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## (54) Modular kitchen

(57) A new modular kitchen comprising one or more modular units or elements (1, 2, 3, 3a, 4, 5), each having at least modular height (h) and width (g), and wherein the width module (g), or horizontal module (Ux), is identical to the height module, or vertical module (Uy). Said horizontal module (Ux) and vertical module (Uy) have a length of 18.4 cm.

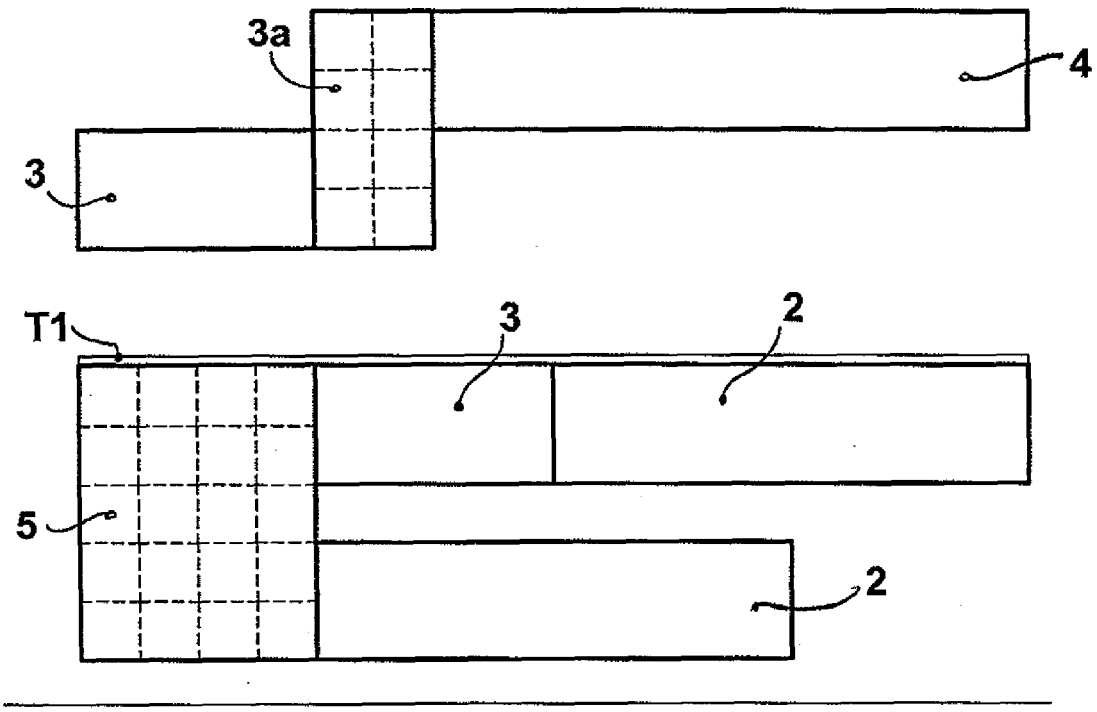


Fig. 3

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## Description

**[0001]** The present patent relates to modular kitchens and in particular concerns a new type of modular kitchen, with vertical module identical to the horizontal module.

**[0002]** Modular kitchens are known, i.e. kitchens having composition defined by a combination of various modular elements joined in various ways, typically positioned side by side or one above the other.

**[0003]** In general each modular element is a functional part of the kitchen, for example the sink unit or hob, the unit for built-in oven, refrigerator or dishwasher, food storage units, etc.

**[0004]** The modular kitchens of known type comprise modular elements which rest on the ground, such as the sink unit or the hob unit and/or modular suspended units which are fitted on the wall at a certain height. Said modular wall units are for example the food storage units, the extraction fan unit typically positioned above the hob, etc.

**[0005]** The modular elements of the known kitchens have standardised width and height dimensions.

**[0006]** Modular elements with width of 45, 60 or 90 cm, i.e. multiples of a horizontal module of 15 cm or fraction of 60 cm are known. Usually modular elements for built-in electrical appliances such as oven, dishwasher, etc. have a width of 60 cm, while the modular elements for built-in sink can be 75 or 90 cm.

**[0007]** The modular elements of the known modular kitchens furthermore have a vertical module which is also standardised and is larger than the horizontal module. The modular elements therefore generally have a rectangular shape. To design a kitchen, it is necessary to know the measurements of the available volume and establish what type of modular elements to include in the kitchen. The various modular elements must then be appropriately combined, defining a configuration that occupies the available space in a uniform manner, satisfying primarily functional but also aesthetic requirements.

