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(54) **A device for fastening skirting-boards to household appliances**

(57) A device for fastening the skirting-board to appliances that have a back provided with a seat engageable (8a), the device comprising fastening means (22, 30), to secure a skirting-board (8) in a position substantially parallel to the front of a lower part (6) of a household appliance (1). The fastening means (22, 30) comprise at least one fastening member (30) with a modular first connection portion (31) axially extended and including a succession of coupling modules (34). Each coupling module (34) has a base part (35) and a projecting front element (36), designed for coupling with the engageable seat (8a) of the back of a skirting-board (8). The coupling modules (34) of the succession are reciprocally joined in a separable way to enable to adapt the length of the first connection part (31) of the fastening member (30).

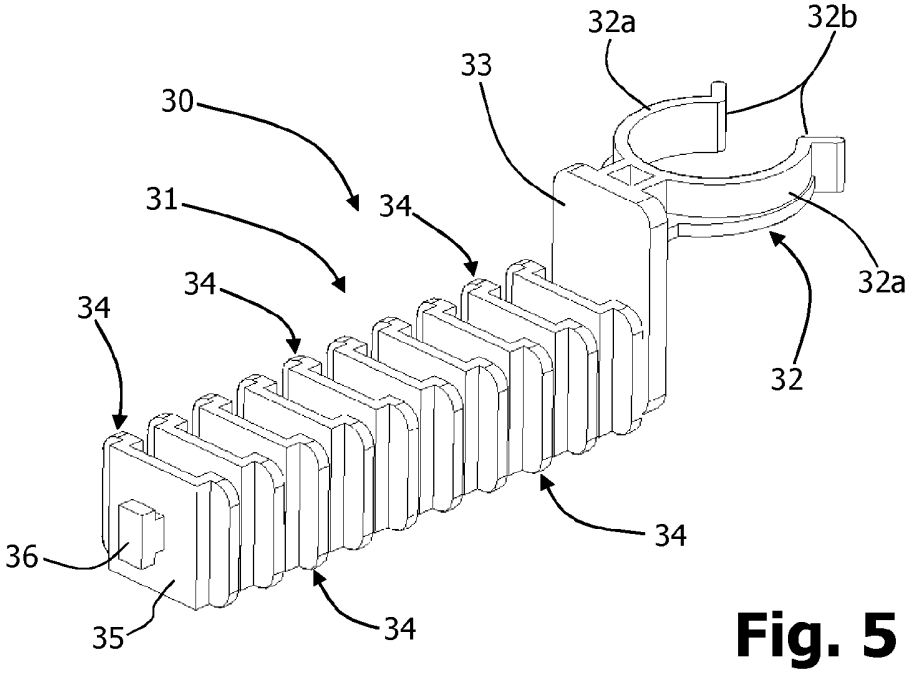


Fig. 5

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Description

Field of invention

[0001] The present invention relates to household appliances, such as dishwashers, cooking appliances, refrigeration appliances and machines for the treatment of textile garments. The invention has been developed with particular reference to the so-called equipments "built-in" appliances or, more in general, intended to be inserted or integrated in furniture of a household environment, such as a kitchen.

Field of the invention

[0002] As known, household appliances called "built-in" are intended to be inserted or integrated in the furniture of a household environment, such as a kitchen.

[0003] In this kind of installation, the appliance is often inserted between two stackable pieces of furniture, on which lies a common worktop, or "top"; in correspondence of the front of the appliance may be provided a decorative panel, such as a panel that covers the structure of the dishwasher's door.

[0004] The kitchen furniture, as well as built-in household appliances, generally have a lower part recessed in correspondence of the front, wherein as is the custom to fasten a skirting-board.

[0005] The skirting-boards commonly prepared by furniture manufacturers have, in correspondence of its back, a seat or guide which is engageable by relative fastening means, used for fastening the skirting-board itself to furniture or to household appliances.

[0006] The recessed lower part of the front of a household appliance does not necessarily coincide with the recessed portion of the front of the adjacent furniture, in terms of depth. For this reason, must be allowed a certain possibility of adjustment of the fastening means of the skirting-board to the lower part of the front of the household appliance. At current state, the fastening devices used for fixing a skirting-board at the front of a household appliance are generally of complicated conception and not easy installation.

[0007] It is also possible that a built-in household appliance should be installed at one end of the modular furniture. In such circumstances, in correspondence of the flank of the appliance which is located in correspondence of the end of the modular furniture, a decorative side panel is mounted. Even in this case, for aesthetic reasons, it is often necessary to mount, in correspondence of the lower part of the flank of the appliance, a relative skirting-board. Even in this case, the fastening devices are known of conception generally complicated and not easy to mount.

Summary of the invention

[0008] This present invention proposes mainly to solve the above drawbacks and to provide a device for fastening a skirting-board in correspondence of the front of household appliances having a simple structure, economical and easy to install.

[0009] One auxiliary purpose of this invention is to provide such a device which is also usable for fastening skirting-board in correspondence of a flank of the household appliances if is necessary.

[0010] Correlated purposes of the invention are those to indicate a method and a kit particularly advantageous for fastening skirting-boards to household appliances.

[0011] One or more of the above mentioned purposes are achieved, according to this invention, by a device, a method and a kit for fastening skirting-board to domestic appliances having the characteristics of the appended claims. The claims are an integral part of the technical teaching provided herein in relation to the invention.

Brief description of the drawings

[0012] The features and the advantages of the invention will be clear from the following detailed description, made with reference to the accompanying drawings, which are provided purely as an explicative and non-limiting way in which:

- Figure 1 is a perspective representation, partial and schematic, of an example of installation of a household appliance at one end of a composition of furniture, particularly kitchen furniture;
- Figure 2 is a perspective view, partial and schematic, of a household appliance provided for installation at the end of a composition of furniture, as in the case of Figure 1;
- Figure 3 is a larger-scale detail of Figure 2;
- Figure 4 is a schematic perspective view of a component associated with a base unit of Figures 2 and 3;
- Figure 5 is a schematic perspective view of a part of a device for fastening according to the invention;
- Figure 6 is a schematic perspective view, on an enlarged scale, of a coupling module of fastening member of Figure 5;
- Figure 7 is a perspective view, partial and schematic, in enlarged scale of a skirting board shown in Figure 1;
- Figure 8 is a schematic perspective view of a further member of a device for fastening according to a particularly advantageous embodiment of the invention;
- Figures 9-14 are perspective views, partial and schematic, of the lower area of the device of Figures 2-3, aimed to clarify the way of mounting a device according to the invention; and
- Figures 15-19 are perspective views, partial and schematic, of the lower part of the household appliance of Figures 2-3, aimed to exemplify a possible assembly sequence of a device according to the invention.

Detailed description of embodiments of the invention

[0013] The reference to "one embodiment" in the field of this description is to indicate that a particular configuration, structure or characteristic described in relation to the embodiment is included in at least one embodiment. Thus, phrases such as "in one embodiment" and similar, eventually present in different points of this description, are not necessarily referring to the same embodiment. Moreover, particular conformations, structures, or characteristics may be combined in any suitable manner in one or more embodiments, also different from those described. The references used herein are for only convenience and therefore do not define the scope of protection or the scope of the embodiments. In the following, furthermore, the invention will be described limited to the elements necessary to its understanding, assuming - for example - that the household equipment exemplified below includes all the components normally known and necessary for its functioning.

[0014] For a better understanding of this invention it is useful to remind briefly the modality of installation of a built-in household appliance, i.e. integrated or inserted into a furniture of a household environment, such as a kitchen. For this purpose, in Figure 1 the case of mounting a household appliance, here represented by a dishwasher 1, in correspondence to one end of a composition of kitchen furniture, is exemplified. In the example, the dishwasher 1 is mounted to the flank of a generic furniture 2 and above the dishwasher 1 and the furniture 2 a common worktop or top, indicated with 3, is installed. In the example, the door of the dishwasher 1 is not directly visible, as it is hidden by a decorative panel, indicated with 4. With 5 is shown, instead, the front door of the furniture 2, for example, a door hinged about a vertical axis.

[0015] Both the dishwasher 1 and the furniture 2 have, in the lower part of the respective front, a part generically recessed 6, 7, in correspondence of which a common skirting-board, indicated as a whole with 8 must be mounted. Still referring to the represented example, a decorative panel side, indicated with 10 is designed to be applied to the flank 9 of the dishwasher 1.

[0016] In the example, the lateral panel 10 has a height less than that of the flank of the dishwasher, in such a way that even in the lower part of the flank 9 can be installed a skirting-board 11, aesthetically congruent - for example in terms of color - with the skirting-board 8. Note that, differently from the front, the flank of a household appliance does not necessarily have a recess in correspondence of the lower part, as in the exemplified case. In the example, in correspondence of the visible end side of the top 8, is mounted a terminal element 12 having essentially aesthetic functions, of covering the lateral end of the top itself and the upper end of the decorative panel 10.

[0017] In Figure 2 the dishwasher 1 is illustrated in a partial and schematic fashion, already provided with the relative front decorative panel 4 and the decorative lateral panel 10, as well as the top 3. In the lower area of the front of the dishwasher 1 a base part 20 of the machine is visible, which is generally in a retracted position from the front amount of space of the door of the machine, thereby forming the recessed portion schematically indicated with 6 in Figure 1. Still in Figure 2, as well as in the following Figure 3, it is also visible the lower part of the flank 9 of the dishwasher, shaped congruently to the recessed portion 6 of the front of the machine.

[0018] A base part 20 is visible in Figure 3, provided in the lower part, in the front area, of a pair of adjustable feet 21. At the front of the base part 20 substantially in correspondence of the adjustable feet 21, two elements or components 22 are preferably provided in a fastened position: as will be seen in the following, in one particular embodiment of the invention the elements 22, particularly anti-overturning components, are used for the purposes of fastening the skirting-board 8 of Figure 1.

