(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 4 541 230 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
23.04.2025 Bulletin 2025/17

(21) Application number: **24206911.0**

(22) Date of filing: **16.10.2024**

(51) International Patent Classification (IPC):
A47B 88/90 *(2017.01)* ***A47B 88/969*** *(2017.01)*
A47B 77/04 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
A47B 88/941; A47B 88/969; A47B 2220/03

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
GE KH MA MD TN

(30) Priority: **17.10.2023 IT 202300021633**

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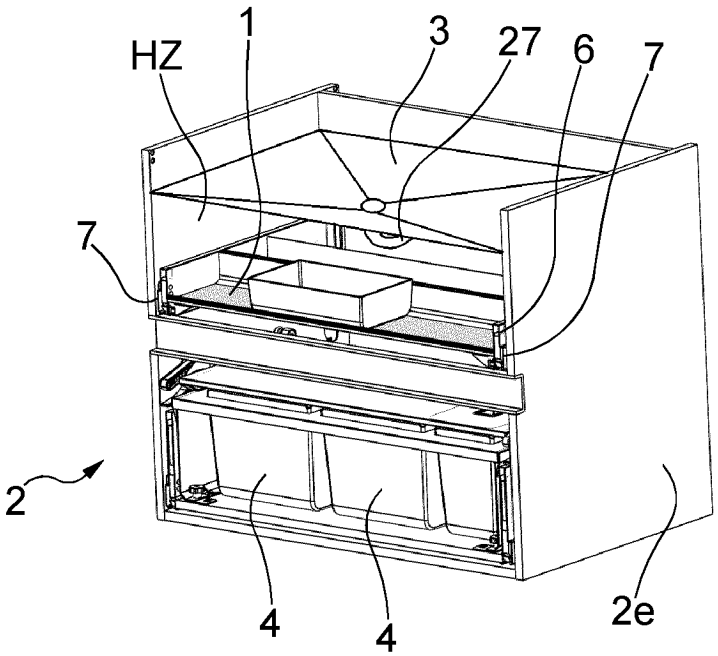
(54) **UNDERSINK MODULE OR UNIT**

(57) The present invention relates to an undersink unit designed to be inserted or mounted or installed in a housing zone (HZ) of a piece of furniture or wardrobe (2) between an upper sink (3) and at least one lower waste bin (4) of the piece of furniture (2) itself.

FIG.30



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Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention concerns an undersink unit designed to be inserted in a housing zone of a piece of furniture between an upper sink and at least one lower waste bin of the piece of furniture itself.

STATE OF THE PRIOR ART

[0002] Under the sink of a kitchen or bathroom there are usually various elements and equipments useful for the management of water and waste, such as the siphon, flexible pipes that connect the tap to the plumbing system as well as waste bins.

[0003] In addition, immediately under the sink and above the waste bins it is also possible to provide storage drawers for objects such as sponges, detergents, cloths and other small cleaning utensils, which drawers are usually installed sliding inside the cabinets or furniture on which the sink is mounted to better organize the cleaning items and keep them easily accessible.

[0004] However, on the back of the positioning area of such drawers there are drain pipes that extend downwards from the sink, so the extension or depth of the drawer must take into account the possible positions of such pipes, which, of course, depending on the case, can be in a position more or less close to the front of the cabinets.

[0005] US20070114893A1, US20050099101A1 and JP2003299532A teach solutions according to the state of the prior art.

OBJECTS OF THE INVENTION

[0006] An object of the present invention is to provide a novel undersink unit.

[0007] Another object of the present invention is to provide a unit as aforesaid which is capable of accommodating any position of the drain pipes without excessively sacrificing the volume of housing objects therein.

[0008] It is another object of the present invention to provide a unit as now indicated which is easily and quickly adjustable.

[0009] Another object of the present invention is to provide a unit as indicated above that can be equipped with different accessories depending on the needs.

[0010] In accordance with one aspect of the invention, an undersink unit according to claim 1 is provided.

[0011] The dependent claims refer to preferred and advantageous embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Other features and advantages of the invention will be more evident from the description of embodiments of undersink units, shown for illustrative purposes in the attached drawings in which:

- figures 1 and 2 are perspective views from above and from respective sides, of an undersink unit in accordance with a first embodiment according to the present invention with a respective second compartment in open configuration;
- figure 3 is a side view of the undersink unit of figure 1;
- figure 4 is a bottom perspective view of the undersink unit of figure 1;
- figures 5 and 6 are top and side perspective views of the undersink unit of figure 1 with a second compartment in closed configuration;
- figure 7 is a bottom view of an enlarged detail of the unit in figure 1;
- figure 8 is a front view of an enlarged detail of the unit in figure 1;
- figure 9 is an exploded view of some components of the unit of figure 1;
- figure 10 illustrates a bracket of the unit of figure 1;
- figures 11 and 12 are perspective views from above and from respective sides, of the first component of the unit of figure 1;
- figure 13 is a perspective view from above and from the rear of the second component of the unit of Figure 1;
- figures 14 and 15 are perspective views from above and from respective sides, of an undersink unit in accordance with another embodiment according to the present invention;
- figures 16 and 17 are perspective views from above and from respective sides, of an under-sink unit in accordance with a further embodiment according to the present invention with respective second compartments in extended configuration;
- figures 18 and 19 are perspective views from above and from respective sides, of the under-sink unit of figure 16 with respective second compartments in reduced configuration;
- figures 20 and 21 are perspective views from above and from respective sides, of an undersink unit in accordance with another embodiment according to the present invention;
- figure 22 is a perspective view from above and from the front, of an undersink unit in accordance with a further embodiment according to the present invention;
- figure 23 is a front view of an enlarged-scale detail of the unit of figure 22;
- figure 24 is an exploded view of some components of the unit of figure 22;
- figure 25 is a perspective view from above and from the front, of an undersink unit in accordance with another embodiment according to the present invention;
- figure 26 is a front view of a detail on an enlarged scale of the unit of figure 25;
- figure 27 is an exploded view of some components of

the unit of figure 25;

- figures 28 and 29 are perspective views from above and from respective sides, of a piece of furniture or cabinet according to the present invention; and
- figure 30 is a perspective view slightly from the front of the piece of furniture of figure 28 with the door removed.

[0013] In the attached drawings, identical parts or components are identified by the same reference numbers.

EMBODIMENTS OF THE INVENTION

[0014] With reference to figures 1 to 13 and 28 to 30, an undersink module or unit 1 has been illustrated, designed to be inserted or mounted or installed in a housing zone HZ of a piece of furniture or wardrobe 2, for example a kitchen wardrobe, between an upper sink 3 and at least one lower waste bin 4 of the piece of furniture 2 itself. More specifically, the sink 3 is, as is known, supported by or mounted in the walls of the piece of furniture 2, while the waste bin 4 is mounted or arranged on the bottom of the piece of furniture 2, optionally supported by a base or bottom wall of the same.

[0015] In this description, the term "front" or expressions derived from it, such as for example "frontal" or "anterior" as well as the term "rear" or expressions derived from it, such as for example "behind" or "posterior", are to be understood with reference to the front 2a or rear 2b of the piece of furniture or wardrobe 2 in which the unit 1 is to be inserted, thus the front 1a of the unit 1 will be the end or side proximal to the front 2a of the piece of furniture or wardrobe 2 from which it is possible to access the housing zone HZ, after opening any doors or drawers, while the rear 1b of the unit 1 will be the end or side distal from the front 2a of the piece of furniture or wardrobe 2 or proximal to the rear 2b of the piece of furniture or wardrobe 2 which is closed or in any case from which it is not possible to access the housing zone HZ.

[0016] Other geometric references must always refer to how the undersink unit 1 is installed, such as the reference to the side of a component indicates the end of the latter which, in use, is proximal to the side of the respective piece of furniture 2, and the same applies to the top, bottom or similar.

[0017] The unit 1 comprises at least two sides 5, defining the sides of the unit 1, which sides 5 are provided with engagement and sliding means 6 with respective guide or sliding portions 7 of a piece of furniture or wardrobe 2, for example a kitchen. The sides 5 can be of any suitable type and comprise suitably shaped main walls 5a, while the engagement and sliding means 6 can be made in any suitable way, for example with parts of sheet or similar shaped and interlocked or fitted or connected to the main walls 5a of the sides 5 and possibly provided with pins or the like.

[0018] Clearly, the sides 5 have a length or dimension of main extension, in use, parallel to each other.

[0019] The unit 1 is then provided with a first containment component 8 bridge extending between the at least two sides 5 or in any case transversally or orthogonally to the direction from one side 5 to the other, which is designed to define a front, in use, first compartment or area of support or containment S1 of unit 1 designed to the positioning of objects.

[0020] The first compartment or area of support or containment S1 is, preferably, open towards the top, so that it is possible to place objects, such as trays, sponges, soap, pieces of cloth, bags, etc., in it starting from the front 1a of the unit or better of a respective piece of furniture 2, if desired after opening or moving a respective door. Preferably, the first compartment or area of support or containment S1 is also open towards the front, in the sense that it does not have vertical delimiting walls placed to close, at least partially, a respective side or front end or front.

[0021] Furthermore, the unit 1 also comprises at least one second containment component 9 designed to be mounted in whole or in part behind the first containment component 8, i.e. further away from the front 1a and closer to the rear 1b of the unit 1, to define alone or together with the first containment component 8 and/or one or both sides 5 a second compartment or area of support or containment S2, in use, behind the unit 1 and designed for the positioning of objects, such as trays, sponges, soap, pieces of cloth, bags, etc. The second compartment or area of support or containment S2 is thus further distal from the front 1a or 2a than the first compartment or support or containment area S1.

[0022] The second compartment or support or containment area S2 is, preferably, open towards the top, so that it is possible to place objects in it starting from the front 1a of the unit or better of a respective piece of furniture 2. Even more preferably, the second compartment or area of support or containment S2 is closed towards the front 1a and towards the rear 1b, in the sense that it has vertical delimiting walls placed to close, at least partially, one respective front and rear side or end.

[0023] Advantageously, the at least one second component 9 is mounted in a sliding or movable manner, preferably in the front la-rear 1b direction, with respect to the first containment component 8.

[0024] If desired, the second compartment S2 is defined between the first containment component 8 and the at least one second component 9, so that by moving the at least one second component 9 with respect to the first component 8 or vice versa, it is possible to vary the housing volume of the second compartment S2 so as to bring it from an open configuration (see figures 1 and 2) to a closed configuration (see figures 5 and 6) or in any case from a more open or voluminous configuration to a less open or voluminous one.

[0025] According to the embodiment illustrated in the figures, the second compartment or area of support or containment S2 is also closed laterally by the sides 5.

[0026] Preferably, the first component 8 is L-shaped, with a first section 8a of the L consisting of a first wall, preferably flat, which is, in use, horizontal or slightly inclined with respect to the horizontal and a second section 8b of the L consisting of a first wall, preferably flat, which is, in use, vertical or slightly inclined with respect to the horizontal at a distance from the front 1a, the latter being defined by the free end of the first section 8a, which, in use, can, for example, be substantially aligned with the free front ends of the sides 5, so as to define the depth of the first compartment S1, i.e. the dimension in the direction front la-rear 1b. The second section 8b constitutes the rear of the first component 8.

[0027] If desired, one or both of the sections 8a, 8b of the L extend from one edge 5 to the other.

[0028] In this case, the first compartment S1 is delimited only by the sections 8a, 8b and laterally by the edges 5 and, as mentioned, is open upwards and, if desired, towards the front 1a.

[0029] The first component 8 can be connected, if desired removably, to one or both edges 5 and/or to one or two brackets 10 which will be discussed later, for example by means of screws, bolts, rivets or similar means 14a, for example fitted, if desired in a direction from bottom to top, in respective portions of the first section 8a as well as of one or both edges 5 or of one or two brackets 10.

