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[Fortsetzung auf der nächsten Seite]

(54) Title: DRAWER HAVING A DIVIDER SYSTEM

(54) Bezeichnung : SCHUBKASTEN MIT EINEM TEILERSYSTEM

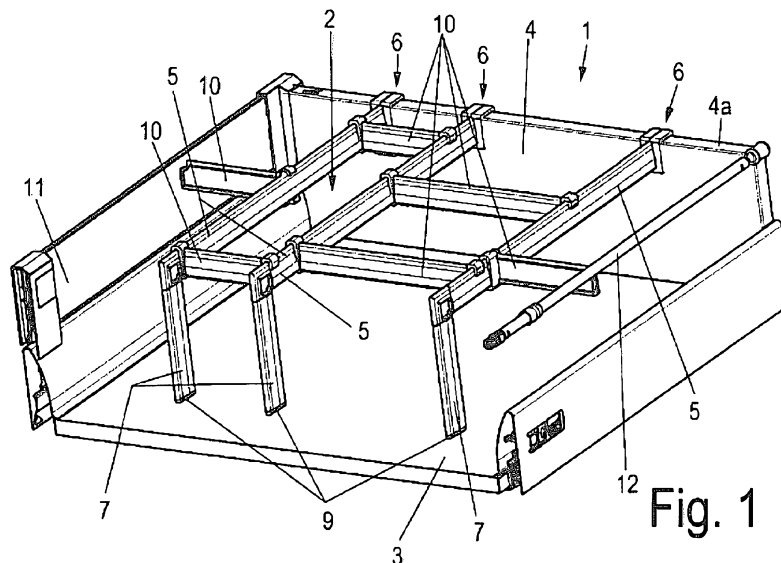


Fig. 1

(57) Abstract: The invention relates to a drawer (1) having a floor (3), a rear wall (4) and a divider system (2) for subdividing the drawer inner chamber, wherein the divider system (2) has at least one longitudinal strut (5) running in a longitudinal direction of the drawer (1) and approximately the height of the top edge (4a) of the rear wall (4), which has a holder (6) reaching over the top edge (4a) of the rear wall (4) on the end face thereof in the region of the rear wall (4), wherein the holder (6) is designed as a clamping apparatus and has a clamping part (6b), which is pressed from the rear side of the rear wall (4) against the rear wall (4).

(57) Zusammenfassung:

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**Veröffentlicht:**

- mit internationalem Recherchenbericht (Artikel 21 Absatz 3)

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Ein Schubkasten (1) mit einem Boden (3), einer Rückwand (4) und einem Teilersystem (2) zur Unterteilung des Schubkasteninnenraumes, wobei das Teilersystem (2) mindestens eine in Längsrichtung des Schubkastens (1) und etwa in der Höhe der Oberkante (4a) der Rückwand (4) verlaufende Längsstrebe (5) aufweist, die an ihrem im Bereich der Rückwand (4) liegenden stirnseitigen Ende eine die Oberkante (4a) der Rückwand (4) übergreifende Halterung (6) aufweist, wobei die Halterung (6) als Klemmeinrichtung ausgebildet ist und ein Klemmteil (6b) aufweist, welches von der Rückseite der Rückwand (4) her gegen die Rückwand (4) angepresst ist.

## A drawer having a divider system

The present invention relates to a drawer comprising a bottom, a rear wall and a divider system for subdividing the interior space of the drawer, with the divider system having at least one longitudinal strut extending in a longitudinal direction of the drawer and approximately at the height of the top edge of the rear wall, which longitudinal strut comprises a holder reaching over the top edge of the rear wall on the end face thereof in the region of the rear wall.

Drawers with divider systems of this kind are known in many embodiments.

It is further known in the construction of furniture to provide drawers with differently thick rear walls. Consequently, there are wooden drawers with relatively thick rear walls and drawers in which the rear walls consist of sheet metal of a relatively low thickness.

A relevant point of fixing the divider system to a drawer lies in the region of the rear wall, with the known divider systems so far not having provided any satisfactory and economically viable solution for fixing the at least one longitudinal strut of the divider system to rear walls of different wall thickness.

The present invention is based on the object of providing a drawer of the kind mentioned above in which the at least one longitudinal strut of the divider system can be fixed easily to rear walls of a large range of wall thicknesses.

This object is achieved in accordance with the invention such a way that the holder is arranged as a clamping device and comprises a clamping part which is pressed from the rear side of the rear wall against the rear wall.

The configuration of the holder in accordance with the invention for fixing the at least one longitudinal strut of the divider system offers the considerable advantage that this holder, which is arranged as a clamping device, can be connected to rear walls of random thickness. As a result, a substantial part of the divider system, which is a longitudinal strut, can be fixed securely and easily by a simply arranged holder to the various drawers with all possible rear wall thicknesses.

The warehousing of a large variety of holders which are adjusted to different wall thicknesses or thicknesses of rear walls can be avoided completely, which is of considerable economic relevance for the production and warehousing of respective parts.

Further features of the invention are the subject matter of dependent claims.

Embodiments of the invention are shown in the enclosed drawings, which will be described below in closer detail, wherein:

Fig. 1 shows a highly schematic perspective view of the drawer with a divider system in accordance with the invention;

Fig. 2 shows a perspective view corresponding to Fig. 1 of a drawer with a divider system which is slightly modified in relation to Fig. 1;

Figs. 3a and 3b show different perspective views of a holder for fixing a longitudinal strut of the divider system to a rear wall of the drawer;

Figs. 4a and 4b show different perspective views of a connecting element for connecting a longitudinal strut of the divider system with a supporting strut;

Figs. 5a and 5b show different perspective views of a transverse strut of the divider system;

Figs. 6a and 6b show different perspective views of a base part of a supporting strut;

Fig. 7 shows a perspective view of a transverse strut that can be mounted between two longitudinal struts of a divider system;

Fig. 8 shows a perspective view of a holder for fixing a longitudinal strut of the divider system to a rear wall according to a further embodiment of the invention;

Fig. 9 shows a simplified perspective view which substantially corresponds to Fig. 1 and 2 of a drawer according to a further embodiment of the invention;

Fig. 10 shows a further perspective view of a drawer with the divider system in accordance with the invention;

Fig. 11 shows a partially illustrated vertical sectional view through the connecting area of a longitudinal strut of the divider system according to Fig. 10 to the rear wall;

Fig. 12 shows a perspective view of a separating strut of a divider system for a drawer in accordance with the invention;

Fig. 13 shows a perspective view of a partial area of the divider system with a separating strut disposed in the mounting position;

Fig. 14 shows a perspective view of a further intermediate mounting position of the separating strut;

Fig. 15 shows a perspective view of the divider system after the final fixing of the separating strut;

Fig. 16 shows a perspective view of a container fixed to a longitudinal strut and two transverse struts;

Figs. 17a and 17b show different perspective views of the container according to Fig. 16;

Fig. 18 shows an exploded view of a dividing wall of a divider system of a drawer according to a further embodiment of the invention;

Fig. 19 shows a perspective partial view of a divider system of a drawer in accordance with the invention with a fully mounted dividing wall according to Fig. 18;

Fig. 20 shows a perspective view of a dividing wall of a divider system according to a further embodiment of the invention with indicated transverse strut for accommodating the dividing wall;

Fig. 21 shows a perspective partial view of a divider system with a dividing wall according to Fig. 20 which has been finally mounted on a transverse strut.

Reference numeral 1 in Fig. 1 designates a drawer in its entirety, which is provided with a divider system for subdividing the interior space of the drawer designated in its entirety with reference numeral 2.

The drawer 1 is shown in a relatively schematic way. In any case, the drawer 1 comprises a bottom 3 and the rear wall 4.