[0019] One of the components 22 is schematically shown in Figure 4, on an enlarged scale. The component 22 essentially comprises a base part 22a, with a lower face $22a_1$ designed to face to a short distance or to be in contact with the floor of installation of the machine 1. The lower part of the base part 22a advantageously has a rear bevel $22a_2$, so that the same component can be directly close to a respective adjustable foot 21, without constituting a obstacle to its rotation during the adjustment phase.

[0020] In the example, on the upper part of the base 22a, it extends a coupling portion 22b which, as it will see in the following, achieves a portion for the coupling of a fastening member of the skirting-board 8.

[0021] In the example, the coupling part 22b has a shaped section, here approximately omega shaped or defined by a substantially cylindrical front portion $22b_1$ that is joined up to a rear portion $22b_2$ with a substantially quadrilateral prism shaped, where the greater face of the rear portion $22b_2$ is directed to the support on the front of the base part (see for example Figure 3).

[0022] The components 22 may be fastened in position by coupling means or inserts provided between the rear face of the coupling part 22b and the front of the base part 20, or even by screws passing through holes of the front of the base 20, screwed together from the inside of the latter on the rear surface of the coupling portion 22b. The components 22 may advantageously be formed in molded plastic material, such as a thermoplastic material. In possible variants of the invention, the elements 22 may also formed of piece with the structure of base part 20, when this is formed at least in part of plastic material. The shape illustrated for components 22 should not however be construed in any way limiting.

[0023] In a preferred embodiment, the components 22 have the function to avoid overturning forward of the dishwasher 1. As it is known, the dishwashers have a front door typically hinged in correspondence of its lower area, in order to rotate about a horizontal axis. After the complete opening of such a door, it is to be in a substantially

horizontal position and the lower tableware basket of the machine is extracted on its inner shell (the so-called "counterdoor"). For example, in case of excessive weight of the load of the said lower basket, it is possible that, after the extraction of the latter on the opened door, the machine as a whole tends to overturn forwards. The components 22, with their lower supporting base 22a relatively large, comes in such circumstances to be supporting points that are located in front of the adjustable feet 21, thereby avoiding the risk of overturning forward of the dishwasher 1.

[0024] According to the invention, the device for fastening skirting-board comprises fastening means, to secure a skirting-board in a position substantially parallel to the front of the lower part of the household appliance 1 - and in particular in correspondence with the generally recessed part 6 of Figure 1 - to a certain distance from it.

[0025] According to the invention, said fastening means comprise at least one fastening member, illustrated in figure 5, where it is indicated with 30 in its entirety.

[0026] In the exemplified embodiment, the fastening member 30 includes a modular first connection portion 31, for coupling the skirting-board 8, and a second connection or coupling part 32, generally opposite to the first connection part 31, between which an intermediate part 33 is preferably provided.

[0027] According to a feature of the invention, the connection part 31 is a modular part, which extends axially or in length and which includes a succession of coupling modules, some of which indicated with 34 in figure 5. As shown particularly in Figure 6, each coupling module 34 has a base part 35, here substantially conformed as a shaped plate, having a projecting front element 36, which is designed for coupling with the engageable seat provided on the back of the skirting-board 8, as will be explained in the following. In the installed condition of the member 30, the part 31 extends substantially horizontally.

[0028] In the example shown, the base part 35 of the coupling module 34 has a main portion 35a preferably flat, from the front of which the front element 36 rises or projects, as well as two lateral flat flaps 35b, generally parallel to the central part 35a, but in the retracted position, so that a respective step is formed between each flap 35b and the central part 35a.

[0029] According to a further feature of the invention, the coupling modules 34 of the succession of modules are reciprocally joined in separable way, in order to enable to adapt the length of the connection part 31 of the fastening member 30, for the skirting-board 8 fastening in position.

[0030] In the embodiment currently deemed preferential, the fastening member 30 is formed in a single piece of plastic material, for example a thermoplastic material injection moldable, with the succession of modules 34 which is then also formed in a single piece. Preferably, each module 34 is joined to the next by of one or more connecting jumper or the like, not visible in the figures, which extend between the projecting front element 36 or of the base part 35 of a module 34 and the back of the base part 35 of the next module (referring to a succession of modules 34 from the intermediate part 33 of the member 30 forward).

[0031] In this way, for example using a cutting device, it is possible to cut the connection jumper or jumpers between two successive modules 34, that is to remove one or more modules 34 from the proximal end, or front, of the connection part indicated with 31 in Figure 5.

[0032] In one embodiment, such as that simplified, the projecting front element 36 has a substantially T-section, with its head portion oriented substantially vertically, as clearly visible for example in Figures 5 and 6. This shape is chosen according the section of the engageable seat or guide which is usually provided in correspondence of the back of the skirting-board 8. This is particularly visible for example in figure 7, where it can be appreciated how the section of the said seat or guide, generally indicated with 8a, is substantially complementary to the section of the projecting element 36. The shape illustrated is that normally expected in most skirting-boards currently produced by furniture manufacturers for use in conjunction with modular kitchen furniture: it can be appreciate, however, that in other embodiments, the specific profile of the projecting element 36 and the seat 8a of the skirting-board can also be different from those exemplified, it being understood that the projecting element will be conformed for engagement with the seat.

[0033] Returning to Figure 5, the connection part 32 of the fastening member 30 is configured for coupling with an element that is located in a fixed position in correspondence to the lower part of the appliance 1.

[0034] In one embodiment, such as that simplified in the figures, said element is represented by a corresponding anti-overturning component 22. In this embodiment, therefore, the component 22 is an active part of the fastening means for the skirting-board 8 to the front of the lower part of the dishwasher 1. Preferably, the coupling between the connection part 32 of the fastening member 30 and the component 22 is a fast-coupling way, such as an elastic coupling and /or snap-coupling.

[0035] In the non-limiting example of Figure 5, the connection part 32 has substantially a open collar or "C" shape, that is comprising two opposite flaps 32a. In the example, being the member 30 formed in a single piece, the connection part 32 has overall the shape of an arc of circumference with a development greater than 180°, in which are identified two flaps 32a.

[0036] Preferably, in the end area of the two opposite flaps 32a a fold or step is defined, here with an acute angle, indicated with 32b. With this shape, the connection part 32 can be elastically or snap engaged on the coupling part 22b of the component 22d of Figure 4, so that said steps 32b engage substantially at the interface area between the cylindrical portion $22b_1$ and the prismatic part $22b_2$ of said coupling part.

[0037] As previously mentioned, the coupling part 22b

of the component 22 may have different shape from that exemplified and, consequently, also the coupling part 32 of the element 30 may be modified in accordance, without precluding the possibility of fast coupling way between the two parts.

[0038] In a particularly advantageous embodiment the fastening device according to the invention comprises additional fastening means, to secure a further skirting-board, which is the skirting-board 11 of Figure 1, in a position substantially parallel to the lower part of the flank 9 of the appliance 1.

[0039] In such embodiment, said additional fastening means comprise at least one of the coupling modules 34 of the fastening member 30 - previously separated from the succession of modules that creates the coupling portion 31 of figure 5 - as well as at least one further fastening member, configured to be secured in a fixed position to the stationary structure of the machine 1.

[0040] Such an additional fastening member is shown schematically in Figure 8, where it is indicated as a whole with 40. As will be seen, the fastening member 40 defines at least a respective coupling seat, in which is receivable the base part 35 of a coupling module 34 (see Figure 6) separated from the relative succession of modules. As will be appreciated, as a result of the coupling of this module 34 with the corresponding seat member 40, the relative projecting element 36 is couplable with the engageable seat or guide 8a in the back of the further skirting-board 11. It should be specified for this purpose that the skirting-board 11 is of similar design as the shape of the engageable seat provided on its back, that is similar to that indicated with 8a in Figure 7.

[0041] In one embodiment, such as in the example, the additional fastening member 40 is configured to be secured at the front of the lower part of the machine 1, with the at least respective coupling seat that extends vertically, in a position generally parallel to the flank 9 of the machine 1. In this way, as will be clear in the following, the member 40 does not substantially cause a lateral amount of space in correspondence of the flank 9. Also the member 40 may be formed in a single piece of plastic material, such as an injection moldable thermoplastic material.

[0042] Referring in particular to Figure 8, the coupling member 40 has a rear part, indicated overall with 41, having a respective back surface for the support against a vertical surface of the stationary structure of the machine 1. In the example, the base part comprises a flap 41a, provided with at least a hole passing through a fastening screw, following described. In position generally opposite and parallel to the rear part 41, a front part 42 is provided, the parts 41 and 42 being connected by at least one intermediate wall 43. The parts 41 and 42 define between them the at least said coupling seat, in which is receivable a coupling module 34 separated from the succession of Figure 5. In the exemplified embodiment, said seat is essentially defined between two opposite guides 44a-44b, each of them being preferably defined between the two parts 41 and 42 and a respective intermediate connection wall 43. In the example, the opposite guides 44a-44b have substantially a C-section and extend vertically. In this way, the flaps 35b of the base part 35 of a module 34 can be inserted from above in the said guides 44a-44b (see Figure 6). Referring again to the exemplified case, in a preferred embodiment, the fastening member 40 has two coupling seats 44a-44b generally vertical and in generally specular positions with respect to a vertical symmetrical plane of the fastening member 40. The presence of two seats 44a-44b is particularly advantageous, since the same fastening member 40 can be used indifferently for fastening skirting-boards in correspondence of the right flank or the left flank of the machine 1, as will be clear in the following.

[0043] The use of the fastening device according to the invention is particularly simple, as evidenced by some operating phases of its mounting illustrated in Figures 9-14, in which are used the same reference numbers of the previous figures to indicate technically equivalent elements to those already described above.

