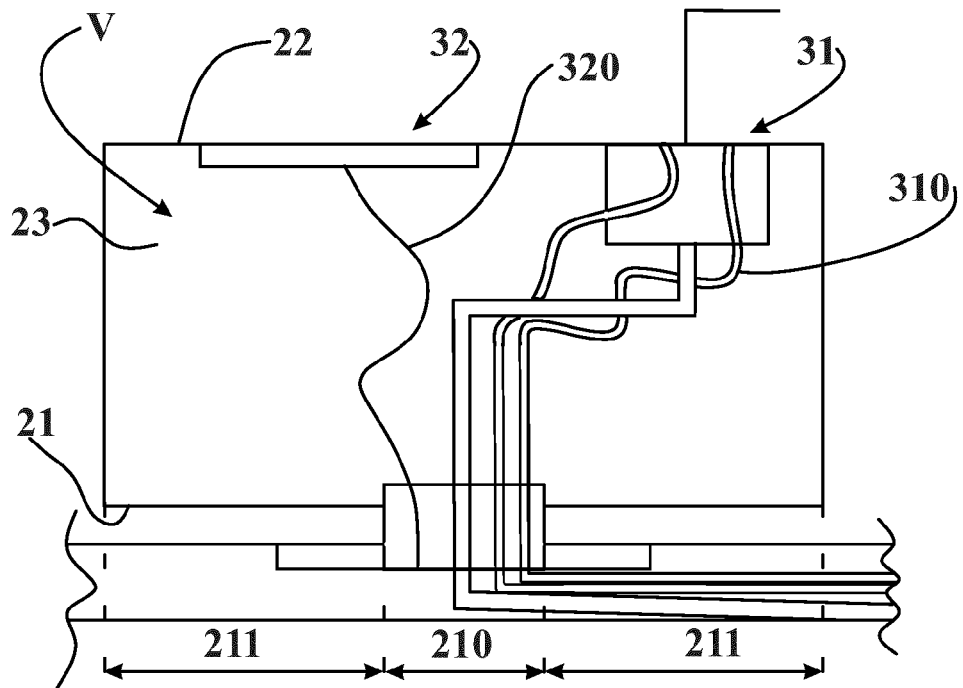


Fig. 2

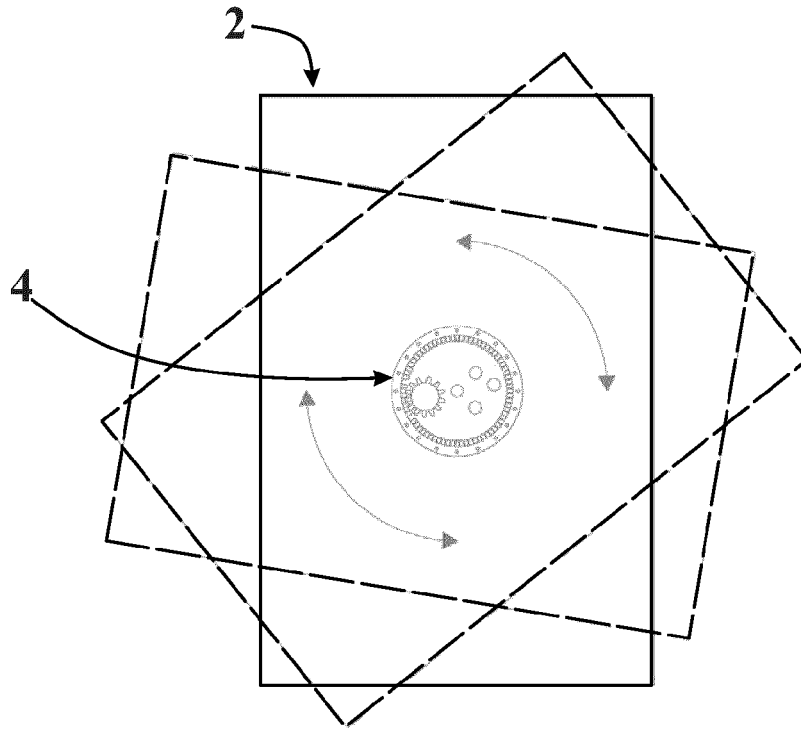


Fig. 3

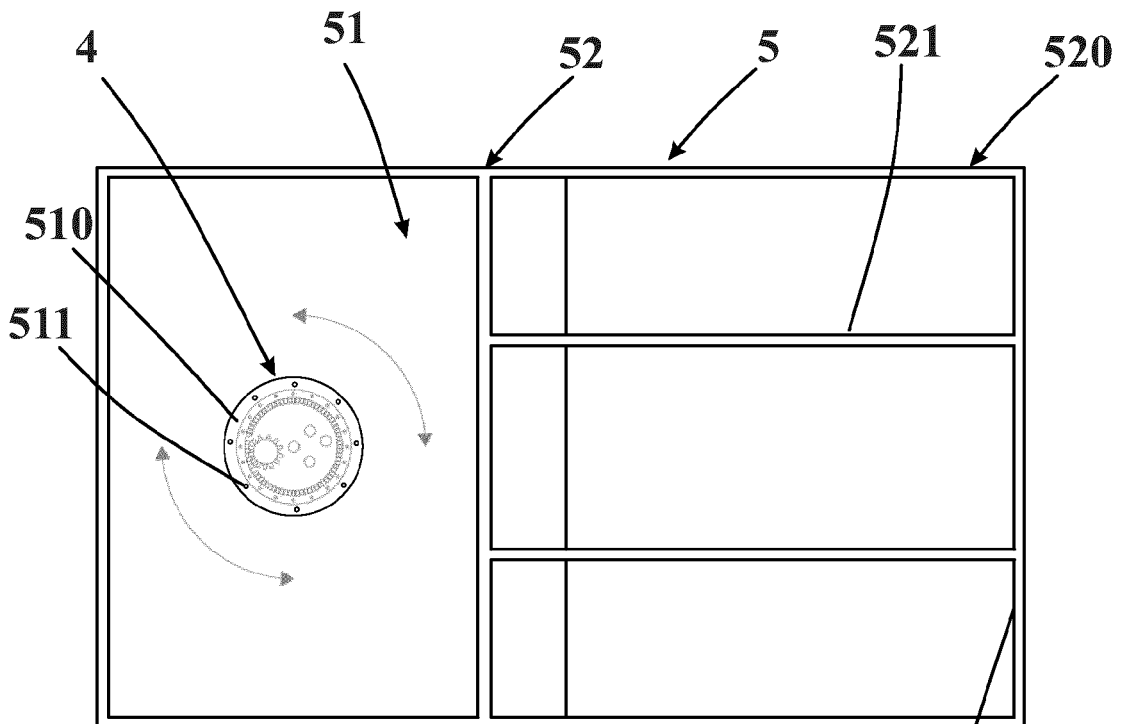


Fig. 4

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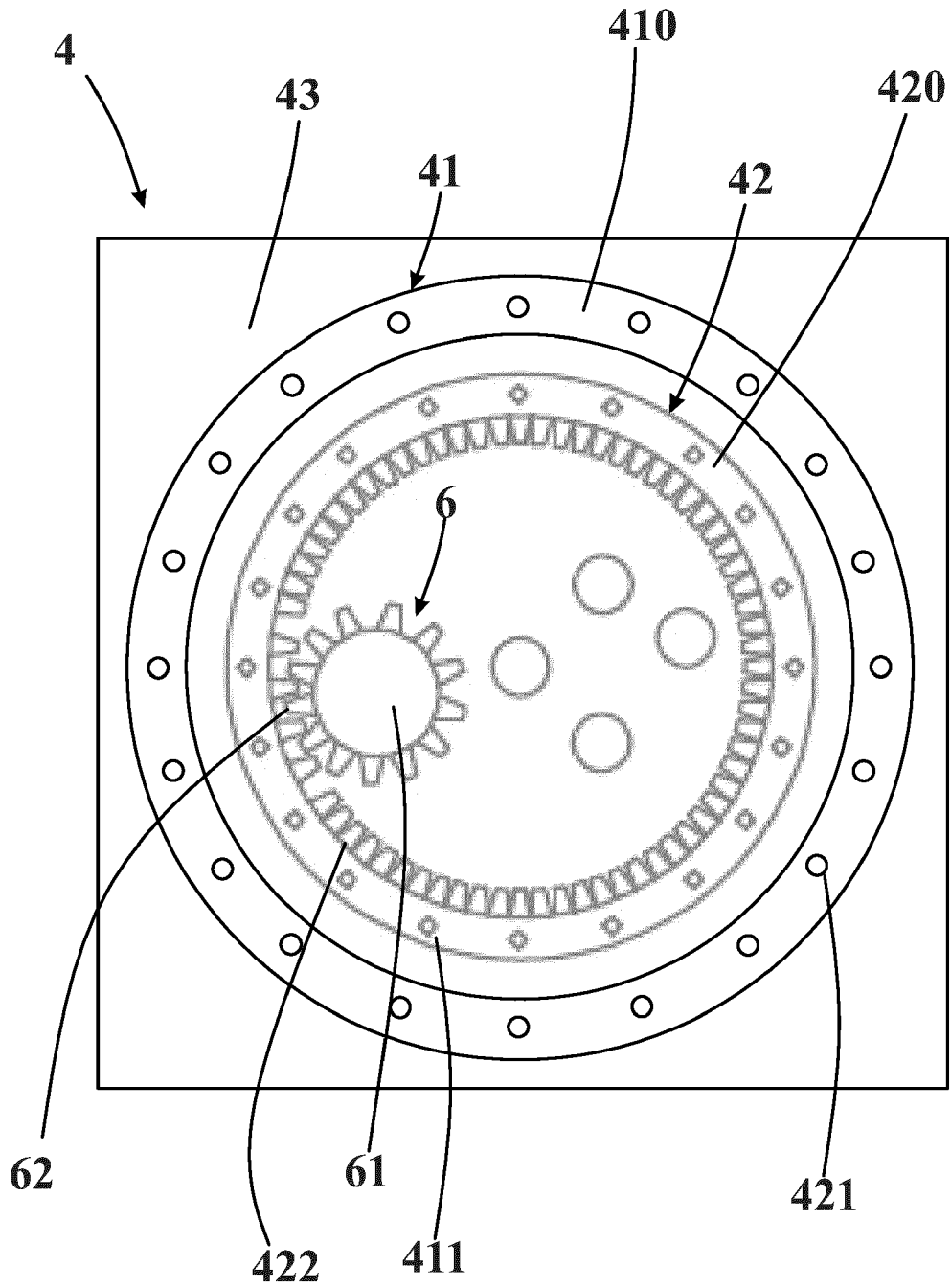


Fig. 5



EUROPEAN SEARCH REPORT

Application Number
EP 22 18 9305

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	<p>US 2 627 445 A (LYON CLIFFORD T) 3 February 1953 (1953-02-03) * column 1 - column 12; figures 1-11 * -----</p>	1-10	<p>INV. A47B77/00 A47B49/00</p>
			<p>TECHNICAL FIELDS SEARCHED (IPC)</p>
			<p>F25D A47B</p>
<p>The present search report has been drawn up for all claims</p>			
Place of search		Date of completion of the search	Examiner
The Hague		30 May 2023	Kohler, Pierre
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 18 9305

5 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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30-05-2023

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2627445	A	03-02-1953	NONE

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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- JP 2005143521 B [0019]