[0030] The first component 8 may also, according to the non-limiting embodiment illustrated in the figures, comprise means of constraint 8c with a component of the piece of furniture 2, such as a door, a movement wall or similar. In this regard, the constraint means, if provided, could comprise a projection 8c or similar extending, if desired, in use, downwards, starting from the first section 8a and define a hole for the insertion of a screw for constraint or connection to a door, movement wall 2c or similar.

[0031] Preferably, the unit 1 comprises at least one bracket 10 fixed, possibly removably, to at least one respective side 5 and/or to the first component 8, preferably so as to be, in use, under a respective side of the latter. With regard to this aspect, the bracket 10 is fixed to a side 5 and/or to the first component 8 by means of connection means 14b, such as screws, bolts or rivets, which may for example have a main fitting or extension direction from the bottom upwards.

[0032] According to the non-limiting embodiment illustrated in the figures, the at least one bracket 10 is fixed to a side 5 to then be constrained and support from below the first component 8 to which it is connected by means of screws, bolts, rivets or similar means 14a. Alternatively, the at least one bracket 10 could be attached to the first component 8, while the latter is attached to one or both of the sides 5 and supports the bracket 10 or, the at least one bracket 10 could be attached to a side 5 without coming into contact or engagement with the first component 8.

[0033] Moreover, each bracket 10 delimits a first slot or at least one hole or a first row of first holes 11, while the at least one second component 9 delimits at least one second slot or at least one hole or at least one row of second holes 12.

[0034] According to this variant, the unit 1 also comprises fastening means 14c inserted in a slot or hole 11 aligned with a slot or hole 12, so as to be able to removably and possibly in an adjustable manner fix the second component 9 to the at least one bracket 10.

[0035] Clearly, adjustability can be obtained if a slot 11 or at least a row of first holes 11 and/or a slot 12 or at least a row of second holes 12 is provided.

[0036] Preferably, the possible slot 11 and/or 12 extends in the front la-rear 1b direction and the same applies to the possible row of first 11 and/or second 12 holes.

[0037] Even more preferably, the unit 1 comprises two brackets 10 each fixed, if desired removably, to a respective edge 5 and/or to the first component, so that brackets 10 are provided on or at both edges 5 or both sides of the first component 8, if desired both brackets being provided with a slot or holes 11 for alignment and removable and possibly adjustable fixing, as described in the previous paragraphs, to at least one second component 9.

[0038] Of course, in such a case, each bracket 10 would preferably be engaged with a respective side of the second component 9.

[0039] With reference to the non-limiting structure of the at least one bracket 10, it may have a portion of attachment or connection 10a to the first component 8 and/or to a side 5 and thus a portion of support and/or fixing 10b to a second component 9.

[0040] The portion of support and/or fixing 10b could be shaped like a plate and in it the slot or first hole or first holes 11 could be delimited, for example a slot 11 extending in the front la-rear 1b direction or a row of first holes 11 aligned in this direction 1a-1b.

[0041] According to the non-limiting embodiment illustrated in the figures, the attachment or connection portion 10a could be housed in or on a support zone RZ delimited by a side 5, for example at the internal bottom of the same, with internal meaning the side directed or facing, in use, towards the other side 5.

[0042] With reference to this aspect, according to the non-limiting embodiment illustrated in the figures, the or each side 5 has internally a lower protruding section 5b extending from a main wall 5a of the side and which defines the support zone RZ, open upwards and towards the other side 5, for the positioning and, if desired, fixing of the attachment or connection portion 10a to a respective bracket 10.

[0043] The attachment or connection portion 10a would rest on the lower protruding section 5b and protrude inwards with respect to the latter.

[0044] Clearly, the depth or extension in the front la-rear 1b direction of the bracket 10 could be equal to or less than that of the respective edge 5. If desired, the depth or extension in the front la-rear 1b direction of the attachment or connection portion 10a could be equal to

that of the respective side 5, while the depth or extension in the front la-rear 1b direction of the support and/or fixing portion 10b could be less than that of the respective side 5, for example slightly greater than the depth of the first component 8.

[0045] The support and/or fixing portion 10b could extend at the front of the bracket 5 and for a front la-rear 1b extension equal to less than half or a third of the length of the attachment and connection portion 10a.

[0046] According to the non-limiting embodiment illustrated in the figures, the unit 1 is also provided with at least one terminal or closing block component 19, mounted and fixed, if desired by means of screws, bolts or similar, on the back of a respective side 5 and designed to delimit an alignment hole with a hole delimited on the back of a respective bracket 10, for the insertion of a respective terminal fixing screw 14d, if desired with a fixing or fitting direction from the rear towards the front, of a respective bracket 10 to the terminal block component.

[0047] With reference to the support of the first component 8, according to the non-limiting embodiment illustrated in the figures, it or rather one or each of the respective ends could be placed on a bracket 10, in particular on a portion, preferably frontal, of the attachment or connection portion 10a, to which it is removably connected by means of one or more screws, bolts, rivets or similar means 14a, for example fitted in respective portions of the first section 8a and of one or both brackets 10.

[0048] With reference to the non-limiting embodiment illustrated in figures 1 to 13, the at least one second component 9 is L-shaped, with a first segment 9a of the L consisting of a second wall, preferably flat, which is, in use, horizontal and a second segment 9b of the L consisting of a second wall, preferably flat, which is, in use, vertical, the first segment 9a being slidably and movably mounted (if desired in the front la-rear 1b direction) with respect to, if desired, flush the possible first section 8a so as to move the second segment 9b away from or closer to the second section 8b and thus vary the depth or extension in the front la-rear 1b direction of the second compartment S2.

[0049] In this case, the second compartment S2 is advantageously delimited frontally by the first component 8, if desired by the respective second section 8b, rearwards by the second segment 9b, on the bottom by the first segment 9a and possibly laterally by the sides 5, so that it is open upwards. If desired, part of the bottom of the second compartment S2 is also defined by the bracket or brackets 10, for example by the respective attachment or connection portion 10a.

[0050] With reference to the non-limiting embodiment illustrated in the figures, the or each second segment 9b is mounted sliding between the first section 8a and the or a bracket 10 or better the respective support and/or fixing portion 10b. Alternatively or in addition, the or each second segment 9b is slidingly mounted between the first section 8a and a portion of a side 5.

[0051] If desired, one or more gaskets G1, G2 are provided, for example one G1 below the first component 8 or on the rear bottom of the same to facilitate the sliding of the second component 9 and/or one G2 in front of the first component 8.

[0052] The unit 1 can include at least one first tray or main tray 13, of any suitable configuration and size, which is housed or positioned in the first compartment S1, for example on the first section 8a of the first component 8.

[0053] Such a tray 13 naturally comprises a base 13a, with a circular, square, rectangular or polygonal section, optionally with rounded edges, and a perimeter frame wall 13b extending upwards from the edge of the base so as to define an object positioning zone PZ open only upwards.

[0054] According to a variant, see figures 14 to 21, the at least one second component comprises at least one auxiliary tray 15, 16, 17 mounted or fixed to the rear of the first component 8 or the second component defines with the first component 8 and optionally also with a respective edge 5 at least one auxiliary tray 15, 16.

[0055] With reference first to figures 14 to 15, an undersink unit 1 is illustrated with one or more first auxiliary trays 15 having two walls in common with the first component 8 and/or with a side 5. More specifically, one or each tray 15 has a length 15a of horizontal wall, a length 15b of lateral vertical wall and a length 15c of rear wall in a single piece and mutually folded or integral with one another by interlocking, welding, screws, bolts or other suitable means, while the other walls, i.e. the lateral and front walls of the tray 15 are defined one by an internal, in use, part of a side 5 and the other by a rear, in use, portion of the first component 8.

[0056] According to the non-limiting embodiment illustrated in the figures, the horizontal wall section 15a has a greater depth or length in the front la-rear 1b direction than the other walls of the tray 15 and the latter is inserted between the first section 8a and the bracket 10 or rather the respective support and/or fixing portion 10b, although the horizontal wall section has a greater width than the respective bracket 10 or rather the support and/or fixing portion 10b and therefore protrudes inwards with respect to the latter. Furthermore, in this case, the tray 15 may delimit a second slot or one or more second holes and fixing means 14c are then provided inserted in the slot or hole 11 aligned with the slot or hole in the tray 15, so as to be able to fix removably and possibly in an adjustable manner, the auxiliary tray 15 or the respective length 15a to the at least one bracket 10.

[0057] In this case, a stabilizing means 18 of the position of the auxiliary tray 15 may also be provided, for example a screw, bolt or similar 18 inserted in the segment 15a and in the first component 8, for example in the first section 8a of the latter, if desired in a groove 20, for example with a main extension in the direction from one side 5 to the other, defined in the latter.

[0058] With reference to the length 15b of the vertical lateral wall, it could be supported or at a slight distance

from the rear of the second section 8b of the first component 8.

[0059] According to the non-limiting embodiment illustrated in figures 14 and 15, two first auxiliary trays 15 are provided, each with a wall in common with a respective side 5.

[0060] In accordance with an alternative, see figures 16 to 19, one or each second auxiliary tray 16 could have the volume of the respective second compartment S2 adjustable.

[0061] In this regard, the auxiliary tray 16 could have a first horizontal wall length 16a and a first vertical wall length 16b in a single piece and mutually bent or integral with each other by interlocking, welding or other suitable means, which are fixed to a respective side 5 and/or to the first component 8 as well as at least one second horizontal wall length 16c, a second lateral vertical wall length 16d and a second rear wall length 16e assembled in a single piece or integral with each other as well as mounted movably with respect to the first lengths 16a-16b so that by moving the second lengths 16c-16e with respect to the first lengths 16a-16b it is possible to adjust the width or size in the direction from one edge 5 to the other of the second compartment S2 and therefore the volume of the respective second compartment S2.

[0062] With reference to this aspect, the second horizontal wall length 16c is mounted slidingly flush to (from below or above) the first horizontal length 16a, while the second rear wall length 16e is mounted slidingly flush to (frontally or rearward) the first vertical length 16b.

[0063] If desired, in at least one of the second length 16e and the first length 16b there is a slot or row of holes 21 to be aligned with a hole or slot in the other length 16b, 16e to then insert a screw, bolt or similar 22 for fastening between these lengths 16b, 16e.

[0064] The second horizontal wall length 16c could delimit a respective slot or row of holes 23 to be aligned with a lower hole or slot or groove 23 in the first component 8 and then fix these components using screws, bolts or similar 24.

[0065] Clearly, the presence of the slot or row of holes 21 and, if desired, of the slot or row of holes 23 allows the lengths 16c-16e to be fixed in a plurality of positions with respect to the lengths 16a, 16b and therefore to adjust the width or size in the direction from one side 5 to the other of the second compartment S2 and thus the volume of the respective second compartment S2 between a more extensive configuration (see figures 16 and 17) and a less extensive configuration (see figures 18 and 19).

[0066] With reference now to figures 20 and 21, a third embodiment of an auxiliary tray 17 similar to the first auxiliary tray 15 has been illustrated, but in which it does not have walls in common with a side 5, but only a front wall in common with the first component 8 or with the second section 8b of the same.

[0067] In this case, the tray 17 would have a horizontal wall 17a, a rear wall 17b, and two side walls 17c, 17d, the latter could have means of attachment 25 with the first component 8, for example with the second section 8b. In relation to this aspect, a protrusion or similar 25 could be provided extending frontally from the side walls 17c, 17d, for example at the top of the latter, which protrusion 25 is designed to fit, if desired with a snap or with forced insertion into a groove 26 or similar delimited by the second section 8b, for example with a main extension in the direction from one side 5 to the other, which groove 26 can for example be open towards the rear 1b.

[0068] With reference now to figures 22 to 24, they illustrate an embodiment like that of figures 1 to 13, but in which the sides 5 and the brackets 10 are different from those of the latter.

[0069] Moreover, in this case, the lower projecting section 5b could comprise, in the direction from the outside towards the inside or towards the other side 5, a plate 5c, with a horizontal, in use, arrangement and then an L-shaped end 5d, so as to define a lowered step with respect to the support surface of the plate 5c, with a vertical, in use, first sector 5d1 rising from the internal edge of the plate 5c and then a horizontal, in use, second sector 5d2 rising from the bottom of the first sector 5d1 away from the plate 5c.

