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(54) **TELESCOPIC GUIDE FOR CABINETS AND SUSPENSION BRACKET THEREFOR**

TELESKOPFÜHRUNG FÜR SCHRÄNKCHEN UND HALTEBÜGEL HIERFÜR

GUIDE TELESCOPIQUE POUR ARMOIRE ET FERRURE DE SUSPENSION POUR UNE TELLE
ARMOIRE

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Description

[0001] The invention relates to a telescopic guide of the type defined in the preamble of independent claim 1. Such a telescopic guide is known from US 5,470,143. US 5,470,143 discloses a guide rail to be connected directly to slotted uprights of a cabinet casing. In this known guide rail the cabinet section comprises two pairs of attachment projections, extending perpendicular to the wall part out of which they are stamped. Each of these projections comprises a clamping part, extending in the same plane. The clamping projections can be inserted into slots of the slotted uprights and then pushed forward, for the clamping projections to engage behind the slotted uprights. A resilient member locks the guide rail into place, in order to avoid the guide rail coming loose.

[0002] EP 0 818 163 discloses a telescopic guide rail which can be connected to a cabinet wall part by two separate braces to be screwed against said wall. Both braces are identical. Near the front of the cabinet section a first lip is formed, punched out of the relevant wall part, such that it comprises a clamping part extending substantially parallel to said wall part and connected thereto at the topside. Said lip can be pushed over the topside of the relevant front brace, for suspension thereof. Near the back of said drawer section a second lip is punched from said wall part, comprising a second clamping part extending substantially parallel to said wall part, connected thereto via a vertical connection at the side of said lip facing the front side of said guide unit. The second lip can be inserted into a slot in the back brace, horizontally. A guide rail according to EP 0 818 163 can thus be connected to a cabinet by first mounting the brace exactly in place, after which firstly the second lip can be slid into place, inserted to opening, whereby the guide rail is kept at an angle relative to the horizontal, such that the first lip is moved to a position above the upper edge of the front brace. The guide rail is then rotated around the rearward lip, for the first lip to engage the relevant brace.

[0003] Furthermore, a guide rail is known from practice and is, for instance, supplied by the firm of Jonathan, Fullerton, USA.

[0004] These known telescopic guides comprise a cabinet section and a drawer section partly slidable therein in the longitudinal direction, with suspension brackets being attached against the side facing away from the drawer section against a wall part of the cabinet section. These suspension brackets are provided to this end with a slotted opening, while the relevant wall part is provided with holes arranged in corresponding positions, such that the suspension brackets can be screwed against the relevant wall part. To this end, the drawer section has to be slid out so far that the inside of the cabinet section is clear at the height of the holes so as to enable engagement of an attaching bolt or nut. The suspension bracket can be attached by means of further bolts, screws or such attaching means against, for instance, an upright of a cabinet or such a frame. The suspension brackets are further

provided with bent longitudinal edges which, during use, engage against the longitudinal edges of the cabinet section, so that displacement of the cabinet section parallel to the wall part and at right angles to the slide-out direction of the sections is prevented.

[0005] This known telescopic guide has the drawback that attachment of the suspension brackets is very complicated and time-consuming, in particular because the mounting of the attaching bolts and nuts has to be done with two hands, while, simultaneously, the further telescopic guide has to be held up, in the desired position. Moreover, such a telescopic guide is also expensive in use, because loose bolts and nuts must be used. A further drawback of this known telescopic guide is that the suspension brackets can only be attached when the telescopic guide is nearly completely slid out, so that the mounting is even more difficult, while, furthermore, the risk of errors in mounting is increased. Moreover, this known telescopic guide has the drawback that the suspension bracket should be specifically designed for the relevant cabinet section, since the bent longitudinal edges must connect to the outer edges of the cabinet section. As a result, the use of these suspension brackets is even more difficult and expensive.

[0006] Furthermore, it has already been proposed that suspension brackets are welded directly against a wall part of the cabinet section. This has the important drawback that readjustment of such a suspension bracket is not possible and the mounting thereof on the guide must take place already during the production. As a result, such a telescopic guide is not useful for different cabinets, while packing, storage and transport thereof is very uneconomical, particularly in view of the occupied space. Moreover, for these known guides loose parts, in particular attaching screws and the like, have to be packed in foil bags, boxes or the like, which is expensive, leads to waste and is additionally a source of errors. Furthermore, such a telescopic guide has the drawback that the welding operation may lead to deformations, which is disadvantageous, particularly because of increased wear and reduced sliding properties.

[0007] It is an object of the invention to provide a telescopic guide of the type defined in the preamble of the main claim, in which the above drawbacks of the known telescopic guides are avoided, while retaining the advantages thereof. To this end, a telescopic guide according to the invention is characterized by the features of claim 1.

[0008] A telescopic guide according to the present invention offers the advantage that the suspension brackets can be simply connected with the cabinet section by sliding on, without requiring special attachment means. In particular the known bolts and nuts can be abandoned, while the suspension brackets can yet be packed, stored and transported apart from the sections. This particularly simplifies the use of telescopic guides, in particular the mounting thereof. A further advantage of a telescopic guide according to the present invention is that for different types of telescopic guides the same suspension

bracket can be used, so that a high degree of standardization is ensured.

[0009] As referred to in this application, a guide is at least a drawer guide and guides for use in rack cabinets, filing cabinets and, in a general sense, guides for use in, at least with furniture in a broad sense, as well as for use in apparatus engineering, such as for photocopiers, cash dispensers and selling devices and the like.

[0010] A guide according to the invention is preferably characterized by the features of claim 2.

[0011] In a further advantageous embodiment a telescopic guide according to the present invention is characterized by the features of claim 3.

[0012] By designing the at least one and preferably each attachment projection to be of hook-shaped design and forming it from the relevant wall part, preferably with a punching treatment, the advantage is obtained that the required attachment projections can be very easily formed, for instance in one operation. Moreover, no material needs to be added, while a fixed rigid connection is obtained. Moreover, deformations are thereby prevented, such as, for instance, would be the case when the attachment projections must be welded to the guide.

[0013] In further elaboration a telescopic guide according to the invention is characterized by the features of claim 4.

[0014] By providing at least two spaced apart attachment projections, with the clamping parts being able to engage over at least a part of a longitudinal edge of a corresponding number of slotted recesses in the suspension bracket, the advantage is obtained that the suspension bracket can be very easily connected with the cabinet section in a manner secured against rotation. In fact, the two spaced apart attachment projections will at least for the greater part prevent rotation of the suspension bracket with respect to the cabinet section.

[0015] In a very advantageous embodiment a telescopic guide according to the invention is characterized by the features of claim 7.

[0016] In such an embodiment the advantage is obtained that at least a part of the suspension bracket, when sliding in under the clamping parts of the attachment projections, will pass the clamping projection, such that the clamping projection engages behind an edge of a recess in the suspension bracket. Thus the suspension bracket is secured against displacement, at least against coming loose in the direction opposite to the direction in which the suspension bracket is slid over the attachment projections. Such a clamping projection may be formed, for instance, from the relevant wall part, for instance as a depression or partly punched-out lip.

[0017] In a further advantageous embodiment a telescopic guide according to the invention is further characterized by the features of claim 10.

[0018] Such a telescopic guide offers the advantage that by means of the two bracket parts of each suspension bracket the position of the telescopic guide can be adjusted at least in one direction with respect to a cabinet

frame to which the telescopic guides have to be mounted. Moreover, attachment thereof to the frame is very easily possible.

[0019] In a further preferred embodiment a telescopic guide according to the invention is characterized by the features of claim 11.