[0044] In Figure 9, as well as in the following figures, is visible the lower area of the machine 1, with the components 22 already fixed in position (as said, the components may also be formed integral with the base part or coupled to it). In Figure 9, only one of the fastening members 30 is represented in front of the component 22, it being understood that for fastening skirting-board 8, not shown here, may be used at least two components 30.

[0045] Figure 10 exemplifies the coupling or hooking condition of the fastening member 30 to the component 22, and precisely on the coupling part 22b of the latter. As it is well known from these figures, the adjustable feet 21 are preferably positioned behind the components 22, with the smoothed side of its base 22a which avoids possible obstruction between the parts.

[0046] Figure 11 illustrates the step of fastening member 40 to the stationary structure of the dishwasher 1, in correspondence of the front of the machine or, as in the exemplified case, in correspondence of a front edge of the flank 9 which is bent orthogonally in correspondence on the front of the base part 20. As previously mentioned, the member 40 may be fixed in position by a screw, here indicated with 50, inserted in a through-hole provided in the flap 41a of the rear part 41 (Figure 8), with the rear surface of the base part that rests on the surface of said orthogonally bent edge of the flank 9. Figure 12 illustrates the assembled condition of the second fastening member 40. As it is known, the lateral dimensions of member 40 does not exceed substantially the flank 9: this is advantageous in cases where, as in that shown, the flank 9 has a lower part generally retracted.

[0047] The following Figure 13 exemplifies the case of separation of a coupling module by the succession of modules that creates the connecting portion 31 of the fastening member 30. In the figure the module separated from the succession is indicated with 34' while with 34" is

indicated the module that is at the distal end of the remaining succession of modules. As it is said, the separation can be carried out using any cutting device. It is also possible to obtain of the module performing a twist to separate the module (34') from the immediately preceding module (34"), it being understood that in this case it will be preferable, for example, using a cutting device to remove the part of the connecting jumpers above mentioned, which may interfere with the coupling of the projecting front part 36 of the front module (34") of the remaining succession with the engageable seat 8a from the back of the skirting-board 8.

[0048] Figure 14 illustrates the condition in which the module 34' removed from the succession it has been inserted into the corresponding guide of the fastening member 40 which is turned towards the flank 9 and parallel to it. In a preferred embodiment, such as that exemplified, the intermediate portion 33 of the fastening member 30 extends in the vertical direction more than modules 34 (that is, the first has a greater height than the latter), with the connecting parts 31 and 32 that are located respectively in an area generally lower and in an area generally higher of the portion 33. In this way, the connecting part 32 can be above the modules themselves. This allows, for example, to position higher up the coupling section of the part 32, and then to have components 22 with lower supporting base 22a relatively large compared to the coupling portion 22b, in order to better fulfill the function of anti-overturning.

[0049] Figures 15-19 illustrate, with views substantially similar to those of Figures 9-14, a possible sequence of mounting of a fastening device according to the previously mentioned preferred embodiment of the invention, in which the device is provided for fastening a front skirting-board and a lateral skirting-board.

[0050] In figure 15 the skirting-board 8 is visible, in which in the seat 8a has been engaged the projecting element 35 of the front module of the remaining succession of modules of the fastening member 30 (that is the module indicated with 34" in figure 14).

[0051] In the phase of Figure 16 the connection part 32 (see Figure 5) of the fastening member 30 is coupled to the coupling portion 22b (see for example Figure 14) of the component 22, with the modality of elastic coupling or snap coupling, as previously described.

[0052] In the phase of Figure 17, substantially homologous to the previous figure 14, the coupling module 34', separated from a succession of modules (see Figure 13) is inserted in the seat 44a-44b (see figure 8) of the fastening member 40.

[0053] Figure 18 illustrates the condition in which the flank 9 of the machine 1 has already been partially covered with a decorative panel end, which is the lateral panel indicated with 10 in Figure 1.

[0054] Figure 19, finally, shows the final state of mounting phase in which the additional skirting-board 11 has been coupled to the front element 35 of coupling module 34' (not visible here). Given the relatively short length of the skirting-board 11, the coupling of its rear seat (similar to that indicated by 8a in Figure 7) may be made by a translation of the skirting-board itself on the front element.

[0055] As previously mentioned, in the mounting phase of the device object of the invention, will be preferably provided with two fastening members 30, each of them is coupled to a component 22.

[0056] The possibility to separate one or more coupling modules 34 from the rest of the succession of modules of the member 30 allows to adapt the length of the connection part 31 of Figure 5, that is to adapt its length depending on the position that the skirting-board 8 will assume relatively to the front of the lower part 6 of the machine 1. Note that, preferably, the number of modules 34 of the succession will be still greater than that normally required for the purpose based on the typical dimensioning of the lower recess of the household appliances in order to provide certainly of at least one module 34 separable from the rest of the succession. In the case in which the device 1 is an appliance of the end furniture module, as in the case of Figure 1, it can be used also the fastening member 40, if it intends to mount a lateral skirting-board 11 in correspondence of the flank of the appliance.

[0057] Note that, if necessary, a fastening member 40 may possibly also be fixed in correspondence of the back of the appliance: therefore, where necessary deemed, a member 40 can be mounted in correspondence of the front of the machine, such as visible in figure 18, and another component 40 mounted in a substantially similar manner in correspondence of the back of the stationary structure of the machine, in order to allow, if necessary, two anchorage areas for the side skirting-board 11. The number of modules 34 of the succession will be preferably selected in order to allow the separation of at least two coupling modules 34. From the previous description, the features and the advantages of the fastening device according to the this invention, primarily represented by its structural simplicity and therefore its cost, as well as from its easy and quick mounting are clear. A further advantage offered by the preferred embodiment described is to allow, if necessary also the fastening of at least a skirting-board in correspondence of a flank of the appliance, in a simple and rapid way.

[0058] The device object of the invention may be provided in the form of kit of parts, comprising for example one or two fastening members 30 and eventually at least one fastening member 40.

[0059] It is clear that many variations are possible for the skilled person in the field of the device, of the method and of the kit of parts previously described by the way of an example, without departing from the purpose of the invention as defined by the claims that follow.

[0060] In the embodiments previously described the succession of coupling modules 34 which creates the connection part 31 of the member 30 is formed in a single piece, but in possible variants of the invention said modules can be configured as separate components but still

coupled between them in a separable way, for example by a interlocking or snap. In one embodiment of this type, for example, the projecting front part can be engageable and couplable in a provided seat in correspondence of the back of the base part 35 of a next module of the series.

[0061] The invention has been described above with reference to a dishwasher, but it is clear that the same invention is applicable to other types of appliances equipped with skirting-board, such as washing machines, dryers, ovens, stoves, refrigerators, etc..

Claims

1. A device for fastening skirting-boards (8, 11) having a back provided with an engageable seat (8a) to household appliances, the device comprising fastening means (22, 30), to secure a skirting-board (8) in a position substantially parallel to the front of a lower part (6) of a household appliance (1), **characterized in that** the fastening means (22, 30) comprise at least one fastening member (30) with a modular first connection portion (31) that extends axially and includes a succession of coupling modules (34), that each coupling module (34) has a base part (35) and a projecting front element (36) designed for coupling with the engageable seat (8a) of the back of a skirting-board (8), and that the coupling modules (34) of the succession are reciprocally joined in a separable way to enable to adapt the length of the first connection part (31) of the fastening member (30).

2. The device according to claim 1, comprising further fastening means (34', 40), to secure a further skirting-board (11) in a position substantially parallel to a flank (9) of a lower part of the household appliance (1), wherein the further fastening means (34', 40) comprise:

   - at least one first of said coupling modules (34'), separated from said succession of coupling modules (34), and
   - at least one further fastening member (40), defining at least one respective coupling seat (44a-44b) in which the base part (35) of the at least one first coupling module (34') separated from the succession of coupling modules (34) is receivable, with the front element (36) of the at least one first coupling module (34') that is couplable with the engageable seat (8a) of the back of the further skirting-board (11).

3. The device according to claim 2, wherein the further fastening member (40) is configured to be secured at the front of the lower part (6) of the household appliance (1), with the at least one respective coupling seat (44a-44b) that extends vertically in a position generally parallel to the flank (9) of the household appliance (1).

4. The device according to claim 3, wherein the further fastening member (40) comprises two said seats (44a-44b) generally vertical and in generally specular positions.

5. The device according to any of the preceding claims, wherein the fastening member (30) has a second connection part (32), generally opposite to the first connection part (31) and configured for coupling with an element (22) that is in a fixed position at the front of the lower part (6) of the household appliance (1).

6. The device according to claim 5, wherein the fastening means (22; 30) comprise the said element (22) in fixed position, having a respective coupling portion (22b) to which the second connection part (32) of the fastening member (30) is couplable in a fast-coupling way, particularly via elastic coupling and/or snap-coupling.

7. The device according to claim 5 or claim 6, wherein the second connection part (32) is elastically deformable for coupling thereof on said coupling portion (22b) of said element (22) in fixed position.

8. The device according to one of claims 5-7, wherein said element in fixed position is an anti-overturning element (22) of the household appliance (1), the corresponding coupling portion (22b) extending substantially vertically.

9. The device according to any of the preceding claims, wherein the fastening member (30) is formed of plastic material.

10. The device according to any of claims 5-8, wherein the fastening member (30) has an intermediate part (33) between the first connection part (31) and the second connection part (32), the intermediate part (33) having a greater height than the coupling modules (34), with the first and second connection parts (31, 32) that are in a generally lower area and a generally upper area, respectively, of the intermediate part (33).

