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(71) Applicant: **Gollinucci, Giacomo**
47521 Cesena (IT)

(72) Inventor: **Gollinucci, Giacomo**
47521 Cesena (IT)

(74) Representative: **Cataldi, Giulia et al**
Studio Torta S.p.A.
Via Viotti, 9
10121 Torino (IT)

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(54) **BIN HOLDER CARCASS AND DRAWER, IN PARTICULAR FOR SEPARATE WASTE COLLECTION**

(57) A bin holder carcass (9; 109), in particular for waste bins (10), for insertion in a drawer (1) having a compartment (2) delimited by side walls (4) and a panel door (8) connected to a side wall (4) by means of a respective carriage which has, in turn, a sideboard (6) and a horizontal board (7); wherein the bin holder carcass (9;

109) has: a frame (11) with an opening (12) to house one or more waste bins (10); and one or more support elements (16, 17; 116, 127, 17) to connect, in use, the frame (11) to a drawer (1), in particular to at least one sideboard (6) of a drawer (1).

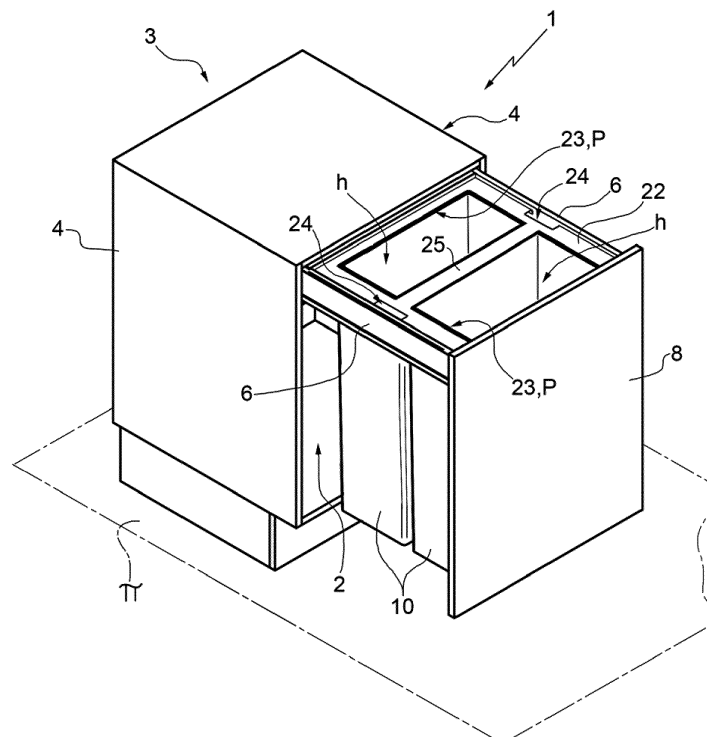


FIG.1

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Description

[0001] The present patent application concerns a bin holder carcass and a drawer, in particular for separate waste collection.

[0002] Normally a drawer for separate waste collection consists of a bracket installed inside the compartment of the unit in which the drawer operates, a bin holder carcass running along the bracket and adapted to support one or more waste bins, a front door fixed to the bin holder carcass and a back panel fixed to the bin holder carcass. The unit, the door and the back panel are built by the furniture maker whereas the above-mentioned bin holder carcass and bins are built by a supplier firm of the furniture maker.

[0003] The main problems that currently exist consist in the fact that, given the same width of the compartment in which the drawer operates, every furniture maker installs its own bracket manufactured and sized differently from the guides installed by other furniture makers. Consequently the firms that produce the bin holder carcass have to produce a series of bin holder carcass models, each one adapted to the type of bracket used by the furniture maker. Furthermore, the bracket with the current bin holder carcasses on the market remains exposed to view and is therefore not only unattractive but also a trap for dust and any waste parts (bearing in mind the use of the drawer). In addition, the guides currently on the market can be mounted so as to project horizontally inside the compartment; said guides are ugly and substantially prevent the application of bin holder carcasses of known type and the usual installation of the waste bins. Lastly, in the current bin holder carcasses it is complicated to adjust their width so as to provide an accurate effective support for the waste bins. Furthermore, the bin holder carcasses of known type currently on the market comprise a plurality of components and therefore entail a certain complexity of installation.

[0004] The object of the present invention is to provide a bin holder carcass which is easily adaptable to commonly used kitchen drawers, is easy and inexpensive to produce and easy to install.

[0005] According to the present invention, a bin holder carcass and a drawer are provided as cited in the attached claims.