[0020] By enclosing at least one of the suspension brackets in mounted condition in all directions and slidably mounting the at least one of the other brackets in the longitudinal direction of the guide, the advantage is obtained that dimensional variations of the furniture or the like in which the guide has to be mounted can be easily taken up. Thus, for instance, dimensional variations between uprights as a result of undesired curves thereof can be taken up.

[0021] The invention further relates to a suspension bracket, suitable and intended for use for a telescopic guide according to the invention and to a cabinet or the like provided with such telescopic guides. To this end the invention foresees a suspension bracket as defined in the independent claims 12.

[0022] Further advantageous embodiments of telescopic guides according to the invention are given in the further subclaims.

[0023] To further explain the invention, practical examples of telescopic guides and suspension brackets according to the present invention will be described with reference to the drawings in which:

Fig. 1 is a diagrammatic perspective view of a part of a telescopic guide with a detached suspension bracket according to the present invention;

Fig. 2 is a front view of a bracket part of a suspension bracket shown in Fig. 1;

Fig. 3 is a side view of a part of a telescopic guide with an attached suspension bracket;

Fig. 3A is a side view of an alternative embodiment of a telescopic guide;

Fig. 3B is a side view of an upright of a cabinet or rack with a suspension bracket mounted thereon;

Fig. 4 is a further alternative embodiment of a bracket part mounted on a cabinet section; and

Fig. 5 is a third alternative embodiment of a bracket part for a telescopic guide.

[0024] In these descriptions of the drawings corresponding parts have corresponding reference numerals.

[0025] Fig. 1 is a diagrammatic perspective view of a guide 2 and a suspension bracket 4. The guide 2 comprises a cabinet section 6 and a drawer section 8 slidable therein in the longitudinal direction P, and an intermediate section 10. Such a three-piece telescopic guide is sufficiently known per se and is only shown herein by way of example. Of course, all kinds of different, otherwise formed guides can be used, for instance two-piece guides or guides with sections differently placed with respect to each other.

[0026] On the rear wall part 12 of the cabinet section

6, which rear part is directed outwards during use, a series of raised, somewhat L-shaped hooked attachment projections 14 punched out of the wall part 12 is provided in a number of positions. Each attachment projection 14 comprises a back part 16 extending approximately at right angles to the wall part 12 and a clamping part 18 extending parallel to the wall part 12. Fig. 1 shows four clamping projections 14 positioned near an end of the guide 2, two pairs. The clamping parts 18 lie in one plane, the back parts 16 extend parallel to each other. Between the back parts 16 a space 20 is left open, such that the distances B between the non-facing insides of the back parts 16 are formed. The purpose thereof will be further explained below. Enclosed between the wall part 12 and the insides of the clamping parts 18 facing the wall part 12 is a space 22 having a height D. The purpose thereof will also be further explained below.

[0027] At a distance S from the sides of the more nearby attachment projections 14 remote from the nearby end of the guide 2 a clamping projection 24 is pressed out of the wall part 12, which clamping projection 24 is lip-shaped and slopes up in the direction away from the attachment projections 14.

[0028] The suspension bracket 4 comprises a first bracket part 26 and a second bracket part 28. Both bracket parts 26, 28 are of hooked design and formed from, for instance, sheet steel or such material. The first bracket part 26 comprises a first flange part 30 and a second flange part 32, the second bracket part 28 comprises a third flange part 34 and a fourth flange part 36. In the flange part 30 four L-shaped slots 38 are provided, the legs of which are parallel to each other two by two behind each other and two by two beside each other. The foot parts 40 are somewhat larger in width than the legs of the slots and are situated on equal sides of the legs and point to both sides. The size and shape of the foot parts 40 correspond mainly to the size and shape of the clamping parts 18 of the attachment projections 14, while the distance between the longitudinal edges 39 of the slots 38 remote from each other corresponds, seen in the width direction Z, approximately to the width B between the projections 14. This ensures that a mounted bracket is secured against displacement at right angles to the back parts and against rotation. The distance between the foot parts 40, seen in the longitudinal direction P, corresponds to the distance between the pairs of attachment projections 14, likewise seen in the longitudinal direction P. The thickness of the first flange part 30 corresponds, for instance, approximately at least to the height D of the space 22. Moreover, the width of the legs of the slots 38 corresponds mainly to the material thickness of the back parts 16. The lengths of the legs of the slots 38 corresponds, for instance, approximately at least to the distance S between the attachment projections 14 and the clamping projection 24. To obtain a desired adjustability, this length may also be chosen to be greater.

[0029] The second flange part 32, which extends at right angles to the first flange part 30, is provided with

two outer straight slots 42 extending parallel to each other and two inner L-shaped slots 44. The foot parts 46 of these L-shaped slots 44 are located in the transition area between the first flange part 30 and the second flange part 32 and are directed away from each other. The third flange part 34 comprises two holes 48 provided with internal screw thread, into each of which an attaching bolt 50 can be screwed through the respective straight slots 42 (see Fig. 3). Thus the second bracket part 28 can be screwed against the first bracket part 26. Moreover, the third flange part 34 is provided with two second attachment projections 52 which correspond to the attachment projections 14 in shape. These second attachment projections 52, provided with second clamping parts 54, are arranged such that they can be slid into the L-shaped slots via the foot parts 46, with the second clamping parts 54 partly lying over the longitudinal edges of the legs of the L-shaped slots 44. Since the bolts 50 cannot slid out of the straight slots 42, a proper connection between the first bracket part 26 and the second bracket part 28 is thus realized, it being possible to adjust the second bracket part with respect to the first bracket part 26 in a direction at right angles to the rear wall part 12. Moreover, when the first bracket part is mounted, the second bracket part, as will be further described below, is prevented from coming loose from the first bracket part 26, also when the bolts 50 are not arranged. Thus a mounted guide 2 cannot inadvertently come loose from the relevant suspension bracket 4.

[0030] In an alternative embodiment, as shown in Fig. 2, the slots 42 extend into the first flange part 30, with a foot part 42A having such dimensions that the head of an attaching bolt 50 can pass therethrough. The advantage thus obtained is that the attaching bolt 50 can first be screwed into the holes 48 and can then be slid into the slots 42 via the foot parts 42A and can further be fixed. This offers the advantage that the bolts can be pre-mounted, so that they need not be packed loose, while it is no longer necessary for a user need to mount them. This limits the mounting time, prevents errors and avoids loose packings.

[0031] In the fourth flange part 36, which extends at right angles to the third flange part 34, approximately parallel to the first flange part 30, two L-shaped third attachment projections 56 are formed which are depressed from the fourth flange part 36. With these third attachment projections 56 the second bracket part 28 can be fixed in appropriate openings of a known per se metal or plastic frame, for instance of an electronic case. The third attachment projections 56 and the possible associated clamping projection 60 may also be depressed towards the opposite side, for mounting two guides to the facing sides of opposite uprights, with the fourth flange parts 36 against the facing sides thereof. Such frames comprise, for instance, four upright sections 58 extending parallel to each other, for instance with a rectangular or L-shaped cross section, diagrammatically shown in Fig. 3 by broken lines. In these sections a series of openings 57 is

provided in at least one but often in several sides above each other (Fig. 3B), such that objects can be fixed thereto or therein. The third attachment projections 56 are shaped such that they can be fittingly received in the relevant openings 57 and can be clamped therein by sliding in, over the longitudinal edges of the relevant openings 57. In the fourth flange part 36, seen in the slide-in direction above the upper third attachment projection 56, a third clamping projection 60 is formed, again by depressing from the flange material, which third clamping projection slopes up in the direction away from the third attachment projections 56. When the second bracket part 28 is mounted in the openings 57, the upper third attachment projection 56 will tightly lie over the lower longitudinal edge of an opening 57 in the upright 58, and within the opening 57 the third clamping projection 60 will abut against the upper edge thereof. Displacement of the second bracket part 28 is thereby simply but effectively prevented. Thus the suspension bracket 4 is fixed to the relevant frame part 58 in the vertical as well as in the horizontal direction.

