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(54) **Free-standing modular furniture**

(57) Modular free-standing furniture, in particular an office furniture, comprising at least one work surface (2), which is applied on at least two support members (1), the support members each comprise a fixed part, provided for standing on a floor and on which fixed part is mounted, an in height adjustable part, which is adjustable over at least 100 mm and preferably at least 200 mm, and on which the work surface provided with a cable duct (32) is applied, and of which the support members are provided with first support posts for said overhead unit, between which support posts the cable duct extends and flushes along each time two sides of the support posts, and wherein between each of the first support posts and along one side of the work-surface a space is provided in longitudinal direction, which enables a first access to the cable duct.

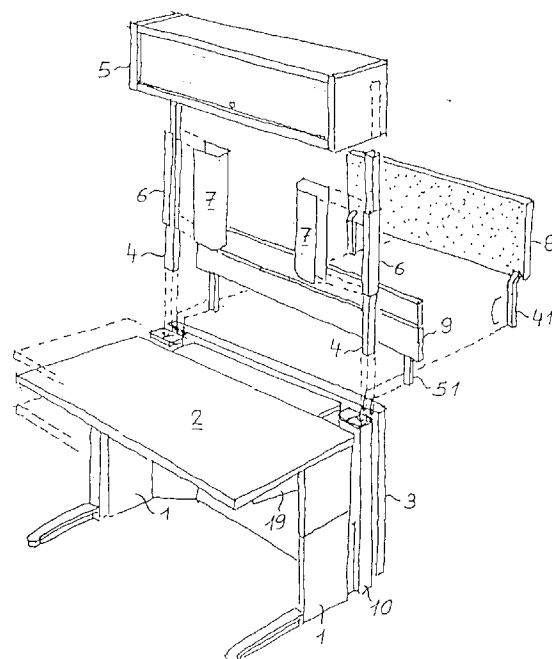


Fig.1

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Description

The invention relates to a modular free-standing furniture, in particular an office furniture, comprising at least one work surface, which is applied on at least two support members, whereby the support members are further provided for demountably applying an overhead unit and whereby a back panel is mountable to at least two of the support members, and whereby the support members each comprise a fixed part, provided for standing on a floor and on which fixed part is mounted an, in height adjustable part, which is adjustable over at least 100 mm, and preferably at least 200 mm, and on which the work surface provided with a cable duct is applied.

Such a free-standing modular furniture is known from the European patent No. 0145410. With the known office furniture the work surface is screwed on two support members, which are adjustable in height. This enables the user to adjust the work surface at a height suitable for him, enabling a comfortable sitting position. The cable duct is provided under the work surface and extends over the whole length of the work surface. The known office furniture comprises further an overhead unit, which is applied by means of struts on the support members. In order to screen the legs of the user, a back panel is further applied on at least two of the support members.

A drawback of the known furniture is, that the cable duct is difficultly accessible, which renders the application of cables in that duct difficult.

It is an object of the invention to provide a free-standing modular furniture, in particular an office furniture, wherein the cable duct is easily accessible and thus the application of cables less cumbersome.

A free-standing modular furniture according to the invention is therefore characterised in that the furniture is an intramodular furniture of which the support members are provided with first support posts for said overhead unit, between which support posts the cable duct extends and flush along each time two sides of the support posts, and wherein between each of the first support posts and along one side of the work surface a space is provided in longitudinal direction, which enables a first access to the cable duct. The fact that the cable duct extends along one side of the work surface, between the first support post and flushes each time along two sides thereof, has for consequences that at the height adjustment of the work surface the first support posts will not form an obstacle for the movement of the work surface over the adjustment path. Because the cable duct is fixed to the work surface, the latter will follow the displacement of the work surface and the cabling directed towards the apparatus, present on the work surface, remains unchanged. By providing said space the access from the work surface to the cable duct is easy and there is no danger that the cables will be clamped somewhere along that path during the move-

ment of the work surface. Because the office furniture according to the invention is also an intramodular furniture, this signifies that a plurality of applications, in upper- as well as in under-construction, are possible while thereby all embodiments remain within standardised measures.

A first preferred embodiment of a modular free-standing furniture according to the invention is characterised in that the support members are provided with a recess, which is delimited on one side, considered in height direction, by the first support post and on the other side by the adjustable part and work surface, and in which recess said cable duct discharges and provides there a second access to the cable duct. This enables, when the work surfaces are applied lengthwise beside each other, to have the cables running through this recess from cable duct to cable duct and starting from the cable duct. Indeed by the presence of those recesses in which the cable duct discharges a modular set-up is as if to say created on the level of the cable ducts of work surfaces mounted beside each other.

It is favourable that said space and said recess run into each other. This simplifies the application of the cables in the cable duct from one work surface to the other.

A second preferred embodiment of a modular furniture according to the invention is characterised in that the cable duct is provided with an upstanding wall, extending substantially parallel to the back panel over a height reaching up to at least the underside of the work surface. This enables to screen the back side of the work surface as well as to maintain the cables within the cable duct when the work surface is situated higher than the back panel.

A third preferred embodiment of a modular furniture according to the invention is characterised in that a cap is each time applied to said first support posts, which cap extends over at least half of the path over which the work surface is adjustable in height, and wherein said space further extends between the cable duct and the part covered by the cap. The presence of the cap takes care that the first support posts remain screened when the work surface is situated lower than the upper border of the back panel. This increases the esthetic aspect of the furniture. The fact that said space extends along the cap takes care of the fact that the cap will not interfere with the movement of the work surface neither render difficult the application of the cables in the cable duct.

A fourth preferred embodiment of a modular furniture according to the invention is characterised in that the support members are provided with second support posts, for detachably applying at least one building-up element, in particular a separation screen and/or a fixing element for office accessories. The building-up element can in such a manner be mounted independently of the overhead unit without distorting the modular character of the furniture.

A fifth preferred embodiment of a modular furniture according to the invention is characterised in that first

and second support posts form a rigid complex with said fixed part of the support member. In such a manner a rigid basis is obtained. Thereupon a displacement in height of the work surface will not influence the position of the upper unit, because the latter rests on the first support posts which are applied on the fixed part.

It is favourable that said first support posts are formed by closed profiles, whereby the access to the hollow space of said closed profile is protectable with a cover. The closed profile assures a good stability of the furniture while the cap guarantees the esthetic character.

It is favourable that said cover is shiftable and/or backfoldable mounted. The cover is in such a manner easily and suitably storable.

A sixth preferred embodiment of a modular furniture according to the invention is characterised in that said space is span at least partially by a shiftable protection, in particular brush hair. Due to this it is avoided that small objects such as a pen and a paper-clip would easily reach the cable duct.

A seventh preferred embodiment of a modular furniture according to the invention is characterised in that in said first support post a first extremity of a strut is each time detachably applied and which overhead unit is detachably applied on second extremities of two of said struts. This enables an easy and flexible building-up of the upper unit.

It is favourable that said first support posts are in cross-section somewhat larger than the cross-section of the struts, and wherein the recesses are provided in the overhead unit for applying said struts. Rapid building up is so possible.

It is favourable that on a distance calibration element a cable protection cap is provided for creating a cable path along the strut. Quick building up is so possible.

It is favourable that on said distance calibration element a cable protection cap, whether or not provided with a contact-box is applied for creating a cable path along the strut. This enables to protect cables running to the upper unit.

An eight preferred embodiment of a modular furniture according to the invention is characterised in that said fixed part of the support member is provided with at least a first and at least a second groove, wherein said first groove is at least twice as long as the second groove, and wherein the part adjustable in height is provided with at least a row of three fixing points, in such a manner that a first respectively a second and third fixing point are applied at a distance substantially corresponding with the one of the second groove. Height adjustment can in such a manner be easily realised.

The invention will now be described by means of the drawings showing preferred embodiments. In the drawings :

Figure 1 respectively 2 shows a first respectively a

second preferred embodiment of an intramodular office furniture according to the invention in a partially exploded view;

Figure 3 shows an embodiment of a support member according to the invention;

Figure 4 (a till c) shows different positions wherein the support member can be adjusted;

Figure 5 respectively 6 (a till c) shows the height adjustment of the work surface;

Figure 7 respectively 8 shows a side- respectively a topview of a part of the work surface with support members;

Figure 9 shows a side view of another embodiment of a furniture according to the invention;

Figure 10 shows a furniture according to the invention provided with struts for supporting an overhead unit;

Figure 11 shows a furniture according to the invention provided with an overhead unit;

Figure 12, 13, 14 & 15 show embodiments of caps for protecting the support posts; and

Figure 16 shows the application of building-up elements;

In the drawings a same reference sign has been assigned to a same or an analogous element.

The intramodular free-standing furniture shown in figure 1 or 2 comprises a work surface 2 that is applied on two support members 1. By free-standing furniture one has to understand a furniture of which the work surface is mounted on support members, which support members rest on a floor. By intramodular furniture one has to understand a furniture of which the different components fall between standardised dimensions, in such a manner that several set-ups are enabled -while the free-standing furniture remains within the standardised dimensions. With the office furniture shown in the figure 1 or 2 the components such as the work surface 2, the support members 1, the overhead unit 5, the back panel 3, the wall panel 8, the work surface support 9 and the struts 4 are all within modular measures.

The back panel 3 is fixed by means of for example screws on the support members 1. In the shown example the back panel is applied on first 10 and second 17 support posts, which are part of the support members 1. The support posts are either detachable, for example by means of screws, or rigidly for example by means of welding, attached on the fixed part 11 of the support member. The support posts are either rigidly or detachably connected with one another. The first 10 and second 17 support posts are formed by a closed profile or tube. A closed profile has the advantage of forming a rigid construction without being heavy. Because the back panel 3 is mounted on the first support posts, which form the fixed part of the support member, the back panel will fixedly remain on the furniture and will not follow the movement of the work surface 3 as will be described hereunder.