11. A method for fastening a skirting-board (8) to a household appliance,
comprising the steps of:

   a) providing a skirting-board (8) having a back provided with an engageable seat (8a),
   b) providing fastening means (22, 30) for the skirting-board (8), and
   c) securing the skirting-board (8) in a position substantially parallel to the front of a lower part (6) of the household appliance (1), via the fas-

tening means (22, 30),

wherein step b) comprises providing a fastening member (30) with a modular first connection part (31) axially extended and including a succession of coupling modules (34), each coupling module (34) having a base part (35) with a projecting front element (36) designed for coupling with the engageable seat (8a) of the back of the skirting-board (8), the coupling modules (34) of the succession being reciprocally joined in a separable way,
and wherein step c) comprises

- separating at least one coupling module (34') from the succession of coupling modules (34), at a proximal end of the latter, to adapt the length of the first connection part (31) of the fastening member (30), and
- coupling the projecting front element (36) of the coupling module (34") which is at the proximal end of the remaining succession of coupling modules (30) with the engageable seat (8a) of the back of the skirting-board (8).

12. The method according to claim 11, also comprising the steps of:

d) providing a further skirting-board (11) having a back provided with an engageable seat (8a),
e) providing further fastening means (34', 40) for the further skirting-board (11), and
f) securing the further skirting-board (11) in un position substantially parallel to a flank of a lower part of the household appliance (1), via the further fastening means (34', 40),

wherein step e) comprises providing at least one further fastening means (40),
defining at least one respective coupling seat (44a-44b) in which the base part (35) of at least one first coupling module (34') separated from the succession of coupling modules (34) is receivable,
and wherein step f) comprises

- coupling the base part (35) of the at least one first coupling module (34') with the coupling seat (44a-44b) of the further fastening member (40), and
- coupling the front element (36) of the at least one first coupling module (34') with the engageable seat (8a) of the back of the further skirting-board (11).

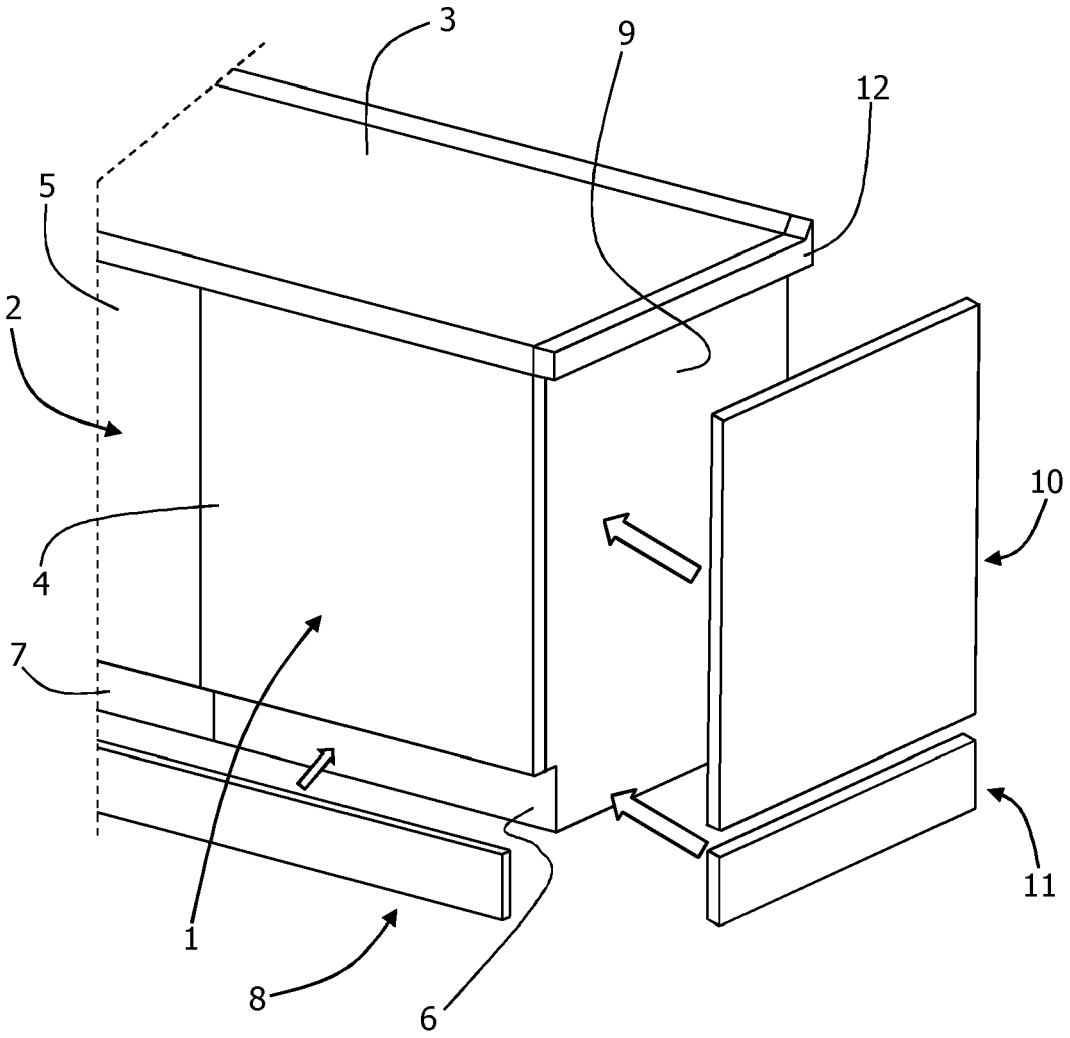
13. The method according to claim 12, wherein step f) comprises securing the further fastening member (40) at the front of the lower part (6) of the household appliance (1).

14. The method according to any of claims 11-13, wherein step c) comprises coupling a second connection part (32) of the fastening member (30), generally opposite to the first connection part (31), to an element (22) which is in a fixed position at the front of the lower part (6) of the household appliance (1), particularly via fast-coupling.

15. A kit of parts for fastening skirting-boards (8, 11) having a back provided with an engageable seat (8a) to household appliances, comprising

- at least one first fastening member (30), to secure a skirting-board (8) in a position substantially parallel to the front of a lower part (6) of the household appliance (1), the at least one first fastening member (30) having a modular first connection part (31) axially extended and including a succession of coupling modules (34), each coupling module (34) having a base part (35) and a projecting front part (36), designed for coupling with the engageable seat (8a) of the back of the skirting-board (8), the coupling modules (34) of the succession being reciprocally joined in a separable way to enable to adapt the length of the first connection portion (31) of the fastening member (30), and
- at least one second fastening member (40), to secure a further skirting-board (11) in a position substantially parallel to a flank (9) of the household appliance (1), the at least one second fastening member (40) defining at least one respective coupling seat (44a-44b) in which the base part (35) of a first one of said coupling modules (34') separated from said succession of coupling modules (34) is receivable, with the corresponding front element (36) that is couplable with the engageable seat (8a) of the back of the further skirting-board (11).