[0032] Of course, other mounting means may also be used, such as screw connections and the like.

[0033] A suspension bracket 4 can be attached to a guide 2 as follows.

[0034] The first flange part 30 is kept parallel to the rear wall part 12 and pressed with the foot parts 40 of the slots 38 over the clamping parts 18 of the four attachment projections 14, such that the first flange part 30 abuts against the rear wall part 12. Subsequently, the suspension bracket 4 is moved along the rear wall part 12 in the direction away from the end 3 of the guide 2, parallel to the direction P. Then the longitudinal edges 62 of the slots 38 are received in the spaces 22 against the insides of the back parts 16, and the part 64, if present, located between the slots is received in the space 20 between the attachment projections 14. Any movement of the first bracket part 26, and thus of the suspension bracket 4, in a direction other than parallel to the direction P is thereby simply prevented. The suspension bracket 4 is advanced so far that the part located between the slots 38 and the end edge 66 completely passes the first clamping projection 24, such that the longitudinal edge 65 remote from the second flange part 32 comes to abut against the upright longitudinal edge 68 of the clamping projection 24 remote from the attachment projections 14. Then the back parts 16 abut against or lie at some distance from the end of the slots 38 remote from the foot parts 40. Thus the suspension bracket 4 is completely fixed with respect to the guide 2.

[0035] Fig. 3 shows a part of a telescopic guide with a mounted suspension bracket, in side view. An upright 58 in which the suspension bracket is mounted is shown in broken lines. As shown in Fig. 3, the guide 2 is provided with two suspension brackets 4 and 4A, which suspension brackets may be equal to each other. The mounting means for the front suspension bracket 4 are designed as shown in Figs. 1 and 2, including the first clamping

projection 24. This means, therefore, that the front suspension bracket 4 is attached in an unambiguously defined fixed position with respect to the guide 2, such that displacement is not possible. For the rear suspension bracket 4A only the attachment projections 14 are provided, but no clamping projection. In the mounted condition displacement of the rear suspension bracket 4A in the longitudinal direction of the guide is therefore still possible over a limited distance. The advantage thus obtained is that dimensional variations in the distance between the front and the rear upright 58 and 58A, respectively, can be readily taken up. As also shown in Fig. 3, the rear suspension bracket 4A can extend beyond the rear end of the guide 2, so that a guide can be mounted having a length which is, for instance, smaller than the distance between the uprights 58, 58A. Incidentally, it is observed that a design is of course also possible according to which the rear suspension bracket is fixed and the front suspension bracket is slidable or both suspension brackets are fixed.

[0036] Fig. 4 shows a further alternative embodiment of a first bracket part 126, with the slots 138 extending in a direction at right angles to the longitudinal direction P of the guide 102. The foot parts 140 of the slots 138 are then arranged near the side of the first flange part 130 directed upward during use. Furthermore, four attachment projections 114 are arranged side by side. Near the side of the guide 102 directed upward during use is a clamping projection 124 arranged. A first bracket part 126 as shown in Fig. 4 may be attached to the guide 102 in a manner comparable to the method described before. The foot parts 140 are placed over the attachment projections 114, after which the bracket part 126 is slid along the wall part 112 in the direction K, until the longitudinal edges 165 of the foot parts 140 abut against the longitudinal edge 168 of the clamping projection 124. In such an embodiment the forces acting in the slide-in and slide-out direction P of the guide are nearly completely taken up by the attachment projections 114.

[0037] Fig. 5 shows a further alternative embodiment of a first bracket part 226, with a slotted recess 238 being arranged on both sides of the first flange part 230. The wall part 212 is provided with at least two, preferably two juxtaposed pairs of superimposed attachment projections 214, which are provided with clamping parts 218 directed to each other. As shown in Fig. 5, the clamping parts 218 may lie over and on the longitudinal edges 262 of the slotted recesses 238, for enclosing the first flange part 230 in the directions other than in the slide-in direction P. Between the attachment projections 214 a clamping projection 24 can be arranged which, when the first flange part 230 is completely slid in, abuts against an edge 265 of an opening 240. Thus the suspension bracket 204 is fixed in any direction again. For use as a somewhat slidable suspension bracket the opening 240 may be left out, while the length N of the flange part 230 may have any desired length, which is, for instance, advantageous to increase the installation length.

[0038] The suspension brackets 4 may first be attached to the uprights 58, after which the guide 2 may be attached to the suspension brackets 4. This has the advantage that the suspension brackets 4 can be placed simply and with sufficient space before placing the guides. It is, however, also possible to first attach the suspension brackets 4 to the guides 2 and then fix the suspension brackets 4 onto the uprights 58. By using at least two spaced apart attachment projections (in the practical examples shown, four attachment projections 14, 114, 214) the advantage thus obtained is that rotation of the suspension brackets 4 with respect to the guides 2 is readily prevented, so that placement is even further simplified.

[0039] A telescopic guide according to the present invention can be placed very simply and rapidly, with prevention of mounting errors as a result of the unambiguous and simple positioning of the different parts with respect to each other. Moreover, placement is possible without special tools. Because the first flange part 30 is of flat design, this part can be easily formed from a flat plate part, while, moreover, the same suspension bracket, at least the same first bracket part, can be used for different guides, irrespective of the width thereof. A simple standardization is thereby obtained.

[0040] In a simplified form a suspension bracket 4 for use with a telescopic guide according to the present invention may also be of the one-piece type, with the second and third flange parts 32, 34 being rigidly interconnected, as shown in Fig. 3A. The suspension bracket 4 is then bent from one plate part, comprising a first flange part 30, a second flange part 32A and a third flange part 36, parallel to the first flange part 30.

[0041] The invention is in no way limited to the embodiments shown in the figures. Many variations are possible within the scope of the invention as laid down in the annexed claims.

[0042] Thus the attachment projections 14, 114, 214 may be formed in other ways, for instance attached to the rear wall part 12 or to another wall part, for instance by spot welding. Also, the attachment projections may have another form, and a clamping part 18, 118, 218 may engage on the side of the first flange part 30, 130, 230 facing away from the wall part 12. Besides, the clamping projections 24, 124, 224 may be arranged in other positions, for instance such that they can engage in a slot or such recess in or against a longitudinal edge and, moreover, the clamping projections may be somewhat elastic, such that placing and removing the suspension brackets 4 is even further simplified. Also, the slots may have another direction than is shown, for instance at 30 or 45 degrees with respect to the slide-out direction P of the guide, so that another slide-in direction is obtained. It will be clear that a guide according to the invention preferably comprises at least two spaced apart suspension brackets arranged in a comparable manner. In at least one position on the rear wall part 12 a larger series of regularly spaced apart clamping parts may then be provided, such that the

relevant suspension bracket can be arranged in different positions, so that the mutual distance between the suspension brackets 14 of one telescopic guide can be simply adapted to the mutual distance of the different uprights 58. Also, the attachment projections may engage in grooves in the side of a suspension bracket, and several clamping projections may be provided to enclose the suspension brackets in different positions. Furthermore, the angles enclosed between the different flange parts of the bracket parts may be chosen to be different from 90°, depending on the shape and position of the uprights onto which the brackets are to be mounted. These and comparable variations are deemed to fall within the scope of the invention defined by the claims.