[0006] The invention will now be described with reference to the accompanying drawings, which illustrate a non-limiting embodiment example thereof, in which:

- figure 1 is a perspective view of a drawer produced according to the teachings of the present invention;
- figure 2 is a perspective view of a detail of figure 1;
- figure 3 is a main view of figure 2 with some parts removed for clarity;
- figure 4 is a side view of figure 3 with some parts removed for clarity;
- figure 5 is a perspective view of a bin holder carcass according to the present invention;

- figure 6 is a plan view of the bin holder carcass of figure 5;
- figure 7 is a side view of the bin holder carcass of figure 5;
- figure 8 is a front view of the bin holder carcass of figure 5;
- figure 9 is a perspective view of a variation of a bin holder carcass according to the present invention;
- figure 10 is a plan view of the bin holder carcass of figure 9;
- figure 11 is a side view of the bin holder carcass of figure 9; and
- figure 12 is a front view of the bin holder carcass of figure 9.

[0007] In figure 1, the number 1 indicates overall a drawer 1, in particular for separate waste collection, installed inside a compartment 2 provided in a unit 3. In particular, the unit 3 comprises two side walls 4 which delimit the compartment 2 and each of which supports a guide. The drawer 1 is of the sliding type and further comprises two carriages, each of which is mounted in a sliding manner along a respective guide and has a side-board 6 substantially parallel to the respective side wall 4 and a horizontal board 7 which projects inside the compartment 2 transversally to said side wall 4. The horizontal board is flat.

[0008] Furthermore, the drawer 1 comprises a panel door 8 which is connected to the inside of a respective compartment 2 of a unit 3 by means of the two carriages. In particular the drawer 1 has a height, or distance with respect to a support surface n such as to allow the housing of waste bins 10.

[0009] Inside the drawer 1 a bin holder carcass 9 is arranged, configured to be applied to the carriages of the drawer 1 so as to allow the arrangement of at least one waste bin 10 inside the drawer 1. For example, the bin holder carcass 9 is configured to house bins 10 which have a cup-shaped body in a rectangular parallelepipedal form and an internal cavity h which can be accessed via an upper opening p. Preferably, the bins 10 have an upper edge s which delimits the upper opening p and is configured to allow shape or interference coupling of the bin 10 to a support structure, in this case to the bin holder carcass 9.

[0010] According to the illustrations of figures 5 to 8, the bin holder carcass 9 comprises a frame 11 having a central opening 12, configured to house one or more waste bins 10.

[0011] The frame 11 has a substantially rectangular shape in plan view with a longitudinal axis X. According to the illustrations of figures 2 to 8, the frame 11 has a shape and dimension substantially corresponding to the shape and dimension in plan view of the drawer 1.

[0012] The frame 11 comprises, in particular, two longitudinal edges 13 identified below as right-hand longitudinal edge 13I and left-hand longitudinal edge 13II with respect to the arrangement illustrated in figure 1.

[0013] The frame 11 further comprises two transverse edges 14 below identified as front transverse edge 14I and rear transverse edge 14II according to the arrangement illustrated in figure 1.

[0014] It is observed that in the figures the common elements maintain the same numbering and the suffixes I and II distinguish the right from the left, and the front from the rear.

[0015] In particular, the central opening 12 of the frame 11 is delimited by both the longitudinal edges 13 and both the transverse edges 14.

[0016] The bin holder carcass 9 comprises, in particular, a right-hand support element 15I and a left-hand support element 15II which project from the right-hand longitudinal edge 13I and from the left-hand longitudinal edge 13II respectively. Each support element 15 is configured to connect the frame 11 to a respective carriage of the drawer 1.

[0017] In particular, the frame 11 and the support elements 15 are parts of one single body.

[0018] Advantageously, the frame 11 and the support elements 15 are made of sheet metal. In particular the frame 11 and the support elements 15 are produced by laser cutting and/or punching and/or drawing and/or bending starting from one single metal sheet. In this way, work processes like welding and/or riveting or the use of connecting elements like screws or similar are completely absent. According to a variation not illustrated, the bin holder carcass 9 can be produced in several pieces assembled to one another in various known ways, for example riveting and/or the use of connecting elements like screws or similar to reduce the outline of the packaging of the bin holder carcass 9 and reduce transport costs.

[0019] According to the illustrations of figures 5 to 8, each support element 15 comprises, in turn, a sideboard wall 16 and an abutment wall 17. The sideboard wall 16 is substantially perpendicular to said frame 11, or is configured to be, in use, substantially parallel to the sideboard 6. The abutment wall 17 is substantially parallel to the frame 11.

[0020] The abutment wall 17 has one or more holes 18 so as to allow, in use, connection by means of a releasable connecting element, for example a screw (of known type and not illustrated), with a respective horizontal board of the drawer 1.

[0021] Figures 2 to 8 illustrate a first example of the bin holder carcass 9, in which the abutment wall 17 is bent so that the profile formed of a longitudinal edge 13, the respective sideboard wall 16 and the respective abutment wall 17 has a C shape with concavity facing outwards.