[0070] In this case, the attachment or connection portion 10a of one or each bracket 10, could comprise a horizontal, in use, main wall section 10c and then internally a strip section 10d, extending below the main wall section 10c at the internal edge of the latter.

[0071] Advantageously, in use the main wall section 10c would rest on the plate 5c and protrude inwards with respect to the latter with the strip section 10d housed in the step delimited by the L-shaped end 5d.

[0072] Even more advantageously, the main wall section 10c would have a width or extension in the direction from one side or edge 5 to the other or to the other substantially corresponding to the sum of the width of the plate 5c and the L-shaped end 5d, while the strip section 10d would have a width and height substantially like the step delimited by the L-shaped end 5d.

[0073] Finally, with regard to figures 25 to 27, they illustrate a further embodiment similar to that of figures 1 to 13, but in which the sides 5 and the brackets 10 are slightly different from those of the latter.

[0074] In this regard, apart from the configuration of the sides 5 and the brackets 10 in a different part, it will be noted how the brackets 10 have protruding portions 10e designed to constitute, together with the second section 8b, part of the rear wall of the first compartment S 1.

[0075] The present invention also concerns a piece of furniture 2 comprising a sink 3, in an upper position, at least one waste bin 4, in a lower position, as well as at least one drain pipe 27 which departs from the sink 3 downwards and towards the rear in the direction of a respective system for conveying waste water or sewage starting from the sink 3.

[0076] More specifically, the sink 3 is, as known, supported by or mounted in the walls 2e of the cabinet 2, while the waste bin 4 is mounted or arranged on the

bottom of the cabinet 2, possibly supported by a base or back wall of the same.

[0077] The at least one drain pipe 27 preferably extends behind or posteriorly to the housing zone HZ or in a position closer to the rear 2b with respect to the housing zone HZ. Clearly, the second component 9, 15, 16, 17 is placed in a position or arrangement such as not to obstruct or hit or contact the drain pipe 27.

[0078] The piece of furniture 2 clearly comprises a plurality of walls 2e, vertical if desired, and lateral as well as at least one door or movement wall 2c, 2d or similar mounted, if desired hinged or sliding or movable, at the respective front 2a, the piece of furniture 2 then being provided with at least one unit 1 mounted in an intermediate zone between the sink 3 and the waste bin 4 with its sides 5 in sliding engagement with respective portions 7 of the piece of furniture 2.

[0079] In this case, as indicated above, the first component 8 could also comprise constraint means 8c, for example a projection or similar 8c defining a hole for the insertion of a constraint screw or connection to the movement door or wall 2c, so that by moving the latter 2c the movement or exit or insertion of the undersink unit 1 from/into the housing area HZ is also determined.

[0080] Alternatively, the door 2c could be hinged to the other walls 2e of the piece of furniture 2 to be able to open or close the housing zone HZ and therefore allow access to the undersink unit 1.

[0081] Clearly, a second or additional door or movement wall 2d can also be provided, if desired hinged or mounted sliding with respect to the walls 2e of the piece of furniture 2 in a position lower than the first or main movement door or wall 2c, the second or additional movement door or wall 2d being designed to expose the positioning zone of the waste bin or bins 4.

[0082] As it will be understood, thanks to the present invention, the type of second component 9, 15, 16, 17 as well as the position or arrangement of the same can be established as a function of the position and extension of the exhaust pipe 27, so that with an exhaust pipe 27 closer to or further from the front 2a of the piece of furniture 2, the second component 9 could be positioned so that the second segment 9b is, respectively, closer to or further from the first component 8 or, alternatively, a shallower auxiliary tray or a shallower auxiliary tray could be chosen at where the exhaust pipe 27 is provided and at least one deeper one in other points or zones or the size of the second compartment S2 could be adjusted accordingly.

[0083] Therefore, a unit 1 according to the present invention can be adjusted or adapted to any position of the exhaust pipes without excessively sacrificing the volume of housing objects inside it.

[0084] Furthermore, it is very easy to adjust the position or capacity of the unit 1 in a simple and rapid manner, this being particularly true for the embodiments with second component 9 and auxiliary trays 16.

[0085] It is then possible to change the type of accessories or second components depending on the needs, for example space.

[0086] Modifications and variations of the invention are possible within the scope defined by the claims.

Claims

1. Undersink unit designed to be inserted or mounted or installed in a housing zone (HZ) of a piece of furniture or wardrobe (2) between an upper sink (3) and at least one lower waste bin (4) of the piece of furniture (2) itself, said unit comprising at least two sides (5) provided with engagement and sliding means (6) with respective portions (7) of a piece of furniture (2) as well as a first containment component (8) bridge extending between said at least two sides (5) or transversely or orthogonally to the direction from one side (5) to the other, said first component (8) being designed to define a first front, in use, support or containment compartment or area (S1) of said unit designed for the positioning of objects,
wherein said unit includes at least one second containment component (9, 15, 16, 17) designed to be mounted in whole or in part behind said first containment component (8) to define alone or together with said first component of containment (8) and/or with one or both said sides (5) a second rear, in use, support or containment compartment or area (S2) of said unit designed to the positioning of objects.

2. Unit according to claim 1, wherein said at least one second component (9) is slidingly or movably mounted with respect to said first containment component (8).

3. Unit according to claim 2, wherein said second compartment (S2) is defined between said first containment component (8) and said at least one second component (9), so that by moving said at least one second component (9) with respect to said first component (8) it is possible to vary the housing volume of said second compartment (S2).

4. Unit according to any one of the preceding claims, wherein said first component (8) is L-shaped, with a first section (8a) of the L consisting of a first horizontal, in use, wall and a second section (8b) of the L consisting of a first vertical, in use, wall at a distance from the front of said unit.

5. Unit according to claim 4, wherein said first component (8) is connected to one or both sides (5) and/or to at least one bracket (10) of the unit fixed to a respective side (5) by means of screws, bolts, rivets or similar means (14a).

6. Unit according to any one of the preceding claims

when dependent on claim 2, comprising at least one bracket (10) fixed to at least one respective side (5) and/or to said first component (8), said at least one bracket (10) delimiting a first slot or at least one first hole or a first row of first holes (11), whereas said at least one second component (9) delimits at least one second slot or at least one second hole or at least one row of second holes (12), said unit further comprising fixing means (14c) inserted in a first slot or hole (11) aligned with a second slot or hole (12), so as to be able to fix removably and possibly in an adjustable manner, said at least one second component (9, 15, 16) to the at least one bracket (10).

7. Unit according to claim 6, wherein said at least one bracket (10) is fixed to a side (5) to then be constrained and support said first component (8).

8. Unit according to claim 6 or 7, wherein said at least one bracket (10) includes a portion of attachment or connection (10a) to said first component (8) or to a side (5) and said at least one bracket (10) further includes a portion of support and/or fastening (10b) to a second component (9, 15, 16).

9. Unit according to any one of the preceding claims when dependent on claim 4, wherein said at least one second component (9) is L-shaped, with a first segment (9a) of the L consisting of a second horizontal, in use, wall and a second segment (9b) of the L consisting of a second vertical, in use, wall, said first segment (9a) being slidingly or movably mounted with respect to said first section (8a) so as to move said second segment (9b) away or closer from/to said second segment (8b), thereby varying the depth or extension in the front (1a)-rear (1b) direction of the second compartment (S2).

10. Unit according to any one of the preceding claims, comprising at least one first tray or main tray (13) which is housed or positioned in the first compartment (S1).

11. Unit according to any one of the preceding claims, wherein said at least one second component comprises an auxiliary tray (15, 16, 17) mounted or fixed behind said first component (8) or said at least one second component defines with said first component (8) and if desired also with a respective side (5) at least one auxiliary tray (15, 16, 17).

12. Unit according to claim 11, wherein said at least one auxiliary tray (15) has two walls in common with said first component (8) and/or with a side (5) and has an horizontal wall length (15a), a vertical side wall length (15b) and a rear wall length (15c) in a single piece and mutually folded or integral with each other, whereas the other walls of said at least one tray (15) are defined by a side (5) and/or by said first component (8).

13. Unit according to claim 11 or 12, wherein said at least one auxiliary tray (16) has a first horizontal wall length (16a) and a first vertical wall length (16b) in a single piece and mutually folded or integral with each other, which lengths (16a, 16b) are fixed to a respective side (5) and/or to said first component (8), said at least one auxiliary tray (16) having at least one second horizontal wall length (16c), a second vertical lateral length (16d) and a second rear wall length (16e) mounted in a single piece or integral with each other as well as movably mounted with respect to the first lengths (16a-16b) so that by moving the second lengths (16c-16e) with respect to the first lengths (16a-16b) it is possible to adjust the width or size in the direction from one side (5) to the other of the second compartment (S2) and therefore the volume of the respective second compartment (S2).

14. Unit according to claim 11 or 12 or 13, wherein said at least one auxiliary tray (17) does not have walls in common with a side (5), but only a front wall in common with said first component (8), the side walls (17a, 17b) of the tray (17) having coupling means (25) with said first component (8).

15. Piece of furniture comprising a sink (3), in an upper position, at least one waste bin (4), in a lower position, as well as at least one drain pipe (27) which extends from the sink (3) downwards and towards the back in the direction of a respective system for conveying waste or sewage water starting from the sink (3), said piece of furniture further comprising a plurality of walls (2e) as well as at least one movement leaf or wall (2c, 2d) or the like mounted at the front (2a) of the piece of furniture, said piece of furniture being then provided with at least one unit according to any one of the preceding claims mounted in an intermediate zone between the sink (3) and the waste bin (4) with its sides (3) in sliding engagement with portions (7) of said piece of furniture (2).