The divider system 2 is equipped in the illustrated embodiment with a total of three longitudinal struts 5 which extend in the longitudinal direction of the drawer 1 and approximately at the height of the top edge 4a of the rear wall 4. Said longitudinal struts 5 are provided with holders 6 reaching over the top edge 4a of the rear wall 4 in the face end regions facing the rear wall 4.

One possible embodiment of these holders 6 is shown in Figs. 3a and 3b.

These Figs. 3a and 3b clearly show that the holders 6 are provided with mounting webs 6a which can be pushed in a clamping fashion into the longitudinal struts 5 which are arranged as hollow sections.

Figs. 3a and 3b further show clearly that the holder 6 is arranged as a clamping device and comprises a clamping part 6b. Said clamping part 6b is arranged in the embodiment according to Figs. 3a and 3b as a spring clamp which is integrally produced with the holder 6. The clamping part 6b lies in the mounted state on the rear side of the rear wall 4 and is pressed against this rear side of the rear wall 4.

The spring capability of the clamping part 6b therefore leads to the possibility for securely fixing a longitudinal strut 5 to rear walls 4 of different thickness or wall thicknesses.

Fig. 6 alternatively shows a holder 6 in which the clamping part 6b is arranged in form of a clamping lever 6d which is pivotably mounted in a limb 6c of the holder 6 which

reaches over the rear side of the rear wall 4 and is advantageously arranged in form of an elbow lever. The holder 6 can securely be fixed to rear walls 4 of different thickness by pivoting the clamping lever 6b.

As is further shown in Fig. 1, the longitudinal struts 5 are provided with supporting struts 7 on their face ends facing the front side of the drawer, which supporting struts are supported on the bottom 3 of the drawer 1. Said supporting struts 7 are advantageously arranged like the longitudinal struts 5 as hollow sections, preferably with the same cross-sectional shape as the longitudinal struts 5.

The longitudinal struts 5 are connected with the supporting struts 7 via corner connectors 8, as shown in Figs. 4a and 4b.

Said corner connectors 8 comprise mounting webs 8a which like the mounting webs 6a of the holders 6 can be inserted in a clamping fashion into the face ends of the support struts 7 on the one hand and the longitudinal struts 6 on the other hand.

The supporting struts 7 are preferably supported on the bottom side via base parts 9, of which one is shown in Figs. 6a and 6b. It is clear that these base parts 9 can be pushed with a mounting web 9a into the bottom face ends of the supporting struts 7, similar to the mounting webs 6a of the holders 6 and the mounting webs 8a of the corner connectors 8. On the bottom side, the base parts 9 are provided with end plates 9b which are flush with the outside contour of the sections of the supporting struts 7.

Fig. 1 further shows that the divider system also comprises various transverse struts 10 apart from the longitudinal struts 5 and the supporting struts 7.

Said transverse struts 10 can extend both from a longitudinal strut 5 up to an adjacent longitudinal strut 5, or originating from a longitudinal strut 5 up to a side wall 11, a railing strut 12 or the like, and can be supported there on the face side.

A transverse strut 10 which extends from a longitudinal strut 5 up to a side wall 11, a railing strut 12 or the like is shown in detail in Figs. 5a and 5b.

The transverse strut 10 as illustrated there is made in its entirety in an integral manner from plastic and comprises an approximately C-shaped fastening clamp 13 at a face end which can be placed in an interlocking and clamping fashion on a longitudinal strut 5.

The face end of the transverse strut 10 which faces away from the fastening clamp 13 is provided in a corner region with a hollow 14, which allows the application of said face end region of the transverse strut 10 to a railing strut 12 shaped in the manner of a round bar, whereas the remaining face end region of the transverse struts 10 can rest in a substantially planar manner on a side wall 11 of the drawer 1.

Furthermore, Figs. 5a and 5b illustrate that the C-shaped fastening clamp 13 is provided with a notched recess 150 which reaches up to the middle of the fastening clamp 13.

This allows fastening two similar transverse struts 10 to said longitudinal strut 5 in a common alignment originating from a longitudinal strut 5 extending to the left and right, as is shown in Fig. 9 by way of example.

Fig. 7 shows a transverse strut 10 which can be fixed to two adjacent longitudinal struts 5 between said struts. The drawing clearly shows that the transverse strut 10 which is illustrated there and which is preferably made from a section 10a, like the section of the longitudinal struts 5, carries hooks 15 at their face ends, which hooks are made of plastic and which reach over the two adjacent longitudinal struts 5 from above.

Said hooks 15 can again be provided with mounting webs which enable a clamping insertion into the section 10a, as has already been described above for example with reference to the holders 6, the corner connectors 8 or the base parts 9. Fig. 7 further shows that a respective mounting web can be provided with a catch 16, which in the mounted state of a hook 15 passes through a breakthrough of the section 10a, so that an interlocking connection between the section 10a and the respective hook 15 is produced.

Figs. 2 and 10 show that one of several containers 17 can further belong to the divider system 2, which containers can be suspended on to adjacently extending longitudinal struts 5.



Fig. 11 illustrates that the holders 6 can also engage with their clamping parts 6b in a recess or a breakthrough 4b of a rear wall 4, by means of which protection against transverse displacement of the holders 6 relative to the rear wall 4 is obtained.

The elements of the divider system 2 which were described up until now are especially suitable for storing items such as bottles, boxes or the like within a drawer 1 in a manner protecting against displacement, in so far as such items at least have a height which corresponds to the distance of the longitudinal struts 5 and the transverse struts 10 from the bottom 3.

If a subdivision should also protect flatter items such as plates or the like against displacement in certain areas, the use of additional separating struts 18 can be appropriate, as is shown in Figs. 12 to 15. The mentioned separating struts 18 extend from a longitudinal strut 5 or a transverse strut 10 in the direction of the bottom 3 of the drawer 1 again and are advantageously produced as integral plastic parts which in the manner of tongs comprise two limbs 18a which can be pushed part and which allow sliding such a separating struts 18 from above onto a transverse strut 10, as is shown in particular detail in Figs. 13 and 14. Once such a separating strut 18 has been pushed onto a transverse strut 10 for example, the two limbs 18a can be pressed together and can be connected with one another in a latching fashion, so that the final mounting position according to Fig. 15 is obtained. Such a separating strut 18 also protects flat items against displacement within an area of the divider system 2 which is additionally protected by such separating struts 18.

Figs. 16, 17a and 17b show a further embodiment for a container 17, which in this case can be fixed to two freely protruding transverse struts 10, which on their part are connected to a longitudinal strut 5.

For this purpose, the container 17 is provided with two holding brackets 19 which extend downwardly on two mutually opposite sides at a distance from the container walls and which respectively form a receiving channel 19a for accommodating a transverse strut 10.

Figs. 18 to 21 show embodiments of the invention in which dividing walls 20 are provided within individual areas of the divider system 2, which dividing walls extend up to the bottom 3 of a drawer 1 and ensure that smaller flat items within the respectively equipped area cannot be displaced beyond the separated area.

Figs. 18 and 19 show an embodiment in which the dividing wall 20 is arranged in several parts and consists of a plate 21 and two holding struts 22, between which the plate 21 can be clamped. The holding struts 22 have a similar configuration like separating struts 18 as described further above, with the difference that the holding struts 22 can be configured in the respect that they can accommodate the plate 21.

This solution offers the advantage that dividing walls 20 of different widths can be realized in a simple manner because it is merely necessary to vary the width of the plates 21.