[0022] Advantageously, the sideboard wall 16 has at least one side opening 19 which allows access, in use, to the sideboard 6 of the drawer 1. For example, the side opening 19 allows the passage of a tool, for example a screwdriver, for adjusting the respective sideboard 6.

[0023] According to the illustrations of figures 5 to 8, each sideboard wall 16 has two side openings 19, each

of which is provided substantially at a respective longitudinal end of the sideboard wall 16.

[0024] Advantageously, the sideboard wall 16 delimits a portion of the central opening 12, or the sideboard wall 16 has been produced from a portion of sheet metal cut and bent to the inside of the central opening 12. Furthermore, advantageously, each longitudinal edge 13 projects, with respect to the central opening 12, on the outside of the respective sideboard wall 16 and the width (i.e. the extension along a line perpendicular to the longitudinal axis X and level with the frame 11) of each longitudinal edge 13 is greater than the width of the respective abutment wall 17. In use, the longitudinal edge 13 of the frame 11 covers the abutment wall 17 which, in this way, cannot be seen by the user.

[0025] Advantageously the length, or the extension along the longitudinal axis X, and the width of the longitudinal edges 13 depends on the dimensions of the drawer 1 in which the bin holder carcass 9 is to be installed. Advantageously, the dimensions of the longitudinal edges 13 are such as to cover, in use, the internal structure of the carriages and the support elements 15.

[0026] Advantageously, the dimensions of the longitudinal edges 13, of the front transverse edge 14I and the rear transverse edge 14II are such as to permit support of the upper edges of a bin 10.

[0027] The bin holder carcass 9 further comprises a front shoulder 20 and a rear shoulder 21, or flat walls, which project transversally from the front transverse edge 14I and from the rear transverse edge 14II respectively. Advantageously, the front shoulder 20 is configured to be positioned in contact with the panel door 8 during use. In this way, the bin holder carcass 9 provides complete coverage of the area surrounding the bins 10 so as to prevent the waste falling out and dropping into the surrounding areas. In other words, by obstructing the passage around the bins 10, the bin holder carcass 9 guarantees greater hygiene of the drawer 1 and facilitates cleaning of said drawer 1.

[0028] The expressions front and rear are used, for clarity, with reference to the example illustrated in the figures and the bin holder carcass 9 has a symmetrical body, therefore for example the rear shoulder 21 could be arranged in use in contact with the panel door 8.

[0029] Advantageously, the bin holder carcass 9 further comprises a cover 22 which has in plan view a shape and a dimension similar to that of the frame 11. The cover 22 is made of a sheet of metallic material. The cover 22 is configured to be positioned, in use, above the frame 11 so as to cover the upper edges of the waste bins 10 arranged inside the central opening 12 of the frame 11.

[0030] According to the example illustrated in figures 1 and 2, the bin holder carcass 9 is configured to house two adjacent bins 10. Therefore, the cover 22 has two access openings 23 parallel to each other. The shape and the dimension of the cover 22 and the respective access openings 23 is a function of the shape and dimension of the upper edges of the bins 10 which can

be housed inside the central opening 12 of the bin holder carcass 9.

[0031] Advantageously, the cover 22 has two gripping elements 24 which enable a user to grip the cover 22 and raise it. According to the example illustrated in figures 1 and 2, the gripping elements 24 of the cover 22 are two grooves provided on opposite edges of said cover 22.

[0032] According to the example illustrated in figures 1 and 2, the cover 22 has a profile in plan view in the shape of a rectangle and has two rectangular access openings 23 divided from each other by a central band 25 configured to cover the contact area between the upper edges of two adjacent bins 10.

[0033] Advantageously, the internal perimeter of each access opening 23 of the cover 22 has one or more tongues 26 configured to be inserted at least partly inside the upper opening of the bins 10, so as to fix the bins 10 in a predefined position with respect to the respective access opening 23 of the cover 22. Advantageously, the cover 22 is made of aluminium, so as to reduce the weights and improve workability of the material.

[0034] Advantageously, the cover 22 prevents the waste or part of it coming out and depositing in the part below of the drawer 1 or in the interstices between bin holder carcass 9 and drawer 1. In particular, the cover 22 prevents the accumulation of dirt around the bins 10. Therefore, the cover 22 helps to keep the drawer 1 clean. Furthermore the cover 22 serves, advantageously, to fix any plastic bags inserted inside the bins 10. Advantageously, the tongues 26 serve to maintain bags pressed against the respective bins 10 in a predefined position.

[0035] The cover 22 is optional and the drawer 1 can be provided only with the bin holder carcass 9 to support the bins 10.

