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(54) Assembly of drawer elements, carrying and running rails and a casing

(57) An assembly of at least one drawer element, two carrying and running rails and a casing, the carrying and running rails each comprising at least one casing section and a drawer section adjustably connected therewith in the longitudinal direction, each casing section comprising first fastening means for fastening it to the casing, each drawer section comprising second fas-

tening means, and the or each drawer element comprising counter-fastening means, which second fastening means and counter-fastening means can be brought to coupling cooperation by moving the relevant casing element with respect to the drawer sections in a direction approximately opposite to the slide-out direction of the carrying and running rails.

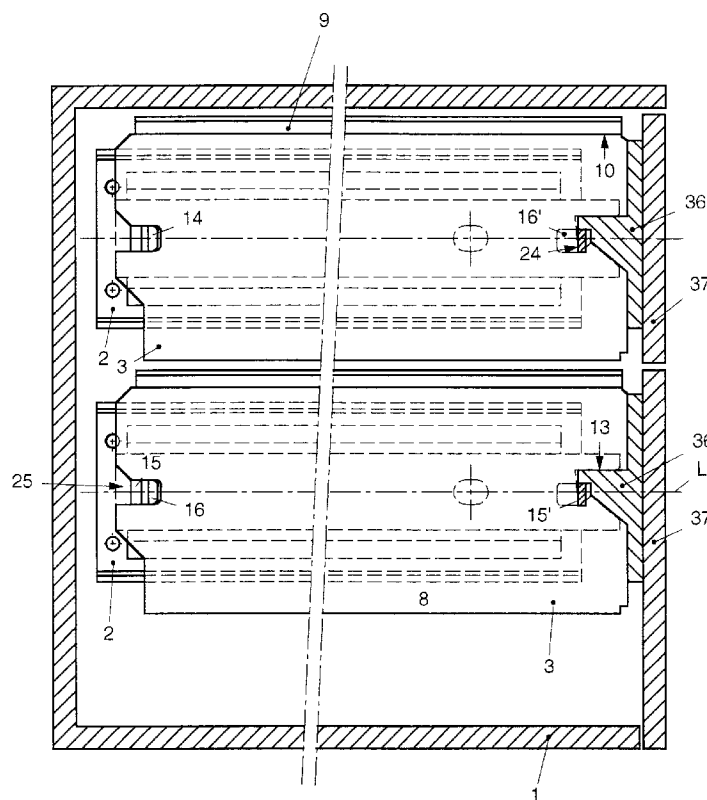


Fig. 1

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Description

The invention relates to an assembly according to the preamble of claim 1. Such an assembly is known from practice.

In the known assembly the drawer elements are fitted between two carrying and running rails arranged on both sides of the drawer and connected with the walls of the casing. When pulling out the drawer element, two or more substantially C-shaped sections slide one along the other with the interposition of ball bearings. Each outer section, to be referred to as casing section, is suitably fastened to the casing, e.g. by means of clamps, bolts or such a connecting technique. Each inner section, to be referred to as drawer section, is fastened to the drawer element and has a carrying function. An intermediate section can be interposed between the casing section and the drawer section to increase the slide-out length of the carrying and running rail.

To fasten the drawer element to the drawer sections, the side walls of the drawer element are provided with openings, and the drawer sections comprise lips to be inserted into the openings. The lips are bent to a U shape and define an upwardly open insert space. The drawer elements are kept for placing between the drawer sections, with the lips below the openings, following which the drawer element is pushed downwards over the lips. Each lip is squeezed so as to be clampingly fixed around the portion of the relevant side wall above the relevant opening, thereby positioning and somewhat securing the drawer element. The drawer element can now be pushed in, together with the carrying drawer section.

This known fastening method has a number of drawbacks. Thus, for instance, pairs of carrying and running rails mounted within the casing on opposite sides will always be positioned a little farther apart than the width of the drawer element to be placed so as to effect a smoother running of the drawer. This means, however, that the casing sections must be slightly pressed towards each other during placing of the drawer element. This is not easy, in particular not because, moreover, the whole weight of the drawer element must be carried at the same time by the person placing the element. Furthermore, finding the openings and placing the clamps therein is a complicated operation requiring experience. A further drawback is that for placing the drawer element the carrying and running rails must be brought to the pull-out position to enable placing. This means additional operations to be carried out by the mechanic, which is especially disadvantageous in case of industrial processing. When the carrying and running rails are pushed in, positioning of the openings above the carrying clamps is hardly possible, certainly when the available space left above and/or below the drawer is only small, e.g. because a series of drawer elements has already been arranged. Especially when each drawer element is already provided with a front end, placing of a

drawer element is not possible when the carrying and running rails are pushed in, because during placing the drawer element must be moved vertically over a relatively large distance. This would therefore mean that the front ends of different drawer elements collide with each other and render placing of the drawer elements impossible.

The object of the invention is to provide an assembly of the type described in the preamble of the main claim, while avoiding the above drawbacks and retaining the advantages thereof. For this purpose, an assembly according to the invention is characterized by the features of the characterizing clause of claim 1.