In the embodiment shown in the figures 1 and 2 the office furniture is provided with an overhead unit 5. It will be clear that the presence of such an overhead unit is not necessary for the application of the invention. Nevertheless the support members have to be provided with first support posts 10 in which the struts 4, carrying the overhead unit 5, can be preferably detachably applied. Also the overhead unit is mounted on the fixed part of the support member, due to which the overhead unit will also not follow the movement of the work surface. Distance calibration elements 6 are each time applied to the struts 4. Such distance calibration elements have the purpose that the height, between the upper side of the first support posts 10 and the overhead unit, has a predetermined distance. When mounted the underside respectively the upperside of the distance calibration element touches the upper border of the first support posts 10 respectively the under border of the overhead unit 5. Upon manufacturing the distance calibration elements are mounted on the struts 4 at a respective height, by means of welding, gluing or screwing.

A cable protection cap 7 is mounted on the distance calibration element which is or isn't provided with a contact-box 43 (figure 10). The cable protection cap has the purpose to screen cables 44 which run from the support members or from the cable duct 32 (figure 5) towards the overhead unit. The connection of the cable protection cap 7 with the distance calibration element 6 is for example realised by means of click-or snap-connectors 45 - 46 (figure 12), enabling a quick, easy and reliable mounting and demounting. The distance calibration element 6 does not have a support function because the latter is mainly realised by the struts.

The office furniture shown in the figures 1 and 2 is further provided with a wall panel 8 that is applied by means of support beams 41 on the second support posts 17. Also the wall panel remains at the same height when the work surface is displaced in height. Further a building-up element 9 is provided, that is applied independently of the wall panel 8 by means of further support beams 51 (figure 16). The building-up element 9 is for example formed by a support rail on which document holders 52 are applicable.

The office furniture according to the invention has an in height adjustable work surface. The height variation is possible over at least 100 mm, and preferably at least 200 mm. This responds to an anthropometric and ergonomic constraint, which prescribes that the work surface should be adjustable in height over a distance between 620 mm and 820 mm counting from the floor. This constraint prescribes that, if the work surface is adjustable in height, it must be able to adjust itself to a minimum range starting from 5 percentile of the female users group (lowest position) to 95 percentile of the male users group (highest position). As already described the height adjustment of the work surface does not influence the position of the overhead unit 5, the back panel 3 and the wall panel 8.

The height adjustment of the work surface is realised by means of the support members 1, which are provided with a fixed 11 and an in height adjustable 18 part. The part 18 which is adjustable in height slides in the fixed part 11 and carries, by means of the work surface support 19, the work surface 2 which is mounted thereon. The connection between the rigid and the in height adjustable part is realised by means of at least a first and a second groove 12 and 13 applied in the fixed part, bolts 20, 21 and 22 being applied in the adjustable part wherein nuts 14 and 16 fit. Preferably the first groove 12 is provided with notches 53 wherein a pen 15, provided with a perforation for screw 16 fits. This enables to adjust the work surface stepwise on calibrated heights. In the shown embodiment the first groove 12 has a length which is at least twice as long as the one of the second groove 13.

In the highest position (figure 4a) the pen 15 is in the highest notch and nut 14 is in bolt 21 in the highest position of the second groove 13. Bolt 22 is visible in the adjustable part 18. In the intermediate position (figure 4b) the pen 15 is in the intermediate position of the notches 53, while nut 14 and bolt 21 are at the bottom part in the second groove 13. Nut 14 could however also be applied in bolt 22 and thus in the upperside of groove 13. Bolt 22 is indeed visible through the second groove. Bolt 21 and 22 are applied in such a manner in a row that their respective distances correspond with the one of the second groove 13. By further sliding in of the adjustable part, bolt 21 disappears from the second groove and only bolt 22 remains available. By this choice of the first and second groove and the positioning of the bolts 21 and 22, it is possible to realise the height adjustment over the whole range of the first groove without having the second groove the same distance as the first, which favours the adjustment facility and the rigidity. Of course other fixing means than bolts and nuts are possible such as fitting pens or clamping members.

With a further embodiment, not shown in the drawings, the height adjustment is realised by mechanical, electromechanical or hydraulic auxiliary means such as engines and pistons. The latter are applied in the U-shaped profiled open part of the support member 1, between the fixed parts 11 and connected with the work surface support 19. They exert then a pressure on the beam 19 in order to have the latter displaced upwise or downwards. This U-shaped profiled part enables to apply said auxiliary means in situ without tools.

The height adjustment of the work surface is further illustrated in figure 4 wherein different possible positions of the work surface are illustrated. With a modular furniture according to the invention the work surface 2 is provided with a cable duct 32, which is applied at the underside of the work surface. By height adjustment of the work surface the cable duct is also displaced, which enables the cables situated therein, to follow the movement of the work surface in a safe manner and without disturbing the displacement of the work surface.

The cable duct is applied at the back side of the work surface near the back panel 3 and provided with an upstanding wall 54, which extends substantially in parallel with the back panel over a height which reaches at least up to the underside of the work surface. By this upstanding wall the cable duct is screened when the work surface is at a height, which is higher than the upper border of the back panel 3, as shown in figure 5c. Further the upstanding wall contributes to the fact that the cables remain in the cable duct upon height displacement of the work surface.

The cable duct extends further between the first support posts 10 and flushes at the height of the first support posts each time along two sides thereof. To this purpose the upstanding wall 54 shows a bending 37. This bending 37 runs along the first support posts 10 and the cap 55 applied thereon. Between each of the first support posts 10 and the work surface 2 a space 56 is applied in longitudinal direction, which enables the first access to the cable duct 32. The cable duct is further covered in the part between the first support posts with a back throwable part 33, which extends in the prolongation of the work surface. That part is for example connected by means of hinges with the work surface. Said space between the work surface and the first support posts, as well as the space between the part 33 of the work surface and the upstanding wall of the cable duct, is at least partially span by a back foldable protection 35, in particular brush hair. Other back foldable protections such as for example formed by flexible plastic strips, are possible. That back foldable protection has the purpose to avoid that small office furniture articles such as pens, erasers, paper-clips etc. could not too easily fall into the cable duct, and thereupon to enable the most direct cable passage to the user.

By the presence of the cable duct 32 and his upstanding wall 54 with bending 37, the cables are suitably protected in the cable duct and follow without any problem the movement of the work surface. The back throwable part 33 and the space 56 enable to apply in an easy manner the cables in the cable duct. It is indeed enough to throw back the back throwable part 33 in order to have access, as from the top, to the cable duct. Along the space 56 the cables are also introduced in such a manner that the support posts 10 do not form a constraint for the continuous application of the cables.

Preferably the support member is provided with a recess 42, Which is on one side in height direction limited by the first support posts 10, and on the other side by the in height adjustable part 18 and the border of the work surface. The cable duct 32 discharges in that recess 42 in such a manner that that recess provides a second access to the cable duct 32. That recess is in particular useful when two work surfaces are set up beside each other, in such a manner, that the cables can run from one cable duct of the respective work surfaces to the other, via the recess, without having to run through the support members and the bottom. Also for "pulling

through" of the cables, the recesses 42 and the space 56, provide a good solution, because the cables can easily be applied via the space and through the recess in the cable duct.

It is also possible to provide the back panel at the side faced towards the work surface of an upstanding, in height adjustable, wall panel 36 such as shown in figure 6. That wall panel is in height adjustable, for example by means of the holes 34 over at least half of the path, over which the work surface is in height adjustable. That half of the height is sufficient because by mounting the wall panel 36 on different heights, the cable duct will always be screened. The upstanding wall of the cable duct 32 extends here only over a small height in order to maintain the cables within the cable duct. With this embodiment first the height of the working surface is adjusted at the desired height upon mounting, after which the wall panel is mounted in such a manner, that either the cable duct is protected (figure 6a) or the backwall of the furniture (figure 6c or b). In this embodiment the bending 37 forms part of the wall panel and not of the upstanding wall of the cable duct.

As already described the office furniture according to the invention is provided with a first support post 10 wherein the struts 4 of a overhead unit are applicable. On those struts 4 distance calibration elements 6 are applied, on which a cable protection cap 7 is mounted. In order, upon presence of such cable protection caps 7, not to have them interrupted suddenly, when the work surface extends lower than the upper border of the first support post and thus creating openings, caps 55 are each time applied on those first support posts, for example by means of screws, click- or snap-mounting. The caps are applied in the extension of the cable protection caps 7 and extend over at least half of the path, over which the work surface is adjustable in height. Due to this, even when the work surface is in the lowest position, the cap will run up to the work surface and thus the cable protection cap will as if to say extend the work surface. The cables present beyond the cable protection cap are in such a manner subtracted from the eyes and also the first support post is at least partially screened. The cap 55 is open at the underside in order to bring there cables from the cable duct or the support members beyond the cap.

The cap 55 and the first support posts are open at the upperside in order to have the struts on the one hand and the cables on the other hand run through. By now screening that open side when no overhead unit is present, a cover 30 is applied on the first support post and on the cap, another covering 31 is applied. Preferably the cap 30 and the other covering 31 form a whole, wherein the part 31 is hingedly mounted with respect to the part 30. The hinge 57 is not exactly applied at the height of the side of the support post, but is over the cap. The part 31 is than fixedly mounted on the cap, while the part 30 is loosely fixed and hinges towards the inner part of the cap. As shown in figure 10 only a part of the

space covered by the cap is rendered free, sufficient to have a cable with a plug put through. The advantage to fix the covering on the cap, is that the latter has not to be removed and brought away upon mounting of the overhead unit.