[0036] In figures 9 to 12, the number 109 indicates a variation of the bin holder carcass. It is observed that in figures 9 to 12, the parts in common with the bin holder carcass 9 keep the same numbering.

[0037] In particular, unlike the bin holder carcass 9 illustrated in figures 1 to 8, the bin holder carcass 109 comprises different support elements 115. In particular, the support element 115 of the bin holder carcass 109 comprises, unlike the bin holder carcass 9, a sideboard wall 116 which projects to the outside of each longitudinal edge 13. In other words, the sideboard wall 116, instead of delimiting internally the central opening 12 of the cover, delimits externally the perimeter of the longitudinal edge 13. The bin holder carcass 109 further comprises a connection portion 127 which connects the sideboard wall 116 to the abutment wall 117. The connection portion has an L-shaped side profile with concavity facing towards the outside of the bin holder carcass 109. In particular, the connection portion 127 covers at least partly the guide of the respective sideboard 6. The bin holder carcass 109 further has side openings 119 provided near the longitudinal ends of each sideboard wall 116. According to the illustrations in figures 9 to 12, the side openings 119 are through windows. The bin holder carcass 109 is

the most suitable for use inside drawers with a compact compartment 2, since it allows optimization of the outlines and maintenance of adequate rigidity of the bin holder carcass in order to support the weight of the bins 10 also when they are full.

[0038] The bin holder carcass 9, 109 of the type described above has the advantage of being made in one piece by means of one single metal sheet; in this way, a single body is obtained which is simple and quick to install. In fact in use, it is sufficient to position the bin holder carcass 9, 109 in the vicinity of the drawer 1 for which it is intended and fix, for example by means of screws, each sideboard wall 16 to a respective horizontal board 7 of the drawer 1.

[0039] It is therefore possible to insert the bins 10 inside the central opening 12 of the frame 11. The bin holder carcass 9, 109 of the type described above further allows adjustment of the connection, via the side openings 19, 109 of the sideboard wall 16, of the sideboards 6 with the panel door 8 and with the unit 3.

[0040] The bin holder carcass 9, 109 of the type described above has the advantage of being inexpensive and quick to install.

[0041] Due to its simple profile, the bin holder carcass 9, 109 can be produced from a sheet, carrying out only bending, cutting, laser cutting, punching and/or drawing operations. In other words, the bin holder carcass 9, 109 can be produced with a few simple work processes; furthermore, the simplicity of the geometry of the bin holder carcass 9, 109 allows the production dimensions of the bin holder carcass 9, 109 to be varied quickly and inexpensively according to the dimensions of the drawer 1 for which it is intended. In this way, it is possible to obtain simply and quickly bin holder carcasses 9, 109 and the covers 22 customized for the particular application.

Claims

1. A bin holder carcass (9; 109), in particular for waste bins (10), for a drawer (1) having a compartment (2) delimited by two opposite parallel side walls (4), and a panel door (8) connected to each side wall (4) by means of respective carriages, each of which comprises, in turn, a sideboard (6), in particular flat and vertical, and a horizontal board (7); wherein the bin holder carcass (9; 109) comprises a frame (11) having an opening (12) to house one or more waste bins (10); wherein the frame (11) has a substantially rectangular shape in plan view with a longitudinal axis (X) and comprises a first and a second longitudinal edge (13; 13I, 13II) and a first and a second transverse edge (14; 14I, 14II); wherein said longitudinal and transverse edges (13, 14) delimit laterally said opening (12); wherein the bin holder carcass comprises a first and a second support element (16, 17; 116, 127, 17) to connect, in use, said frame (11) to a respective sideboard (6) of the drawer (1); wherein

said first support element (16I, 17I; 116I, 127I, 171) is connected to said first longitudinal edge (13I); and wherein said second support element (16II, 17II; 116II, 127II, 171I) is connected to said second longitudinal edge (13II).