Fig. 1



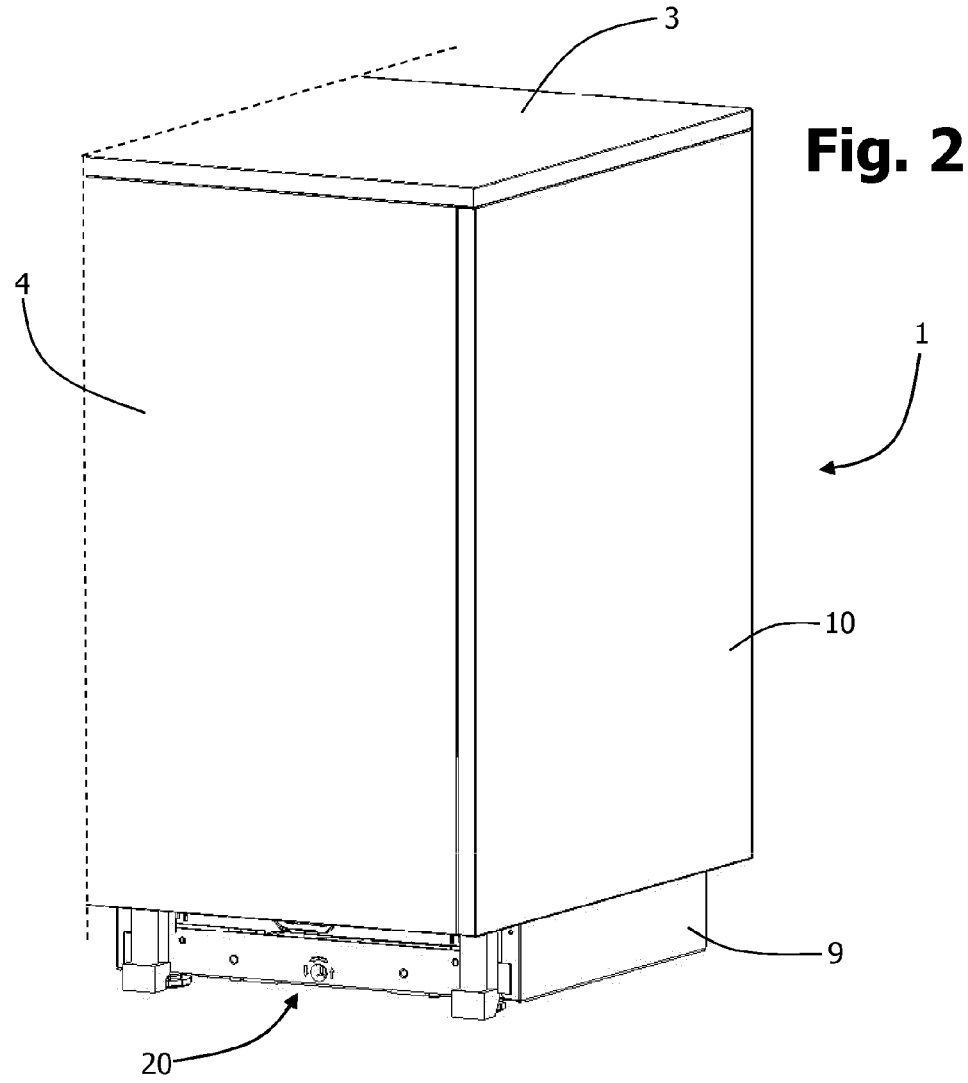


Fig. 2

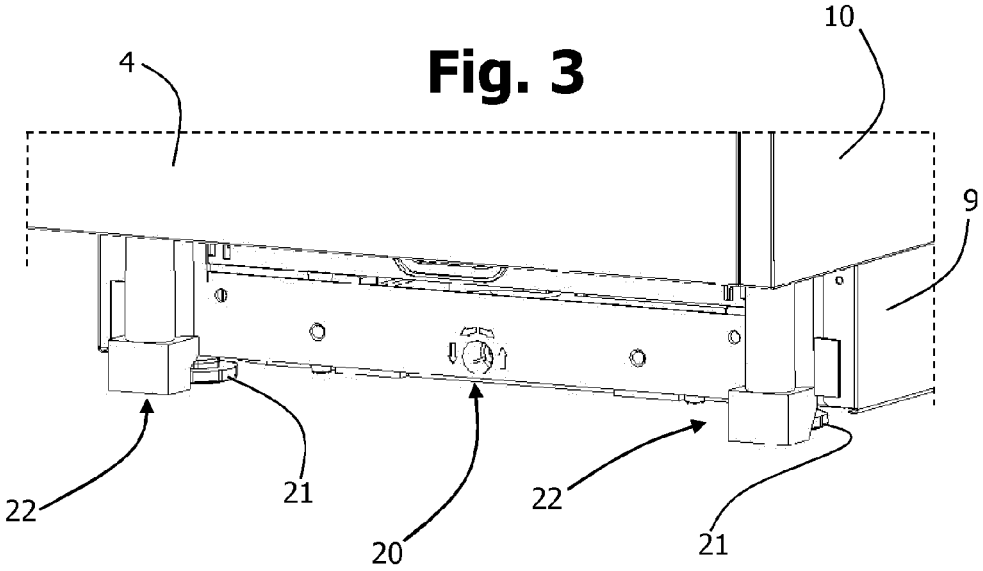


Fig. 3

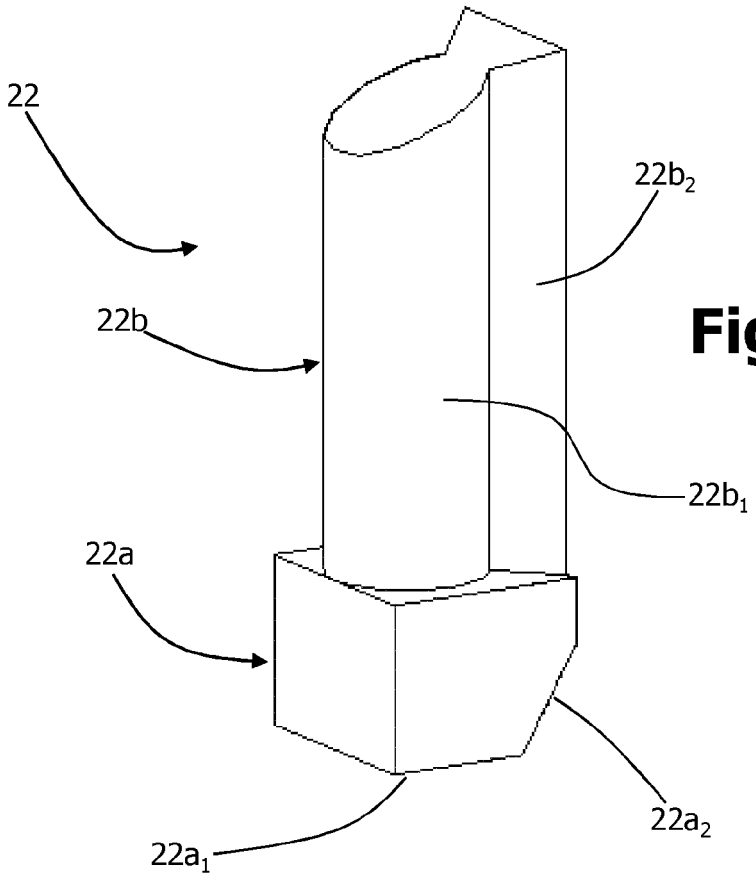

22
22b2
22b
22b1
22a
22a2
22a1

Fig. 4

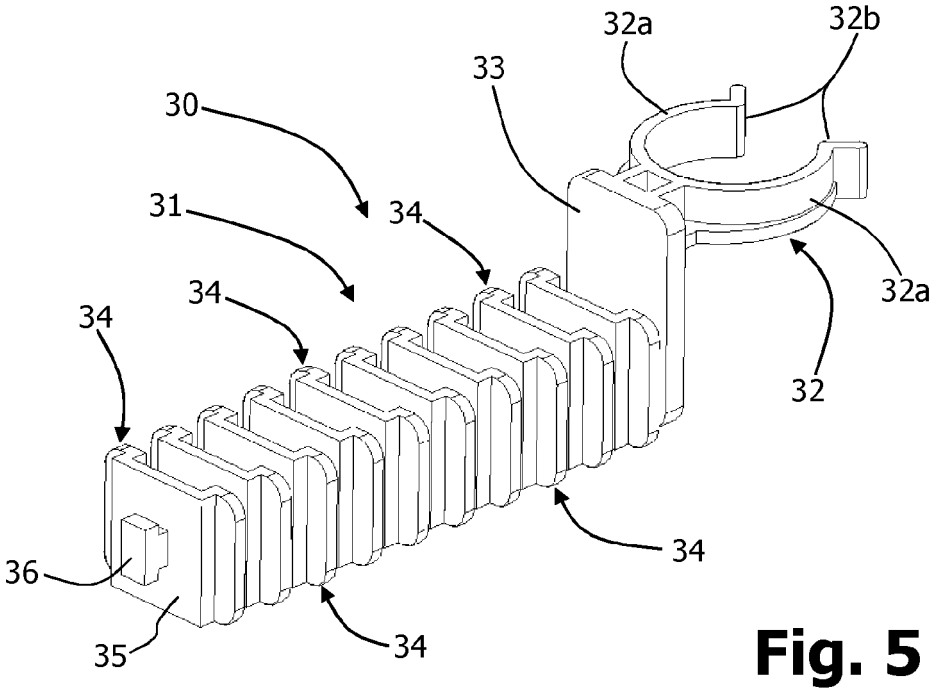

32a
32b
33
30
34
31
34
32a
34
32
34
36
34
35
34

Fig. 5

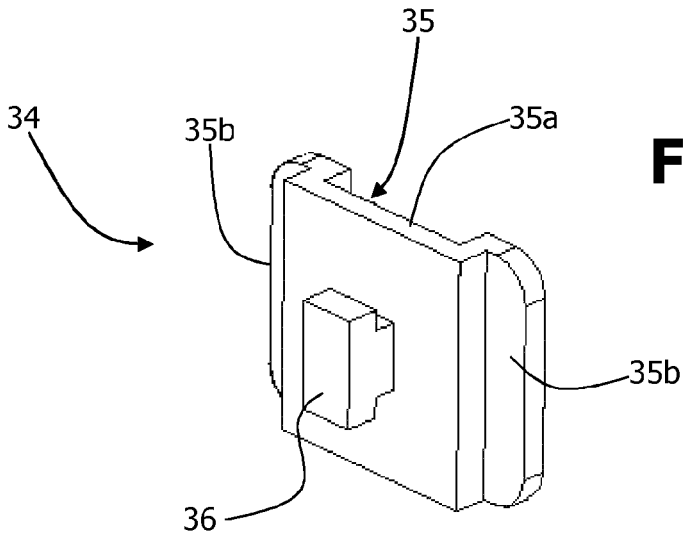


Fig. 6

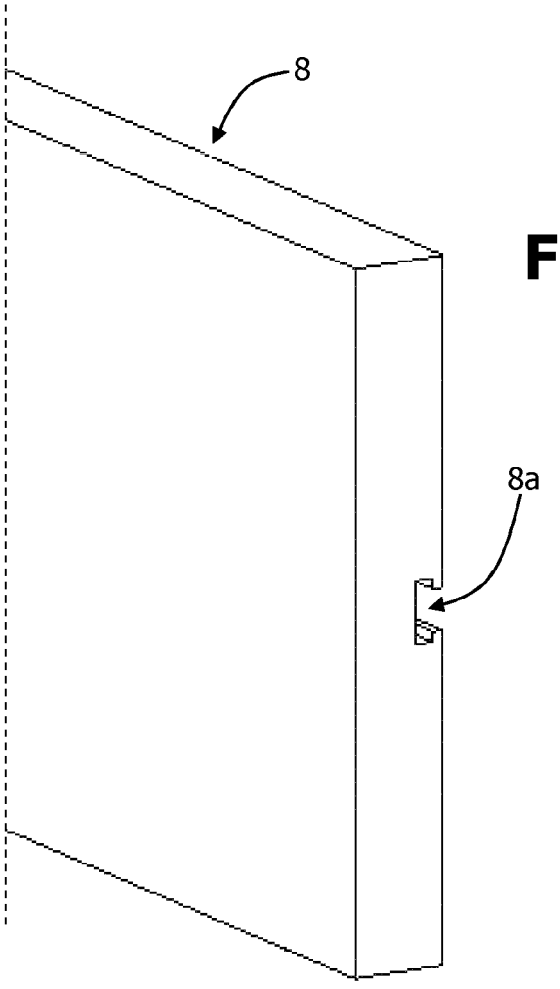


Fig. 7

Fig. 8

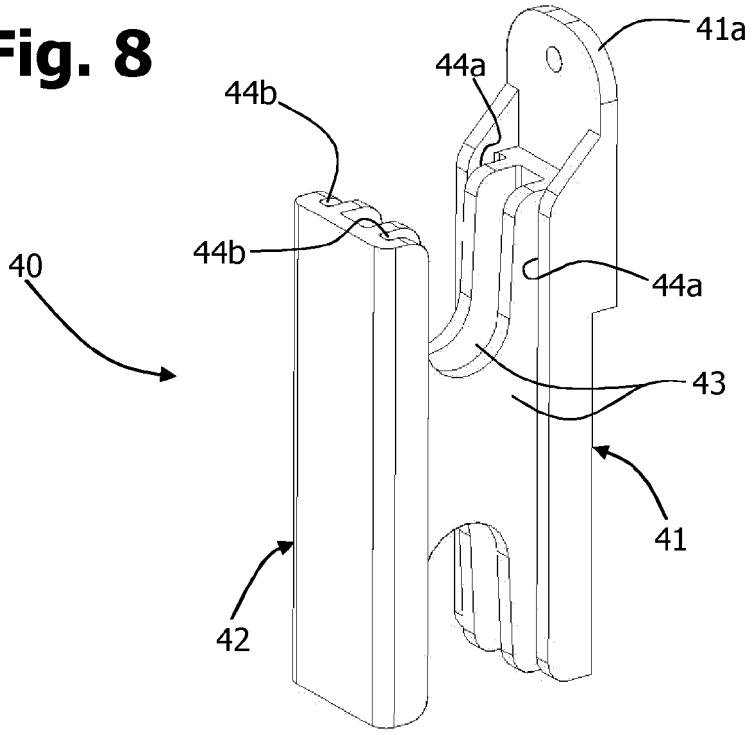

41a
44a
44b
44b
40
44a
43
41
42

Fig. 9

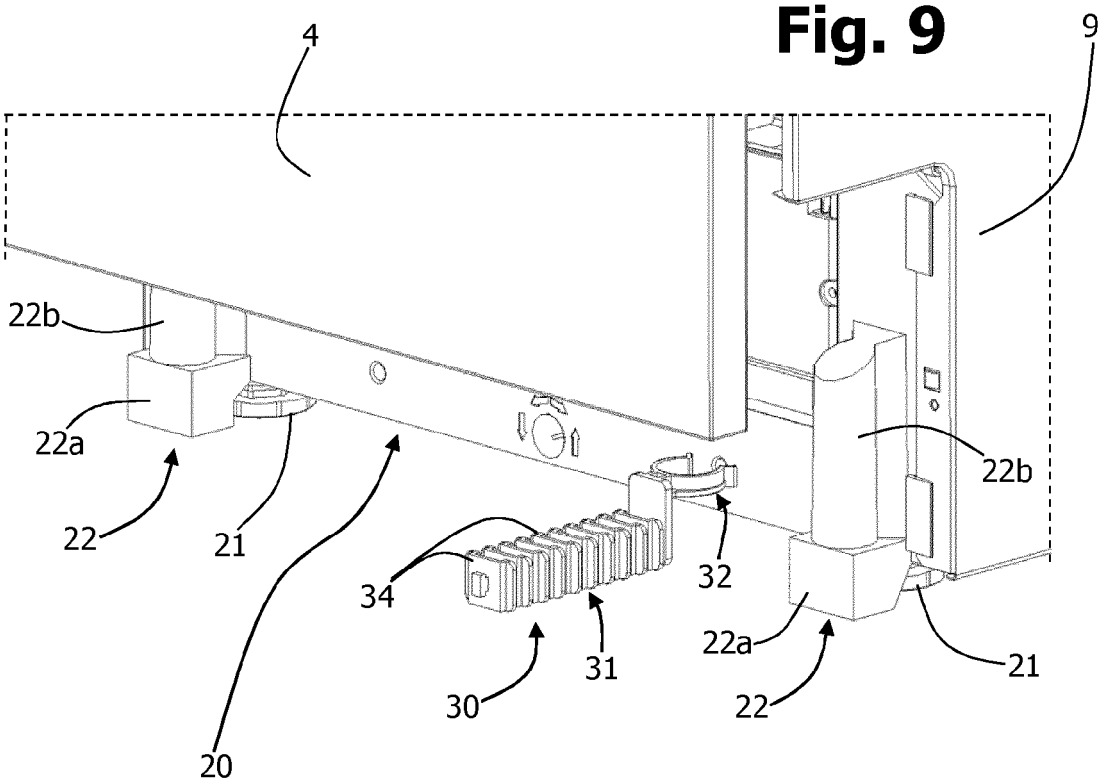

4
9
22b
22a
22
21
22b
34
32
31
22a
21
30
22
20

Fig. 10

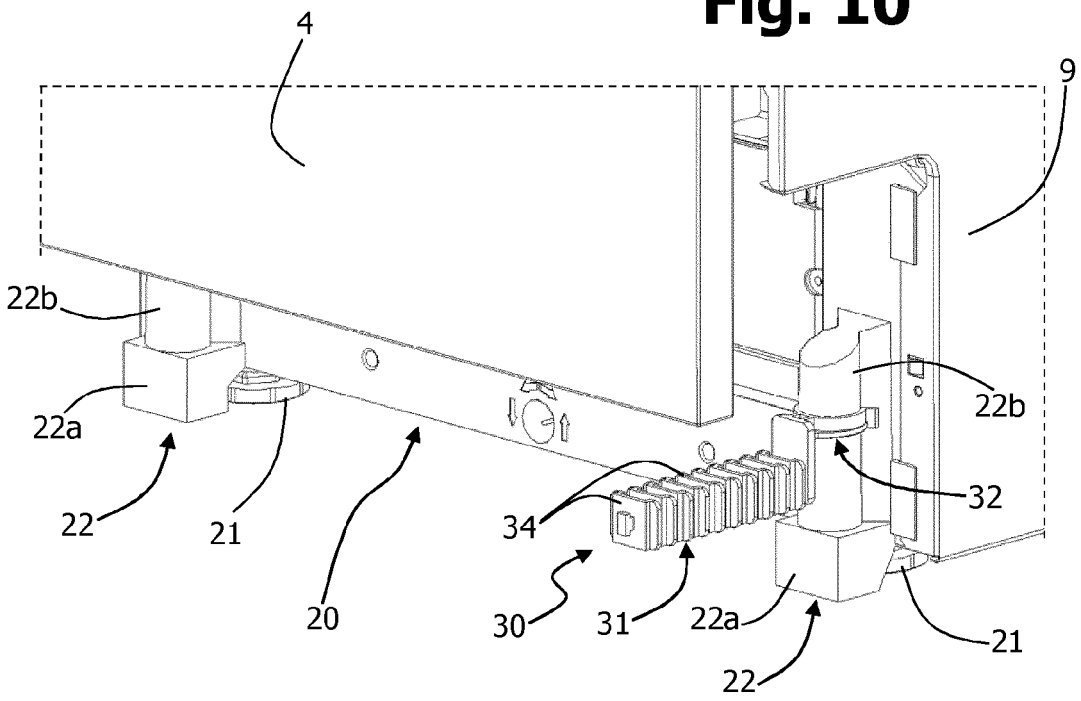

4
9
22b
22a
22
21
20
34
30
31
22a
22
22b
32
21

Fig. 11