It is of course also possible, as shown in figure 9, to apply the cap 30 only over the first support post and not to provide caps 55. In the latter case, the cable protection caps will not be provided and the cables will be applied in the space of the first support post 10 and the struts 4. The cables could also be applied along the first support post in the struts.

Further embodiments of caps for protecting the first and/or second support posts are shown in the figures 13, 14 and 15. In figure 13 and 14, the covering 47 is mounted on a hinged arm 48. The cover 47 is not connected with the first and second support posts but extends thereupon. Upon bending away the cover 47 it is first moved in the direction of arrow 58, in order to render it free from the support post and thereupon bend away under the work surface. In this case the cover should not be removed. In the embodiment shown in figure 15, the cover 49 is bent away by means of hinge 50 along the first support post and eventually stocked under the work surface, for freeing the support post.

The fixing of the support elements 9, upon which under more document keepers 52 can be applied, is realised by means of further support beams 51, such as shown in figure 16. The wall panel 8 is mounted by means of support beams 41, which are applied in a same manner as the further support post 51, in the second support post 17. The cross-section of the second support post is somewhat larger than the one of the support post. The support posts 41, 51 are however provided with a resilient element 60 applied on one side. That resilient element enables to fix the support members, in a clamping manner, in the second support post 17, without abandoning an easy mounting and demounting. The building-up elements 9 and/or the wall panel 8 are in such a manner easily and independently mountable by means of, pushing in, or respectively pulling out. By means of the bend-configuration of the support post 41, the wall panel 8 is applied in the prolongation of the back panel 3, while the configuration of the further support post 51 takes care, that the building-up element is mounted before the wall panel 8. In such a manner the modular character of the office furniture is maintained.

Figure 11 illustrates in such a manner the way in which the overhead unit is mounted. The strut 4 is applied in the hollow space 62, described by the first support posts 10, and forms a substantially right angle with the work surface 2. The hollow space 62 is in cross-section somewhat larger than the width of the strut 4. The strut rests at the underside against the back side of the first support post, and at the upperside against the front side of the first support post. The overhead unit 5 is provided with a cavity 63, wherein strut 4 is applied. Also this cavity is with respect to its cross-section somewhat

larger than the one of the strut. The strut rests in this cavity at the underside against the frontside, and at the upperside against the back side. Also with the underside of the overhead unit 5, the strut 4 forms a substantially right angle. Due to the weight of the overhead unit, the latter forms a torque on the strut, in such a manner that the latter is clamped in the hollow space of the first support post and in the cavity of the overhead unit, and in such a manner takes care, that the overhead unit is mounted in a stable manner, despite the larger cross-section of the cavity and the hollow space 62 and 63. That larger cross-section favours the mounting facility. Such as shown in the figure 10 and 11, the upstanding flanges of the cavity form an oblique angle α , with the underside of the overhead unit. The upstanding flanges of the hollow space of the first support posts 10 also forms an oblique angle β , in such a manner that the hollow space of the strut 4 touches the upperside respectively the underside at the frontside respectively the backside. The struts form thus an angle of 90° with respect to the underside respectively the upperside, of the overhead unit respectively the work surface. By this oblique configuration of the cavity and the hollow space the strut is applied in a stable manner in the cavity.

The invention is described by means of an office furniture. It will however be clear that other furniture such as for example, two part bins or tables can be constructed in a same manner.

Claims

1. Modular free-standing furniture, in particular an office furniture, comprising at least one work surface, which is applied on at least two support members, whereby the support members are further provided for demountably applying an overhead unit, and whereby a back panel is mountable to at least two of the support members, and whereby the support members each comprise a fixed part, provided for standing on a floor and on which fixed part is mounted an in height adjustable part, which is adjustable over at least 100 mm and preferably at least 200 mm, and on which the work surface provided with a cable duct is applied, characterised in that the furniture is an intramodular furniture of which the support members are provided with first support posts for said overhead unit, between which support posts the cable duct extends and flushes along each time two sides of the support posts, and wherein between each of the first support posts and along one side of the work surface a space is provided in longitudinal direction, which enables a first access to the cable duct.
2. Modular free-standing furniture as claimed in claim 1, characterised in that the support members are provided with a recess, which is delimited on one

side, considered in height direction, by the first support post and on the other side by the adjustable part and work surface, and in which recess said cable duct discharges and provides there a second access to the cable duct.

3. Modular free-standing furniture according to claim 2, characterised in that said space and said recess run into each other.

4. Modular free-standing furniture according to one of the claims 1 to 3, characterised in that the cable duct is provided with an upstanding wall, extending substantially parallel to the back panel over a height reaching up to at least the underside of the work surface.

5. Modular free-standing furniture according to one of the claims 1 to 3, characterised in that the back panel is fixed to said support member and on the side directed to the work surface, is provided with an upstanding, in height adjustable, wall panel, which extends over at least half of the path, over which the work surface is adjustable in height.

6. Modular free-standing furniture according to one of the claims 1 to 5, characterised in that a cap is each time applied to said first support posts, which cap extends over at least half of the path over which the work surface is adjustable in height, and wherein said space further extends between the cable duct and the part covered by the cap.

7. Modular free-standing furniture according to one of the claims 1 to 6, characterised in that over the cable duct, at least in the part between the first support posts, a backfoldable part is applied.

8. Modular free-standing furniture according to one of the claims 1 to 7, characterised in that the support members are provided with second support posts, for detachably applying at least one building-up element, in particular a separation screen and/or a fixing element for office accessories.

9. Modular free-standing furniture according to claim 8, characterised in that first and second support posts form a rigid complex with said fixed part of the support member.

10. Modular free-standing furniture according to claim 8, characterised in that first and second support posts are detachably fixed with said fixed part of the support members.

11. Modular free-standing furniture according to one of the claims 1 to 10, characterised in that said first support posts are formed by closed profile, and

wherein the access to the hollow space of said closed profile is protectable with a cover.

12. Modular free-standing furniture according to claim 11, characterised in that said cover is shiftable and/or backfoldable mounted.

13. Modular free-standing furniture according to claim 6 and 11, characterised in that said cover extends over said cap and is provided at this place with a fixed part connected with the cap, to which a pivotable part is applied, which covers said access and a part of the space enclosed by said cap.

14. Modular free-standing furniture according to one of the claims 1 to 13, characterised in that said space is span at least partially by a back foldable protection, in particular brush hair.

15. Modular free-standing furniture according to one of the claims 1 to 14, characterised in that between the work surface and the back panel, a backfoldable protection is provided, in particular brush hair.

16. Modular free-standing furniture according to one of the claims 1 to 15, wherein said overhead unit is mounted, characterised in that in said first support post a first extremity of a strut is each time detachably applied and which overhead unit is detachably applied on second extremities of two of said struts.

17. Modular free-standing furniture according to claim 16, characterised in that said first support posts are in cross-section somewhat larger than the cross-section of the struts, and wherein recesses are provided in the overhead unit for applying said struts, said recesses being in cross-section somewhat larger than the cross-section of the struts and being provided with upstanding flanges, which extend over an oblique angle with the underside of the overhead unit.

18. Modular free-standing furniture according to claim 16 or 17, characterised in that said strut is provided with a distance calibration element, for calibrating the distance between the extremity of the first support post and the underside of the overhead unit.

19. Modular free-standing furniture according to claim 18, characterised in that on said distance calibration-element, a cable protection cap is provided for creating a cable path along the strut.

20. Modular free-standing furniture according to claim 19, characterised in that the cable protection cap is provided with a contact box.

21. Modular free-standing furniture according to claim

6 and 18 or 19, characterised in that said cap and said cable protection cap extend in the continuation of one another.

- 22.** Modular free-standing furniture according to one of the claims 1 to 21, characterised in that said fixed part of the support member is provided with at least a first and at least a second groove, wherein said first groove is at least twice as long as the second groove, and wherein the pad adjustable in height is provided with at least a row of three fixing points, in such a manner that a first respectively a second and third fixing point are shiftable along the first respectively the second groove and that the second and third fixing point are applied at a distance substantially corresponding with the one of the second groove. 5 10 15
- 23.** Modular free-standing furniture according to claim 22, characterised in that said first groove is provided with notches, in which at least a pin is applied for distance calibration with stepwise height adjustment. 20
- 24.** Modular free-standing furniture according to one of the claims 1 to 23, characterised in that in the fixed and movable part of the support member an U-shaped open space is provided, for applying height adjustment means, which are mechanically, electromechanically or hydraulically driven. 25 30