FIG.1

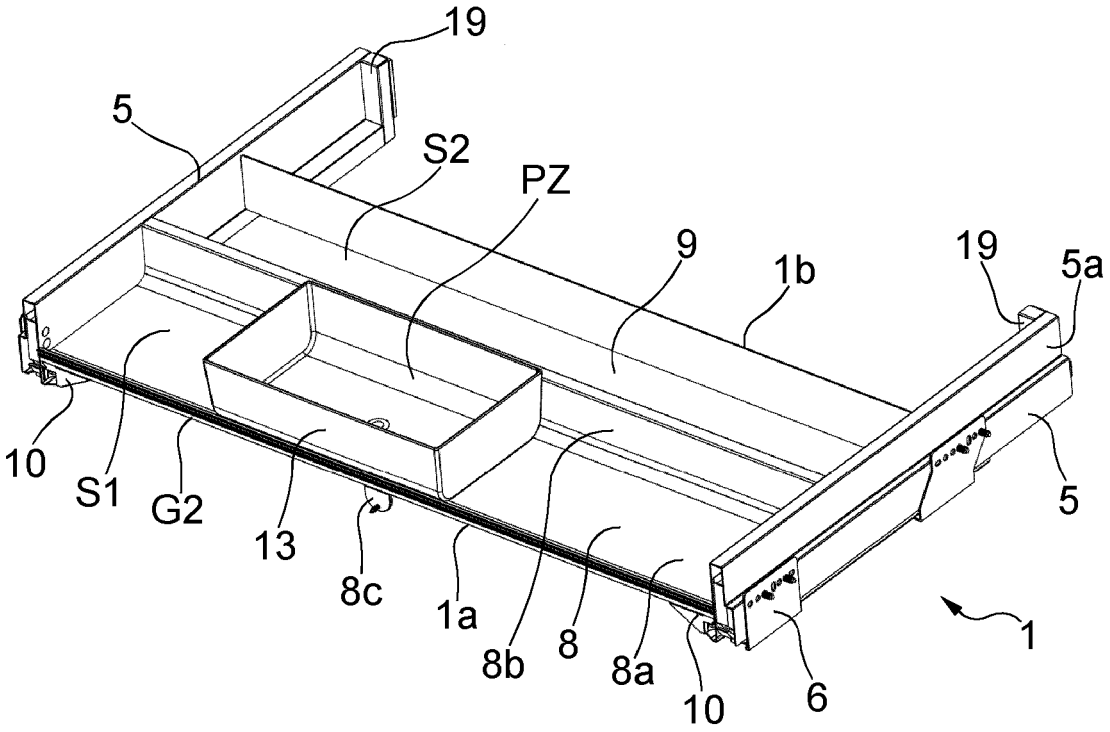

19
5
S2
PZ
9
1b
19
5a
10
S1
G2
13
8c
1a
8b
8
8a
10
6
5
1

FIG.2

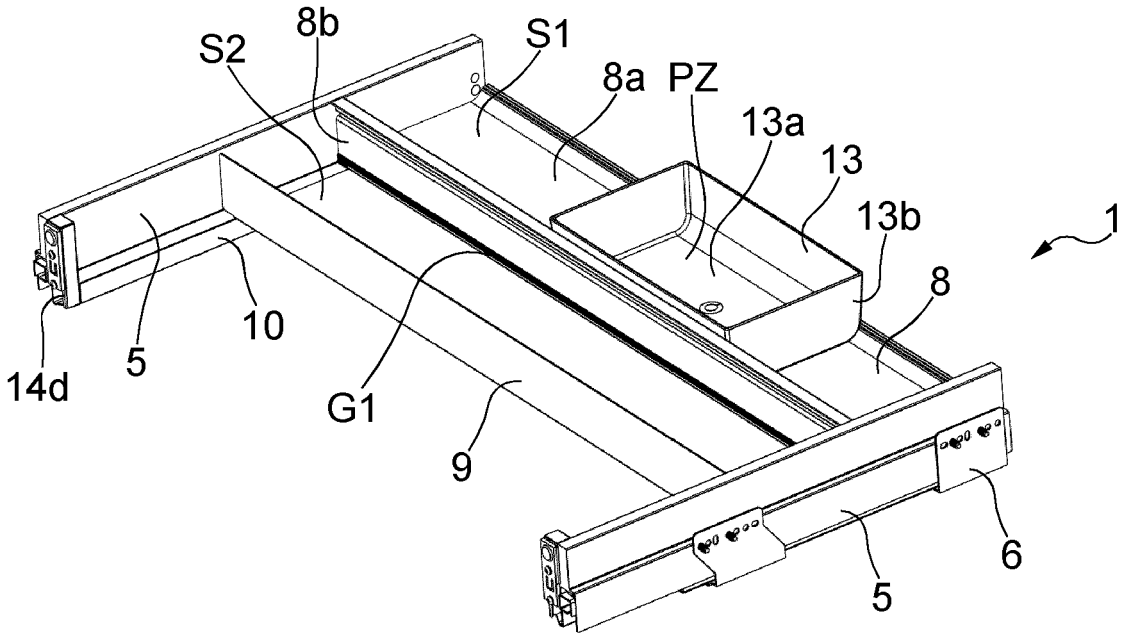

8b
S2
S1
8a
PZ
13a
13
13b
1
8
14d
5
10
G1
9
6
5

FIG.3

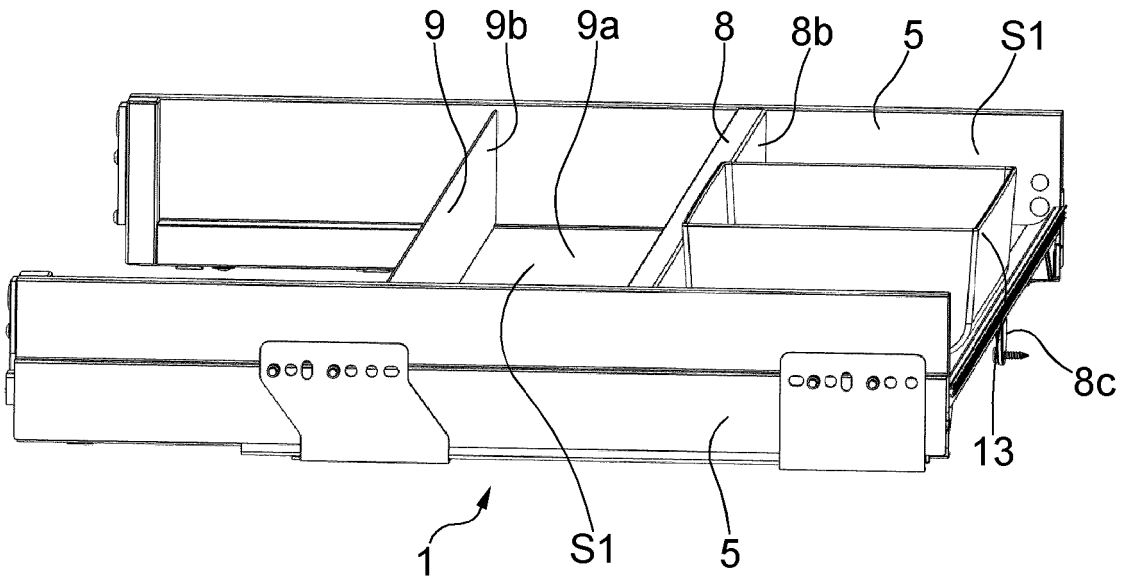


FIG.4

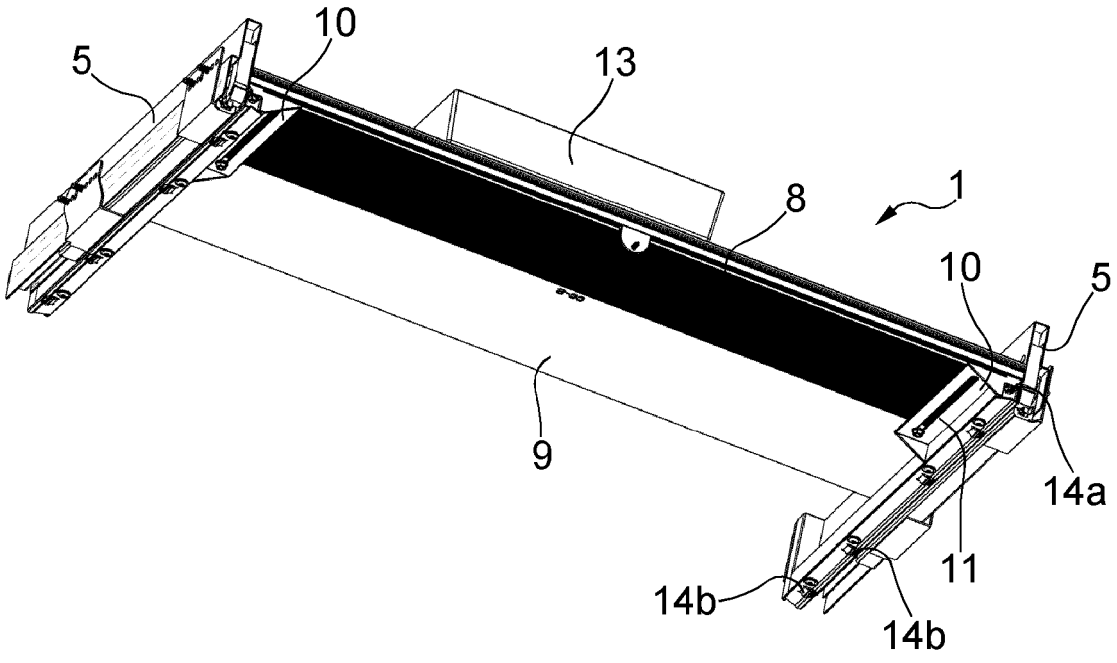


FIG.5

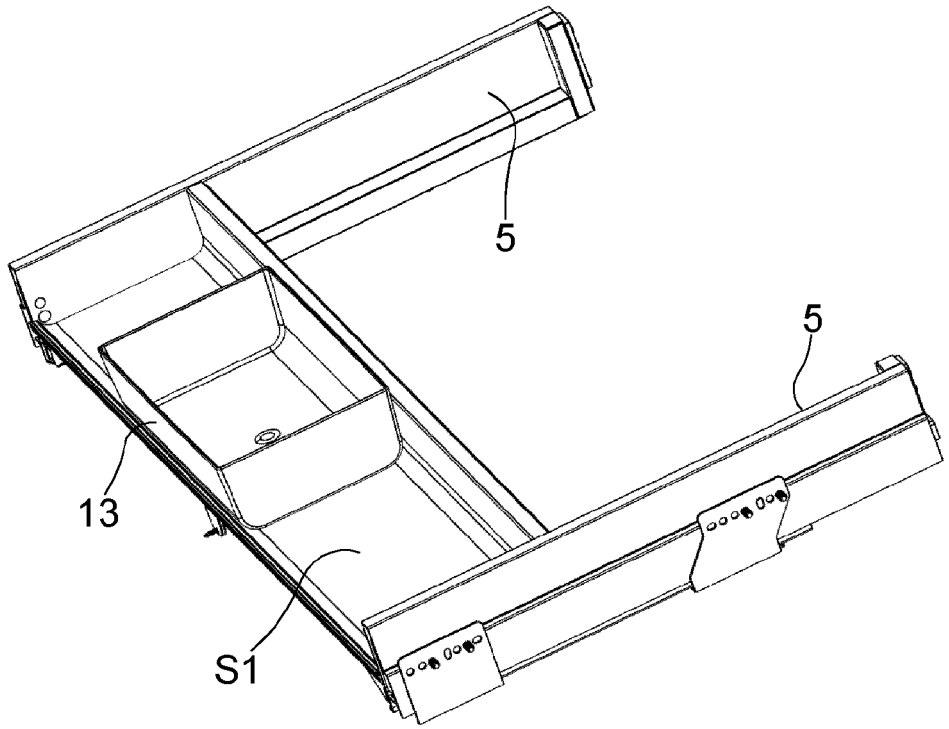
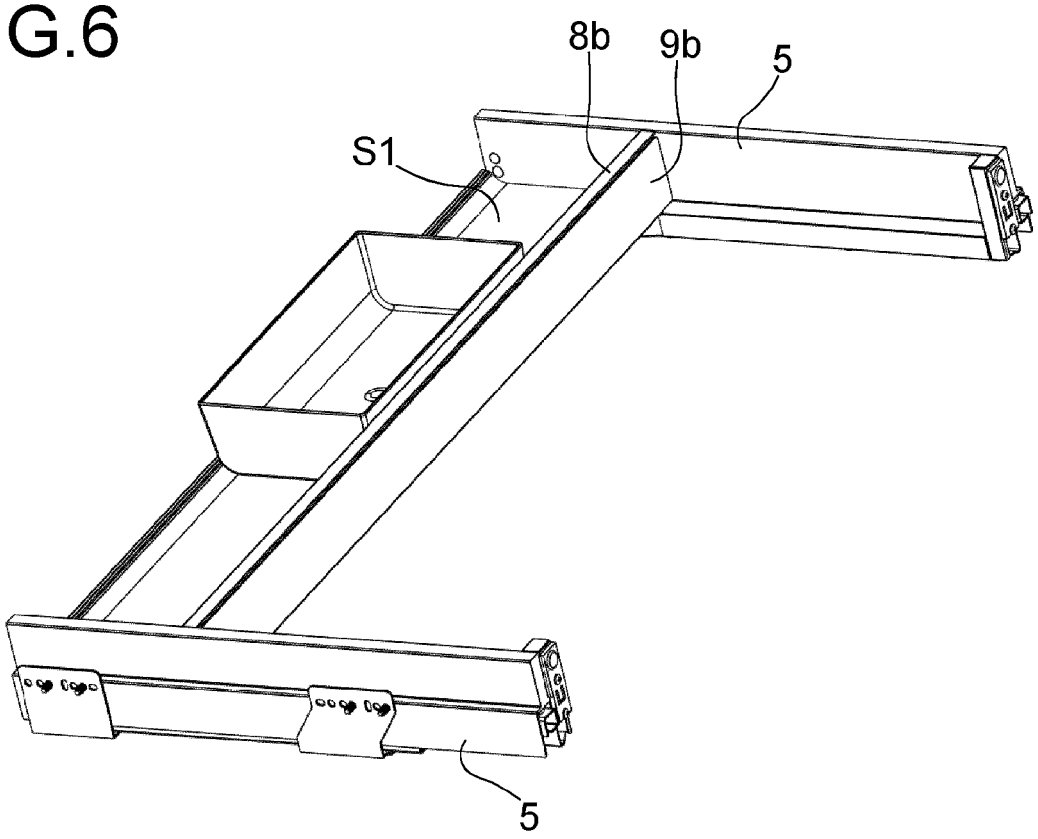