In the embodiment according to Figs. 20 and 21 however the dividing wall 20 is produced in its entirety in an integral fashion and corresponds substantially to the construction of the separating struts 18 with the difference that an extremely larger width is chosen than in the separating struts 18. The dividing wall 20 according to the embodiment according to Figs. 20 and 21 is again integrally made of plastic and comprises two limbs 20a which can be pushed part and which allow sliding the dividing wall 20 onto a transverse strut 10 or a longitudinal strut 5. Once the dividing wall 20 has been pushed onto a transverse strut 10 or a longitudinal strut 5, the two limbs 20a can be locked together in an interlocking fashion by compression and therefore assume the final mounting position as shown in Fig. 21. The advantage of this construction lies in the entirely smooth configuration of the dividing wall 20.

The divider system 2 of a drawer 1 as explained above in closer detail and its exclusive connection to a rear wall 4 of the drawer 1 is especially characterized by its simple configuration and mounting possibilities, because no screwed joints or other complex connecting processes are required, especially none for the secure fixing in relation to the drawer 1 itself.

The divider system 2 is highly flexible and can be adjusted as required to all wishes of the end-user.

If the divider system 2 is no longer desired by an end-user, the divider system can easily be removed from the drawer 1 again without leaving any recognizable traces on the drawer 1 concerning the presence of a divider system 2.

## List of reference numerals

1	Drawer
2	Divider system
3	Bottom
4	Rear wall
4a	Top edge
4b	Recess/breakthrough
5	Longitudinal strut
6	Holder
6a	Mounting web
6b	Clamping part
6c	Limb
6d	Clamping lever
7	Supporting strut
8	Corner connector
8a	Mounting web
9	Base part
9a	Mounting web
9b	End plate
10	Transverse strut
10a	Section
11	Side wall
12	Railing strut
13	Fastening clamp
14	Hollow
15	Hook
16	Catch
17	Container
18	Separating strut
18a	Limb
19	Holding bracket
19a	Receiving channel
20	Dividing wall

20a	Limb
21	Plate
22	Holding strut
150	Notched recess

## CLAIMS:

1. A drawer (1) comprising a bottom (3), a rear wall (4) and a divider system (2) for subdividing the interior space of the drawer, with the divider system (2) having at least one longitudinal strut (5) extending in the longitudinal direction of the drawer (1) and approximately at the height of the top edge (4a) of the rear wall (4), which longitudinal strut comprises a holder (6) reaching over the top edge (4a) of the rear wall (4) on the end face thereof in the region of the rear wall (4), characterized in that the holder (6) is arranged as a clamping device and comprises a clamping part (6b) which is pressed from the rear side of the rear wall (4) against the rear wall (4).
2. A drawer according to claim 1, characterized in that the clamping part (6b) consists of a spring clamp which is incidentally integrally produced with the holder (6).
3. A drawer according to claim 1, characterized in that the clamping part (6b) consists of a clamping lever pivotably mounted in a limb (6c) which reaches over the rear side of the rear wall (4).
4. A drawer according to claim 3, characterized in that the clamping lever is arranged as an elbow lever.
5. A drawer according to one of the preceding claims, characterized in that the clamping part (6b) rests on the rear side of the rear wall (4).
6. A drawer according to one of the claims 1 to 4, characterized in that the clamping part (6b) engages in a recess or breakthrough (4b) of the rear wall (4).
7. A drawer according to one of the preceding claims, characterized in that the at least one longitudinal strut (5) is provided on its face end facing the front side of the drawer (1) with a supporting strut (7) which is supported on the bottom (3) of the drawer (1).

8. A drawer according to one of the preceding claims, characterized in that at least one transverse strut (10), which originates from the at least one longitudinal strut (5), extends up to a further longitudinal strut (5) or a side wall (11), a railing strut (12) or the like.
9. A drawer according to claim 8, characterized in that the at least one transverse strut (10), insofar as it extends up to a side wall (11), a railing strut (12) or the like, is supported on the face side on the aforementioned components.
10. A drawer according to one of the claims 1 to 6, characterized in that the holding part (6) comprises a mounting web (6a) which is inserted in a clamping manner into the longitudinal strut (5).
11. A drawer according to claim 7, characterized in that the at least one longitudinal strut (5) is connected with the supporting strut (7) via a corner connector (8), with the corner connector (8) comprising two mounting webs (8a) which are respectively inserted in a clamping manner into the longitudinal strut (5) on the one hand and into the supporting strut (7) on the other hand.
12. A drawer according to claim 7, characterized in that the supporting strut (7) is provided on the bottom side with a base part (9) which consists of an end plate (9b) having the same cross section as the supporting strut (7) and a mounting web (9a), with the mounting web (9a) being slid in a clamping manner into the supporting strut (7).
13. A drawer according to one of the preceding claims, characterized in that at least one separating strut (18) which reaches up into the bottom region is connected with at least one longitudinal strut (5) or at least one transverse strut (10).
14. A drawer according to one or several of the preceding claims, characterized in that at least one dividing wall (20) which reaches up into the bottom region is connected with at least one longitudinal strut (5) or at least one transverse strut (10).

15. A drawer according to one of the preceding claims, characterized in that at least one container (17) is integrated in the divider system (2), which container is carried by two adjacently disposed longitudinal struts (5) or two adjacently disposed transverse struts (10).