Since in an assembly according to the invention a drawer element can be coupled to the carrying and running rails by means of a movement approximately parallel to the slide-in direction of the carrying and running rails, it is ensured that substantially no vertical movement of the drawer element is needed for coupling. Thus, different drawer elements can be placed close together with the carrying and running rails in the slid-in position, also when the drawer elements are already provided with a front end. Moreover, during coupling at least part of the drawer element can then be carried by the carrying and running rails. This has the advantage that placing requires less energy and force and can be carried out in a self-aligning manner and, in addition, more rapidly. Moreover, the drawer sections need no longer be pressed towards each other.

In an advantageous embodiment an assembly according to the invention is characterized by the features of claim 2.

When using such an assembly, a drawer element can be carried during placing by the casing section, while, during use, that is to say in coupled condition, it is clear of the casing section and is only carried by the drawer sections, which, anyway, are of course supported on or within the casing sections. This means that the casing section may have the largest cross-section and may at least partly enclose the other, smaller sections (intermediate sections, drawer sections) at the top side and the underside. This means that there can be used a rigid assembly of slidable sections loaded in the most favourable manner. Other carrying and running rail structures may also be used for that matter, e.g. a structure in which the casing section and the drawer section are carried on respectively the top side and the underside of an intermediate section.

In a further embodiment an assembly according to the invention is characterized by the features of claim 5.

When using such an embodiment, the first and second lips are placed against respectively the first and second run-on surfaces. Subsequently, the drawer element is pushed through in the slide-in direction of the carrying and running rails. The first lip thereby moves up rearwards along the first run-on surface and the second run-on surface moves up along the second lip. This means that during the horizontal movement the drawer element

carries out a slight vertical movement. When pushing through, the first lip falls from the first run-on surface into the cutout behind it and is thereby secured against withdrawal. As a result of the slight vertical movement, it is ensured that the drawer element comes loose from the sections everywhere, other than the surface of the drawer section facing it. Besides, the run-on surfaces may also extend approximately parallel to the direction of movement of the carrying and running rails, thereby nearly completely avoiding the vertical movement of the drawer element.

In a further embodiment such an assembly is further characterized by the features of claim 6.

By using a mirror symmetric embodiment, the same carrying and running rail can be used on both sides of the drawer element, which is advantageous both from a viewpoint of manufacturing technique and from a viewpoint of assembling and is also favourable from an economic viewpoint.

The invention further relates to a carrying and running rail and to a drawer element, apparently intended for use in an assembly according to the invention.

The invention also relates to a method of mounting a number of drawer elements within an assembly according to the invention, which method is characterized by the features of claim 13.

This method has the advantage that a number of drawer elements can be placed within a casing in at least substantially mounted condition, without the necessity of pulling out the carrying and running rails and using an undesirable amount of force and precision. This means that this method is economically and ergonomically advantageous.

In explanation of the invention, exemplary embodiments of an assembly will be described, with reference to the accompanying drawings. In these drawings:

Fig. 1 is a cut-through side view of a portion of an assembly according to the invention;

Fig. 2 is a top, rear and side view of a carrying and running rail, viewed from the side of the drawer section;

Fig. 2A is a magnified view of the rear portion of the side wall of a casing element;

Fig. 2B is a magnified view of the front portion of a drawer section;

Fig. 3 is a side view, in three steps, of fitting a drawer element on the carrying and running rails, while the casing and intermediate sections are left out, for clarity's sake; and

Fig. 4 is an alternative, substantially symmetric embodiment of a drawer section in a carrying and running rail according to the invention.

Fig. 1 is a cut-through side view of an assembly according to the invention comprising a casing 1, a carrying and running rail 2 and a drawer element 3 in the form of a suspension frame for suspended files. Each carry-

ing and running rail 2 comprises an outer section, to be referred to as casing section 4, a middle section, to be referred to as intermediate section 5, and an inner section, to be referred to as drawer section 6. Outer is to be understood as situated near the casing 1. The casing section 4 and the intermediate section 5 are shown in Fig. 1 partly in broken lines, for clarity's sake. The drawer section 6 has a relatively small height and is slidably received within the intermediate section 5 by means of a number of balls 7. The intermediate section 5 is slidably received within the casing section 4 by means of a number of balls 7. The casing section therefore has the greatest height and covers, at least at the top and the underside, the two other sections 5, 6. This structure of a carrying and running section is commonly known and is only described by way of example. Many variations are possible within the scope of the invention, e.g. other commercially sold carrying and running rails.

Each drawer section 6 comprises fastening means 11 (Fig. 2, 2B), which will be explained below in more detail. The drawer element 3 comprises a circumferential wall 8, which, during use, extends approximately in a vertical plane, and, at the upper longitudinal edge on two opposite sides 9, comprises an outwardly bent carrying edge 10. The sides 9 comprise counter-fastening means 12 (Fig. 3, 2A), which will be explained below in more detail. The drawer element 3 has a width which approximately corresponds to the distance between the carrying and running rails 2 arranged within the casing 1 on opposite sides. The drawer element can be suspended loosely on the carrying and running rails 2 by means of the carrying edge 10, so that, during coupling with the drawer sections, the drawer element need not be carried by the mechanic. This makes placing simple and easily feasible, in an ergonomically advantageous manner.