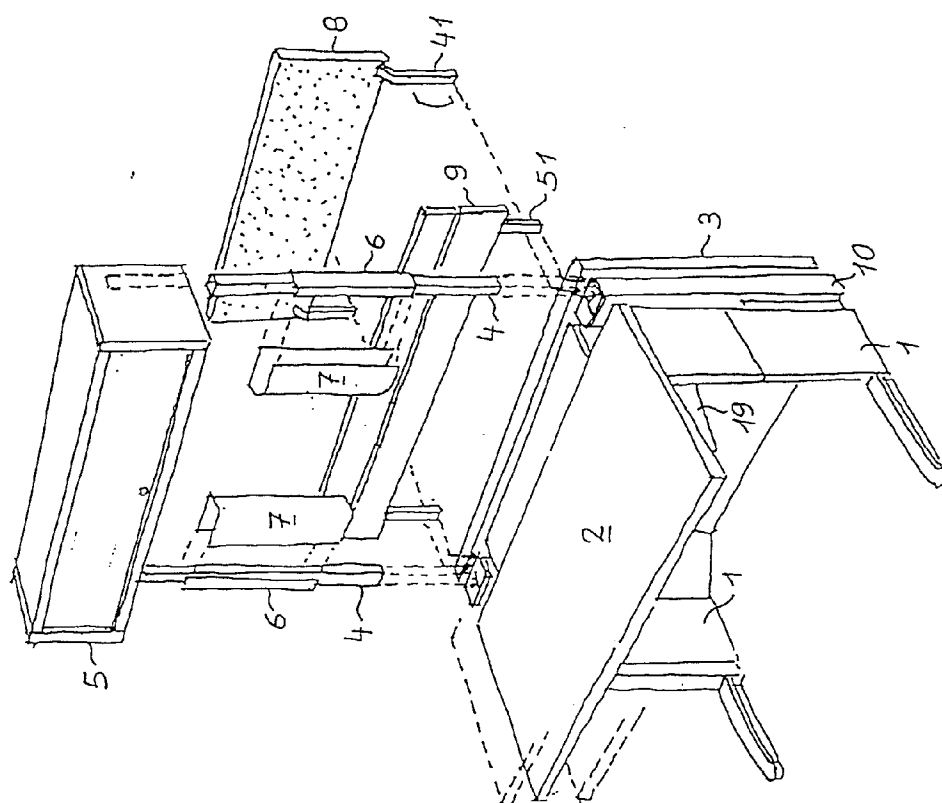
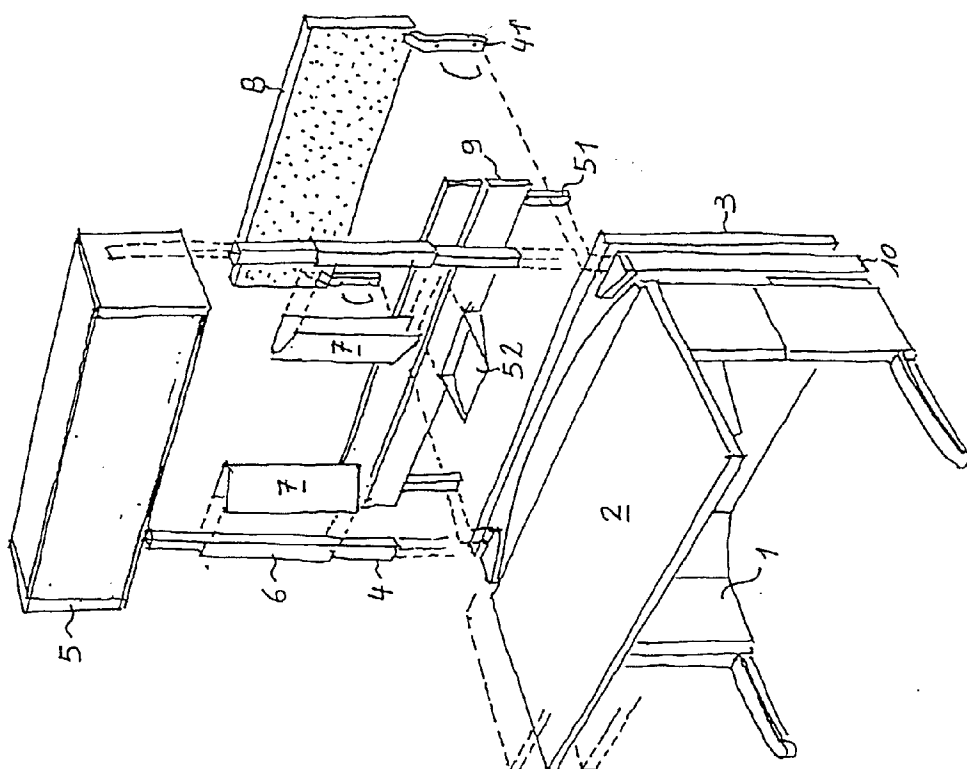
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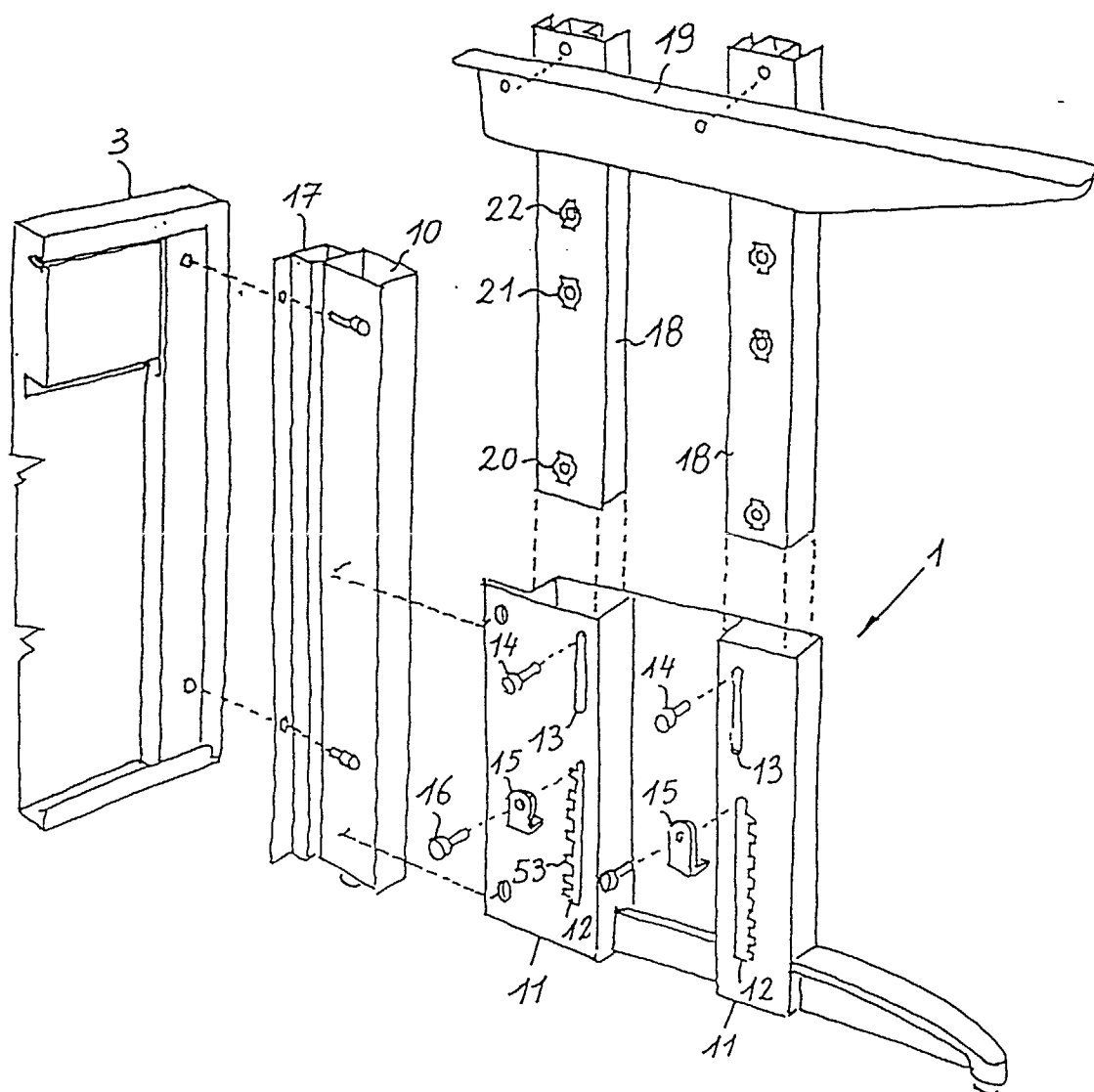