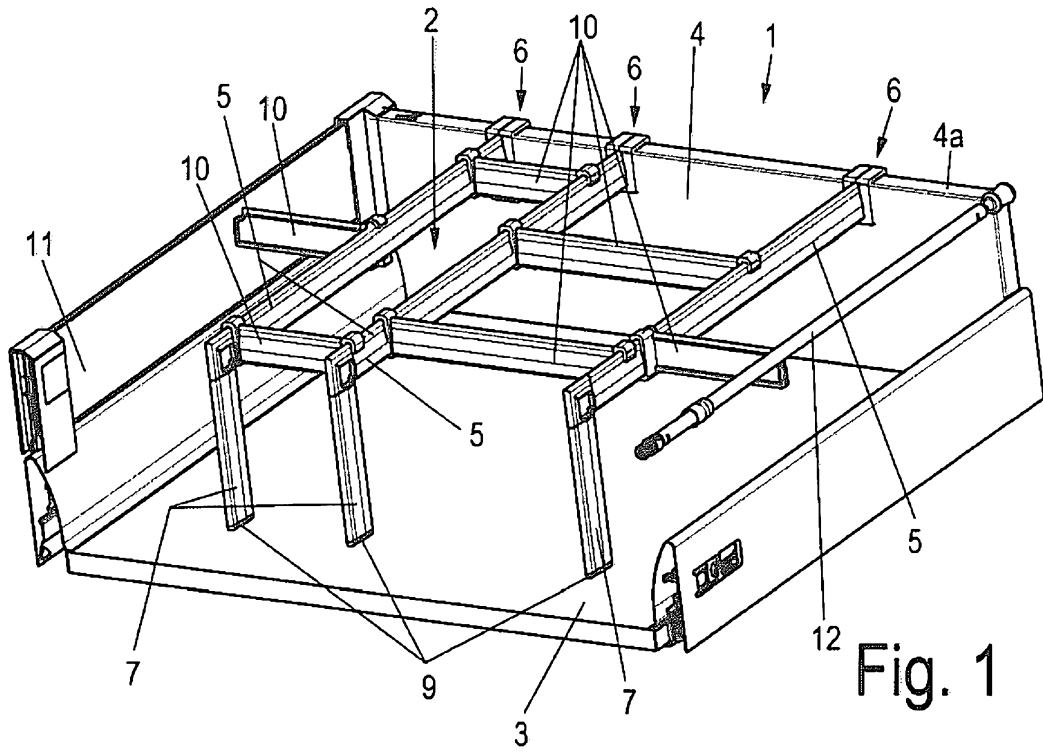


Fig. 2

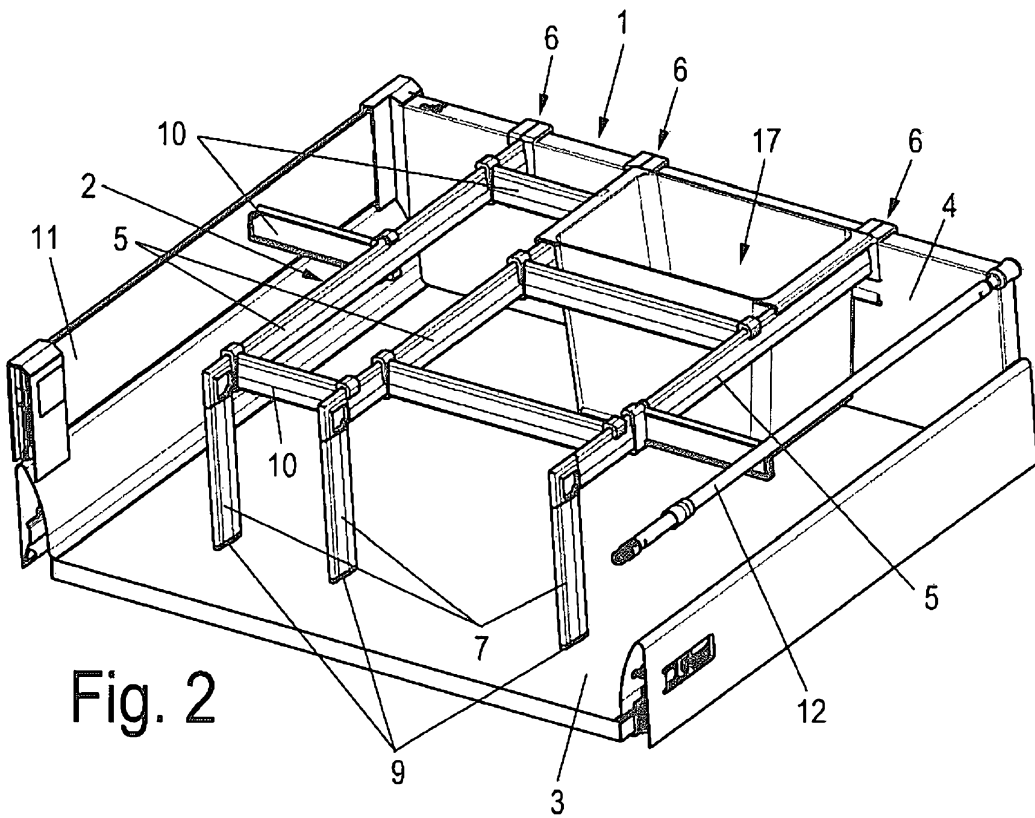
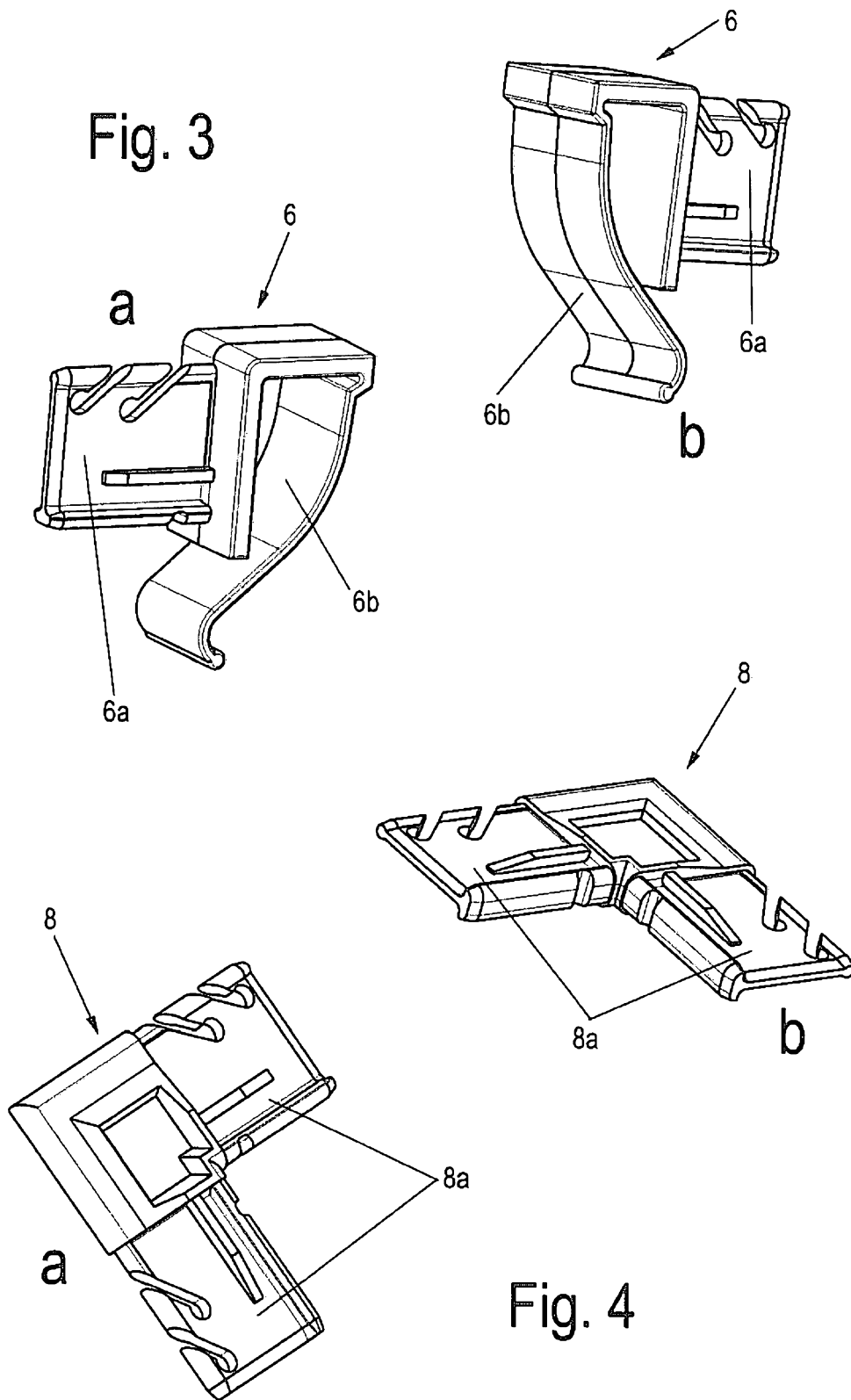