The fastening means 11 and counter-fastening means 12 are of such design that they can be coupled by moving them with respect to each other. This is to be understood as follows.

The fastening means 11 comprise a forwardly open first recess 13 arranged near the front end of each drawer section 6 and a first lip 14 arranged near the rear end of the drawer section and, during use, extending in the direction of the drawer element. The first lip 14 has a body 15 extending in a vertical plane, which body 15 comprises at the end away from the drawer section 6 a forwardly bent end part 16 extending approximately parallel to the plane of the drawer section 6. The distance between the side of the end part 16 facing the drawer section 6 or the side of the drawer section 6 facing the end part 16 is only slightly smaller than the plate thickness of the side wall 8 of the drawer element 3, so that it can be clampingly received between them. The shape and dimensions of the first recess 13 and the first lip 14 will be explained below in more detail.

Near the front end of each side wall 8 of the drawer element 3 the counter-fastening means 12 comprise an

outwardly extending second lip 24, that is to say extending, during use, in the direction of the adjacent casing section 4, and near the rear end of each side wall 8 the counter-fastening means 12 comprise a rearwardly open second recess 25. At least as regards shape, the second lip 24 substantially corresponds to the first lip 14, the bent-over part 16' extending in the rearward direction. The shape and dimensions of the first 13 and the second recess 25 and the first 14 and the second lip 24 will now be explained in more detail in connection with each other.

The lower longitudinal edge 17 of the first recess 13 forms a first run-on surface 18 and a cutout 19 with a bottom 20 situated behind it. The front end 21 of the first run-on surface 18 lies lower than the bottom 20 of the cutout 19, the rear end 22 of the first run-on surface 18 situated near the cutout 19 lies higher than the bottom 20. The upper longitudinal edge 23 of the first recess 13 is approximately horizontal and lies at a distance A above the second end 22 of the first run-on surface 18, which distance A approximately corresponds to, but is not smaller than the height B of the second lip 24. The second lip 24 can therefore pass between the second end 22 and the upper longitudinal edge 23 upright in the horizontal direction. The dimensions of the cutout 19 are such that the second lip 24 can rest on the bottom 20 and is then retained between the front upright edge 26 of the cutout 19 and the rear longitudinal edge 27 of the first recess 13. Once at least partly received in the cutout 19 (Fig. 1, 3C), into which position the second lip 24 can be brought in a manner described below in more detail, the second lip 24 can no longer be moved in a horizontal direction without first bringing it to above the second end 22 of the first run-on surface 18. In fact, the second lip 24 will otherwise strike the front upright edge 26 or the rear longitudinal edge 27. The part 28 of the casing section 6 of the drawer element 3 extending behind the rear longitudinal edge 27 is then clampingly retained between the bent-over part 16' of the second lip 24 and the outside of the side wall 8 of the drawer element 3.

The upper longitudinal edge 29 of the second recess 25 comprises a second run-on surface 30 and a horizontal part 31 adjoining it at the front side. The lower longitudinal edge 32 of the second recess 25 is approximately horizontal and lies at a distance C from the horizontal part 31 of the upper longitudinal edge 29, which distance C approximately corresponds to, but is not smaller than the height D of the body 15 of the first lip 14. The slant of the second run-on surface 30 is so directed that the second recess 25 tapers over the length of the second run-on surface 30 in the forward direction. In the coupled position of the drawer element 3 and the drawer section 6, shown in Figs. 1 and 3C, in which the second lip 24 is at least partly received in the first recess 13, the first lip 14 is fittingly received between the horizontal part 31 of the upper longitudinal edge 29, the lower longitudinal edge 32 and the front longitudinal edge 33 of the second recess 25. The part 34 of the side wall

8 extending before the front longitudinal edge 33 is then clampingly received between the forwardly bent part 16 of the first lip 14 and the drawer section 6. In this position the drawer element 3 can be moved between a completely slid-in position and a completely slid-out position, supported by the carrying and running rails 2 extending on both sides thereof.

The distance between the underside of at least the body 15' of the second lip 24 and the underside of the carrying edge 10 is greater than the distance between the bottom 20 of the cutout 19 and the top side of the casing section 4, but is smaller than the distance between the front end 21 of the first run-on surface 18 and the top side of the casing section 4, when the carrying and running rails 2 are mounted. The distance between the top side of at least the body 15 of the first lip 14 and the top side of the casing section 4 is smaller than the distance between the horizontal part 31 of the upper longitudinal edge 29 of the second recess 25 and the underside of the carrying edge 10, while the distance between the rear end 35 of the second run-on surface 30 and the underside of the carrying edge 10 is smaller than the distance between the top side of at least the body 15 of the first lip 14 and the top side of the casing section 4. The distance between the front longitudinal edge 33 of the second recess 25 and the side of the body 15' of the second lip 24 facing the second recess 25 approximately corresponds to the distance between the rear longitudinal edge 27 of the first recess 13, at least at the level of the bottom 20, and the side of the body 15 of the first lip 14 facing the first recess 13.