FIG.6



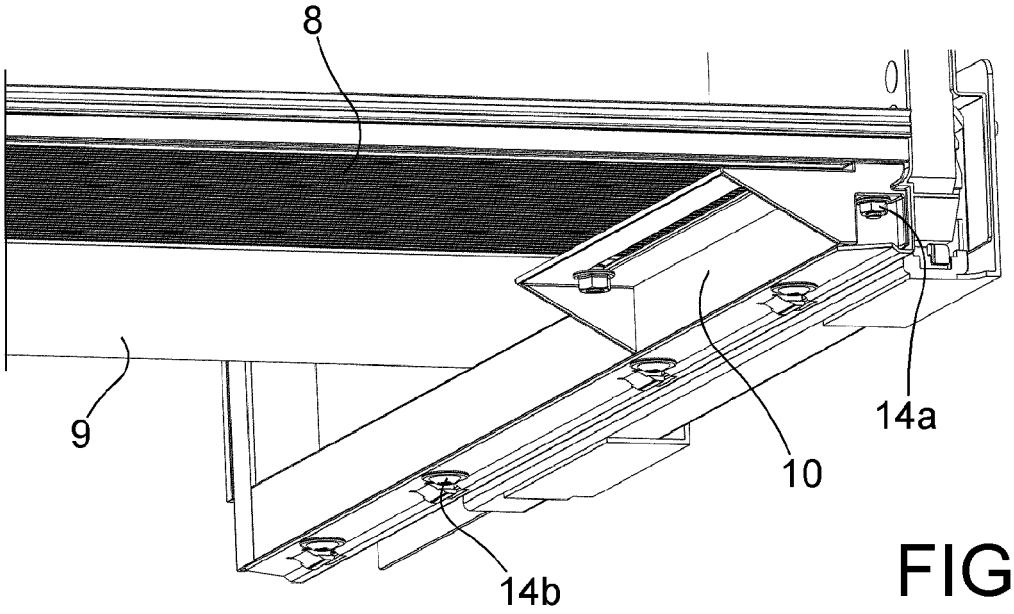


FIG.7

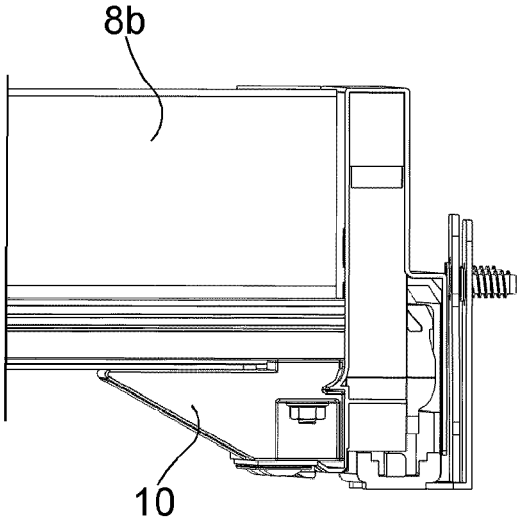


FIG.8

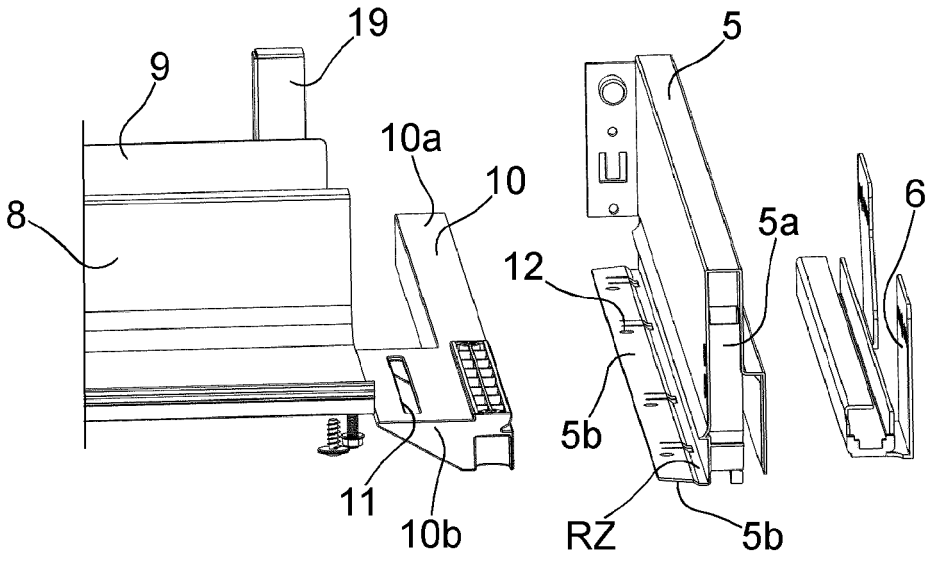


FIG.9

FIG.10

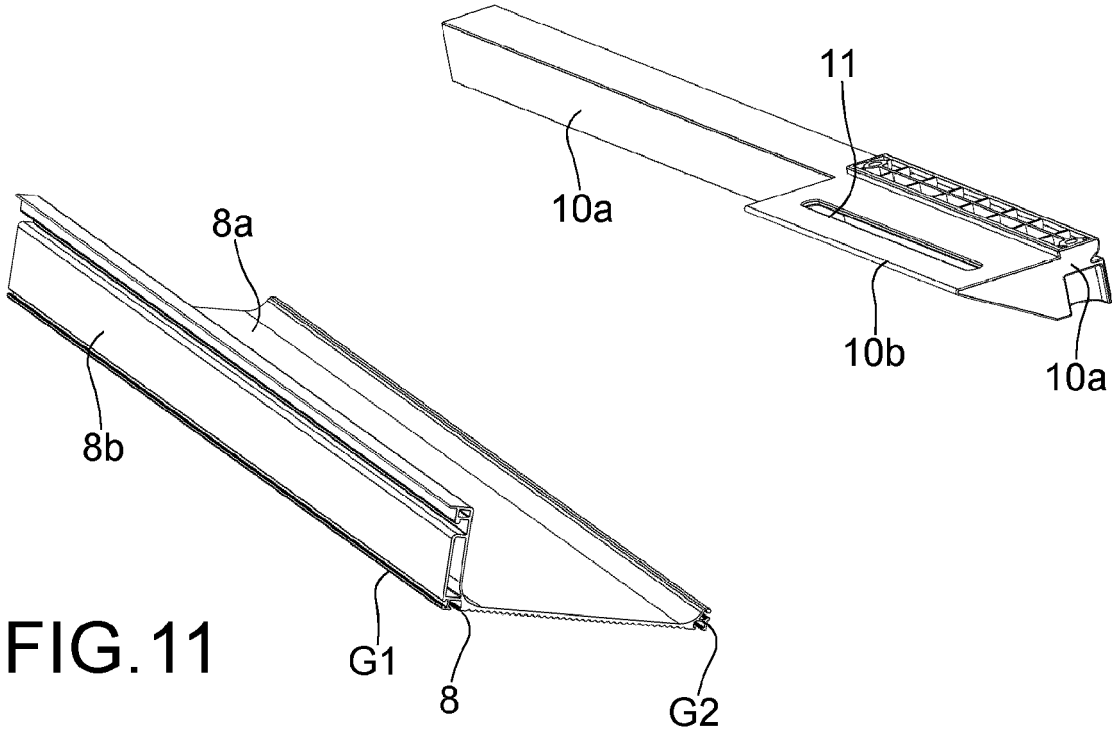


FIG.11

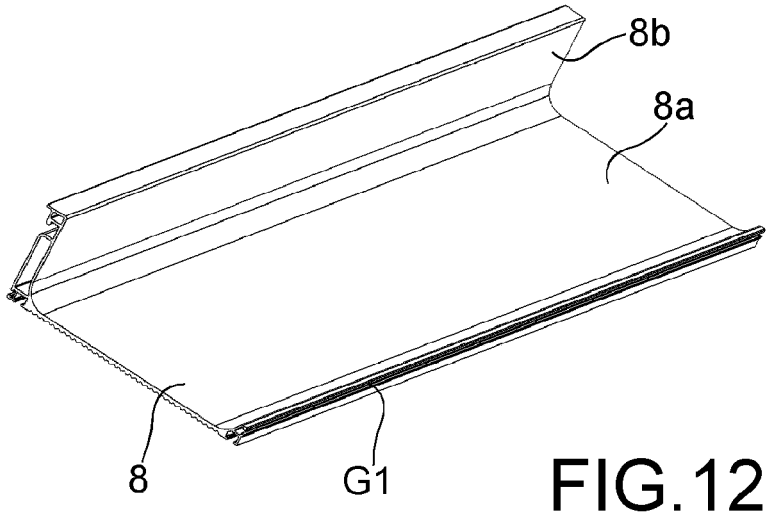


FIG.12