**[0008]** Said operation is not easy and often the dimensions of the units have to be adapted, using made-to-measure compensation elements.

**[0009]** The subject of the present patent is a new modular kitchen with horizontal module identical to the vertical module.

**[0010]** The main aim of the present invention is to make the design phase of the modular kitchen easier and more immediate since the modular elements have horizontal dimensions and vertical dimensions that are multiples of one single module, which will therefore be the only unit of measurement for design of the kitchen, in both the horizontal and vertical directions.

**[0011]** A further object of the present invention is to reduce the overall range of components of the modular elements, in particular the sides, tops, bases and backs of the modular elements, so that said components can therefore be used, appropriately positioned, both for the modular elements arranged vertically and the modular elements arranged horizontally.

**[0012]** A further object of the present invention consists in reducing the production times of said components of the modular elements since they can be produced in series, minimising the various possible variations.

**[0013]** These and further objects, direct and complementary, are achieved by the new type of modular kitchen with horizontal module identical to the vertical module, i.e. comprising a plurality of modular elements having at least modular width and height, wherein the width module, or horizontal module, is identical to the height module, or vertical module.

**[0014]** In the preferred solution said horizontal module and said vertical module have a length of 18.4 cm.

**[0015]** The new modular kitchen comprises one or more modular elements including, for example, one or more modular elements for built-in electrical appliances such as oven, refrigerator, dishwasher, hob, etc.; one or more modular elements for the built-in sink; one or more modular elements constituting food storage units having front doors with wing, flap-up or flap-down opening and/or provided with drawers and/or baskets running on guides, with or without handle.

**[0016]** Said modular elements can either rest on the ground, with or without top for use as a work surface, or be of the suspended type, i.e. suitable for being fitted on the wall.

**[0017]** Said modular elements can have a square face, with width and height obtained by multiplying the respective module by the same multiplication factor, or a rectangular face, with mainly horizontal or vertical development, i.e. with height greater or lesser than the width, said height and width being obtained by multiplying the respective identical modules by different multiplication factors.

**[0018]** The new kitchen provides the important technical advantage of reducing the range of components of said modular elements, since the same component, for example side, back, top or base, can be used both for the vertical modular elements and for the horizontal modular elements.

**[0019]** Design of the kitchen is also facilitated, as the available spaces and volumes are considered containers for a combination of modular elements arranged vertically and horizontally according to the desired form and appearance of the kitchen.

**[0020]** The characteristics of the new invention will be better clarified by the following description with reference to the drawings, attached by way of non-limiting example.

**[0021]** Figure 1 shows the horizontal module (Ux) and the vertical module (Uy), identical, forming a module with square surface (U).

**[0022]** Figures 2 and 3 show two examples of a new modular kitchen created by combining in various ways modular elements (1, 2, 3, 4, 5) having horizontal module (Ux) identical to the vertical module (Uy).

**[0023]** Figure 4 schematises a modular element (3), of the 4 x 2 type, indicating its components: back (S), sides (P1, P2), top (T), base (B) and front door (A), for

example of the flap-up type, and finishing profiles (L).

**[0024]** The new modular kitchen has horizontal module (Ux) identical to the vertical module (Uy), i.e. it comprises one or more modular elements (1, 2, 3, 4, 5) having the same module or unit of measurement for both the vertical dimensions and the horizontal dimensions.

**[0025]** Said modular elements can have a square face (1), with equal width (g) and height (h), i.e. multiples of the respective module (Ux, Uy) multiplied by the same multiplication factor.

**[0026]** In the example shown in figure 2, said modular element with square face (1) is of the 4 x 4 type, i.e. with width (g) equal to 4 horizontal modules (Ux) and height (h) equal to 4 vertical modules (Uy).

**[0027]** Said modular element with square face (1) can be used as a food storage unit, either resting on the ground or of the suspended type, fitted on the wall, as in figure 2.

**[0028]** Said modular elements can have a rectangular face (2, 3, 4, 5) with vertical development (3a, 5) or horizontal development (2, 3, 4), i.e. where the width dimensions (g) and the height dimensions (h) are different multiples of the respective horizontal module (Ux) or vertical module (Uy).