2. A bin holder carcass (9; 109) according to claim 1, wherein the frame (11) and the support elements (16, 17; 116, 127, 17) are one single body.
3. A bin holder carcass (9; 109) according to one of the preceding claims, wherein each support element (16, 17; 116, 127, 17) comprises, in turn, a sideboard wall (16; 116) and an abutment wall (17); wherein the sideboard wall (16; 116) is substantially perpendicular to said frame (11) and said abutment wall (17) is substantially parallel to said frame (11).
4. A bin holder carcass (9; 109) according to claim 3, wherein the abutment wall (17) has one or more holes (18) so as to allow, in use, the connection of said abutment wall (17) by means of a releasable connection element, for example a screw, to a respective sideboard (6) of the drawer (1); wherein the abutment wall (17) is bent so that the longitudinal edge (13; 13I, 13II), the respective sideboard wall (16; 16I, 16II) and the respective abutment wall (17; 17I, 17II) form a C-shaped profile with concavity facing towards the outside of said bin holder carcass (9).
5. A bin holder carcass (9) according to one of the preceding claims, wherein the frame (11) and each support element (16, 17; 116, 127, 17) have been produced by means of one single metal sheet; wherein the sideboard wall (16; 16I, 16II) delimits longitudinally the opening (12) of the frame (11), or the sideboard wall (16; 16I, 16II) has been produced from a portion of sheet metal cut inside said opening (12).
6. A bin holder carcass (109) according to one of the claims from 1 to 4, wherein the frame (11) and each support element (16, 17; 116, 127, 17) have been produced by means of one single metal sheet; wherein the sideboard wall (116) has been produced with a portion of sheet metal on the outside of the longitudinal edge (13); wherein the sideboard wall (116; 116I, 116II) delimits externally the respective longitudinal edge (13), or said longitudinal edge (13) is interposed between the sideboard wall (116; 116I, 116II) and said opening (12); the bin holder carcass comprising a connection portion (127) interposed between the sideboard wall (116) and the abutment wall (17).
7. A bin holder carcass (9; 109) according to one of the preceding claims and comprising a front shoulder (20) and a rear shoulder (21), or flat walls, which

project transversally from the first and from the second transverse edge respectively (14; 14I, 14II); wherein the front shoulder (20) and the rear shoulder (21) are substantially perpendicular to said frame (11) and are in contact, in use, with the panel door (8) or a back of a drawer (1).

8. A bin holder carcass (9; 109) according to one of the preceding claims and comprising a cover (22) which has in plan view a shape and a dimension similar to that of the frame (11); said cover (22) being positioned, in use, above said frame (11); wherein the shape and dimension of the cover (22) is a function of the number of bins (10) which can be contained in the opening (12) of the frame (11) and/or of the shape and/or dimensions of the frame (11), so as to cover, in use, the upper edge (s) of any waste bins (10) inserted inside said frame (11); wherein the cover (22) has at least one opening (12) for each bin (10) which can be supported by said frame (11).
9. A bin holder carcass (9; 109) according to one of the preceding claims, wherein the frame (11) is configured to house two bins (10) and wherein the cover (22) has a first and a second opening (12), one for each bin (10); wherein said cover (22) has a band (25) which divides the first opening (12) from the second opening (12).
10. A bin holder carcass (9; 109) according to claim 8 or 9, wherein the cover (22) has one or more gripping elements (24) to aid gripping of said cover (22) by a user.
11. A bin holder carcass (9; 109) according to claim 10, wherein a gripping element (24) is a recess, or an opening, or a handle.
12. A bin holder carcass (9; 109) according to one of the claims from 8 to 11, wherein the cover (22) is made of sheet metal, in particular of aluminium.
13. A bin holder carcass (9; 109) according to one of the preceding claims wherein at least one edge of the frame (11), or a longitudinal edge (13) or a transverse edge (14), has a dimension such as to support the upper edge (s) of a waste bin (10).
14. A bin holder carcass (9; 109) according to one of the preceding claims and **characterized in that** it is symmetrical at least with respect to an axis.
15. A drawer (1) for a unit comprising a bin holder carcass (9; 109) as claimed in one of the preceding claims.