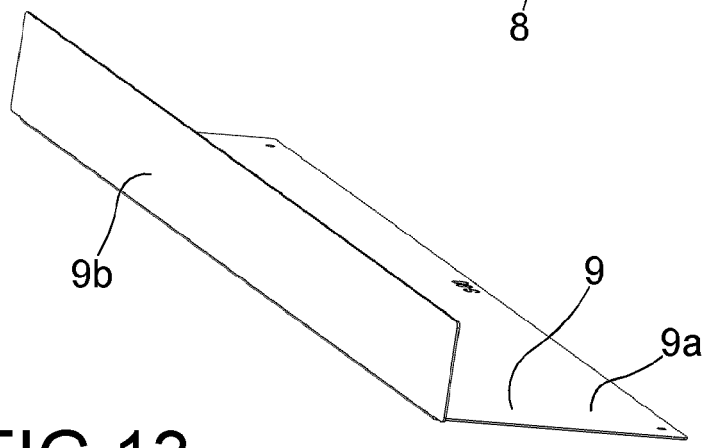


FIG.13

FIG.14

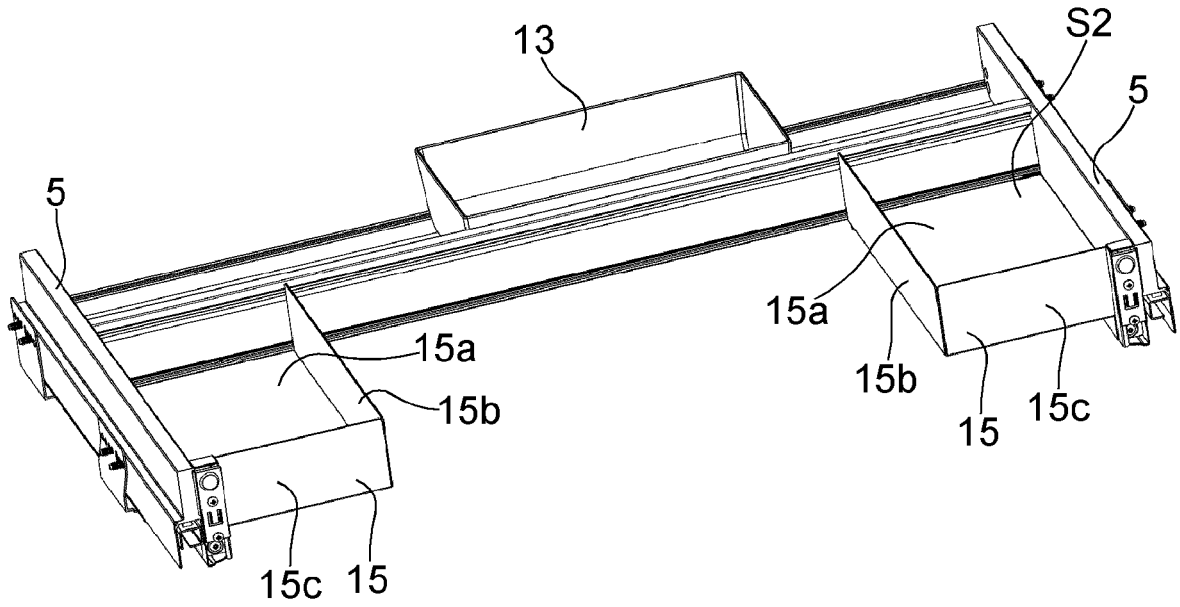

13
S2
5
5
15a
15b
15
15c
15a
15b
15c
15

FIG.15

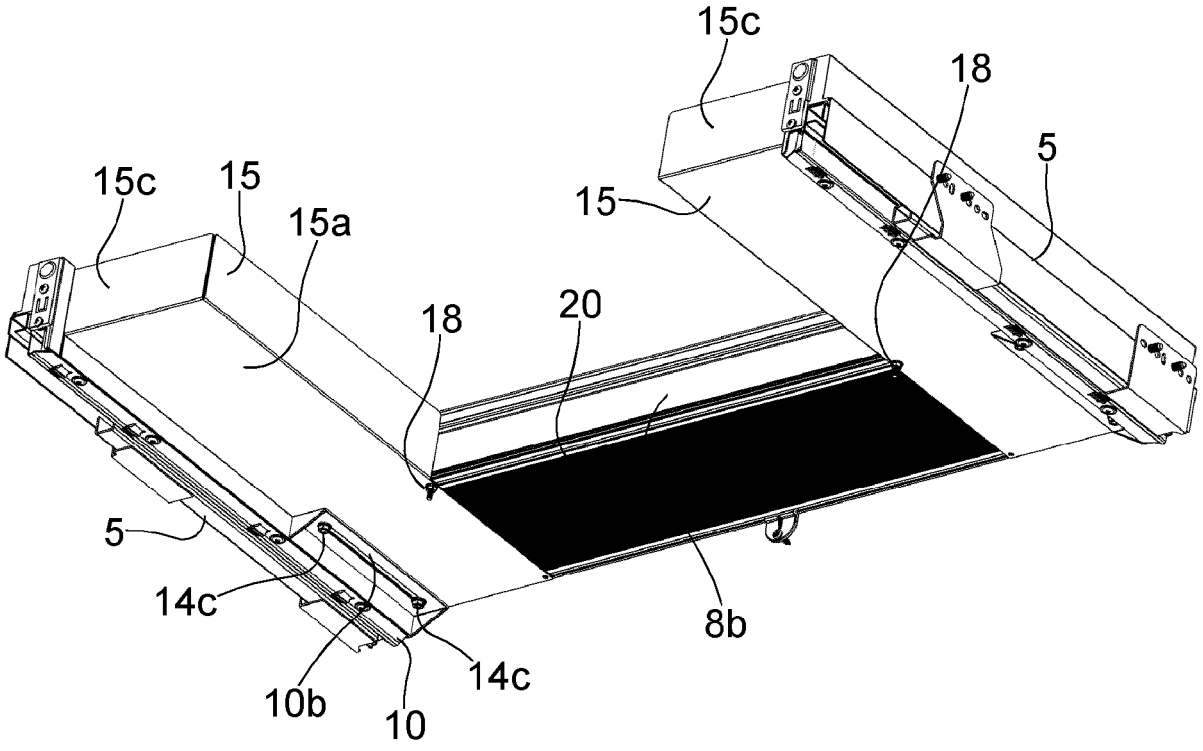

15c
18
5
15c
15
15a
15
18
20
5
14c
8b
14c
10b
10

FIG.16