Claims

1. A telescopic guide unit for attaching a drawer to a cabinet, comprising a cabinet section (6, 106, 206), a drawer section (8) slidable relative to said cabinet section in a longitudinal direction (P) and at least one suspension bracket (4, 4A, 104, 204), arranged to be connected to a wall part (12, 112, 212) of the cabinet section (6, 106, 206) for attaching said cabinet section (6, 106, 206) to a cabinet, wherein the cabinet section (6, 106, 206) comprises first mounting means and the or each suspension bracket comprises second mounting means, wherein:

- at least one of the mounting means comprises a wall part (12, 112, 212), provided with at least two attachment projections (14, 14A, 114, 214), each with a clamping part (18, 18A, 118, 218) and a back part (16, 116, 216), connecting the respective clamping parts to the relevant wall part (12, 112, 212) so as to be located at a distance from the wall part (12, 112, 212), and wherein
- the other mounting means are provided with attachment means (38, 138, 238) for cooperation with the attachment projections,

characterized in that

a space (22) is enclosed between each clamping part (18, 18A, 118, 218), back part (16, 116, 216) and wall part (12, 112, 212), having a height (D) between the wall part (12, 112, 212) and the clamping part (18, 18A, 118, 218), the height (D) being substantially equal to the thickness of the relevant attachment means (38, 138, 238; 62, 162, 262), such that the first and second mounting means can be interconnected so as to be at least substantially fixed in position and supporting, by at least partly sliding in the attachment means (38, 138, 238) between the clamping parts (18, 18A, 118, 218) of the at least two attachment projections (14, 14A, 114, 214) and the relevant wall part (12, 112, 212), in an

advancing direction (K, P); which extends approximately parallel to the longitudinal direction of the back parts (16, 116, 216), thereby preventing movement of the suspension bracket (4, 4A, 104, 204) relative to the cabinet section, in a direction other than the advancing direction (K, P).

2. A telescopic guide unit according to claim 1, wherein the first mounting means comprise the wall part (12, 112, 212) with the at least two attachments projection and the second mounting means comprise the attachment means (38, 138, 238; 62, 162, 262).
3. A telescopic guide unit according to claim 1 or 2, wherein the attachment projections are hook-shaped and are formed from the relevant wall part (12, 112, 212), the clamping parts (18, 18A, 118, 218) extending in opposite directions from the back parts (16, 116, 216), parallel to each other.
4. A telescopic guide unit according to any one of the preceding claims, wherein at least two spaced apart attachment projections (14, 14A, 114, 214) are provided for the at least one suspension bracket (4, 4A, 104, 204), wherein the relevant attachment means comprise at least two slotted recesses (38, 138, 238) for receiving the attachment projections (14, 14A, 114, 214), such that the clamping parts (18, 18A, 118, 218) of the attachment projections in attached position engage on a part of the longitudinal edge (62, 162, 262) of the relevant recesses (38, 138, 238).
5. A telescopic guide unit according to claim 4, wherein the slotted recesses are slots (38, 138, 238) provided in a flange part (30, 130, 230) of the relevant suspension bracket (4, 4A, 104, 204), which flange part (30, 130, 230) abuts against the relevant wall part (12, 112, 212) during use.
6. A telescopic guide unit according to claim 4, wherein the slotted recesses (38, 138, 238) in two opposite longitudinal edges are provided with a flange part (39, 162, 262) of the relevant suspension bracket, which flange part abuts against the wall part (12, 112, 212) during use.
7. A telescopic guide unit according to any one of the preceding claims, wherein the wall part (12, 112, 212) is provided with at least one clamping projection (24, 124, 224) which is arranged at a distance from the attachment projections (14, 14A, 114, 214) and, when the suspension bracket is mounted, can engage behind a longitudinal edge (66, 166), located behind in the advancing direction (K) of the suspension bracket, of the relevant suspension bracket (4, 4A, 104, 204) or of an opening or depression (140, 240) arranged therein, the arrangement being such

that the suspension bracket, at least a relevant part thereof, can pass the relevant clamping projection (24, 124, 224) in the advancing direction but after mounting is retained in the opposite direction by at least the clamping projection (24, 124, 224) against displacement.

8. A telescopic guide unit according to any one of the preceding claims, wherein the advancing direction (K) of the at least one bracket is substantially parallel to the slide-in and slide-out direction (P) of the telescopic guide, preferably in the same direction as the slide-out direction.
9. A telescopic guide unit according to any one of claims 1-7, wherein the advancing direction (K) of the at least one bracket extends substantially at right angles to the slide-in and slide-out direction (P) of the telescopic guide, preferably from below to above, seen in the position of use.
10. A telescopic guide unit according to any one of the preceding claims, wherein the or each suspension bracket (4, 4A, 104, 204) comprises a first and a second bracket part (26, 28), wherein the first bracket part (26) comprises at least two flange parts (30, 32) mutually making an angle, wherein a first flange part is provided with the attachment means (38, 138, 238; 62, 162, 262) and a second flange part (32) with first coupling means (44), wherein the second bracket part (28) is provided with second coupling means (54) for coupling with the first coupling means (44), the arrangement being such that adjustment of the position of the first (26) with respect to the second bracket part (28) is possible, while the second bracket part (28) is further provided with third coupling means (56) for coupling thereof with a cabinet frame or such cabinet part.
11. A telescopic guide unit according to any one of the preceding claims, wherein at least two suspension brackets (4, 4A, 104, 204) are provided per guide, wherein after mounting at least one of the suspension brackets (4, 4A, 104, 204) is connected with the guide so as to be fixed in position in any direction, while after mounting at least one other suspension bracket (4A) is slidable in coupled condition in the longitudinal direction (P) of the guide along the cabinet section.
12. A suspension bracket for a telescopic guide unit according to any one of the preceding claims, comprising a first flange part (30), a second flange part (32, 34; 32A) and a third flange part (36), the first and third flange parts (30, 36) being substantially parallel to each other, the first flange part (30) being provided with at least one substantially L-shaped slot (38) for slideably receiving clamping parts (18) of the cabinet

section of the guide unit, the third flange part (36) being provided with means (56) for connecting said suspension bracket to a cabinet.

13. A suspension bracket according to claim 12, comprising a first bracket part (26) and a second bracket part (28), both being of a substantially hooked design, the first bracket part (26) comprising the first flange part (30) and a second flange forming part (32), the second bracket part (28) comprising another second flange forming part (34) and the third flange part (36), connecting means (42, 44, 50, 52, 54) being provided for adjustably connecting the second flange part (32) to the third flange part (34).
14. A cabinet or such device, provided with at least one telescopic guide unit according to any one of claims 1 - 11.

Patentansprüche

1. Teleskopische Führungseinheit zur Befestigung eines Einschubs an einem Gehäuse, aufweisend einen Gehäuseabschnitt (6, 106, 206), einen relativ zu dem Gehäuseabschnitt in einer longitudinalen Richtung (P) verschiebbaren Einschubabschnitt (8) und mindestens einer Aufhängeklammer (4, 4A, 104, 204), die so eingerichtet ist, daß sie zur Befestigung des Gehäuseabschnitts (6, 106, 206) an dem Gehäuse mit dem Wandteil (12, 112, 212) des Gehäuseabschnitts (6, 106, 206) verbunden wird, wobei der Gehäuseabschnitt (6, 106, 206) erste Montagemitte aufweist und die oder jede Aufhängeklammer zweite Montagemitte aufweist, wobei mindestens eines der Montagemitte ein Wandteil (12, 112, 212) aufweist, das mit wenigstens zwei Befestigungsvorsprüngen (14, 14A, 114, 214) ausgestattet ist, jeder mit einem Klemmteil (18, 18A, 118, 218) und einem Hinterteil (16, 116, 216) ausgestattet, die die einzelnen Klemmteile (18, 18A, 118, 218) mit dem entsprechenden Wandteil (12, 112, 212) verbinden, um in einem Abstand von dem Wandteil (12, 112, 212) befindlich zu sein, und wobei die anderen Montagemitte zur Zusammenwirkung mit den Befestigungsvorsprüngen mit Befestigungsmitteln (38, 138, 238) versehen sind,
- dadurch gekennzeichnet,**
- daß** ein Raum (22) zwischen jedem Klemmteil (18, 18A, 118, 218), Hinterteil (16, 116, 216) und Wandteil (12, 112, 212) eingeschlossen ist, der eine Höhe (D) zwischen dem Wandteil (12, 112, 212) und dem Klemmteil (18, 18A, 118, 218) hat, wobei die Höhe (D) im Wesentlichen gleich der Dicke der entsprechenden Befestigungsmittel (38, 138, 238; 62, 162, 262) ist, so daß die ersten und zweiten Montagemitte miteinander verbunden werden können, um so wenigstens im Wesentlichen in einer Position befe-