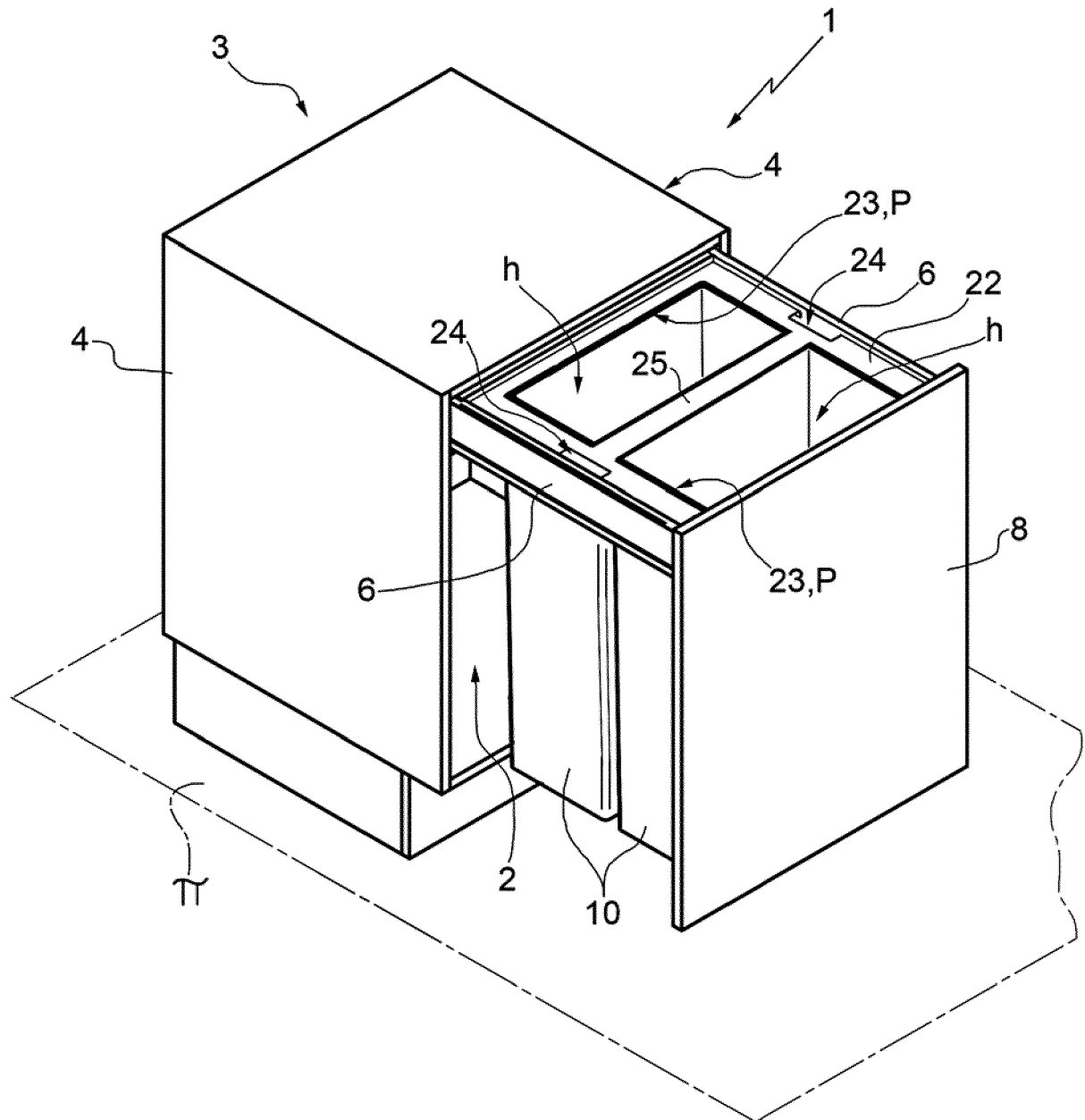


FIG.1