Fig. 3



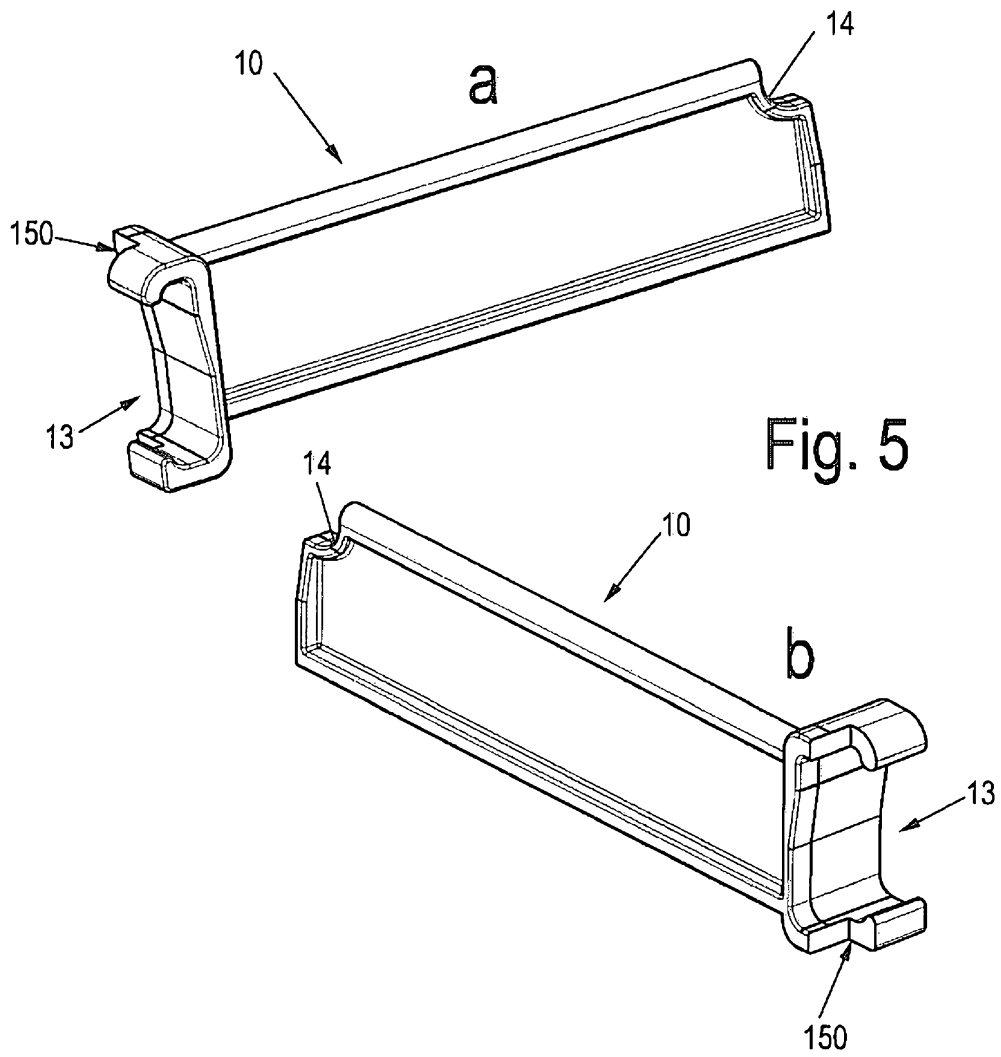


Fig. 5

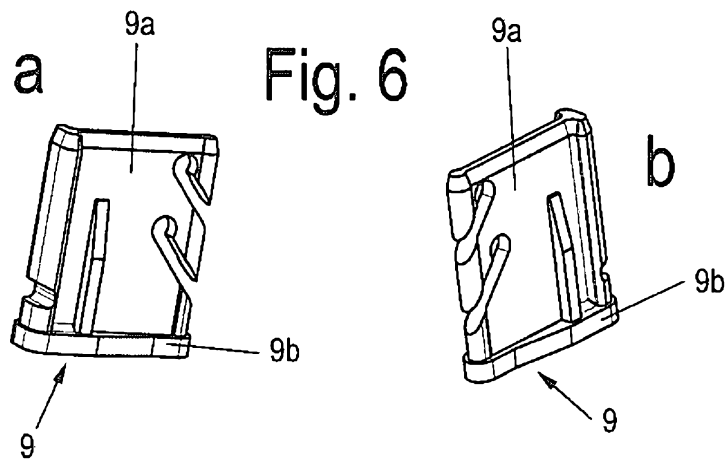
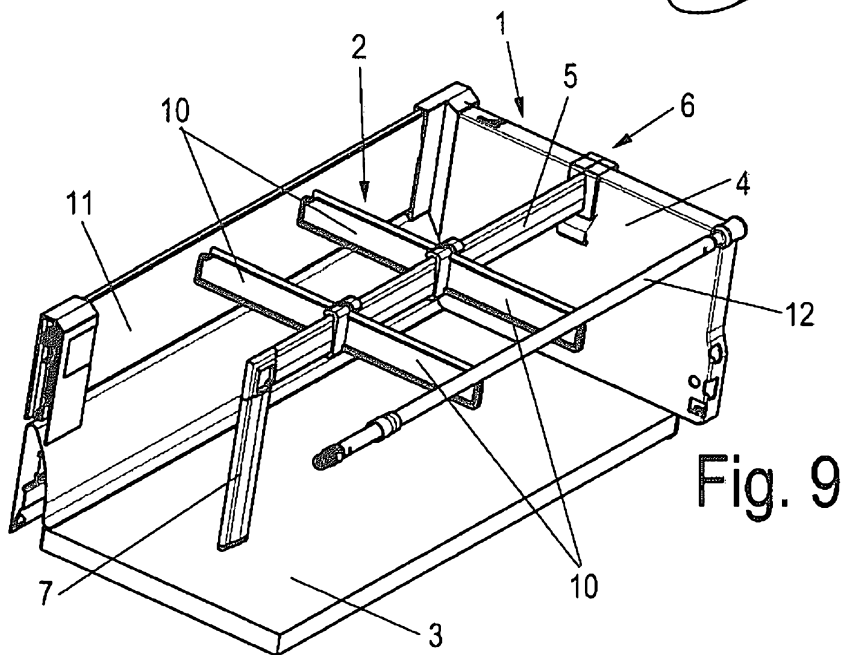
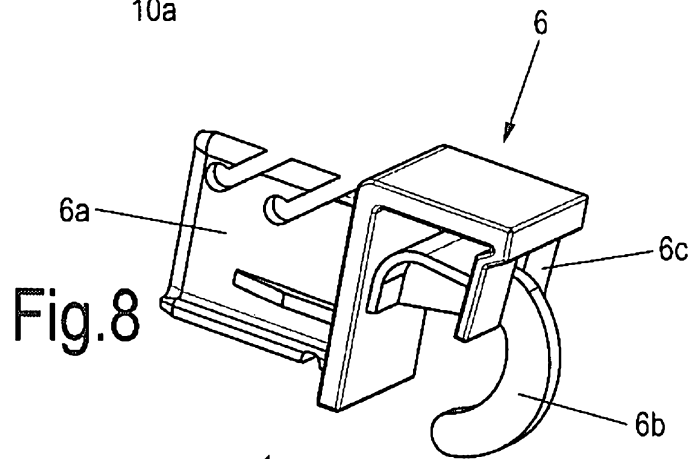
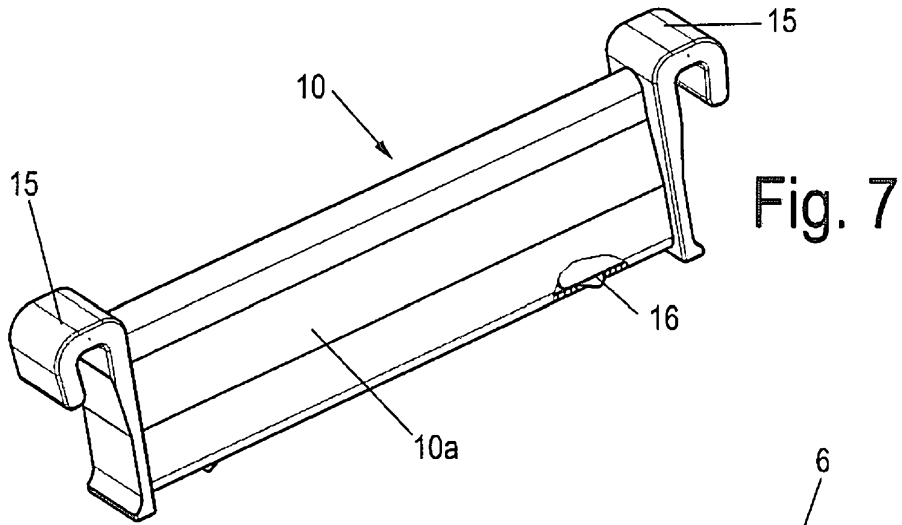