These distances enable easy coupling of the drawer element 3 and the drawer section 6, as will be explained with reference to the accompanying drawings, in particular Figs. 3A - 3C, in which it is indicated how an assembly according to the invention can be used.

A casing 1 is provided on the inner side in opposite positions with carrying and running rails 2, which are fastened to the casing 1 in the conventional manner, e.g. with clamps. The carrying and running rails 2 can then be brought to or kept in the slid-in position, although they may also be brought to a partly or completely slid-out position.

Fig. 3A shows the drawer element 3, with the carrying edge 10 being laid on the top sides 40 of the casing sections 4. For simplicity's sake, reference will always be made to only one side of the assembly. It will be clear that on the other side a coupling is automatically effected in a comparable manner. The carrying and running rails 2 are completely pushed in and carry the weight of the drawer element 3, at least substantially. The first lip 14 lies with the top side of the body 15 against the second run-on surface 30, the second lip 24 lies with the underside of the body 15' against the first run-on surface 18.

Subsequently, the drawer element 3 is forced in the rearward direction, to the position shown in Fig. 3B. The second run-on surface 30 is then pushed up along the

first lip 14 in the rearward direction, while the second lip is pushed up along the first run-on surface 18 in the rearward direction. In the position shown in Fig. 3B, the second lip 24 is situated above the second end 22 of the first run-on surface 18 and substantially lies against the upper longitudinal edge 23 of the first recess 13. During moving up the second lip 24 and the second run-on surface 30 the drawer element 3 of course has also moved up, in a manner such that the carrying edge 10 has come loose from the top side of the casing section 4.

When the drawer element 3 is moved further rearwardly from the position shown in Fig. 3B to the position shown in Fig. 3C, the second lip 24 falls on the bottom 20 of the cutout 19, while the first lip 14 is fittingly received in the earlier described position against the front longitudinal edge 33 of the second recess 25. In this position the drawer element extends approximately horizontally and is brought to the coupled position. During a forward movement of the drawer element 3 the drawer section 6 moves simultaneously over the same distance, while the intermediate section 5 moves simultaneously, e.g., over half the distance and the casing section 4 remains stationary, at least viewed with respect to the drawer element. Besides, the intermediate section may also remain stationary, at least in the first instance.

To prevent the drawer element from inadvertently coming loose from the drawer section 6, which would be possible when somewhat lifting it and then pulling it forwards, there is provided in the position shown in Fig. 3C a locking means 36 which can be fittingly received in the first recess 13 between the top side of the second lip 24 and the upper longitudinal edge 23 of the first recess 13. Only after removal of this or each locking means 36 the drawer element 3 can be detached again from the carrying and running rails 2 in a manner opposite to the manner described above, that is to say in the sequence of Figs. 3C, 3B, 3A. Since when the carrying and running rails 2 are completely pushed in, the first recess 13 is largely situated before the front edge of the intermediate section 5 and the drawer section 4, the locking means 36 can simply be inserted from its side. Therefore, also when pulling out the drawer element 3, it will continuously be carried by the carrying and running rails 2, which is of course ergonomically advantageous.

As appears from the drawings, the vertical movement of the drawer element 3 between the position in Fig. 3B and the position in Fig. 3C is very small. This means that already before placing the drawer element 3 between the carrying and running rails 2 a front 37 can be fastened thereto, also when other drawer elements 3 are already placed in the casing 1. In fact, unlike in the known assemblies, the fronts will not prevent placing, while the carrying and running rails 2 need not be pushed out prior to placing. This means that the drawer elements can be completely finished before placing.

Fig. 4 shows an alternative embodiment of the first recess 113. In this embodiment the recess 113 is mirror

symmetric with respect to the diameter L of the drawer section 106. This means that identical drawer sections 106, and therefore identical carrying and running rails 102 on both sides of the drawer element 103, can be used, which means that per casing only one type of carrying and running rails 102 needs to be used, which is advantageous from a viewpoint of production technique and economy. In fact, assembly faults are avoided and only one type of carrying and running rails 102 needs to be produced and kept in store.

In a variant of embodiment, not shown, the drawer section 6, 106 comprises the second lip and the second recess, while the side walls 8 of the drawer element 3, 103 each comprise a first lip and a first recess. Moreover, carrying and running rails of another type may of course be used, with which comparable fastening means 11 and counter-fastening means 12 can be used.

The invention is in no way limited to the embodiments shown in the drawings and described in the specification. Many variations are possible.