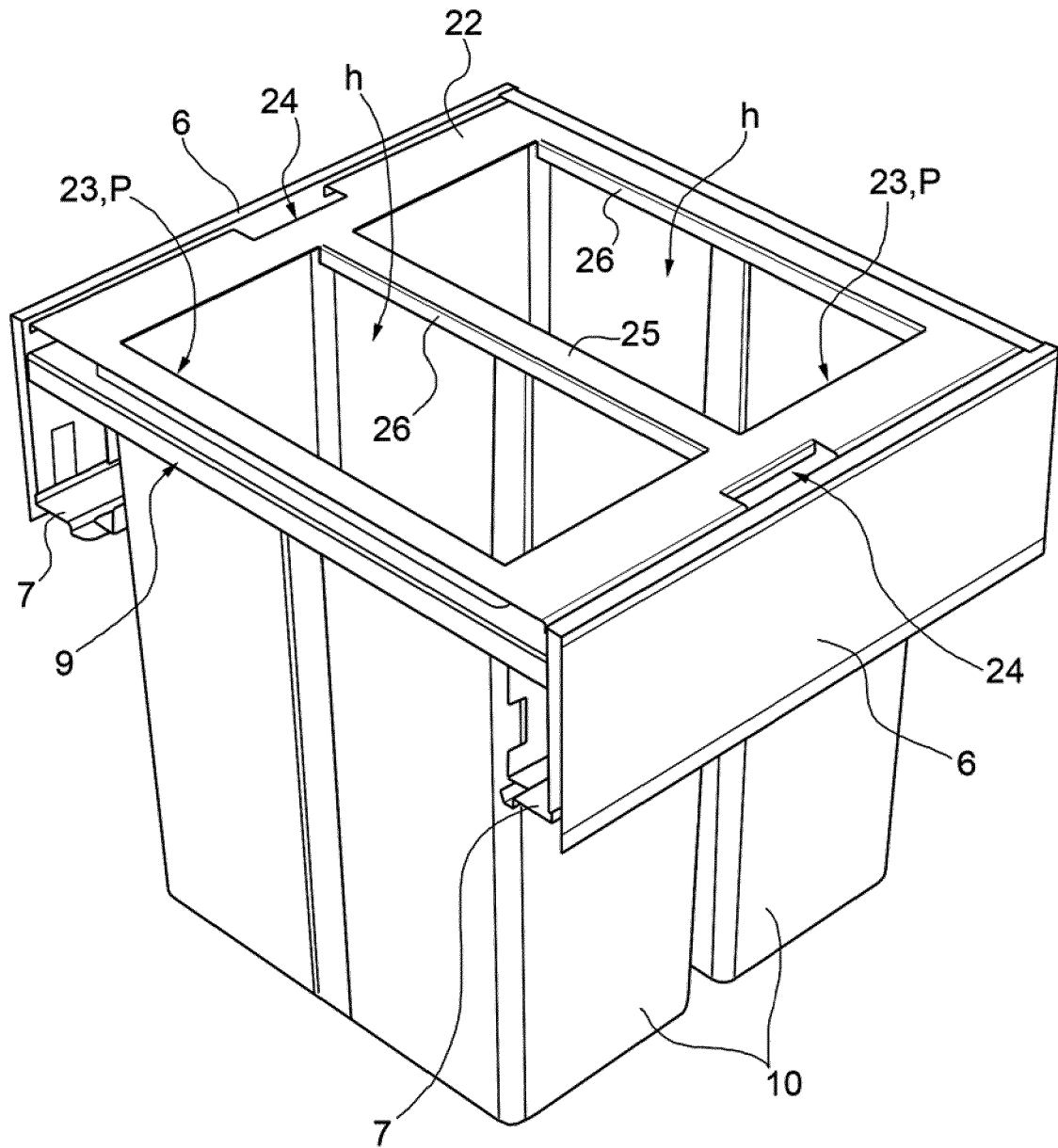


FIG.2

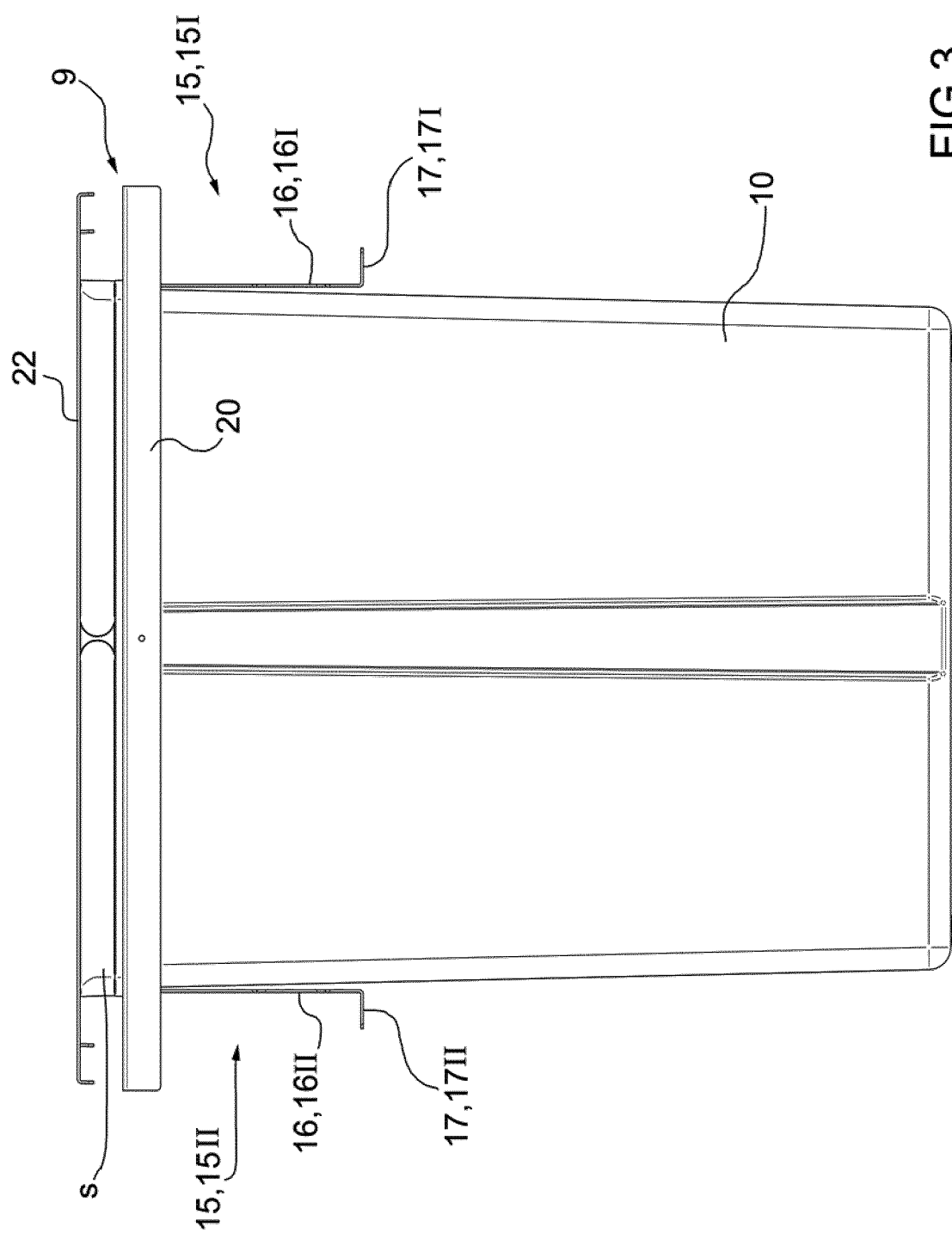