stigt zu sein, und durch wenigstens teilweises Gleiten in die Befestigungsmittel (38, 138, 238) zwischen den Klemmteilen (14, 14A, 114, 214) und dem betreffenden Wandteil (12, 112, 212) in eine Vorrückungsrichtung (K, P) tragend zu sein, die sich annähernd parallel zur longitudinalen Richtung der Hinterteile (16, 116, 216) erstreckt, wodurch eine Bewegung der Aufhängeklammer (4, 4A, 104, 204) relativ zum Gehäuseabschnitt in eine andere Richtung als der Vorrückrichtung (K, P) verhindert wird.

2. Teleskopische Führungseinheit nach Anspruch 1, wobei das erste Montagemitte das Wandteil (12, 112, 212) mit mindestens zwei Befestigungsvorsprüngen aufweist und das zweite Montagemitte die Befestigungsmittel (38, 138, 238; 62, 162, 262) aufweist.
3. Teleskopische Führungseinheit nach den Ansprüchen 1 und 2, wobei die Befestigungsvorsprünge hakenförmig ausgebildet und aus dem betreffenden Wandteil (12, 112, 212) herausgeformt sind, und wobei sich die Klemmteile (18, 18A, 118, 218) in entgegengesetzte Richtungen von den Hinterteilen (16, 116, 216) parallel zueinander erstrecken.
4. Teleskopische Führungseinheit nach einem der vorhergehenden Ansprüche, wobei wenigstens zwei voneinander getrennte Befestigungsvorsprünge (14, 14A, 114, 214) für wenigstens eine Aufhängeklammer (4, 4A, 104, 204) vorgesehen sind, wobei die betreffenden Befestigungsmittel wenigstens zwei schlitzförmige Ausnehmungen (38, 138, 238) zur Aufnahme der Befestigungsvorsprünge (14, 14A, 114, 214) aufweisen, so daß die Klemmteile (18, 18A, 118, 218) der Befestigungsvorsprünge in befestigter Position in einen Teil der longitudinalen Kante (62, 162, 262) der betreffenden Ausnehmung (38, 138, 238) eingreifen.
5. Teleskopische Führungseinheit nach Anspruch 4, wobei die schlitzförmigen Ausnehmungen als Schlitzze (38, 138, 238) in einem Flanschteil (30, 130, 230) der betreffenden Aufhängeklammer (4, 4A, 104, 204) vorgesehen sind, wobei das Flanschteil (30, 130, 230) unter Anwendung gegen das betreffende Wandteil (12, 112, 212) stößt.
6. Teleskopische Führungseinheit nach Anspruch 4, wobei die schlitzförmigen Ausnehmungen (38, 138, 238) in zwei gegenüberliegenden longitudinalen Kanten mit einem Flanschteil (39, 162, 262) der betreffenden Aufhängeklammer versehen sind, wobei das Flanschteil unter Anwendung gegen das Wandteil (12, 112, 212) stößt.
7. Teleskopische Führungseinheit nach einem der vorhergehenden Ansprüche, wobei das Wandteil (12,

- 112, 212) mit wenigstens einem Klemmvorsprung (24, 124, 224) versehen ist, der in einem Abstand von den Befestigungsvorsprüngen (14, 14A, 114, 214) angeordnet ist, und der bei montierter Aufhängeklammer hinter eine longitudinale Kante (66, 166), die sich hinter der Vorrückrichtung (K) der Aufhängeklammer befindet, der betreffenden Aufhängeklammer (4, 4A, 104, 204) oder einer darin angeordneten Öffnung oder Vertiefung (140, 240) greifen kann, wobei die Anordnung derart ist, daß die Aufhängeklammer, wenigstens ein betreffender Teil davon, den betreffenden Klemmvorsprung (24, 124, 224) in der Vorrückrichtung passieren kann, aber nach der Montage in der entgegengesetzten Richtung wenigstens durch den Klemmvorsprung (24, 124, 224) gegen Verschiebungen zurückgehalten wird.
8. Teleskopische Führungseinheit nach einem der vorhergehenden Ansprüche, wobei sich die Vorrückrichtung (K) von wenigstens einer Klammer im Wesentlichen parallel zu der Vorschub- und Herausziehrichtung (P) der teleskopischen Führung, vorzugsweise in dieselbe Richtung wie die Herausziehrichtung erstreckt.
9. Teleskopische Führungseinheit nach einem der Ansprüche 1 bis 7, wobei sich die Vorrückrichtung (K) von wenigstens einer Klammer im Wesentlichen rechtwinkelig zu der Vorschub- und Herausziehrichtung (P) der teleskopischen Führung, vorzugsweise von unten nach oben bezüglich der Anwendungsposition erstreckt.
10. Teleskopische Führungseinheit nach einem der vorhergehenden Ansprüche, wobei die oder jede Aufhängeklammer (4, 4A, 104, 204) ein erstes und ein zweites Klammerteil (26, 28) aufweist, wobei das erste Klammerteil (26) mindestens zwei einen Winkel untereinander bildende Flanschteile (30, 32) aufweist, wobei ein erstes Flanschteil mit den Befestigungsmitteln (38, 138, 238; 62, 162, 262) versehen ist und das zweite Flanschteil (32) mit ersten Kopplungsmitteln (44) versehen ist, wobei das zweite Klammerteil (28) mit zweiten Kopplungsmitteln (54) zur Kopplung mit den ersten Kopplungsmitteln (44) versehen ist, wobei die Anordnung derart ist, daß ein Verstellen der Position des ersten (26) in Bezug zu dem zweiten Klammerteil (28) möglich ist, während das zweite Klammerteil (28) zudem mit dritten Kopplungsmitteln (56) zur Kopplung dieser mit dem Gehäuserahmen oder einem ähnlichen Gehäuseteil versehen ist.
11. Teleskopische Führungseinheit nach einem der vorhergehenden Ansprüche, wobei wenigstens zwei Aufhängeklammern (4, 4A, 104, 204) pro Führung vorgesehen sind, wobei nach der Montage wenigstens eine der Aufhängeklammern (4, 4A, 104, 204) mit der Führung verbunden ist, um so in ihrer Position in jeder Richtung festgelegt zu sein, während nach der Montage wenigstens eine andere Aufhängeklammer (4A) in gekoppeltem Zustand in die longitudinale Richtung (P) der Führung entlang des Gehäuseabschnitts verschiebbar ist.
12. Aufhängeklammer für eine teleskopische Führungseinheit nach einem der vorhergehenden Ansprüche, aufweisend ein erstes Flanschteil (30), ein zweites Flanschteil (32, 34; 32A) und ein drittes Flanschteil (36), wobei das erste und dritte Flanschteil (30 bzw. 36) im Wesentlichen parallel zueinander sind, wobei das erste Flanschteil (30) mit wenigstens einem im Wesentlichen L-förmigen Schlitz (38) zur Aufnahme von Klemnteilen (18) des Gehäuseabschnitts der Führungseinheit versehen ist, wobei das dritte Flanschteil (36) mit Mitteln (56) zur Verbindung der genannten Aufhängeklammer mit dem Gehäuse versehen ist.
13. Aufhängeklammer nach Anspruch 12, aufweisend ein erstes Klammerteil (26) und ein zweites Klammerteil (28), die beide hakenförmig ausgebildet sind, wobei das erste Klammerteil (26) das erste Flanschteil (30) und ein zweites einen Flansch bildendes Teil (32) aufweist, das zweite Klammerteil (28) ein weiteres zweites einen Flansch bildendes Teil (34) und das dritte Flanschteil (36) aufweist, und wobei Verbindungsmittel (42, 44, 50, 52, 54) zur verstellbaren Verbindung des zweiten Flanschteils (32) mit dem dritten Flanschteil (34) vorgesehen sind.
14. Gehäuse oder eine ähnliche Anordnung, versehen mit wenigstens einer teleskopische Führungseinheit nach einem der Ansprüche 1 bis 11.