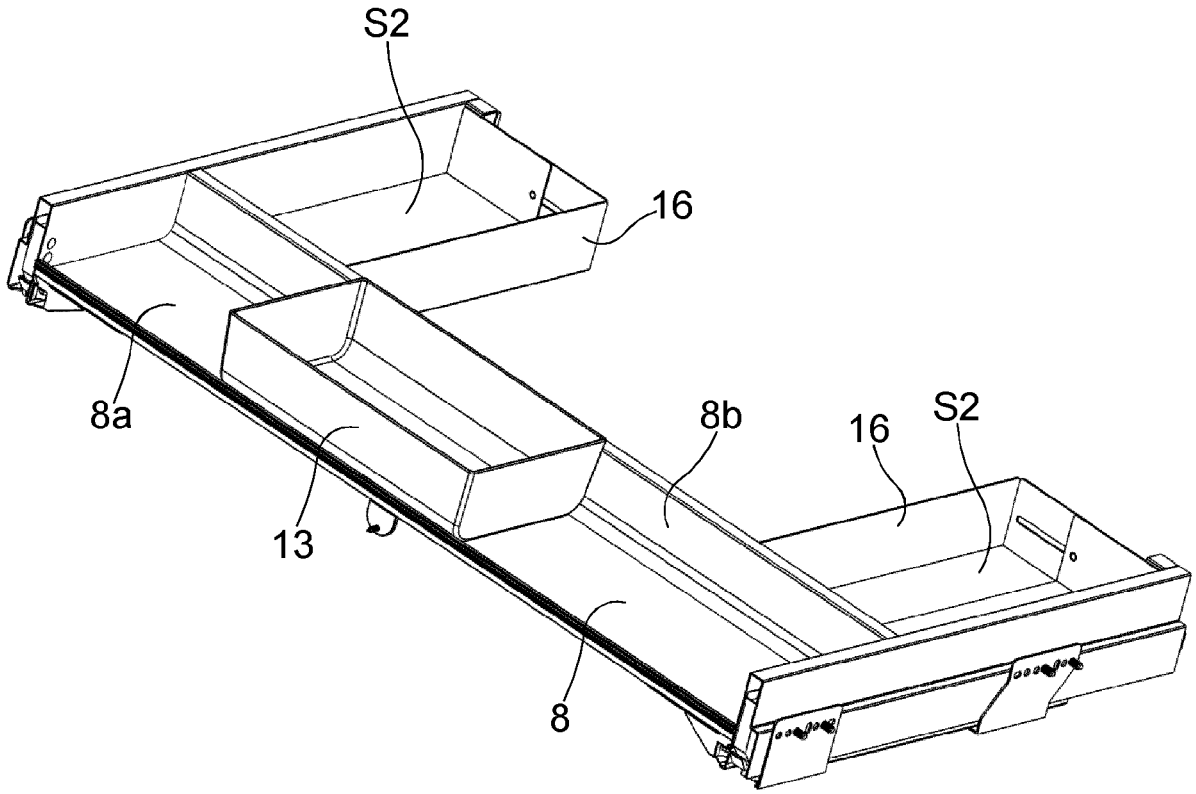


FIG.17

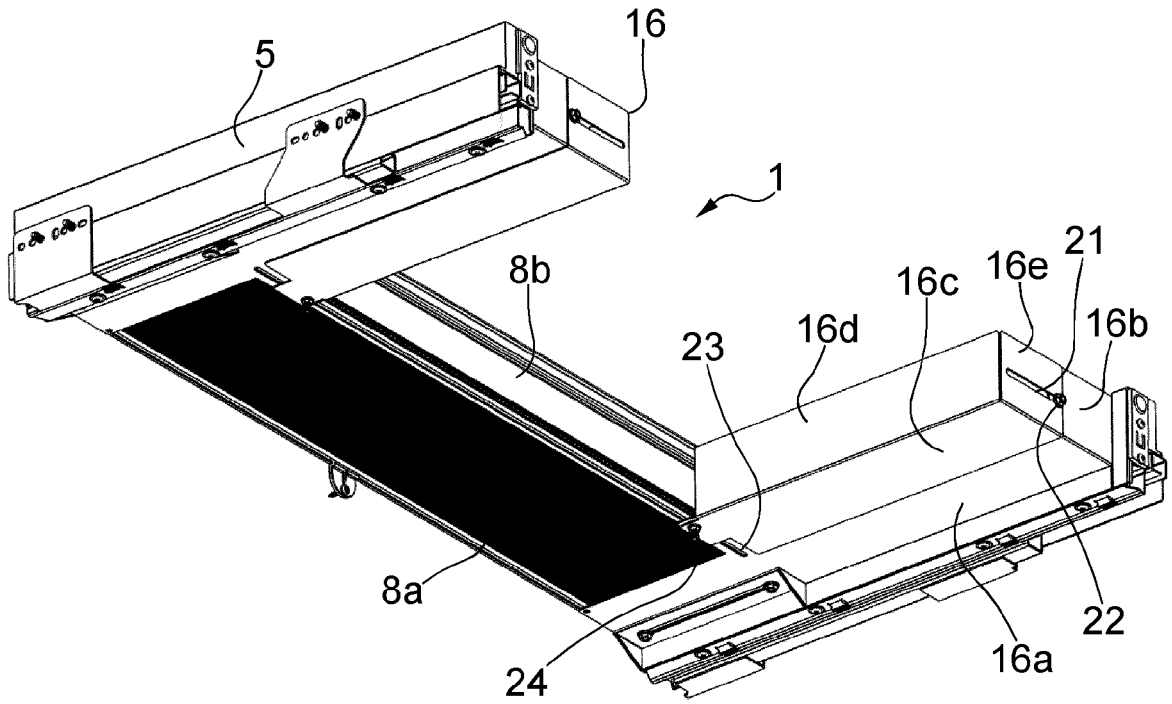


FIG.18

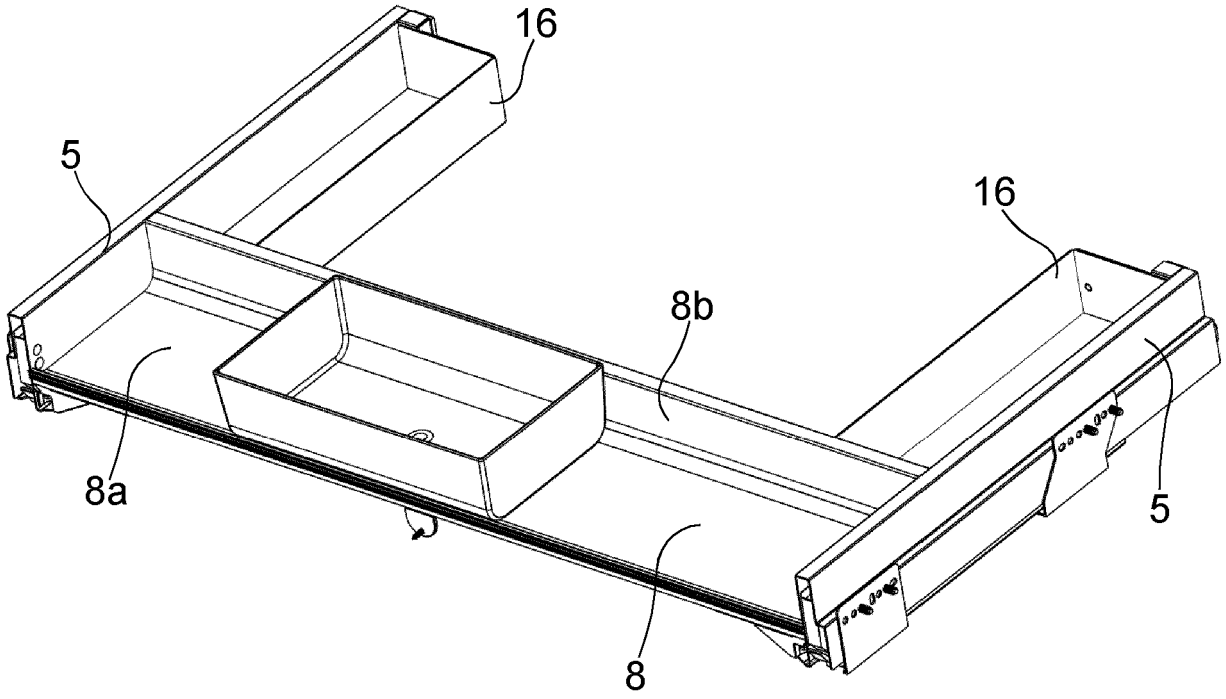


FIG.19

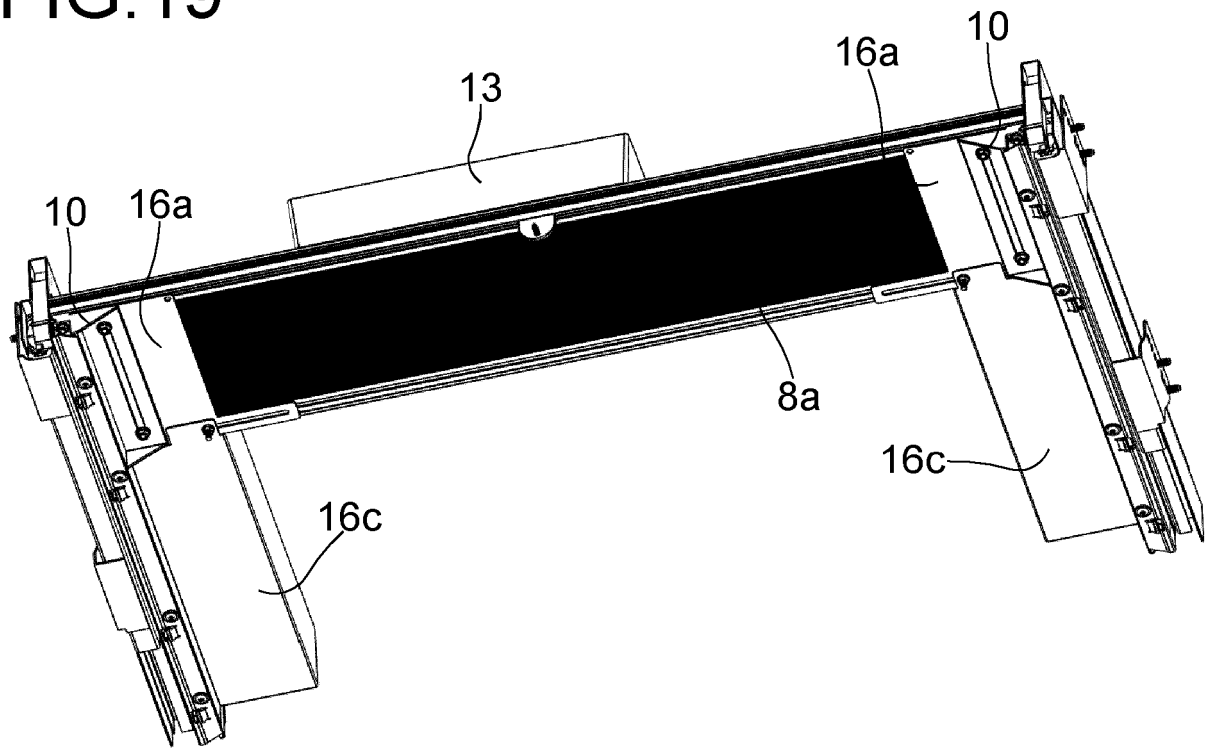


FIG.20

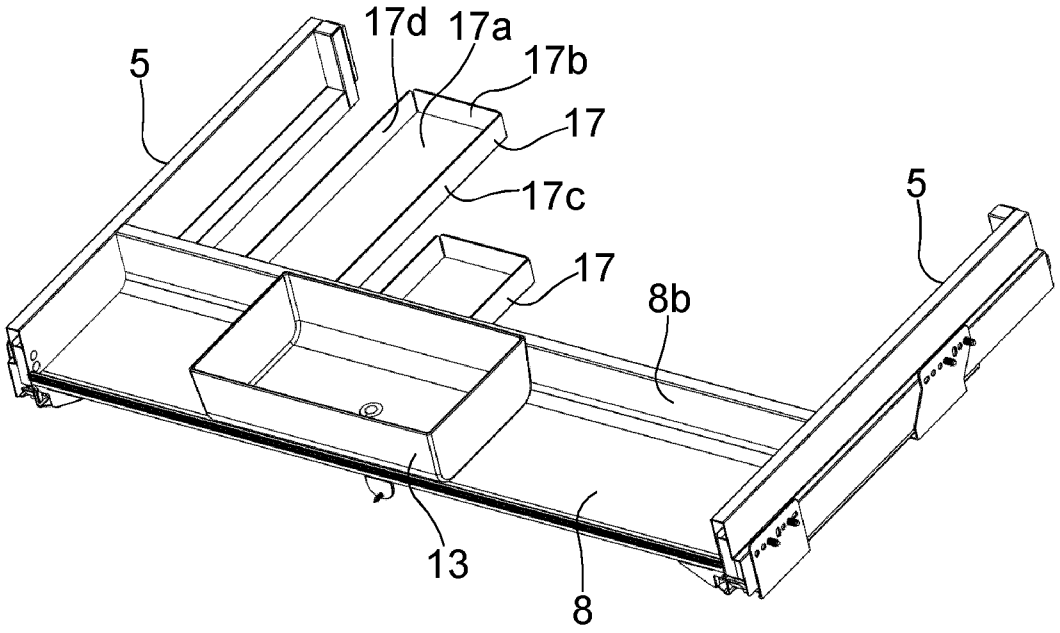
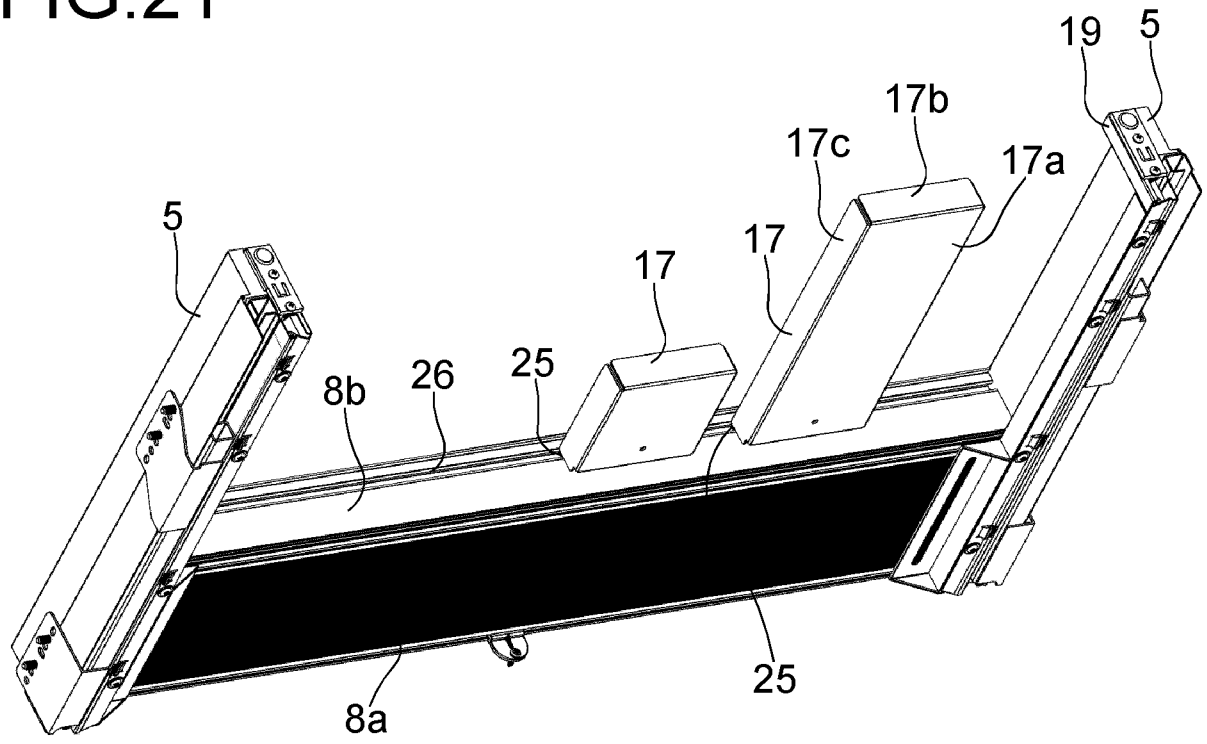