Thus, for instance, the counter-fastening means 12 may be mounted as separate plate members or combined on a strip or the like against a side wall of a drawer element, e.g. when the drawer element is a wooden or plastic casing. The fastening means, too, may be mounted as separate plate members or combined on a strip or the like. In the exemplary embodiment shown, the carrying edge is obtained by bending over a plate member and extends along the full length of the side wall. Of course, it may also be interrupted or extend along only a portion of the side wall, while separately arranged carrying means may be used, such as clamps or blocks, and in particular with thick-walled side walls of, e.g., wood or plastic, the carrying edge may be provided as a profiled portion in the side wall. Besides, the fastening means 11 and the counter-fastening means 12 may be arranged in positions other than those shown in the drawings. Thus, for instance, the second recess may be provided at some distance from the back of the side wall of the drawer element, with a slotted recessed portion extending in the longitudinal direction of the side wall between the second recess and the back of the side wall, the arrangement being such that the first lip can move through the slot when placing the drawer element and can then be included in the second recess. This enables a number of drawer elements 3, 103 of different lengths to be mounted with one length of running and carrying rails 2. The run-on surfaces 18, 30 may have another and different angle of inclination. Thus, for instance, the angle of inclination may be approximately 0°, that is to say the run-on surfaces extend approximately parallel to the slide-in and the slide-out direction of the carrying and running rails. The running and carrying rails may additionally comprise only one casing section and one drawer section or several intermediate sections. Furthermore, all types of drawer elements other than drawer elements for suspended files may be used, e.g. drawer elements with a bottom.

These and many comparable adaptations and variations are deemed to fall within the scope of the invention.

Claims

1. 1. An assembly of at least one drawer element, two carrying and running rails and a casing, said carrying and running rails each comprising at least one casing section and one drawer section adjustably connected therewith in the longitudinal direction, each casing section comprising first fastening means for fastening it to the casing, each drawer section comprising second fastening means and the or each drawer element comprising counter-fastening means, characterized in that the second fastening means and the counter-fastening means can be brought to coupling cooperation by moving the relevant casing element with respect to the drawer sections in a direction approximately opposite to the slide-out direction of the carrying and running rails.
2. An assembly according to claim 1, characterized in that the or each drawer element comprises supporting elements for supporting the drawer element in the uncoupled position on the top side of said running and carrying rails, said second fastening means and said counter-fastening means comprising run-on surfaces such that when coupling the drawer element with the drawer sections the drawer element is slightly moved up, with the supporting means coming loose from the carrying and running rails.
3. An assembly according to claim 1 or 2, characterized in that in the slide-out direction of the carrying and running rails the second fastening means and the counter-fastening means comprise recesses and lips or such projecting parts arranged behind each other, which recesses are at least partly forwardly or rearwardly open, at least one of said recesses comprising retaining means for retaining a lip in the recess, in a manner such that the drawer sections can be coupled with the drawer element by inserting the lips into the recesses and retaining them by means of the or each retaining means.
4. An assembly according to claims 2 and 3, characterized in that the or each run-on surface is at least partly formed by at least one longitudinal edge of at least one recess on each side of the drawer element, the or each retaining means being formed by a cutout behind the high side of the run-on surface, which cutout, during coupling of the drawer element with the carrying and running rails, can receive at least part of the lip inserted into the recess, in a manner such that it cannot be pulled out of the re-

cess other than through a simultaneous or preceding vertical, at least upwardly directed movement.

5. An assembly according to claim 3 or 4, characterized in that at the end which, during use, is the front end each drawer section comprises a forwardly open first recess, at least the lower longitudinal edge forming a first run-on surface, said first run-on surface adjoining a cutout having a bottom surface situated at a height between the level of the front end and that of the rear end of the relevant first run-on surface, said drawer section, near the end which, during use, is the rear end, comprising a first lip displaced in the direction away from the casing section, a side face of the or each drawer element which, during use, abuts on the drawer section comprising near the front side an outwardly displaced second lip, which second lip can be inserted from the front side into the first recess to reach a position in which it is at least partly received in the cutout behind the first run-on surface, the side face near the rear side, at least at a distance from the second lip which is approximately equal to the distance between the first recess and the first lip, comprising a second recess, which second recess is rearwardly at least partly open, with at least the upper longitudinal edge of the second recess forming a second run-on surface, into which second recess the second lip can be inserted, simultaneously with inserting the first lip into the first recess.
6. An assembly according to claim 5, characterized in that at least each drawer section and preferably each carrying and running rail is at least substantially mirror symmetric with respect to a centre longitudinal plane, parallel to the pull-out direction.
7. An assembly according to claim 5 or 6, characterized in that each first recess, when the carrying and running rails are slid in completely, is substantially situated before the front longitudinal edge of the sections other than the drawer section.
8. An assembly according to any one of claims 5 - 7, characterized in that the top side of each drawer section is situated lower than the upper edge of each casing section, each side wall comprising supporting means for supporting the drawer element in uncoupled condition on the top side of the casing section, with the lips, the cutouts and the run-on surfaces being so positioned that the supporting means are situated at the drawer element in the condition coupled with the carrying and running rails at some distance above said top side of the casing section, in a manner such that, during use, the drawer element does not abut on the casing section.