**[0029]** For example, it is possible to envisage a modular element with rectangular face (2) with horizontal development of the 10 x 2 type, i.e. with width (g) equal to 10 horizontal modules (Ux) and height (h) equal to 2 vertical modules (Uy).

**[0030]** In figures 2 e 3 said modular element of the 10 x 2 type (2) can for example be used as a suspended element, fitted on the wall, acting as a food storage unit or unit for built-in extraction fan, or as a suspended element acting as a unit for the built-in hob (F).

**[0031]** It is also possible to envisage a modular element with rectangular face (3) with horizontal development of the 4 x 2 type, i.e. with width (g) equal to 4 horizontal modules (Ux) and height (h) equal to 2 vertical modules (Uy).

**[0032]** In figures 2 and 3 said modular element of the 4 x 2 type (3) can be used as a base element, with or without top (T) with work surface (T1), as in figure 2, or as a wall unit, as in figure 3.

**[0033]** It is also possible to envisage a modular element with rectangular face (4) with horizontal development of the 8 x 2 type, i.e. with width (g) equal to 8 horizontal modules (Ux) and height (h) equal to 2 vertical modules (Uy), said modular element (4) being used as a base unit or wall unit, with or without top (T) with work surface (T1) (figures 2 and 3).

**[0034]** It is also possible to envisage, as in figure 3, a modular element with rectangular face (5) with vertical development of the 4 x 5 type, i.e. with width (g) equal to 4 horizontal modules (Ux) and height (h) equal to 5 vertical modules (Uy). Said modular element of the 4 x 5 type (5) can for example be used as a base unit, with top (T) acting as a work surface, also for built-in electrical appliances, for example oven, dishwasher, etc.

**[0035]** Each of said modular elements comprises, analogously to the units of known type, at least one back (S), at least one side (P1, P2), one top (T) and/or one base (B) and if necessary one or more front doors (A).

**[0036]** In the example in figure 4 which shows a modular element (3) of the 4 x 2 type, said modular element (3) comprises: a back (S) of corresponding dimensions, i.e. of the 4 x 2 type; one or two sides (P1, P2) having modular height equal to the height (h) of the modular element, i.e. in said case equal to twice the module (U), and depth equal to the depth (p) of the modular element (3); one top (T) and one base (B) having modular width equal to the width (g) of the modular element, i.e. in said case equal to 4 times the module (Ux), and depth equal to the depth (p) of the modular element (3); one or more front doors (A), for example of the wing or flap-up type, with overall modular dimensions equal to the dimensions of said back (S).

**[0037]** The new modular kitchen therefore comprises a plurality of modular elements (1, 2, 3, 4, 5) combined in various ways with modular height (h) and width (g), with width module (g) or horizontal module (Ux) equal to the height module or vertical module (Uy).

**[0038]** Therefore the same component, for example side (P1, P2), back (S), top (T) or base (B), can be used both for modular elements with horizontal development (2, 3, 4) and for modular elements with vertical development (3a, 5).

**[0039]** For example, taking a rectangular panel which can be used for example as the back (S) of a modular element of the 3 x 2 type (3), said panel (S) can be rotated 90° on the vertical plane and used as the back of a modular element of the 2 x 3 type (3a), as shown in figure 3, where said modular element of the 3 x 2 type (3), i.e. with horizontal development, is positioned alongside a modular element of the 2 x 3 type (3a).

**[0040]** Said modular elements can be made and finished in various types of material and treatments. For example, said modular elements can comprise one or more finishing profiles (L), for example in aluminium, applied on the edges or joints between the various components (A, B, P1, P2, S, T).

**[0041]** The new type of modular kitchen therefore permits the design and creation of numerous configurations, minimising the range of possible components (S, P1, P2, T, B, A) of the modular elements (1, 2, 3, 4, 5).

**[0042]** This entails considerable simplification in production of the components of the new modular kitchen and in design of the modular kitchen, since the same component can be used in various ways in different combinations and compositions.

**[0043]** This also simplifies the catalogues and price lists since the overall number of component types is reduced.

**[0044]** These schematic procedures are sufficient for a person skilled in the art to produce the invention, consequently, in practice, variations can be made without affecting the substance of the innovative concept.

**[0045]** Therefore with reference to the preceding description and the accompanying drawings the following claims are made.

## Claims

1. Modular kitchen comprising one or more modular units or elements (1, 2, 3, 3a, 4, 5), **characterised in that** each of said modular elements (1, 2, 3a, 4, 5) has at least modular height (h) and width (g), and wherein the width module (g), or horizontal module (Ux), is equal to the height module, or vertical module (Uy).