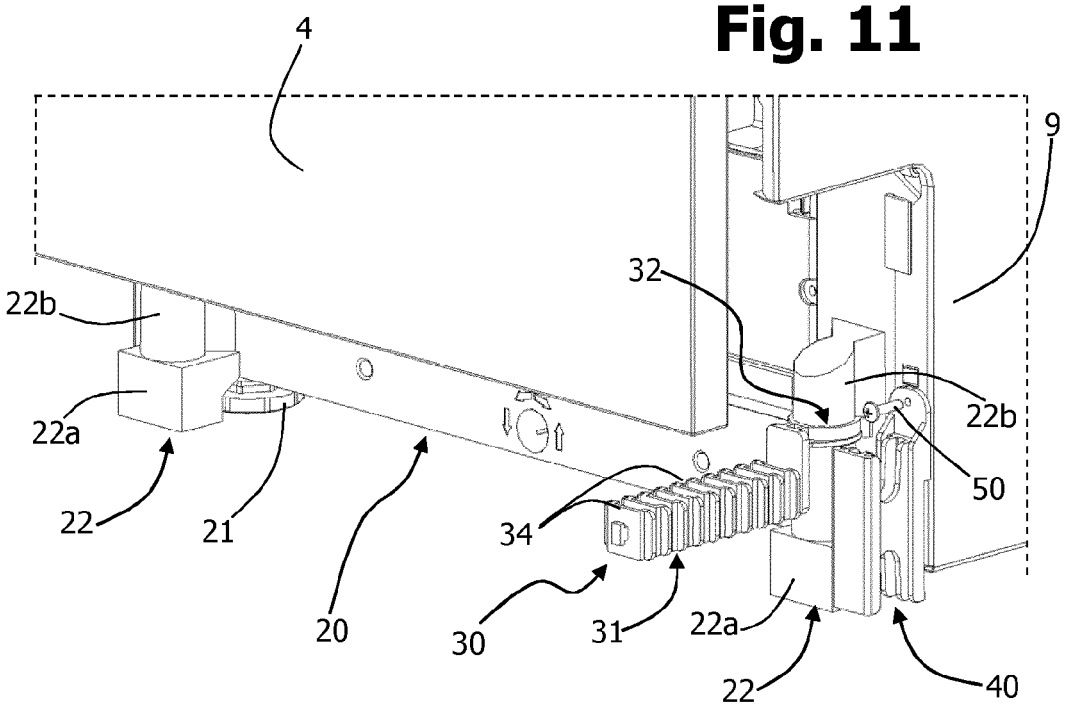

4
9
32
22b
22b
22a
22
21
20
34
30
31
22a
22
50
40

Fig. 12

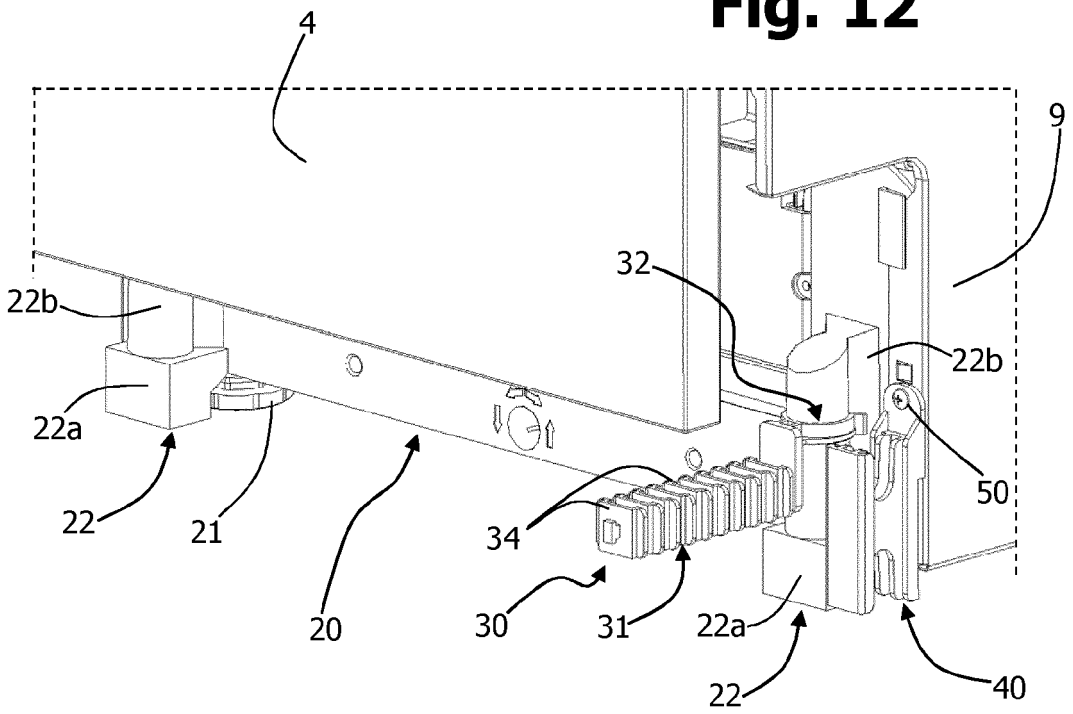

4
9
32
22b
22b
22a
50
22
21
34
20
30
31
22a
22
40

Fig. 13

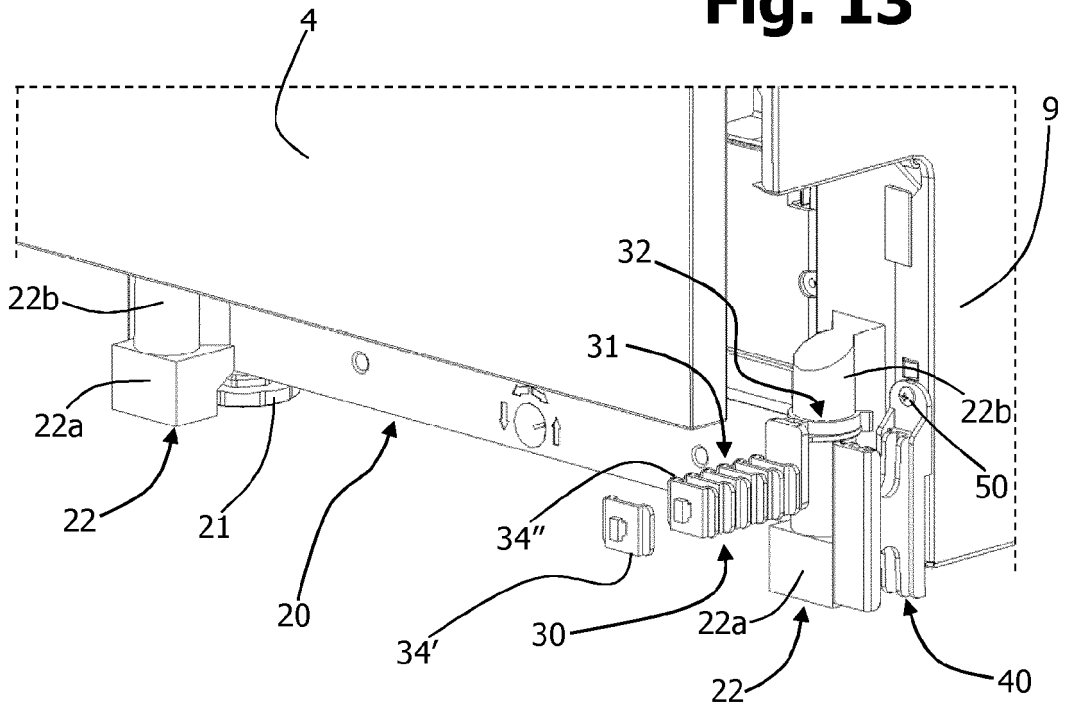

4
9
32
22b
31
22a
22b
50
22
21
34″
20
34′
30
22a
22
40

Fig. 14

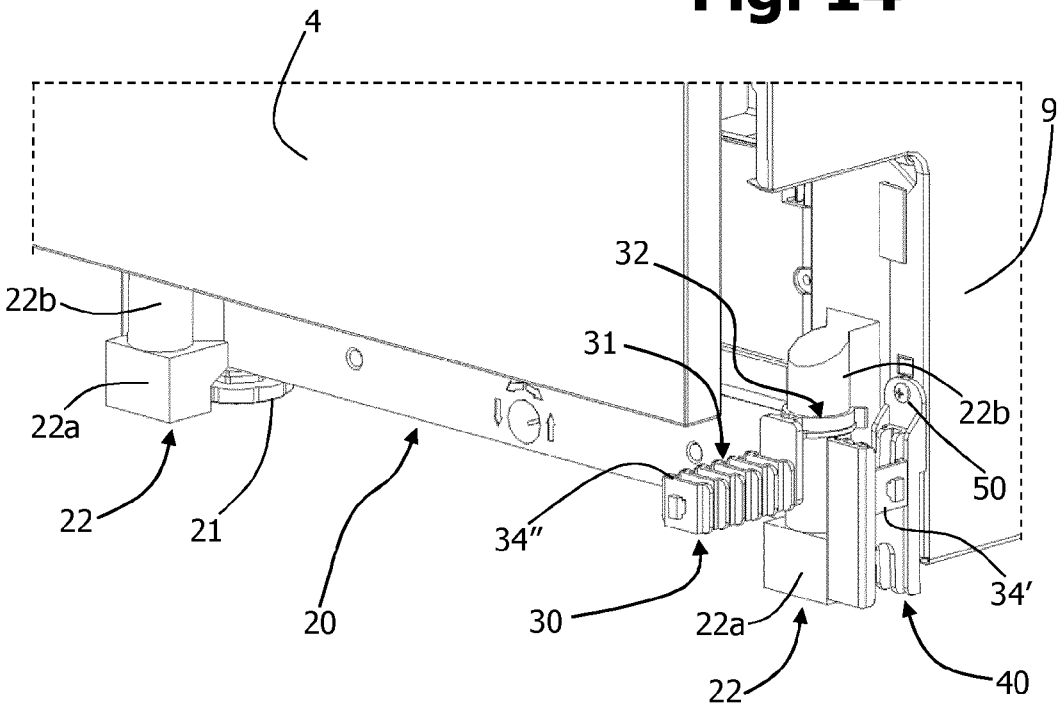

4
9
32
22b
31
22b
50
22a
22
21
20
34″
30
22a
34′
22
40

Fig. 15

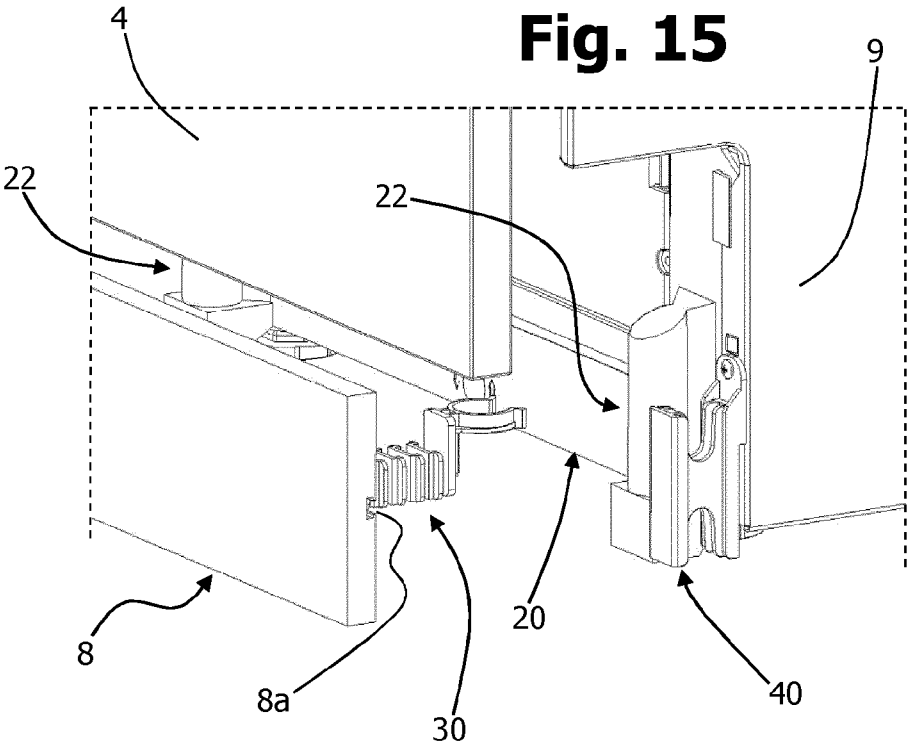

4
9
22
22
8
8a
30
20
40

Fig. 16

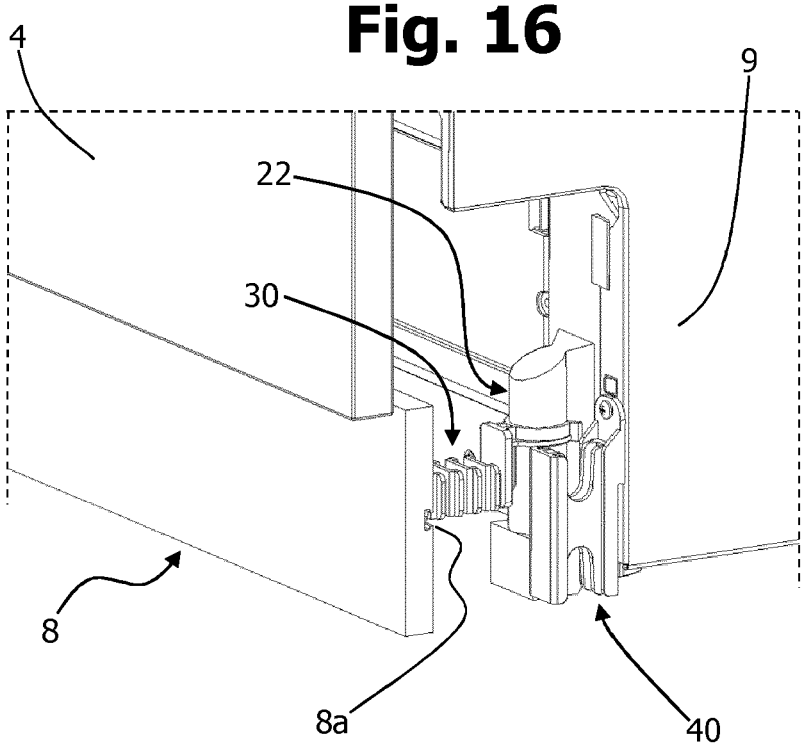


Fig. 17

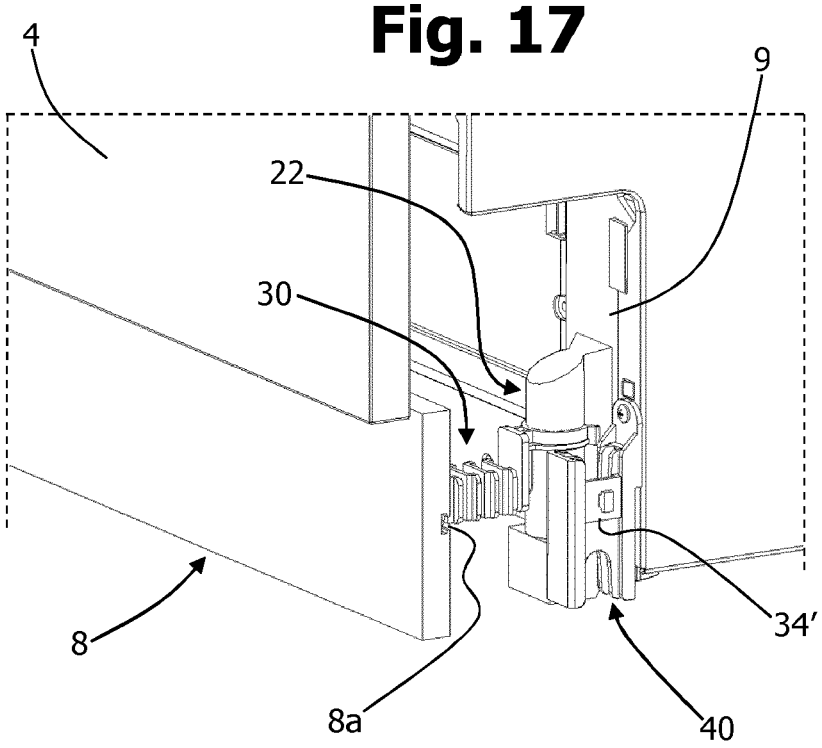


Fig. 18

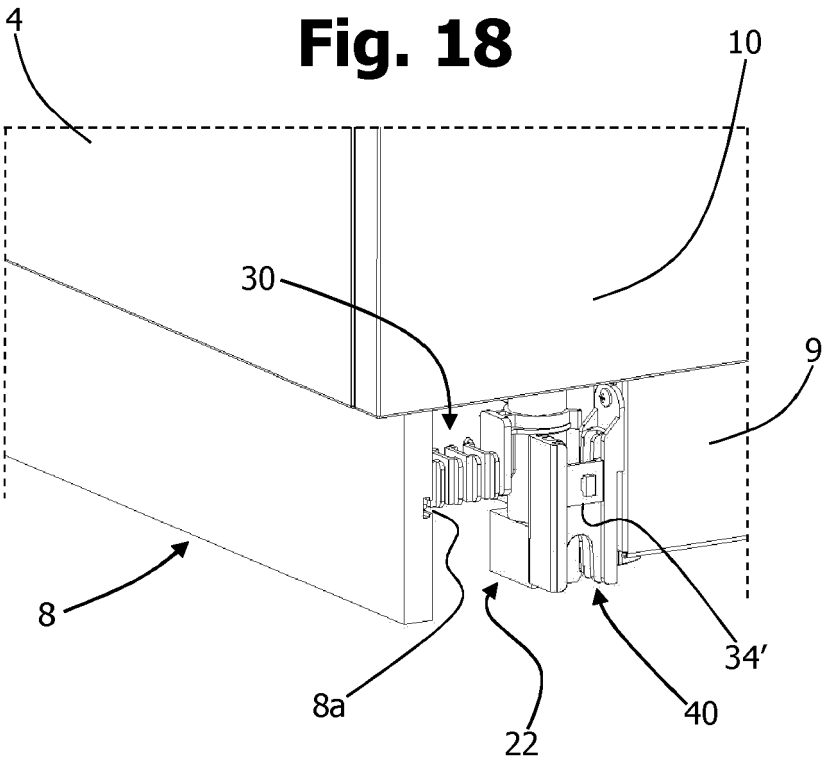
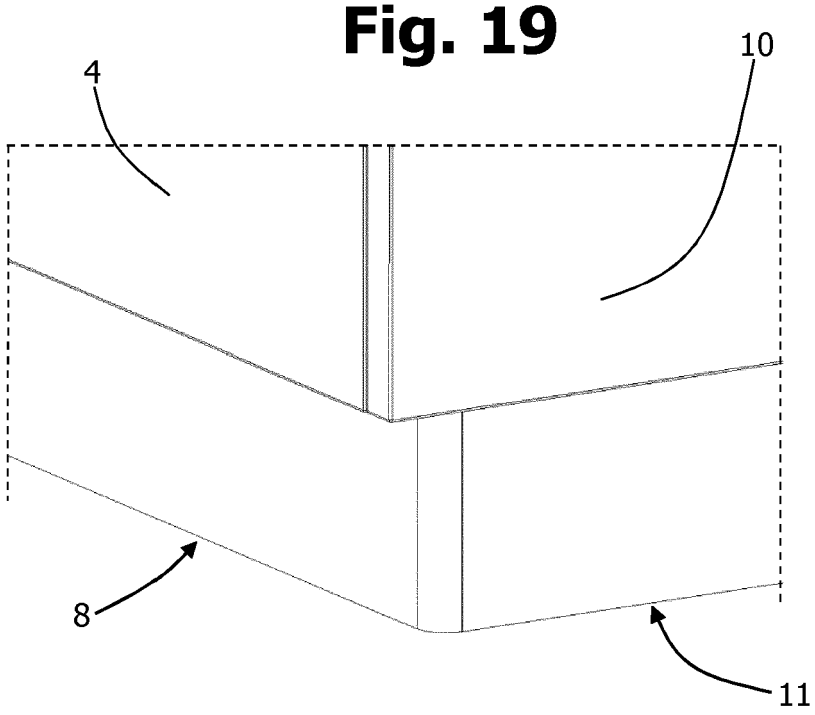


Fig. 19