Revendications

1. Unité de guidage télescopique pour fixer un tiroir sur une armoire, comprenant une section d'armoire (6, 106, 206), une section de tiroir (8), coulissante par rapport à ladite section d'armoire dans une direction longitudinale (P) et au moins un support de suspension (4, 4A, 104, 204) agencé pour être raccordé à une partie de paroi (12, 112, 212) de la section d'armoire (6, 106, 206) pour fixer ladite section d'armoire (6, 106, 206) sur une armoire, dans laquelle la section d'armoire (6, 106, 206) comprend des premiers moyens de montage et le ou chaque support de suspension comprend des seconds moyens de montage, dans laquelle :

au moins l'un des moyens de montage comprend une partie de paroi (12, 112, 212) prévue avec au moins deux saillies de fixation (14, 14A,

114, 214) chacune avec une partie de serrage (18, 18A, 118, 218) et une partie arrière (16, 116, 216), raccordant les parties de serrage respectives à la partie de paroi (12, 112, 212) qui s'y rapporte afin d'être situées à une certaine distance de la partie de paroi (12, 112, 212), et dans laquelle :

les autres moyens de montage sont prévus avec les moyens de fixation (38, 138, 238) pour la coopération avec les saillies de fixation,

caractérisée en ce que :

un espace (22) est enfermé entre chaque partie de serrage (18, 18A, 118, 218), la partie arrière (16, 116, 216) et la partie de paroi (12, 112, 212), ayant une hauteur (D) entre la partie de paroi (12, 112, 212) et la partie de serrage (18, 18A, 118, 218), la hauteur (D) étant sensiblement égale à l'épaisseur des moyens de fixation (38, 138, 238 ; 62, 162, 262) qui s'y rapportent, de sorte que les premiers et les seconds moyens de montage peuvent être interconnectés afin d'être au moins sensiblement fixés en position et supportés, de manière au moins partiellement coulissante dans les moyens de fixation (38, 138, 238) entre les parties de serrage (18, 18A, 118, 218) des au moins deux saillies de fixation (14, 14A, 114, 214) et la partie de paroi (12, 112, 212) qui s'y rapporte, dans une direction d'avancement (K, P) qui s'étend progressivement parallèlement à la direction longitudinale des parties arrière (16, 116, 216), empêchant ainsi le mouvement du support de suspension (4, 4A, 104, 204) par rapport à la section d'armoire, dans une direction différente de la direction d'avancement (K, P).

2. Unité de guidage télescopique selon la revendication 1, dans laquelle les premiers moyens de montage comprennent la partie de paroi (12, 112, 212) avec les au moins deux saillies de fixation et les seconds moyens de montage comprennent les moyens de fixation (38, 138, 238 ; 62, 162, 262).
3. Unité de guidage télescopique selon la revendication 1 ou 2, dans laquelle les saillies de fixation sont en forme de crochet et sont formées à partir de la partie de paroi (12, 112, 212) qui s'y rapporte, les parties de serrage (18, 18A, 118, 218) s'étendant dans des directions opposées à partir des parties arrière (16, 116, 216), parallèles entre elles.
4. Unité de guidage télescopique selon l'une quelconque des revendications précédentes, dans laquelle au moins deux saillies de fixation (14, 14A, 114, 214)

espacées sont prévues pour le au moins un support de suspension (4, 4A, 104, 204), dans laquelle les moyens de fixation appropriés comprennent au moins deux évidements fendus (38, 138, 238) pour recevoir les saillies de fixation (14, 14A, 114, 214) de sorte que les parties de serrage (18, 18A, 118, 218) des saillies de fixation en position fixée se mettent en prise sur une partie du bord longitudinal (62, 162, 262) des évidements (38, 138, 238) qui s'y rapportent.

5. Unité de guidage télescopique selon la revendication 4, dans laquelle les évidements fendus sont des fentes (38, 138, 238) prévues dans une partie de rebord (30, 130, 230) du support de suspension (4, 4A, 104, 204) qui s'y rapporte, laquelle partie de rebord (30, 130, 230) vient en butée contre la partie de paroi (12, 112, 212) qui s'y rapporte pendant l'utilisation.
6. Unité de guidage télescopique selon la revendication 4, dans laquelle les évidements fendus (38, 138, 238) dans deux bords longitudinaux opposés sont prévus avec une partie de rebord (39, 162, 262) du support de suspension qui s'y rapporte, laquelle partie de rebord vient en butée contre la partie de paroi (12, 112, 212) pendant l'utilisation.
7. Unité de guidage télescopique selon l'une quelconque des revendications précédentes, dans laquelle la partie de paroi (12, 112, 212) est prévue avec au moins une saillie de serrage (24, 124, 224) qui est agencée à une certaine distance des saillies de fixation (14, 14A, 114, 214) et, lorsque le support de suspension est monté, peut se mettre en prise derrière un bord longitudinal (66, 166) situé derrière la direction d'avancement (K) du support de suspension, du support de suspension (4, 4A, 104, 204) qui s'y rapporte ou d'une ouverture ou enfoncement (140, 240) agencée à l'intérieur, l'agencement étant tel que le support de suspension, au moins sa partie qui s'y rapporte, peut passer par la saillie de serrage (24, 124, 224) qui s'y rapporte dans la direction d'avancement mais après que le montage soit retenu dans la direction opposée par au moins la saillie de serrage (24, 124, 224) contre le déplacement.
8. Unité de guidage télescopique selon l'une quelconque des revendications précédentes, dans laquelle la direction d'avancement (K) du au moins un support est sensiblement parallèle à la direction de coulisement vers l'intérieur et de coulisement vers l'extérieur (P) du guide télescopique, de préférence dans la même direction que la direction de coulisement vers l'extérieur.
9. Unité de guidage télescopique selon l'une quelconque des revendications 1 à 7, dans laquelle la direc-

tion d'avancement (K) du au moins un support s'étend sensiblement en angle droit par rapport à la direction de coulissement vers l'intérieur et de coulissement vers l'extérieur (P) du guide télescopique, de préférence de dessous vers dessus, vu dans la position d'utilisation.