9. An assembly according to any one of the preceding claims, characterized in that there are provided locking means for locking in the coupled position the possibilities of movement of the drawer element with respect to at least each drawer section, at least in the vertical direction. 5
10. An assembly according to any one of the preceding claims, characterized in that the or each drawer element is a suspension frame for suspended files. 10
11. A carrying and running rail, apparently intended for use in an assembly according to any one of the preceding claims. 15
12. A drawer element, apparently intended for use in an assembly according to any one of claims 1 - 10.
13. A method of mounting a number of drawer elements within an assembly according to any one of claims 1 - 10, wherein a pair of carrying and running rails is always arranged in opposite positions within a casing in a completely slid-in position, following which a drawer element is supported on the top side of the casing sections and slid over the carrying and running sections within the casing in an approximately horizontal direction, fastening and counterfastening means being brought to coupling cooperation with each other, in a manner such that the drawer element is secured in a fixed position with respect to at least the drawer sections and is clear of the other sections, in particular of the casing sections and each intermediate section, if any. 20 25 30

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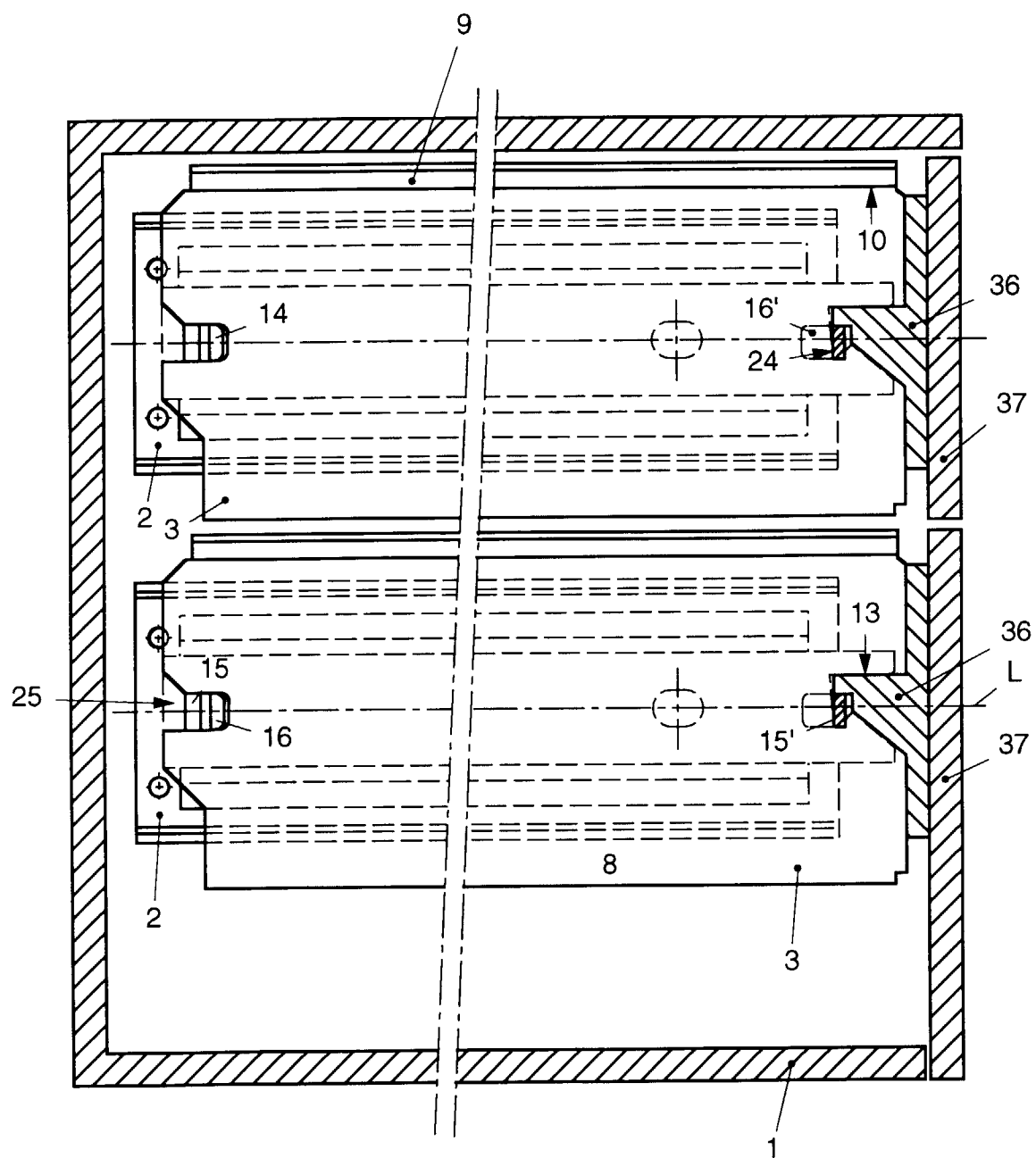
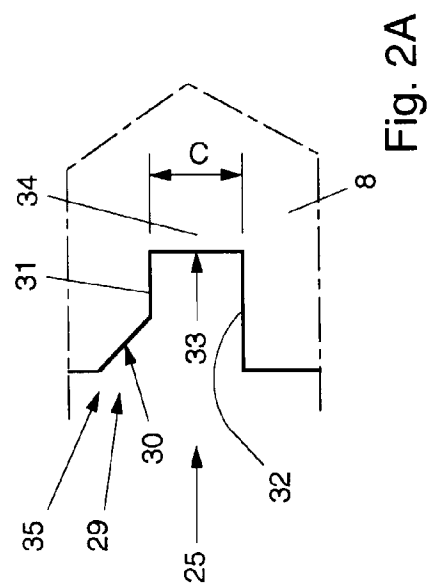
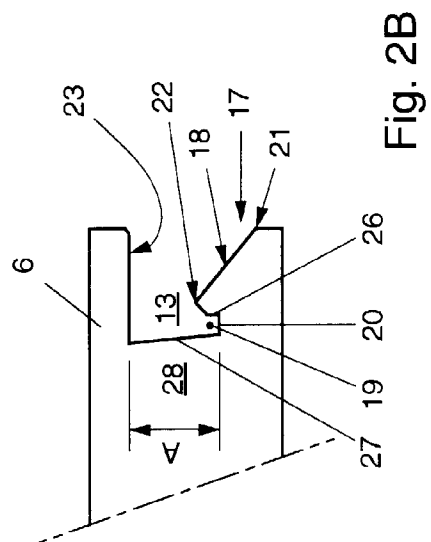
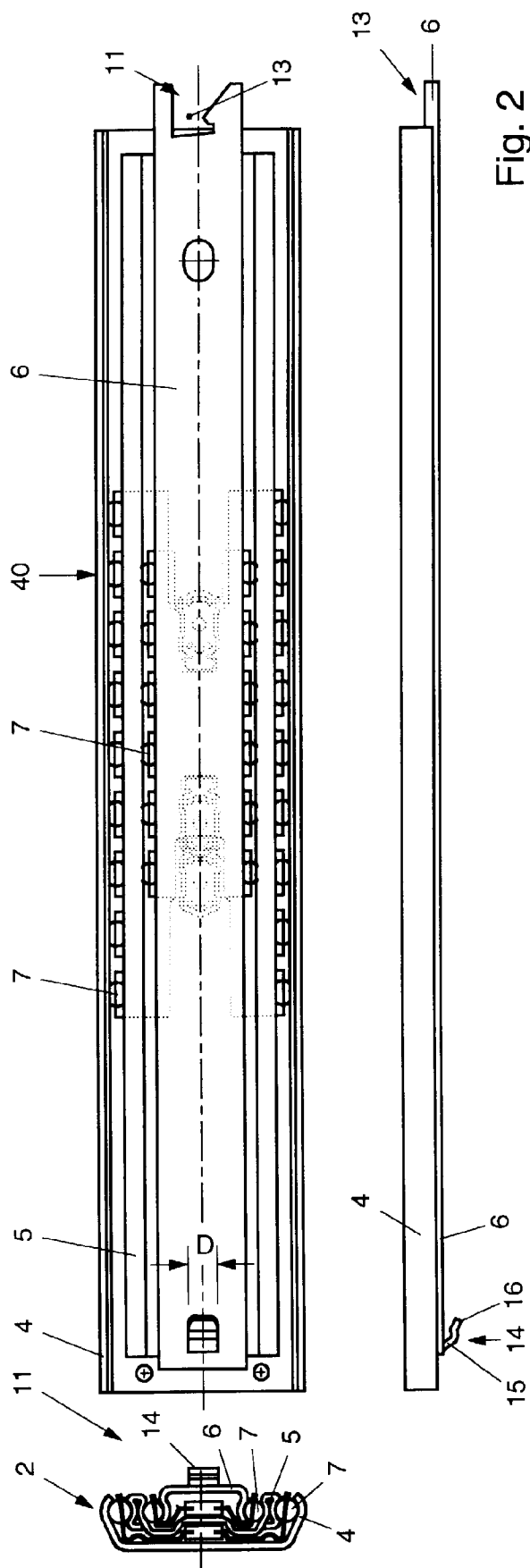