Fig. 6



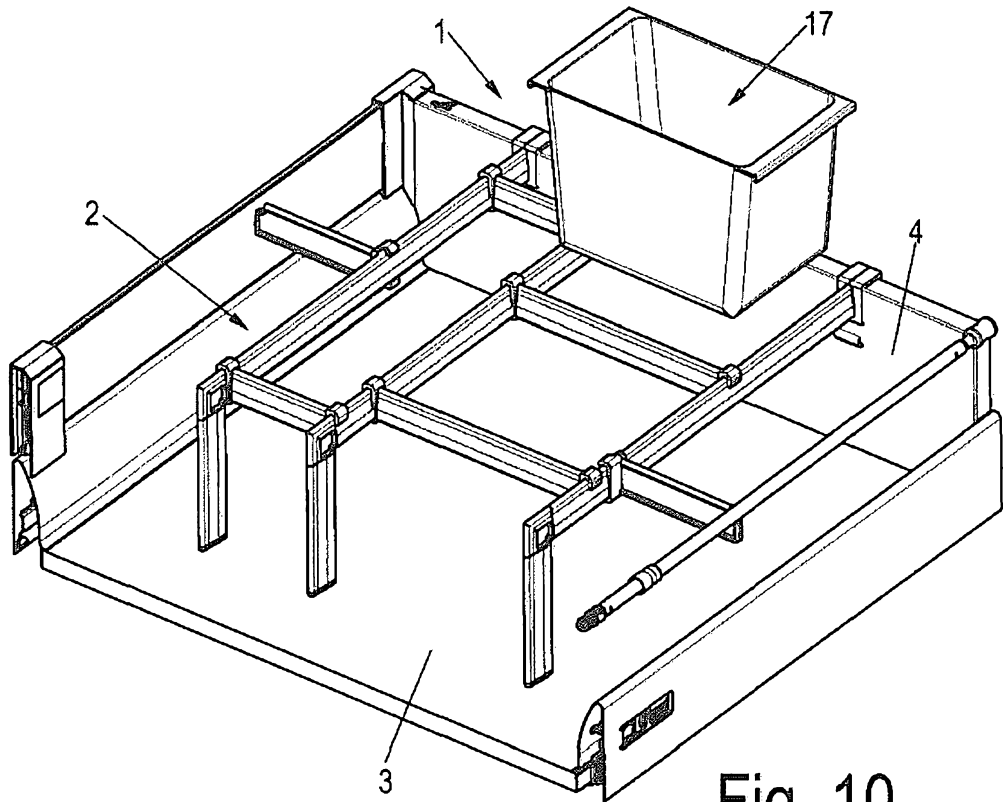


Fig. 10

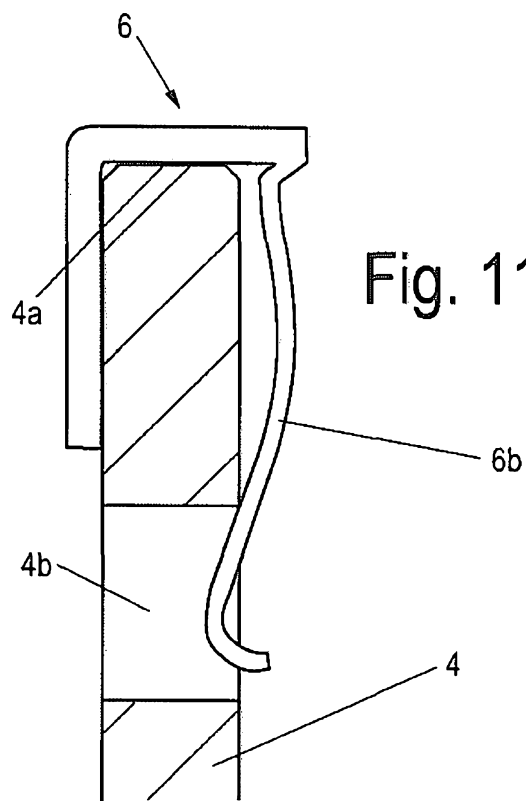


Fig. 11

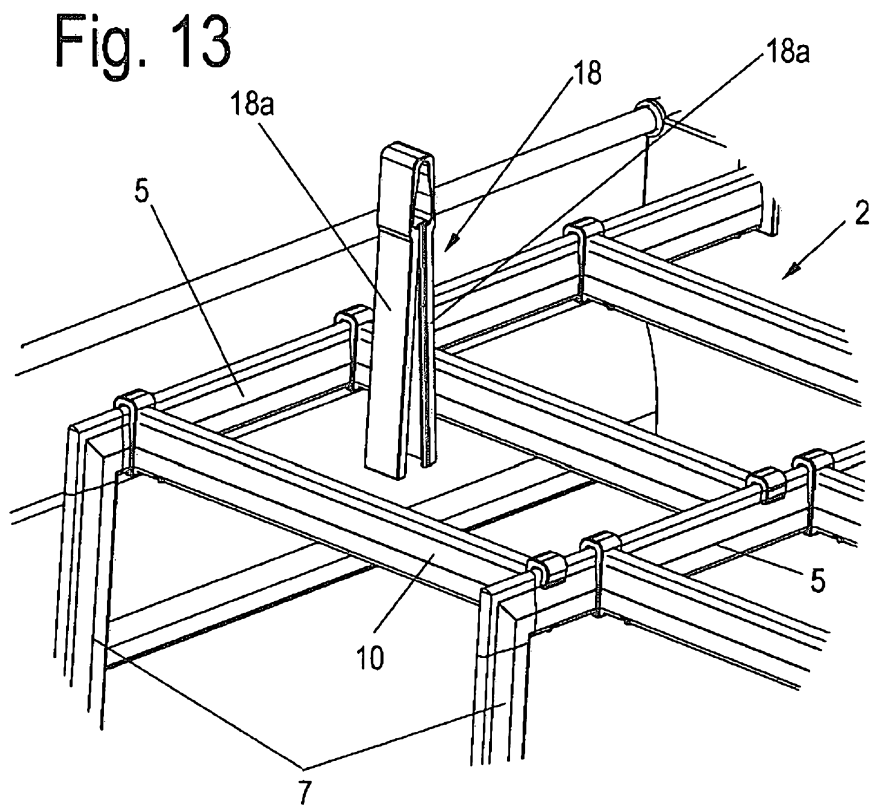
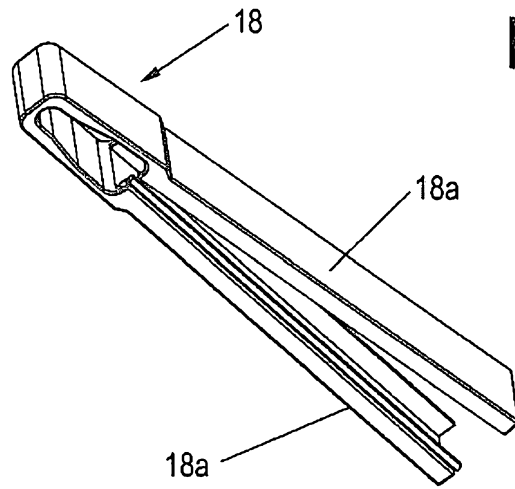