10. unité de guidage télescopique selon l'une quelconque des revendications précédentes, dans laquelle le ou chaque support de suspension (4, 4A, 104, 204) comprend une première et une seconde partie de support (26, 28), dans laquelle la première partie de support (26) comprend au moins deux parties de rebord (30, 32) réalisant mutuellement un angle, dans laquelle une première partie de rebord est prévue avec les moyens de fixation (38, 138, 238 ; 62, 162, 262) et une seconde partie de rebord (32) avec les premiers moyens de couplage (44), dans laquelle la première partie de support (28) est prévue avec les seconds moyens de couplage (54) pour le couplage avec les premiers moyens de couplage (44), l'agencement étant tel que le réglage de la position de la première partie (26) par rapport à la seconde partie de support (28) est possible, alors que la seconde partie de support (28) est en outre prévue avec des troisièmes moyens de couplage (56) pour leur couplage avec un châssis d'armoire ou une telle partie d'armoire.
11. Unité de guidage télescopique selon l'une quelconque des revendications précédentes, dans laquelle on prévoit au moins deux supports de suspension (4, 4A, 104, 204) par guide, dans laquelle après le montage, au moins l'un des supports de suspension (4, 4A, 104, 204) est raccordé avec le guide afin d'être fixé en position dans n'importe quelle direction, alors qu'après le montage, au moins un autre support de suspension (4A) peut coulisser en condition couplée dans la direction longitudinale (P) du guide le long de la section d'armoire.
12. Support de suspension pour une unité de guidage télescopique selon l'une quelconque des revendications précédentes, comprenant une première partie de rebord (30), une seconde partie de rebord (32, 34 ; 32A) et une troisième partie de rebord (36), les première et troisième parties de rebord (30, 36) étant sensiblement parallèles l'une par rapport à l'autre, la première partie de rebord (30) étant prévue avec au moins une fente (38) sensiblement en forme de L pour recevoir par coulissement les parties de serrage (18) de la section d'armoire de l'unité de guidage, la troisième partie de rebord (36) étant prévue avec des moyens (56) pour raccorder ledit support de suspension à une armoire.
13. Support de suspension selon la revendication 12, comprenant une première partie de support (26) et

une seconde partie de support (28), les deux ayant une conception sensiblement en forme de crochet, la première partie de support (26) comprenant la première partie de rebord (30) et une seconde partie de formation de rebord (32), la seconde partie de rebord (28) comprenant une autre seconde partie de formation de rebord (34) et la troisième partie de rebord (36), des moyens de raccordement (42, 44, 50, 52, 54) étant prévus pour raccorder de manière réglable la seconde partie de rebord (32) à la troisième partie de rebord (34).

14. Armoire ou un tel dispositif, prévue avec au moins une unité de guidage télescopique selon l'une quelconque des revendications 1 à 11.