Fig. 1



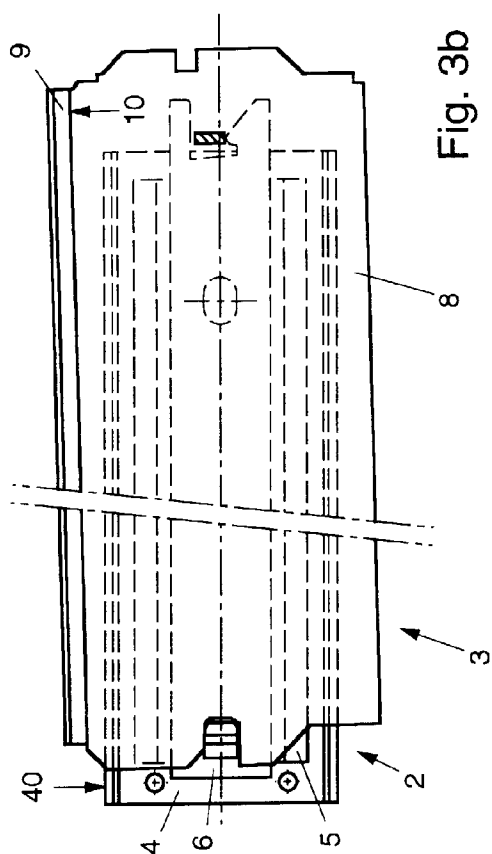


Fig. 3b

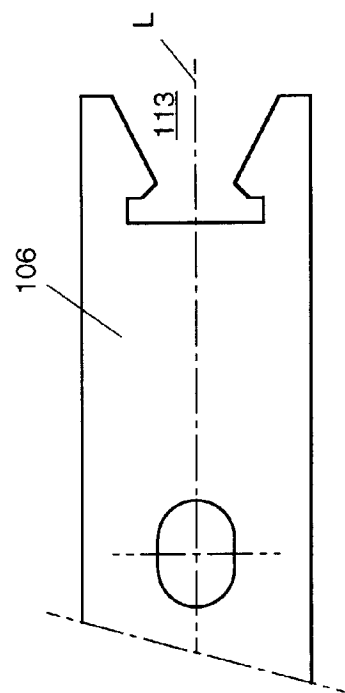


Fig. 4

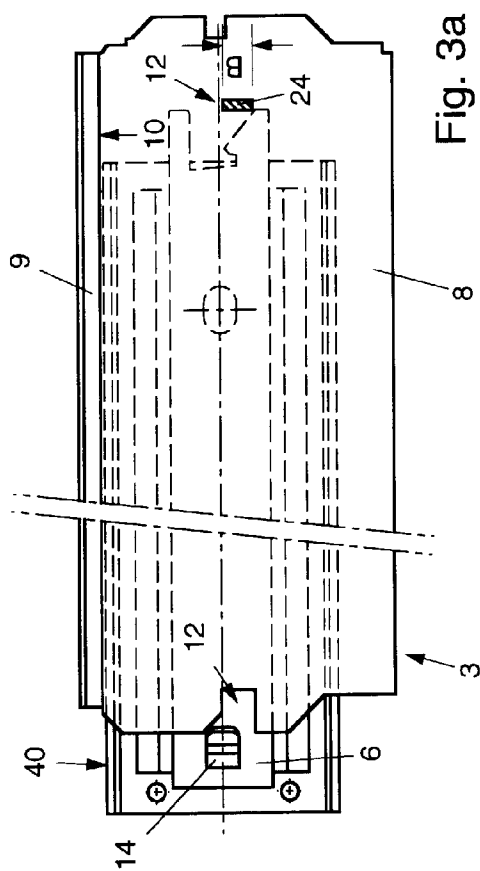


Fig. 3a

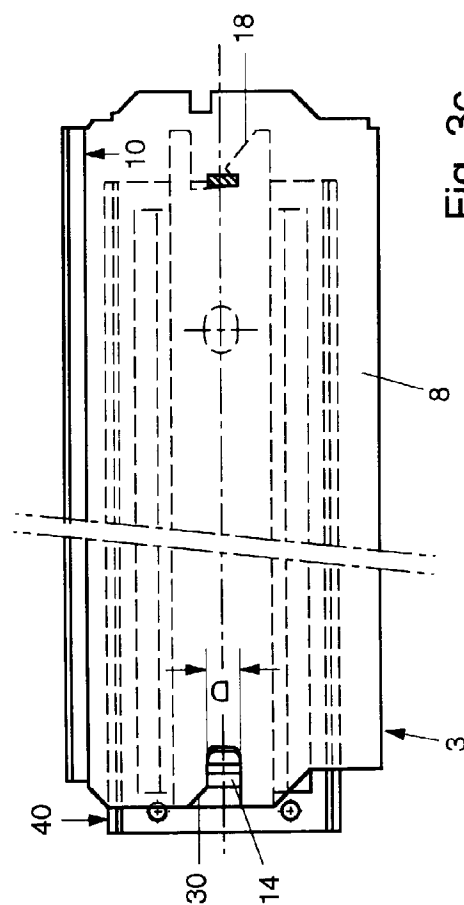


Fig. 3c



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 20 0135

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)
X	DE 27 45 281 A (BBP-KUNSTSTOFFWERK MARBACH BAIER & CO) 12 April 1979 * page 8, paragraph 2 - page 11, paragraph 2; figures 1,2,4 *	1	A47B88/04
A	DE 30 38 832 A (WIESCH) 27 May 1982 * figures 2,4 *	1	
A	EP 0 041 616 A (SCHOCK METALLWERK GMBH) 16 December 1981 * figures 1-16 *	1	
A	EP 0 037 034 A (MESAX AG) 7 October 1981 * figures 1,3-6 *	1,2	
			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 21 May 1997	Examiner Noesen, R
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