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EUROPEAN SEARCH REPORT

Application Number
EP 14 16 2581

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 2004/058037 A1 (ARCELIK AS [TR]; AKIN TOLGA [TR]) 15 July 2004 (2004-07-15) * claims; figures *	1	INV. A47L15/42
A	EP 2 425 747 A1 (VESTEL BEYAZ ESYA SANAYI VE TICARET A S [TR]) 7 March 2012 (2012-03-07) * claims; figures *	1	
A	DE 30 15 251 A1 (MIELE & CIE [DE]) 22 October 1981 (1981-10-22) * page 6 - page 7; claims; figures *	1	
A	FR 2 499 384 A1 (BAUKNECHT GMBH G [DE]) 13 August 1982 (1982-08-13) * page 7, line 24 - page 8, line 3; figures *	1	

TECHNICAL FIELDS SEARCHED (IPC)

A47L
D06F
F25D
A47B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	21 July 2014	Lopez Vega, Javier

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21-07-2014

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004058037 A1	15-07-2004	AT 427690 T	15-04-2009
		AU 2003298502 A1	22-07-2004
		DK 1583456 T3	22-06-2009
		EP 1583456 A1	12-10-2005
		ES 2323420 T3	15-07-2009
		WO 2004058037 A1	15-07-2004
EP 2425747 A1	07-03-2012	EP 2425747 A1	07-03-2012
		TR 201007368 A2	21-01-2011
DE 3015251 A1	22-10-1981	NONE	
FR 2499384 A1	13-08-1982	DE 3104083 A1	12-08-1982
		ES 271923 U	16-10-1983
		FR 2499384 A1	13-08-1982
		IT 1149723 B	10-12-1986
		SE 8200459 A	07-08-1982

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