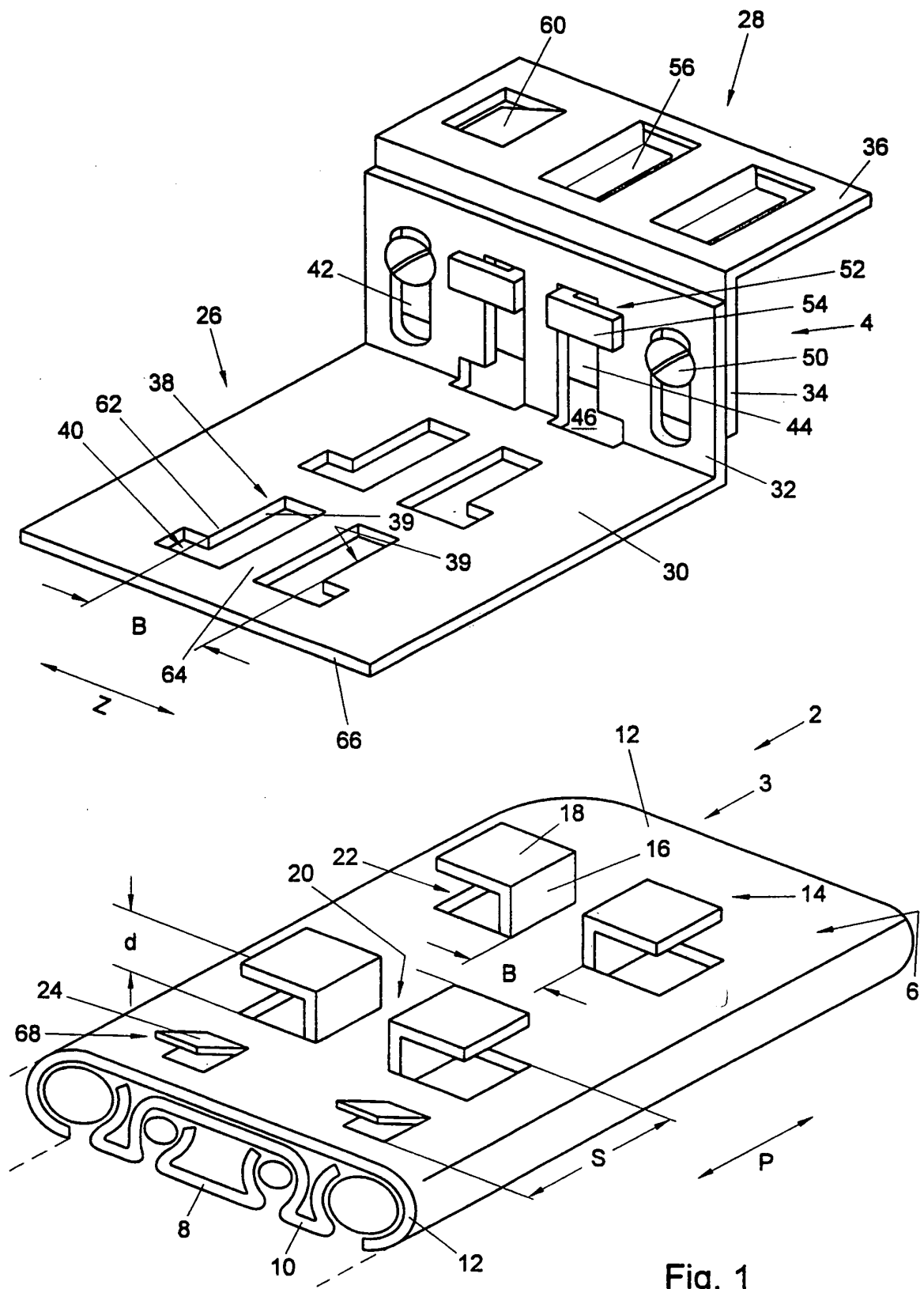


Fig. 1

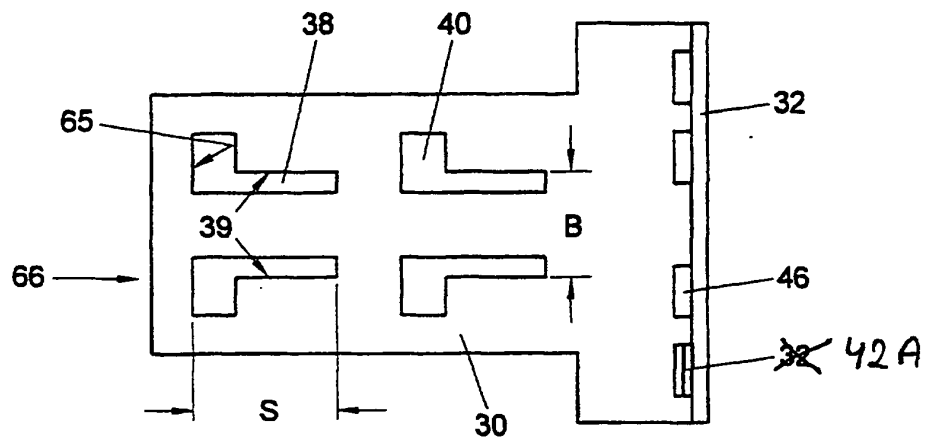


Fig. 2

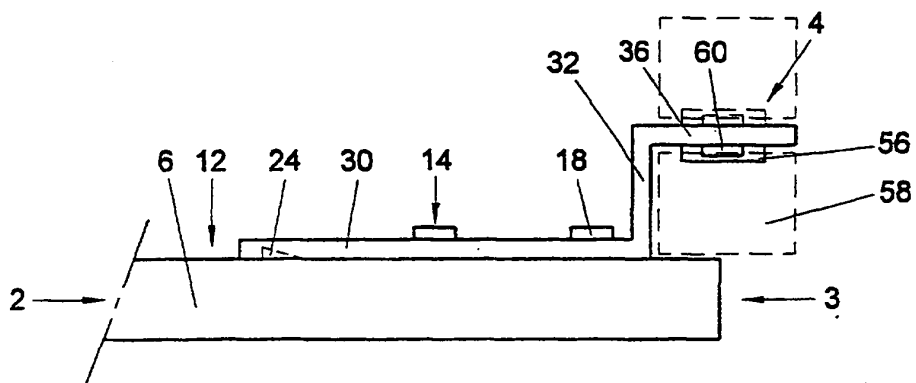


Fig. 3A

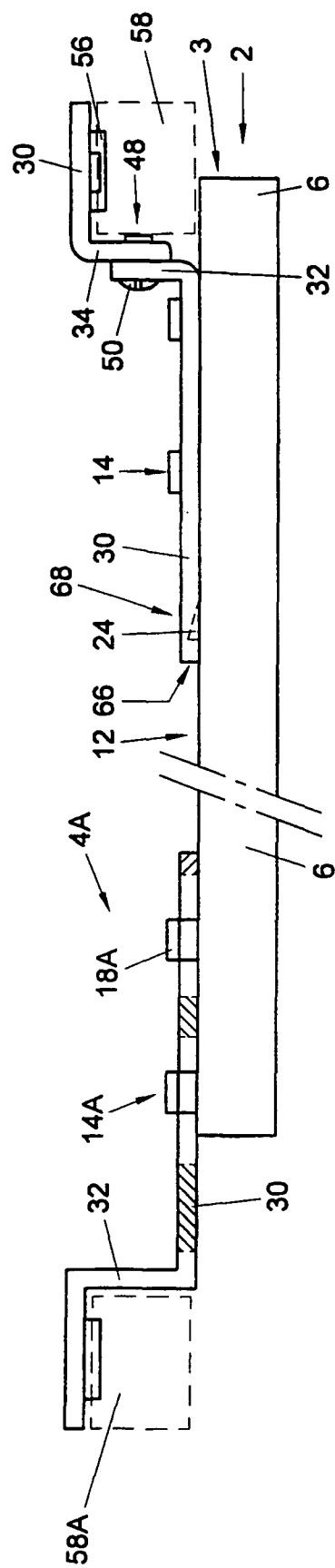


Fig. 3

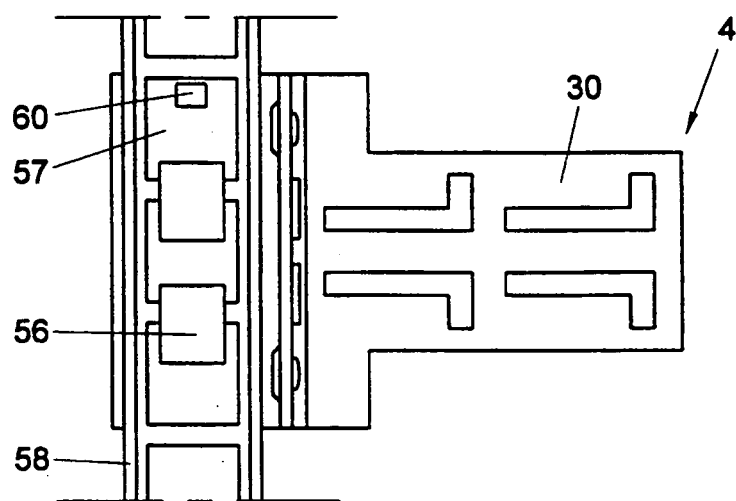


Fig. 3B

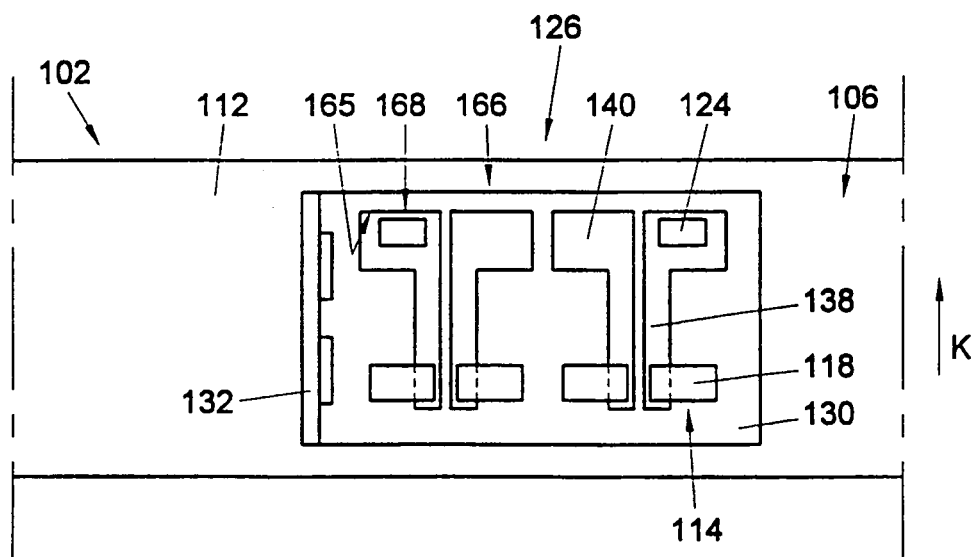


Fig. 4

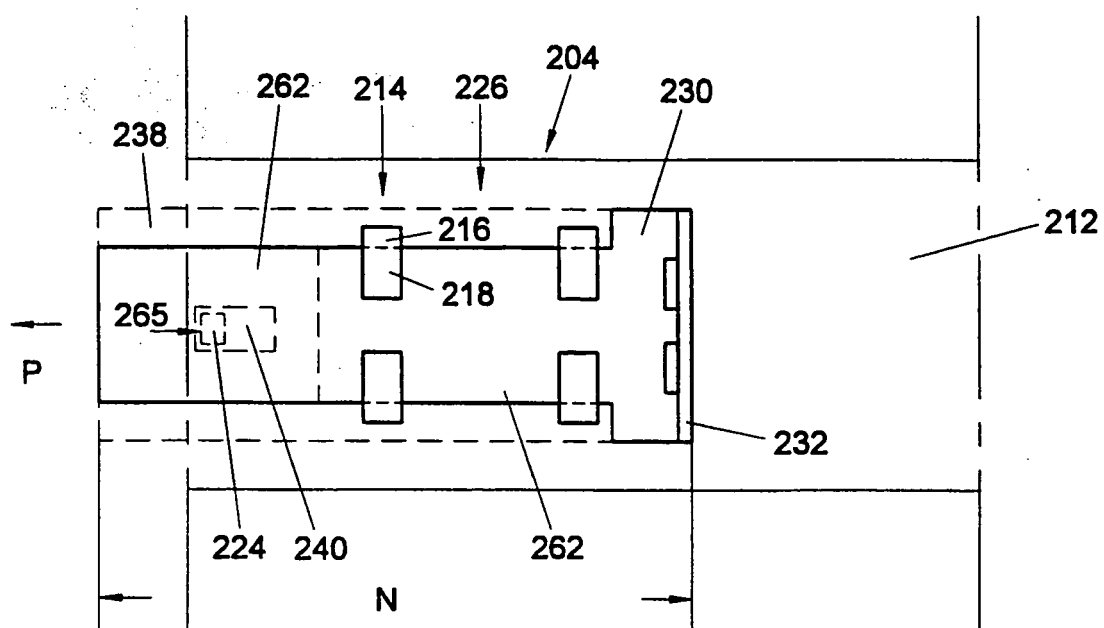


Fig. 5