Fig. 3

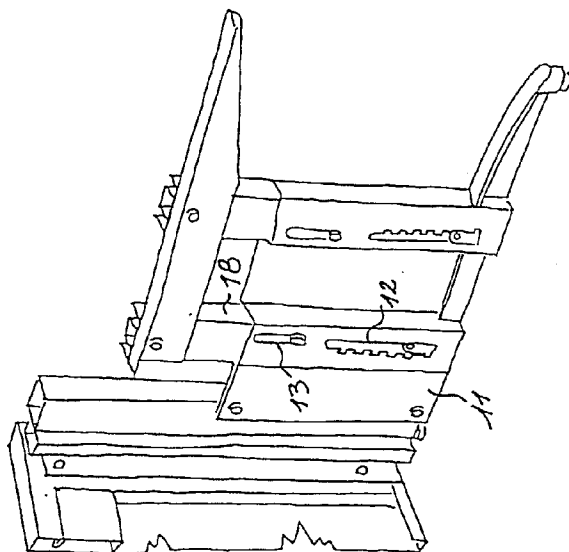


Fig. 4c

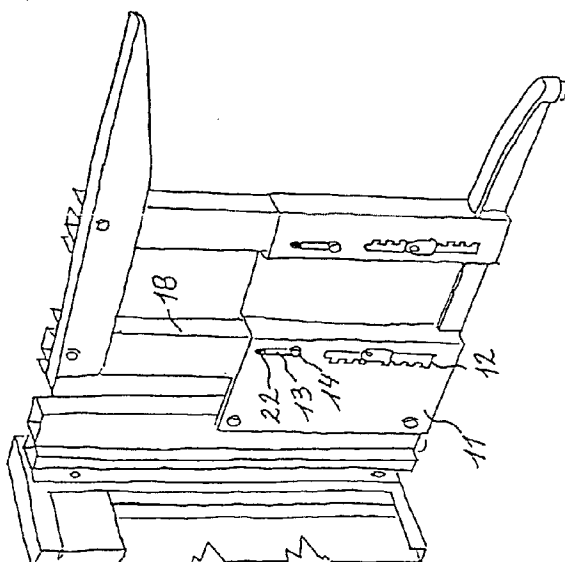


Fig. 4b

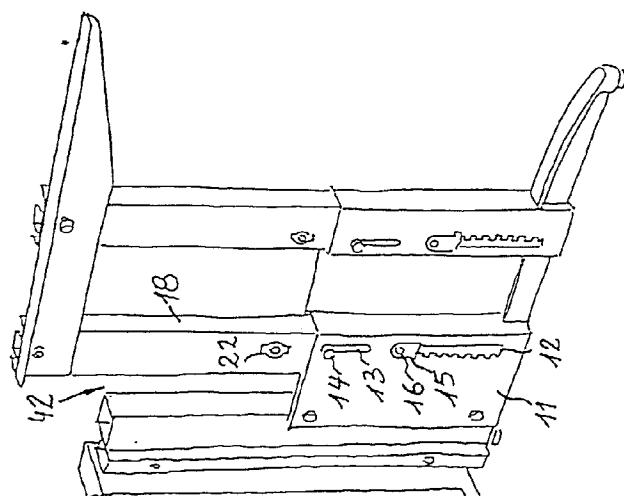
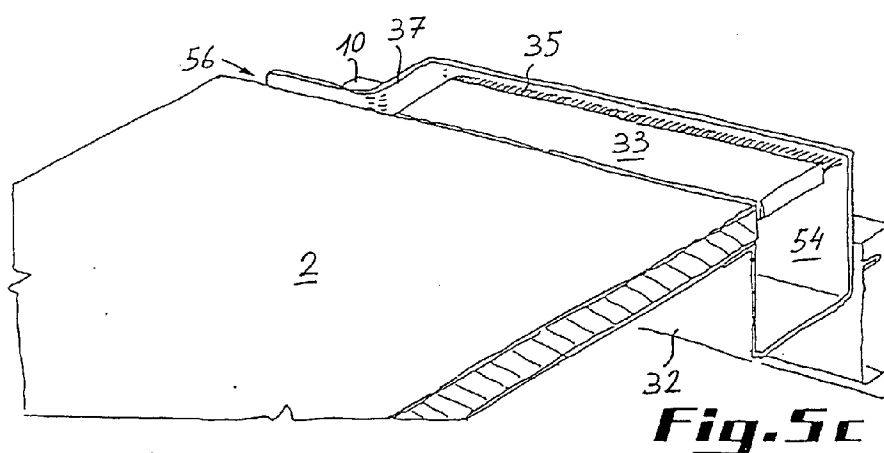
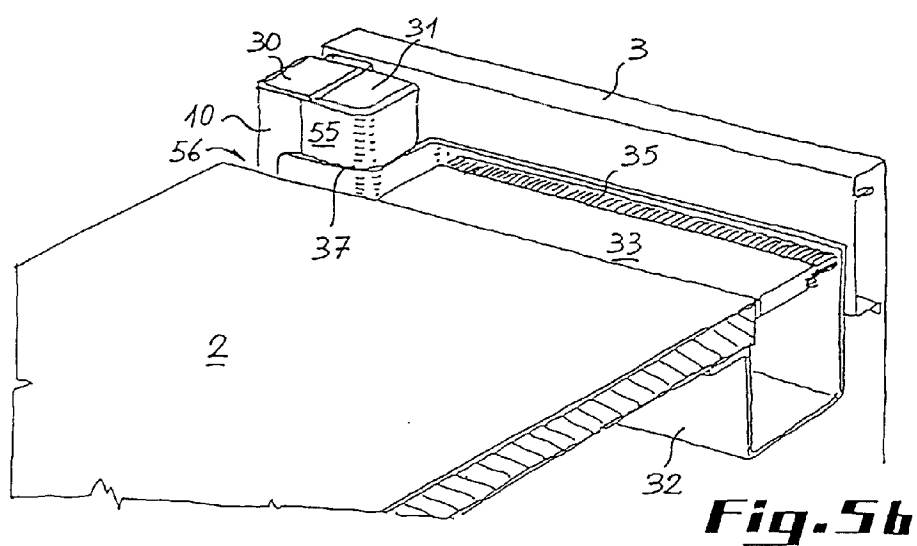
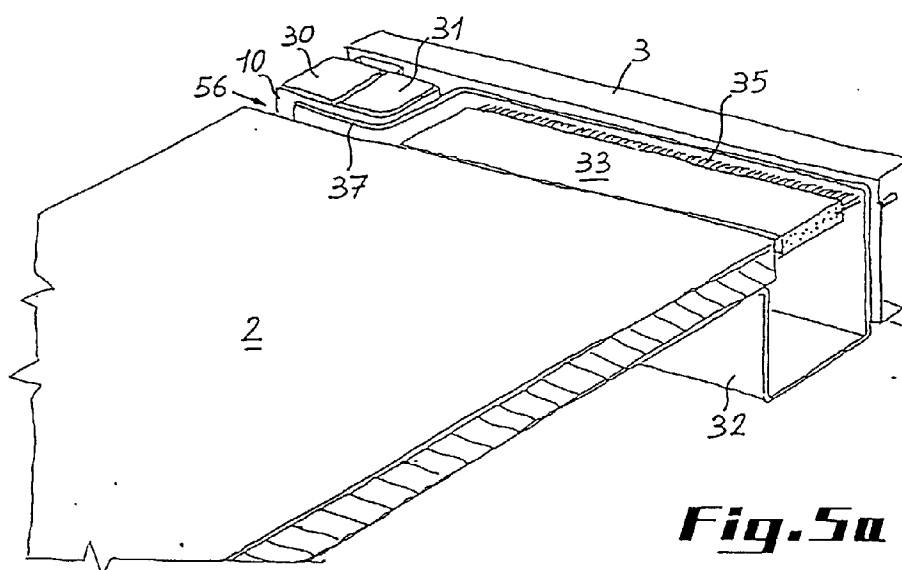
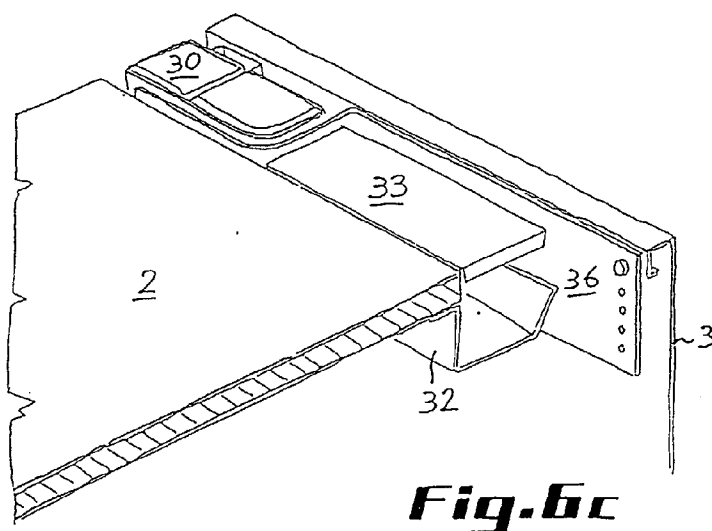
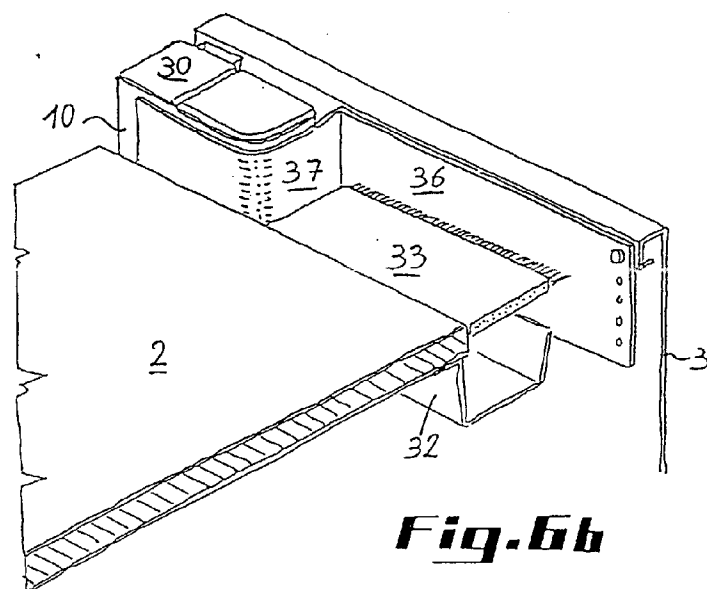
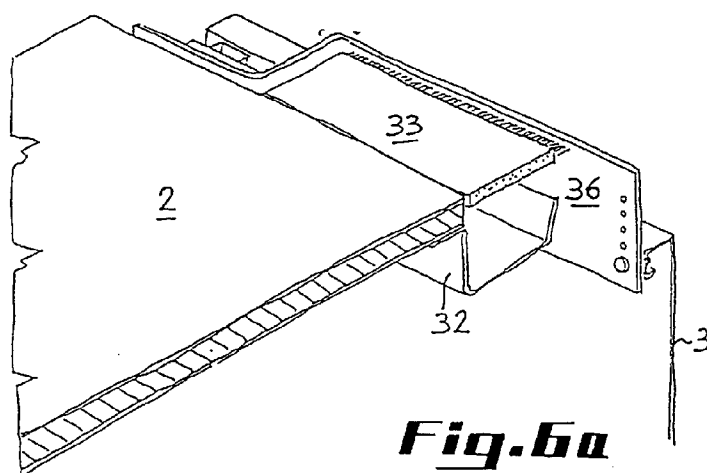