Fig. 14

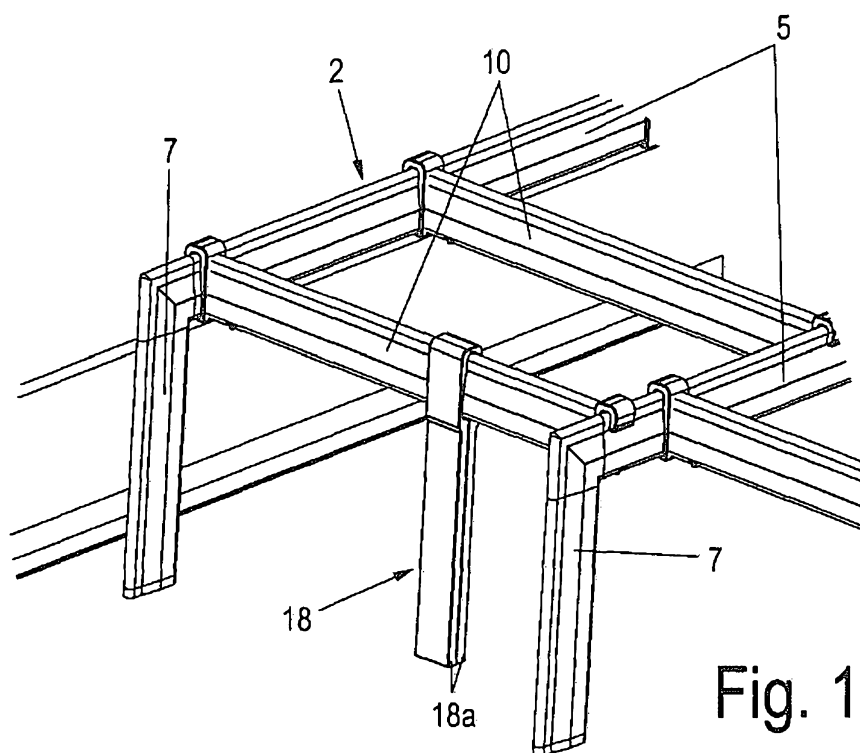
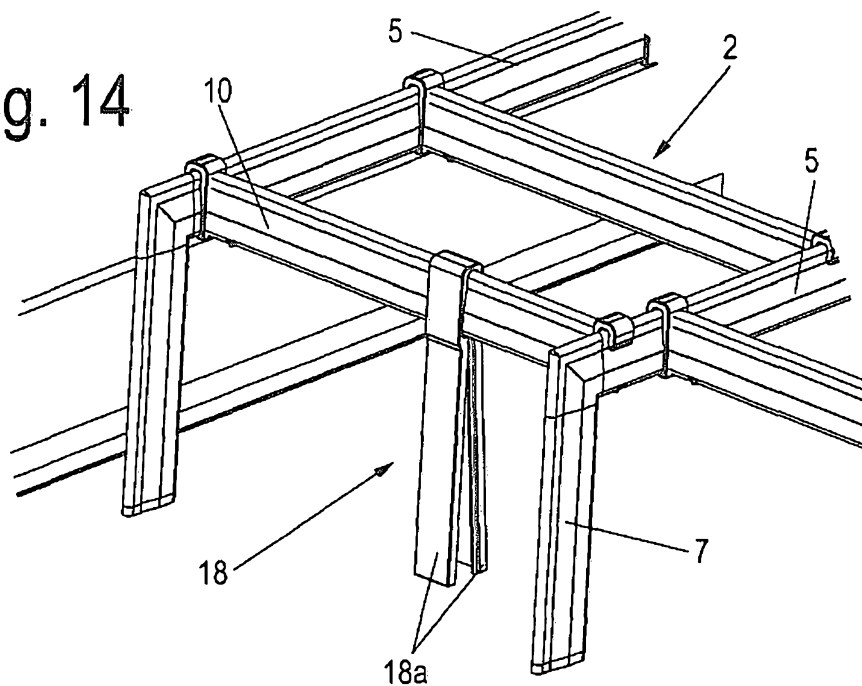


Fig. 15

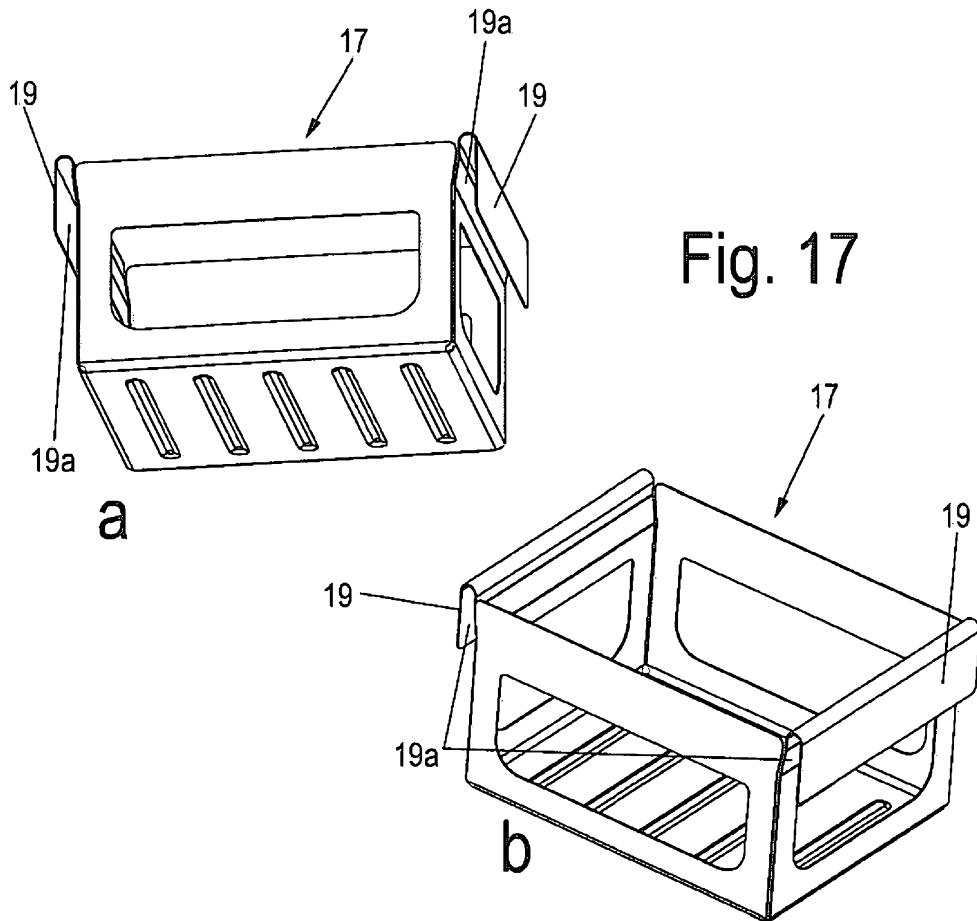
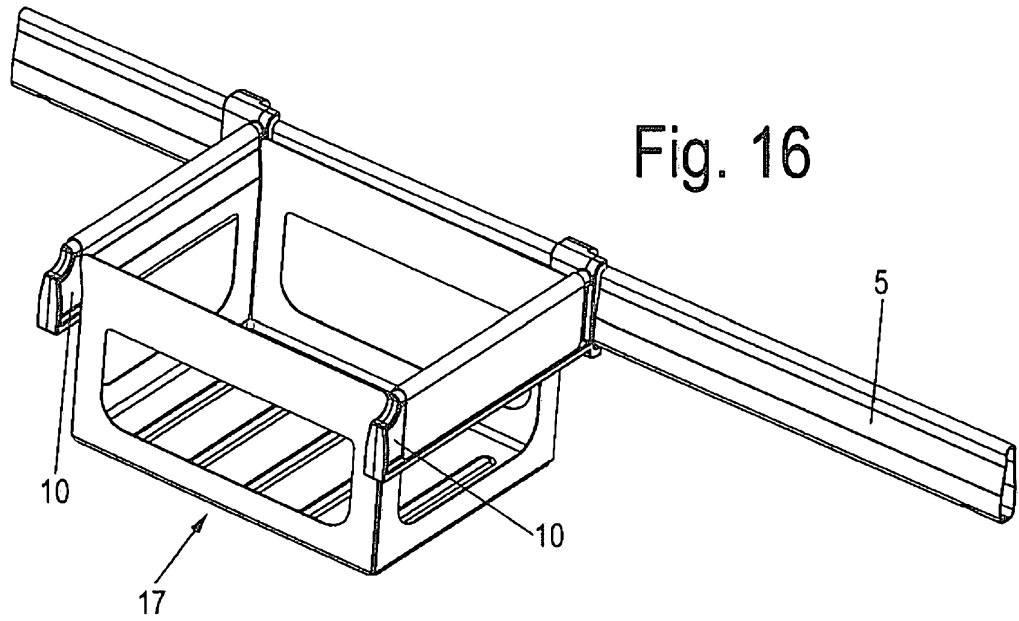