2. Modular kitchen, according to claim 1, **characterised in that** said horizontal module (Ux) and vertical module (Uy) have a length of 18.4 cm.

3. Modular kitchen, according to claims 1, 2, **characterised in that** said modular elements (1, 2, 3, 3a, 4, 5) are of the suspended type, for fitting on a wall.

4. Modular kitchen, according to claims 1, 2, 3, **characterised in that** it comprises one or more modular elements (1, 2, 3, 3a, 4, 5) of the type with top (T) with work surface (T1), and wherein said modular elements are of the wall type.

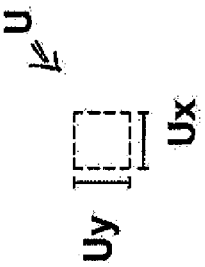


Fig. 1

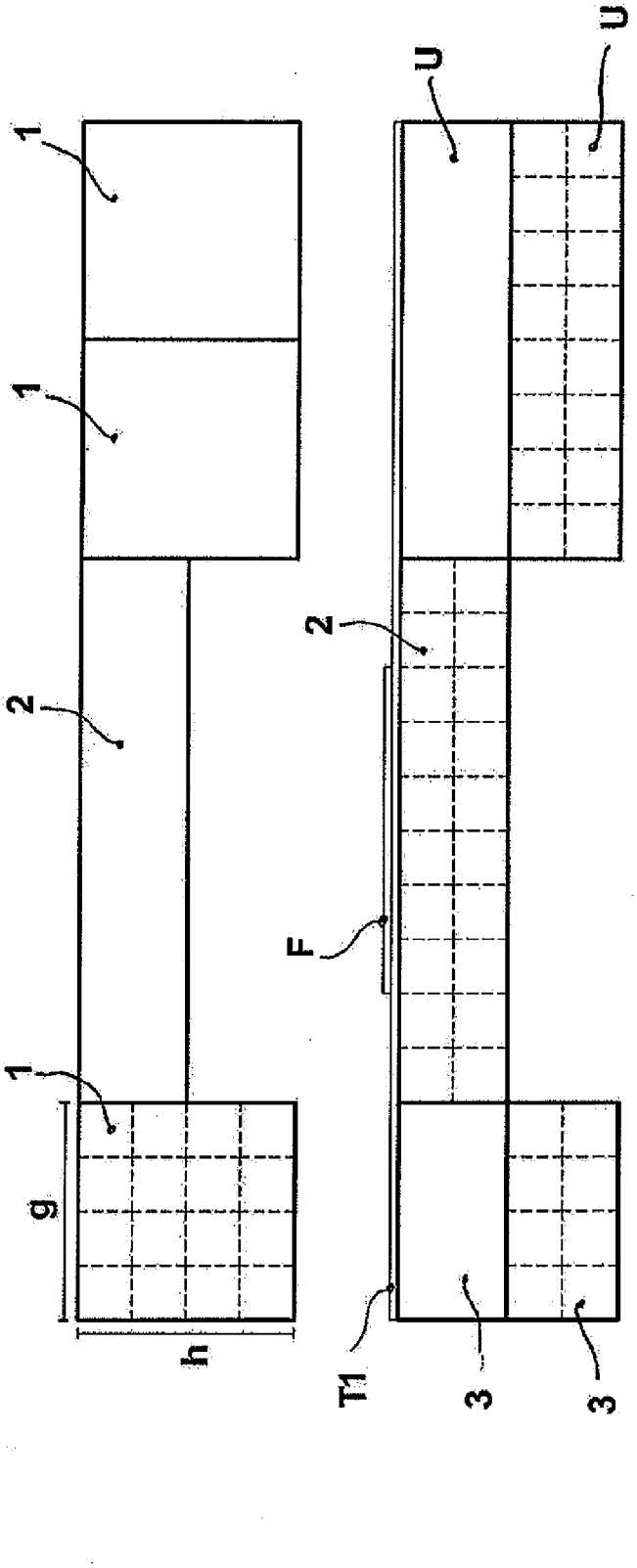


Fig. 2

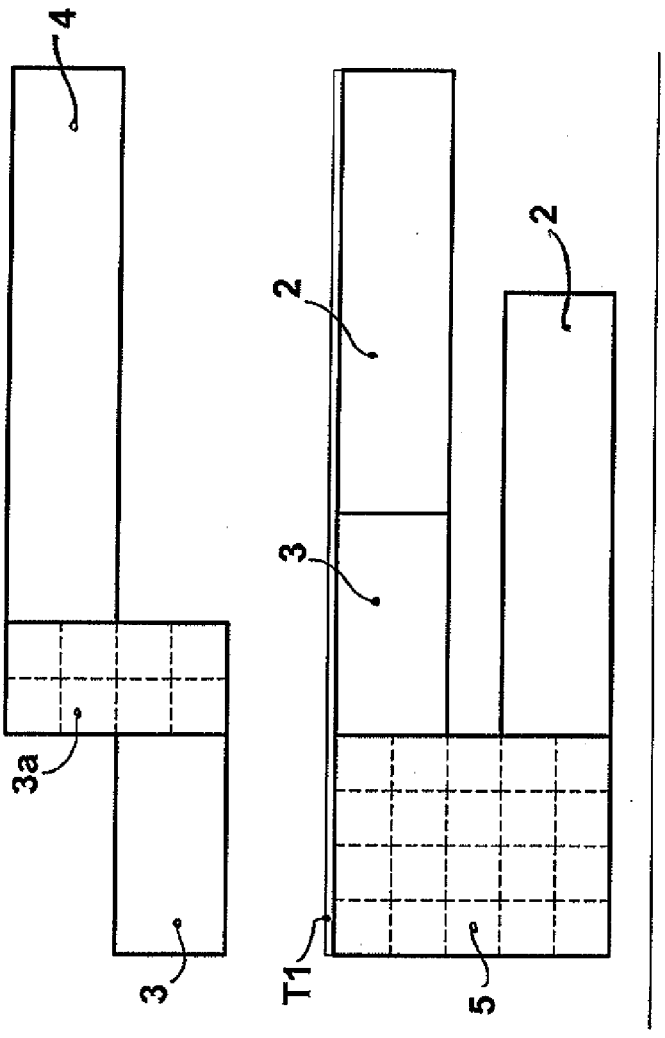


Fig. 3

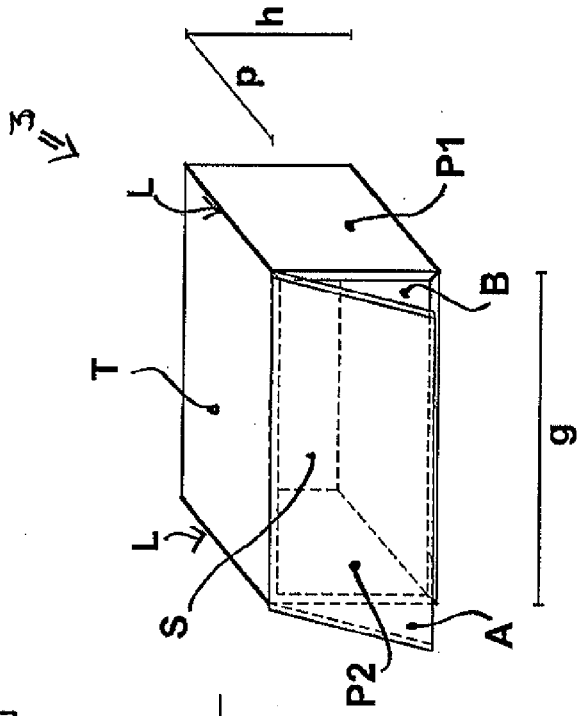


Fig. 4

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# EUROPEAN SEARCH REPORT

Application Number
EP 09 15 5092

## 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 | WO 2006/035742 A (HIC CO LTD [JP]; YARI HIDETOSHI [JP]; OHTA KAZUSHIGE [JP]) 6 April 2006 (2006-04-06) * abstract; figures 1-5 * | 1-4 | INV. A47B87/00 |
| X | DE 203 18 588 U1 (SCHAUFFELE ERNST HANS [DE]) 4 March 2004 (2004-03-04) * abstract; figures 1,2 * * page 2, column 2, paragraph 15 * | 1-4 | |

TECHNICAL FIELDS SEARCHED (IPC)

A47B

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| The Hague | 29 July 2009 | Jones, Clive |

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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 15 5092

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29-07-2009

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| WO 2006035742 A | 06-04-2006 | JP 2006095094 A | 13-04-2006 |
| DE 20318588 U1 | 04-03-2004 | NONE | |

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