17d
17a
17b
5
17
17c
5
17
8b
13
8

FIG.21


19
5
17b
17c
17a
5
17
17
8b
26
25
25
8a

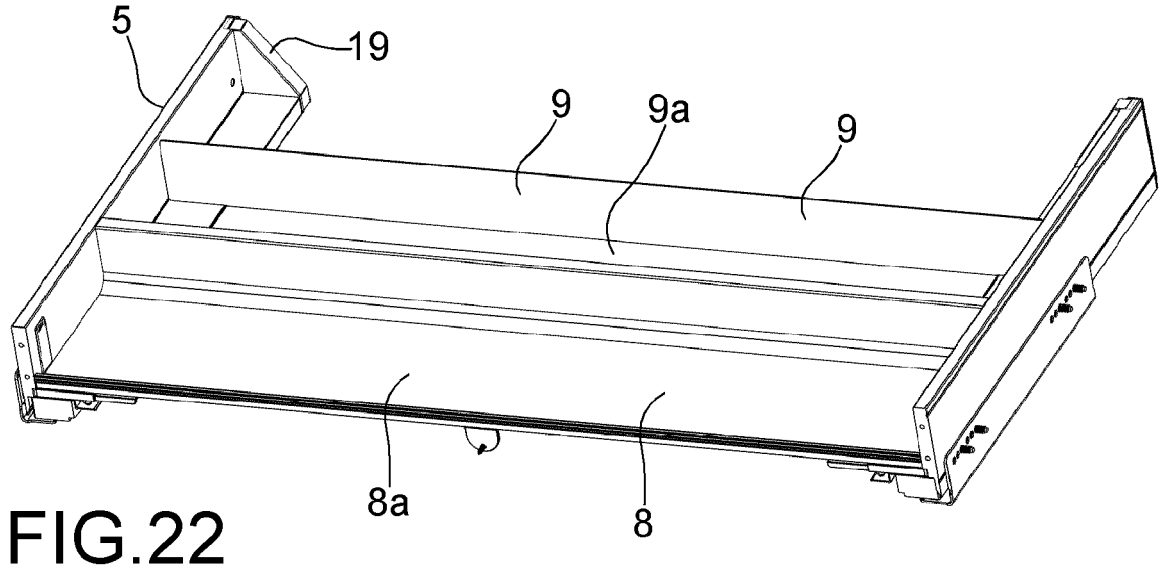


FIG.22

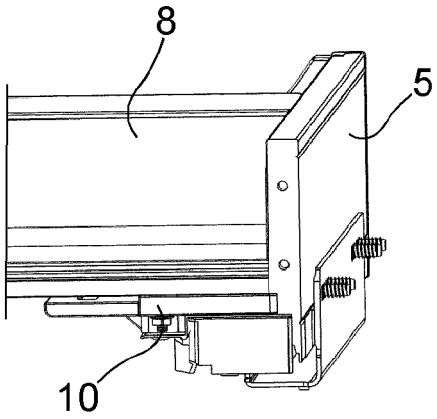


FIG.23

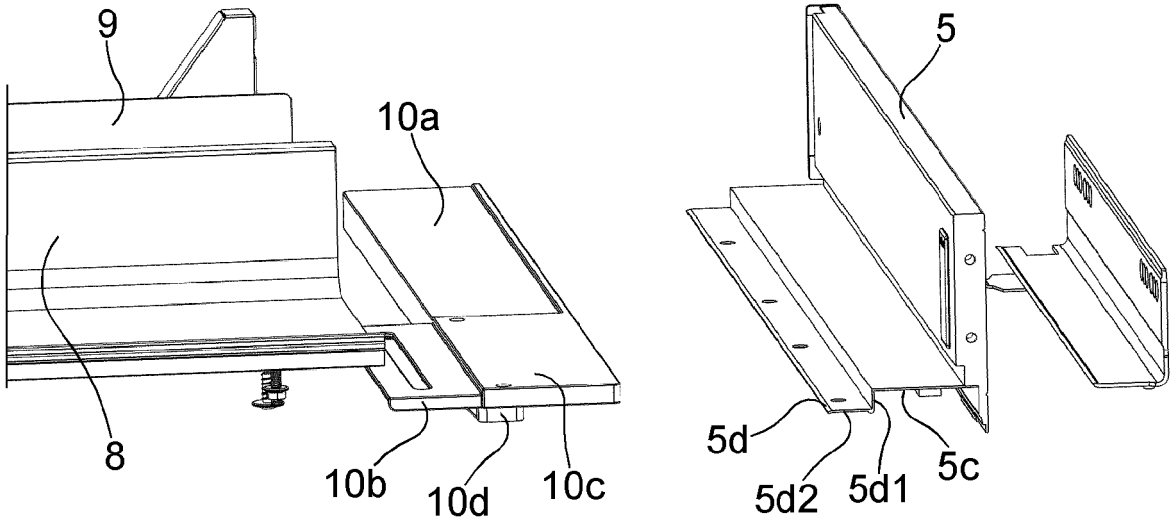
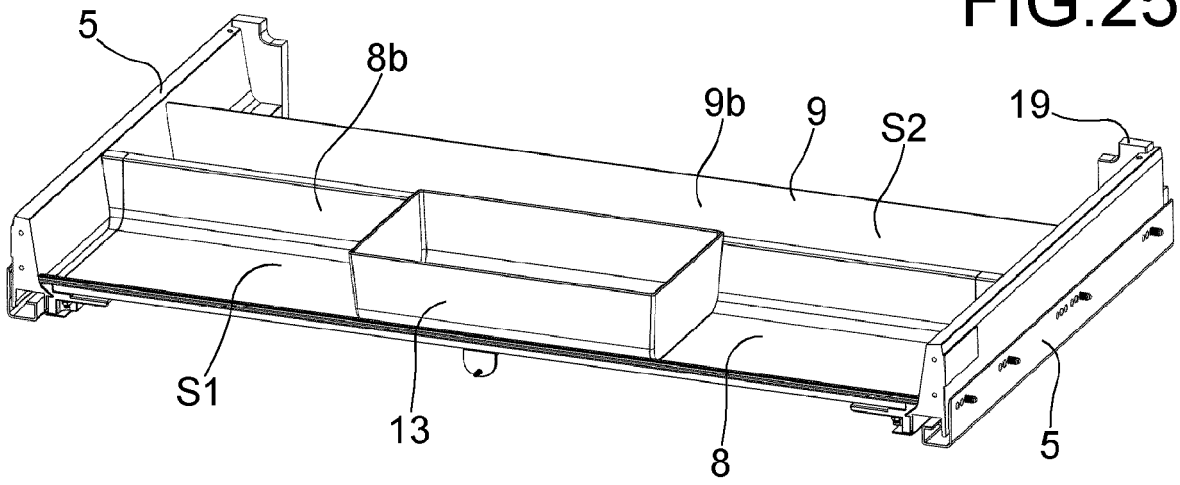


FIG.24

FIG.25



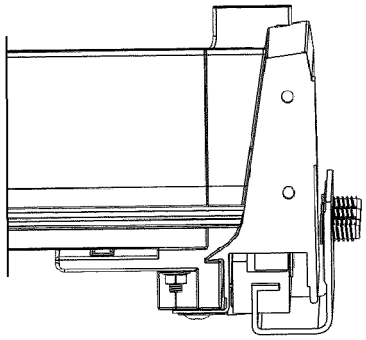


FIG.26

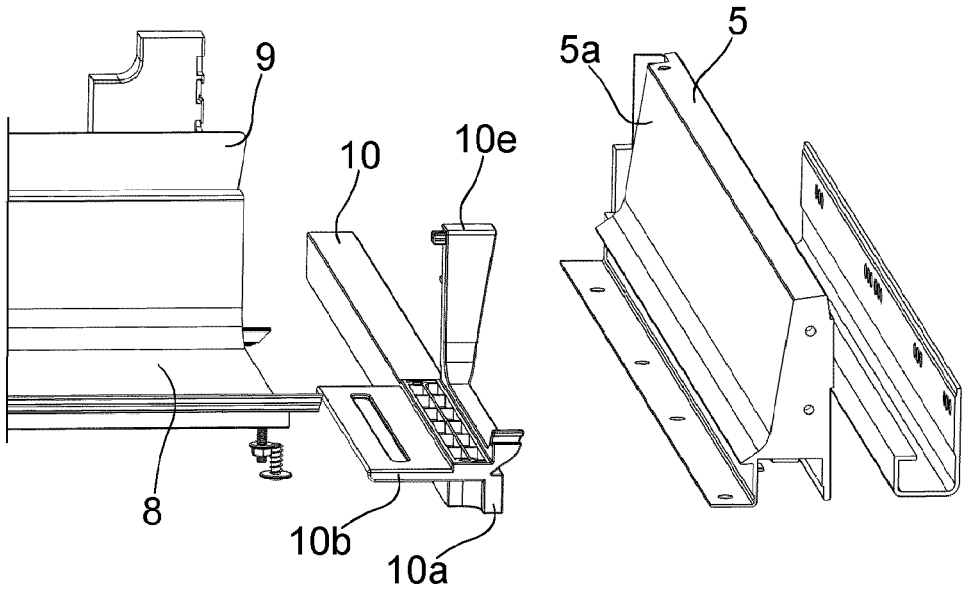


FIG.27

FIG.28

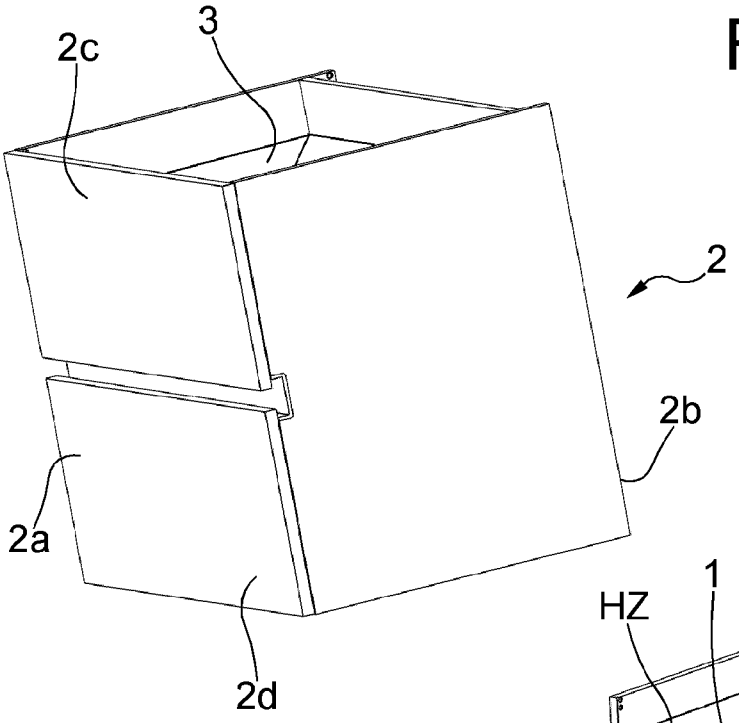


FIG.30

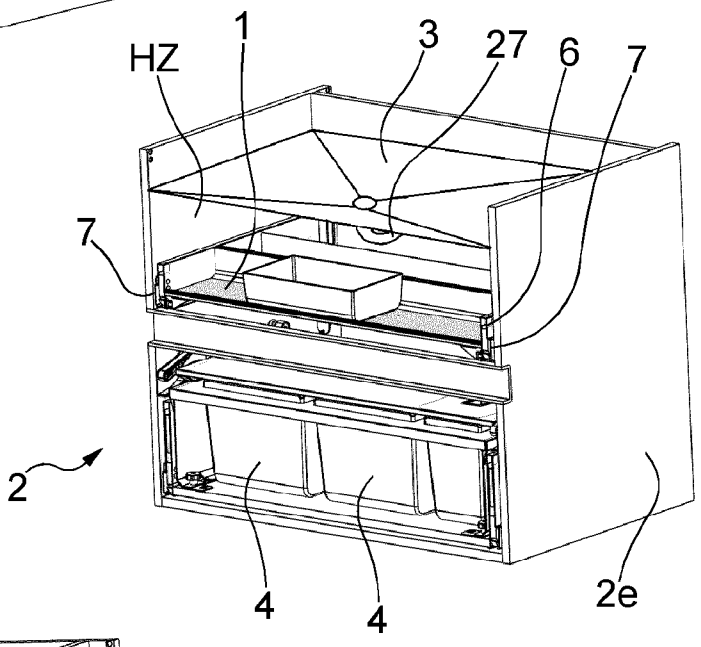
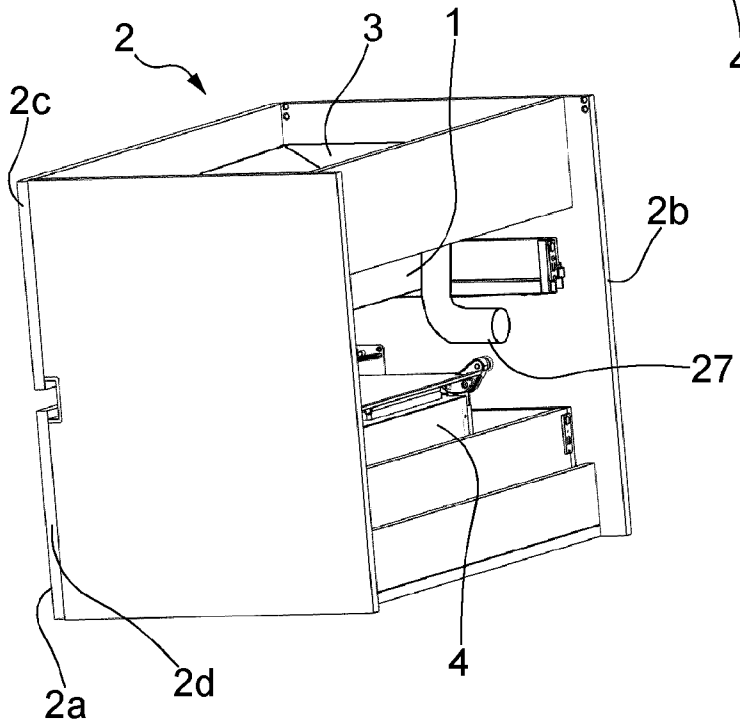


FIG.29



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EUROPEAN SEARCH REPORT

Application Number
EP 24 20 6911

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 A	US 2007/114893 A1 (STYKA KIMBERLY A [US] ET AL) 24 May 2007 (2007-05-24) * the whole document * -----	1-5, 9-13,15 6-8,14	INV. A47B88/90 A47B88/969 A47B77/04
X A	US 2005/099101 A1 (LOWE MARK J [US]) 12 May 2005 (2005-05-12) * page 1, paragraph 12 * * page 2, paragraph 15 * * page 3, paragraph 50 - page 4, paragraph 52 * * page 4, paragraph 58; figures 6, 7, 10 * -----	1,4,5, 11,12,15 2,9,10	
X A	JP 2003 299532 A (MATSUSHITA ELECTRIC WORKS LTD) 21 October 2003 (2003-10-21) * the whole document * -----	1,2,4,5, 11,12,15 3,9,10	
A	DE 20 2005 007301 U1 (JULIUS BLUM GMBH HOECHST [AT]) 21 July 2005 (2005-07-21) * page 2, paragraph 1 - paragraph 8 * * page 3, paragraph 17 - page 4, paragraph 22; figures * -----	1-15	

TECHNICAL FIELDS SEARCHED (IPC)
A47B E03C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	17 February 2025	Fajarnés Jessen, A

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17-02-2025

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- US 20050099101 A1 **[0005]**
- JP 2003299532 A **[0005]**