Fig. 4a





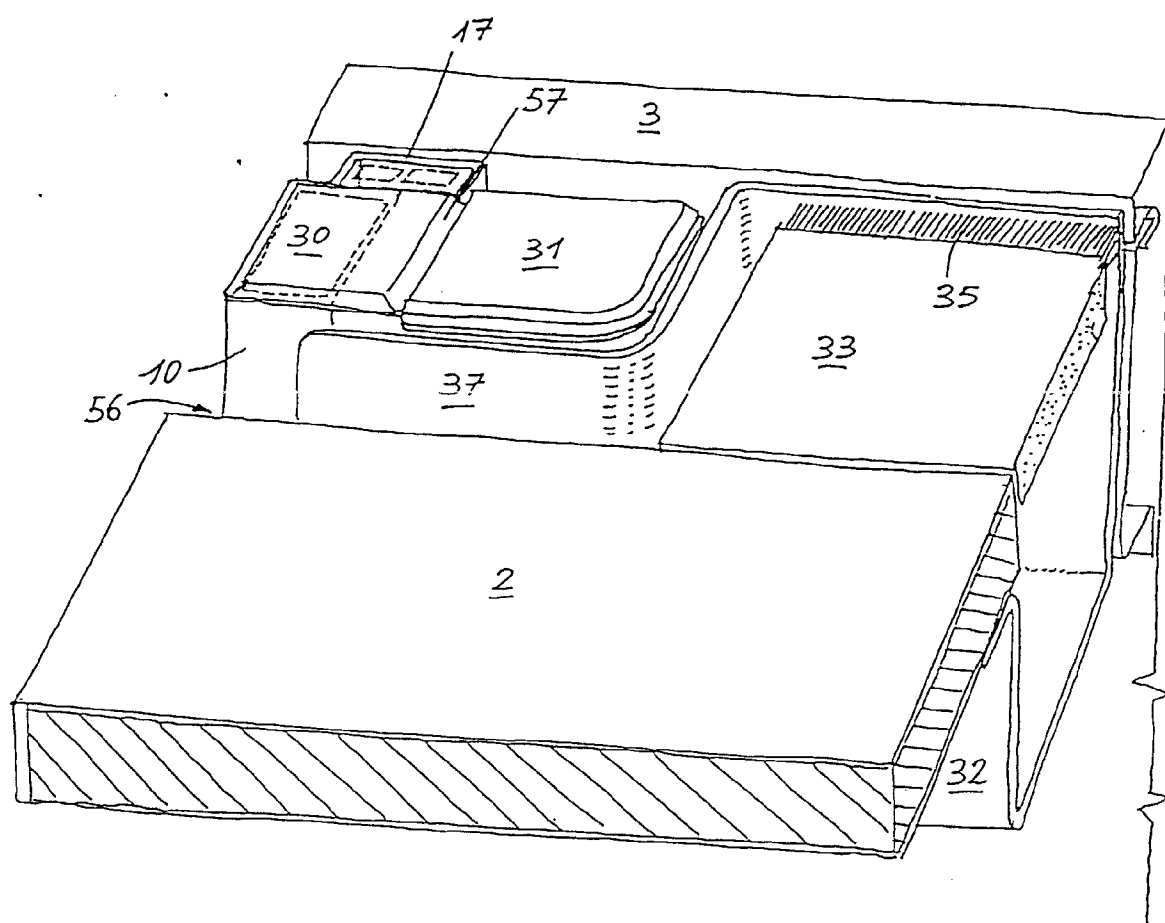


Fig.7

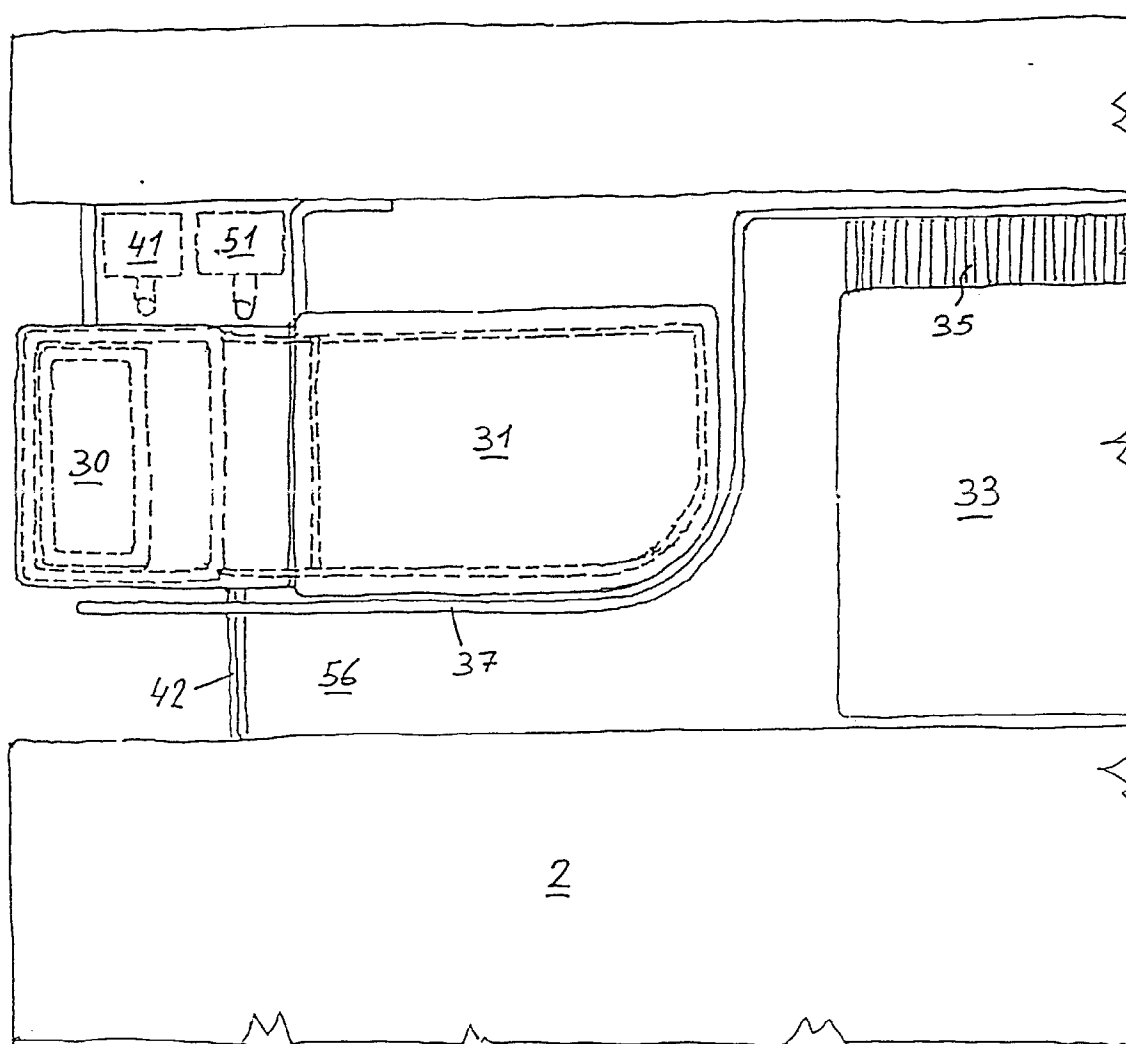


Fig. 8

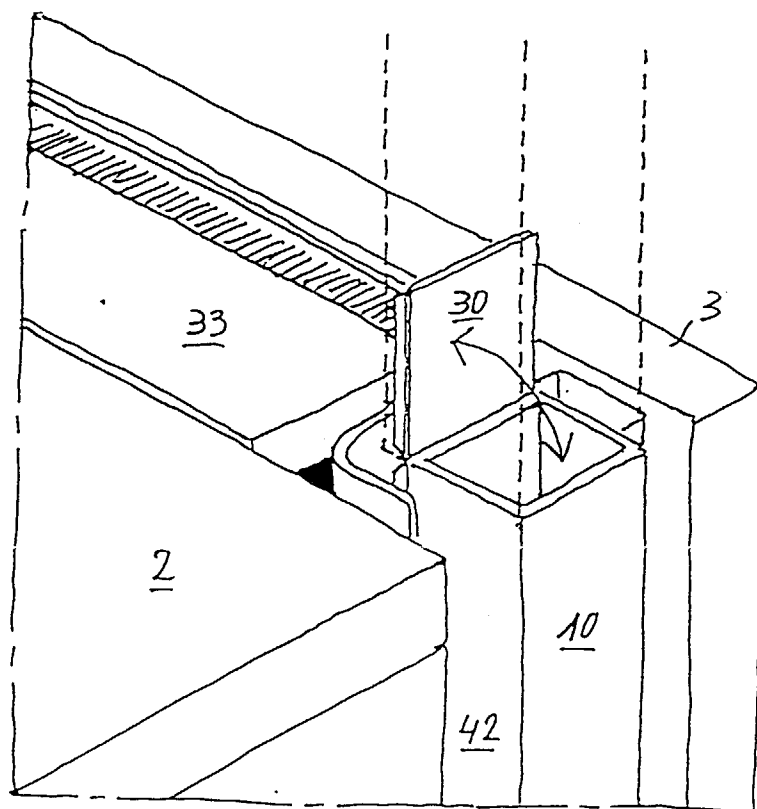


Fig. 9

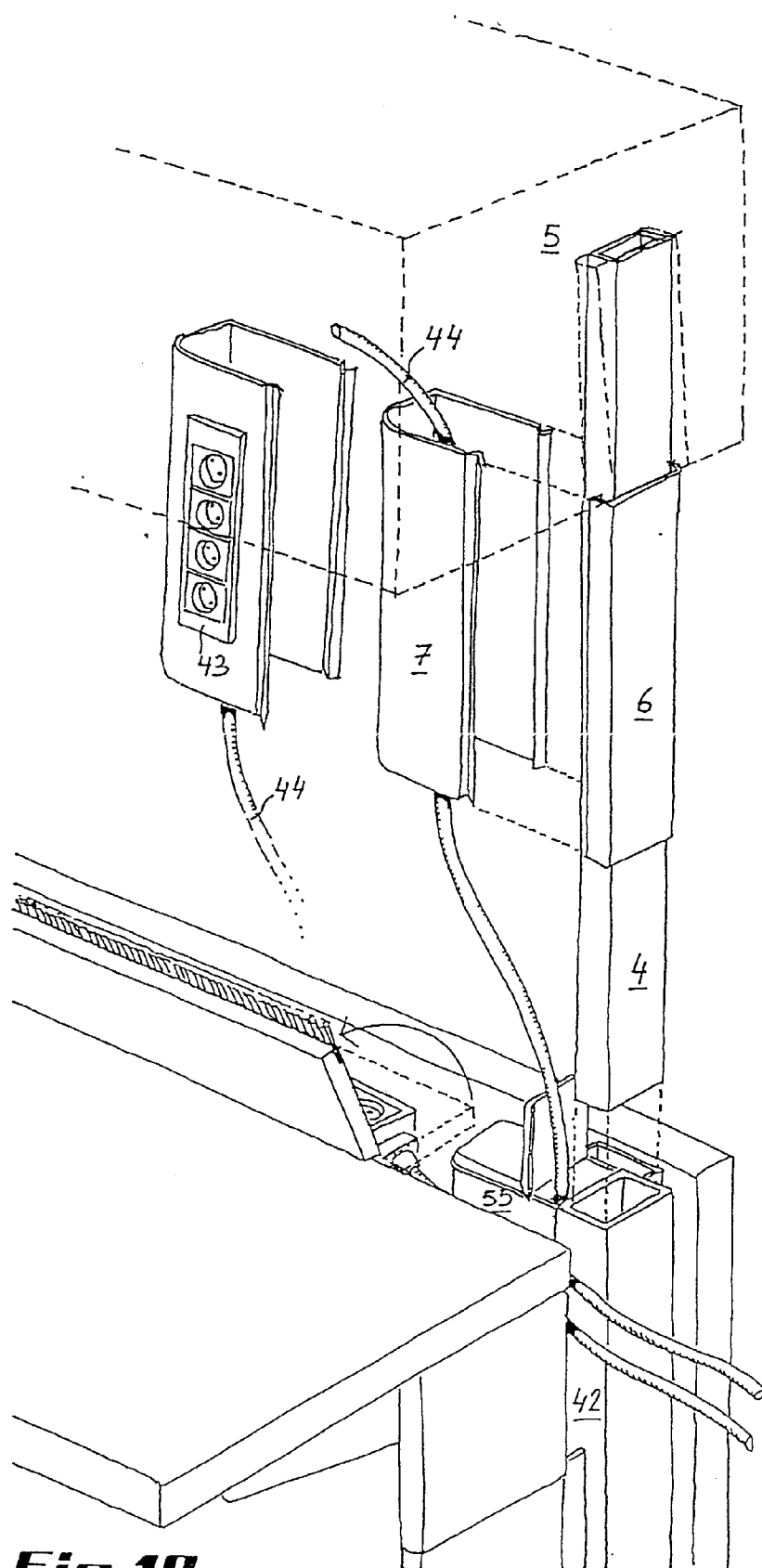


Fig.10

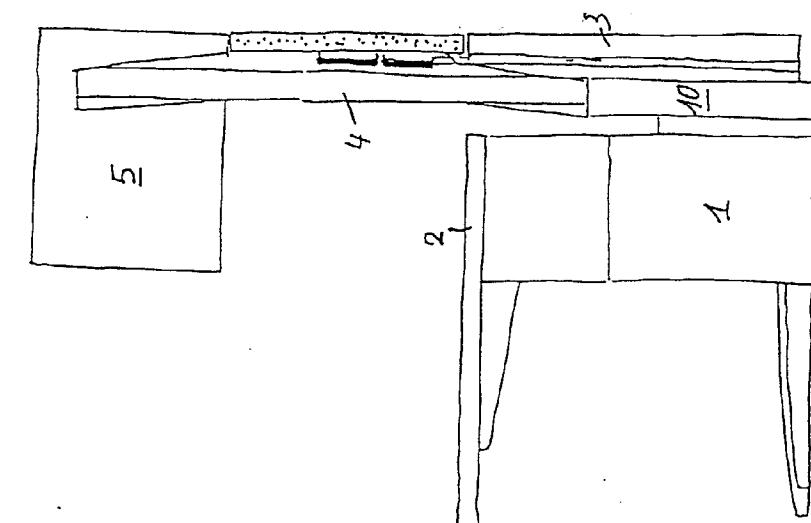


Fig. 11a

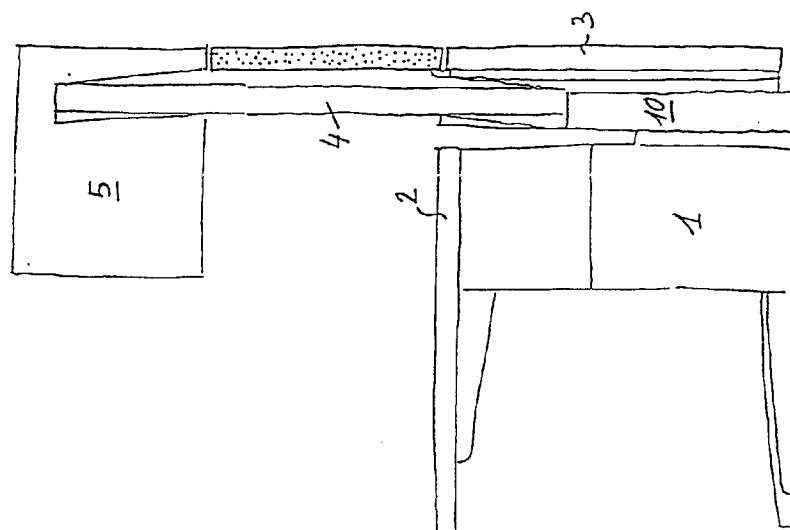


Fig. 11b

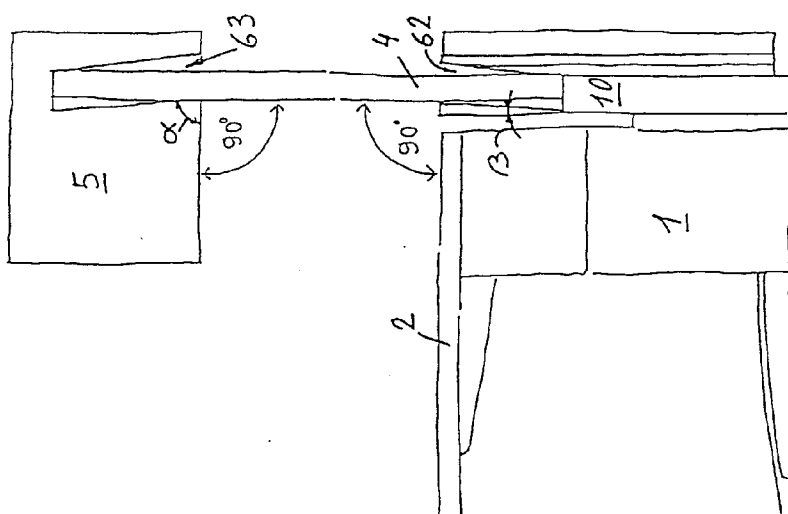


Fig. 11c

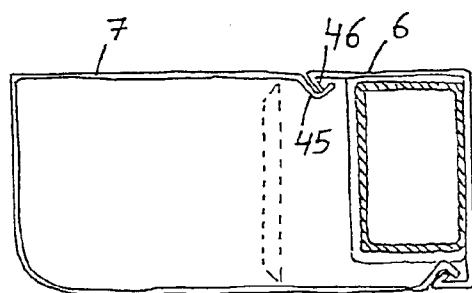


Fig.12

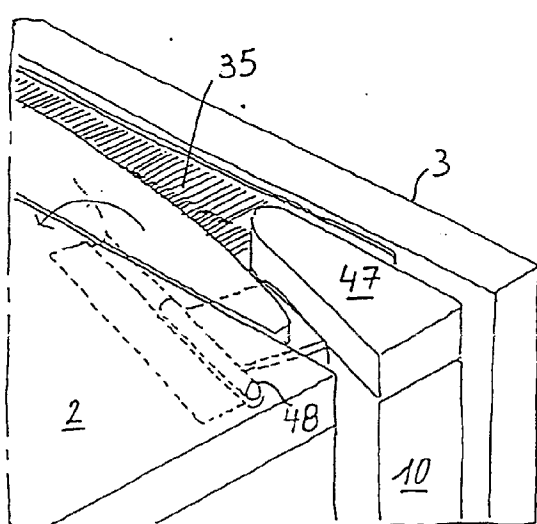