Fig. 18

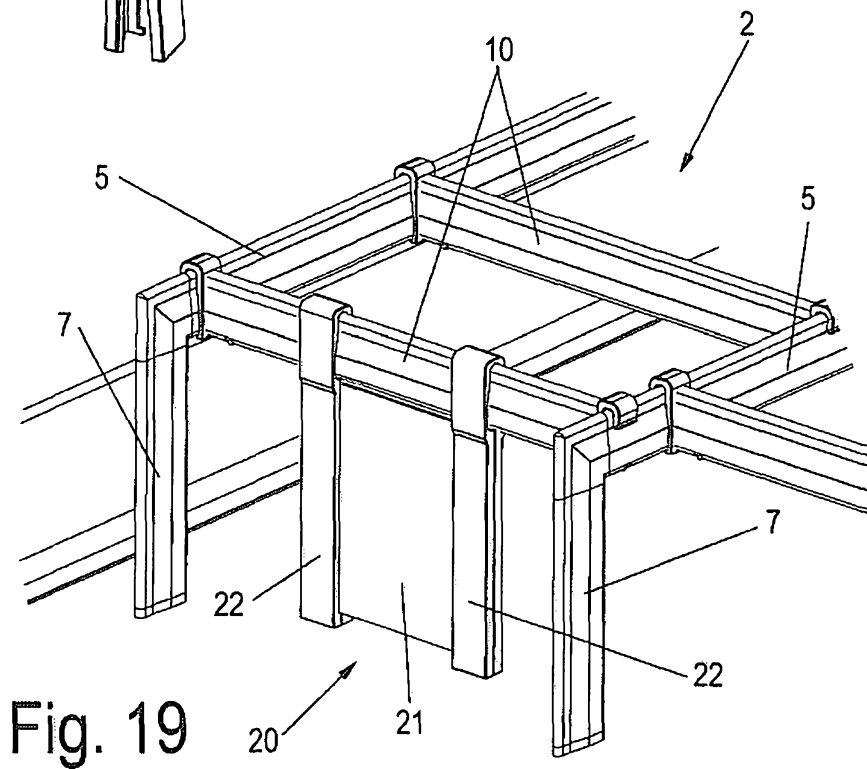
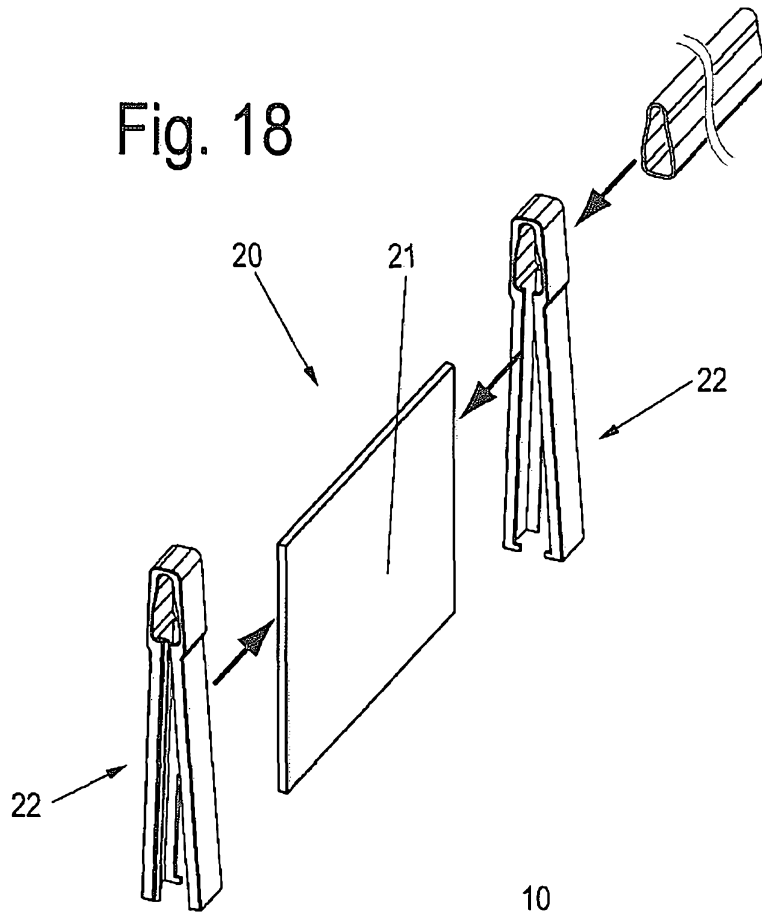


Fig. 20

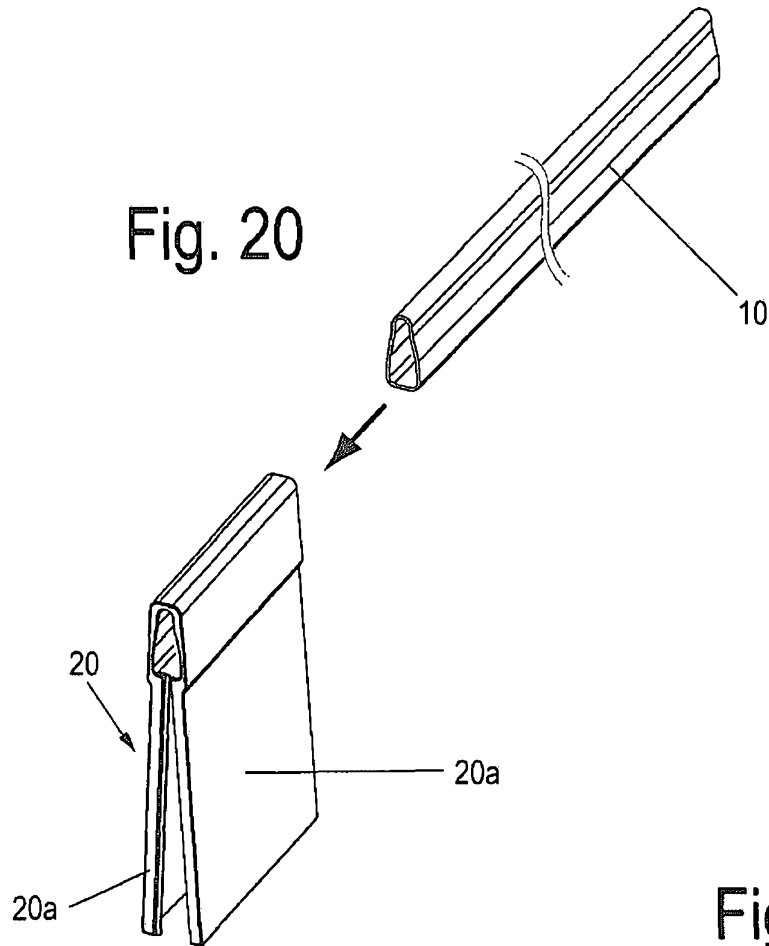


Fig. 21