Fig.13a

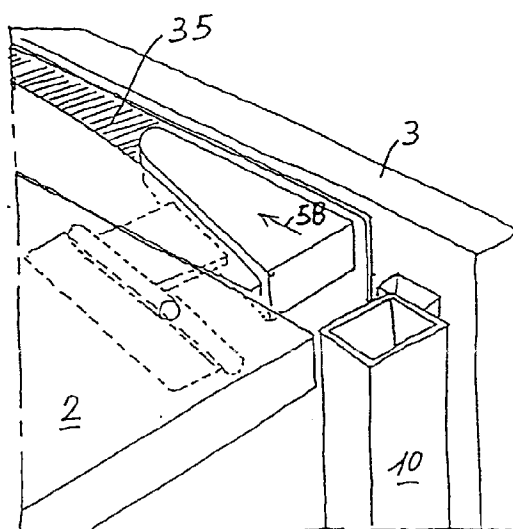


Fig.13b

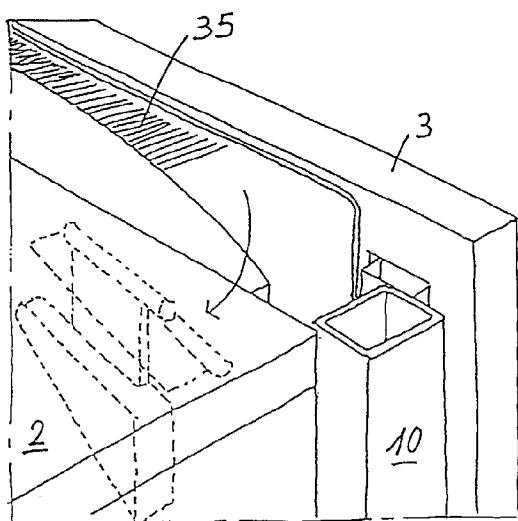


Fig.14a

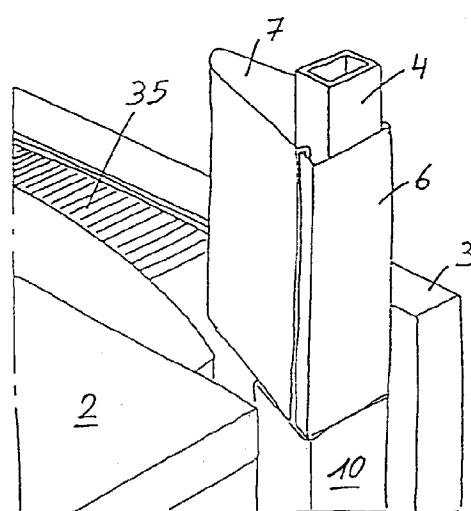


Fig.14b

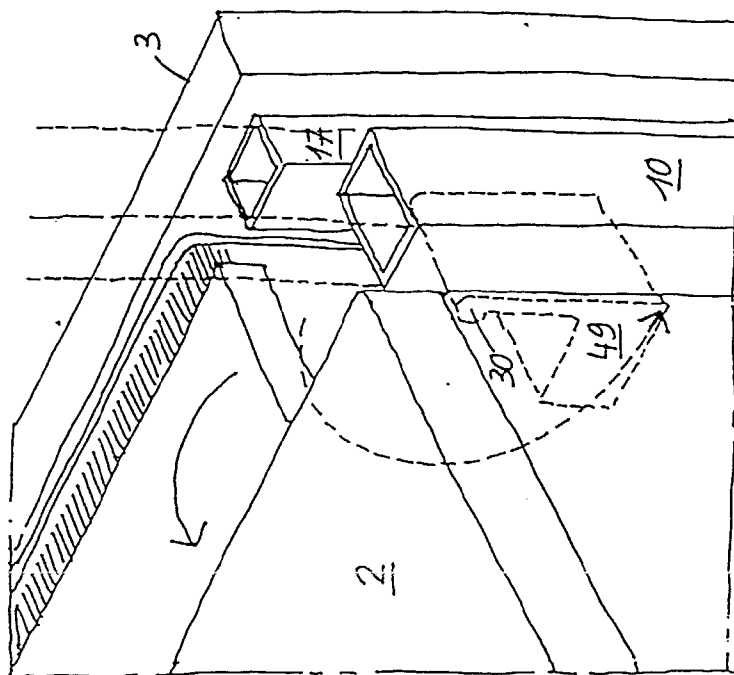


Fig. 15a

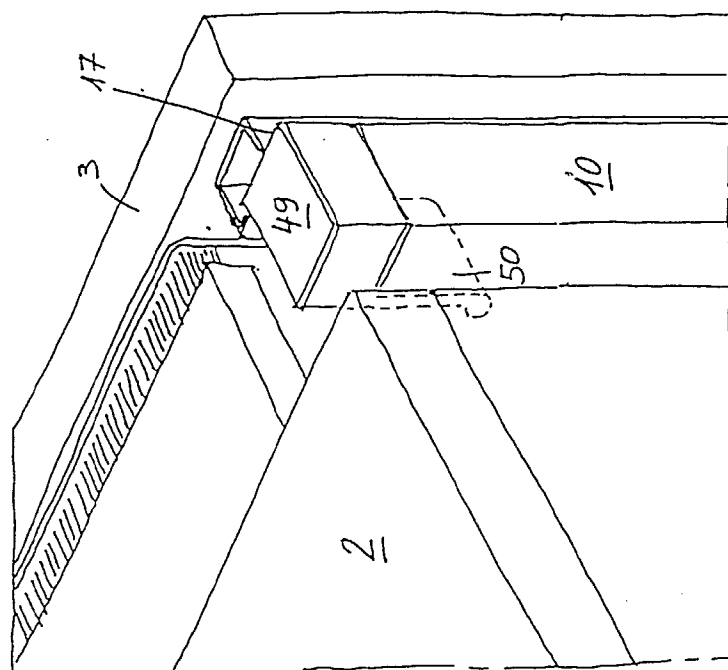


Fig. 15b

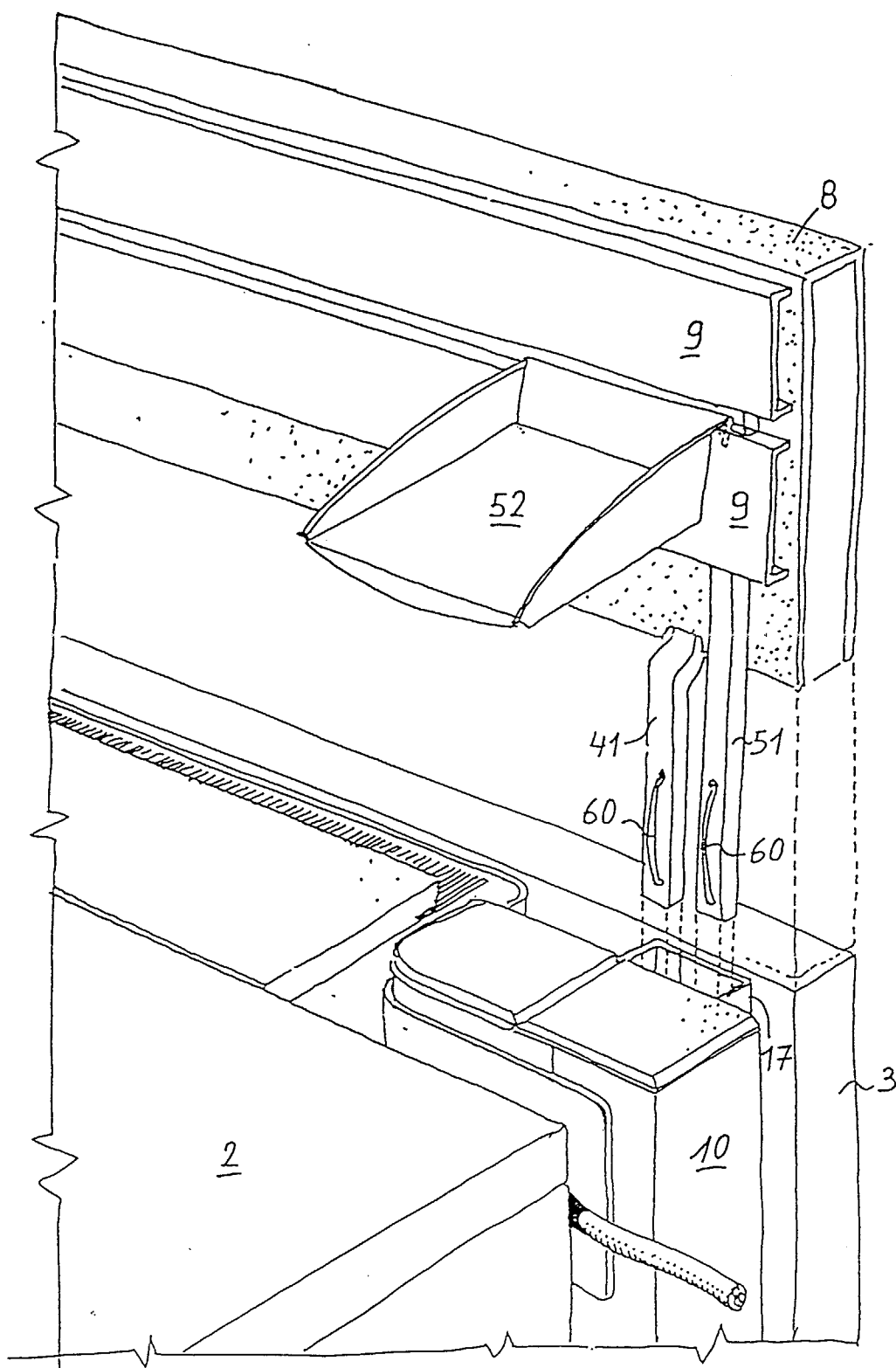


Fig.16



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 20 0447

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
D,X	EP 0 145 410 A (HAUSERMAN INC) 19 June 1985	1,4,8, 11,12	A47B21/00 A47B17/02
A	* page 7, paragraph 4 - page 12, paragraph 2; figures 1-5 *	2,3,5,6, 9,10,24	
X	WO 93 21799 A (TEKNION FURNITURE SYSTEMS) 11 November 1993 * page 6, line 31 - page 8, line 33; figures 5,6 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 June 1997	Examiner Noesen, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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