FIG. 3

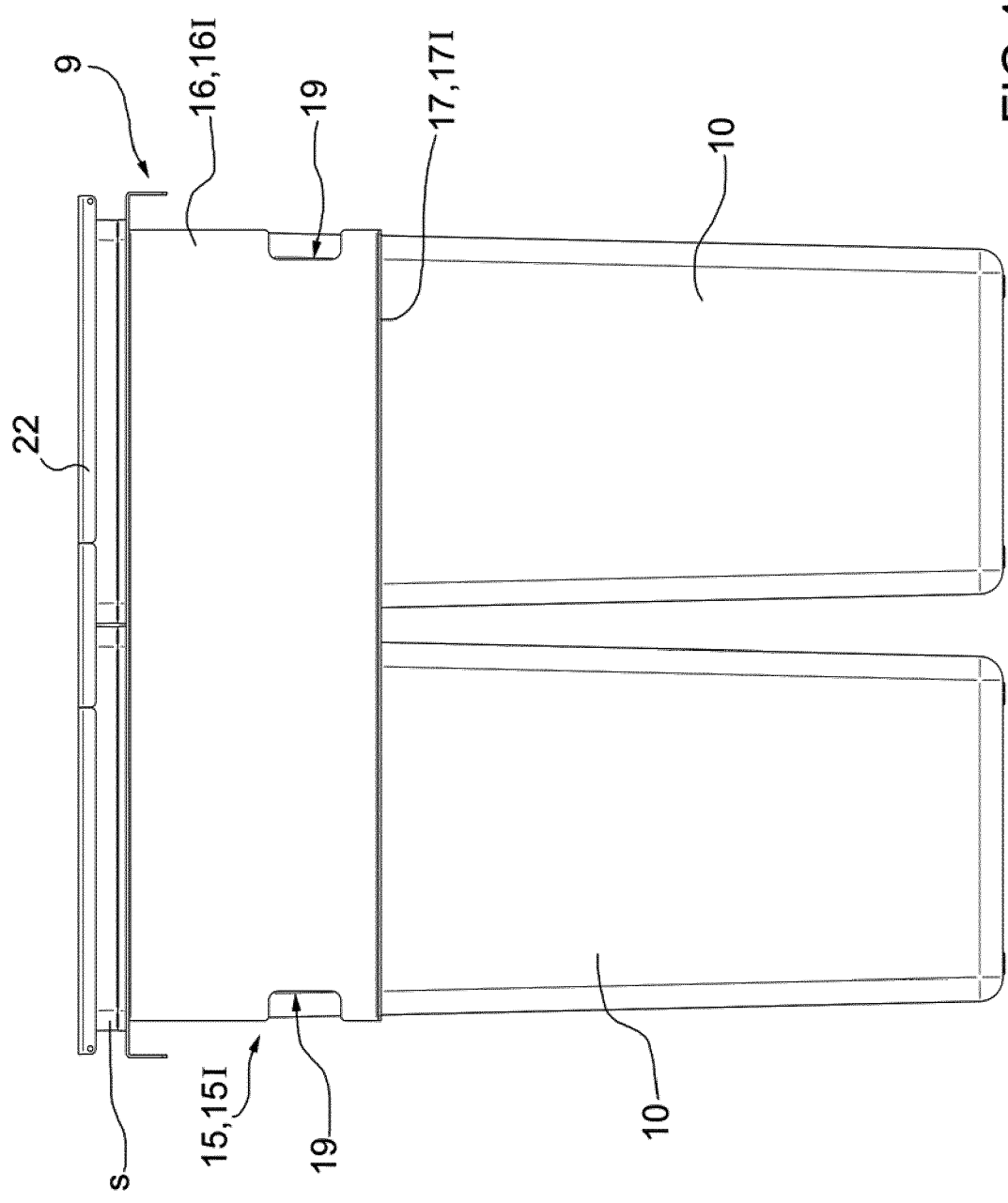


FIG. 4

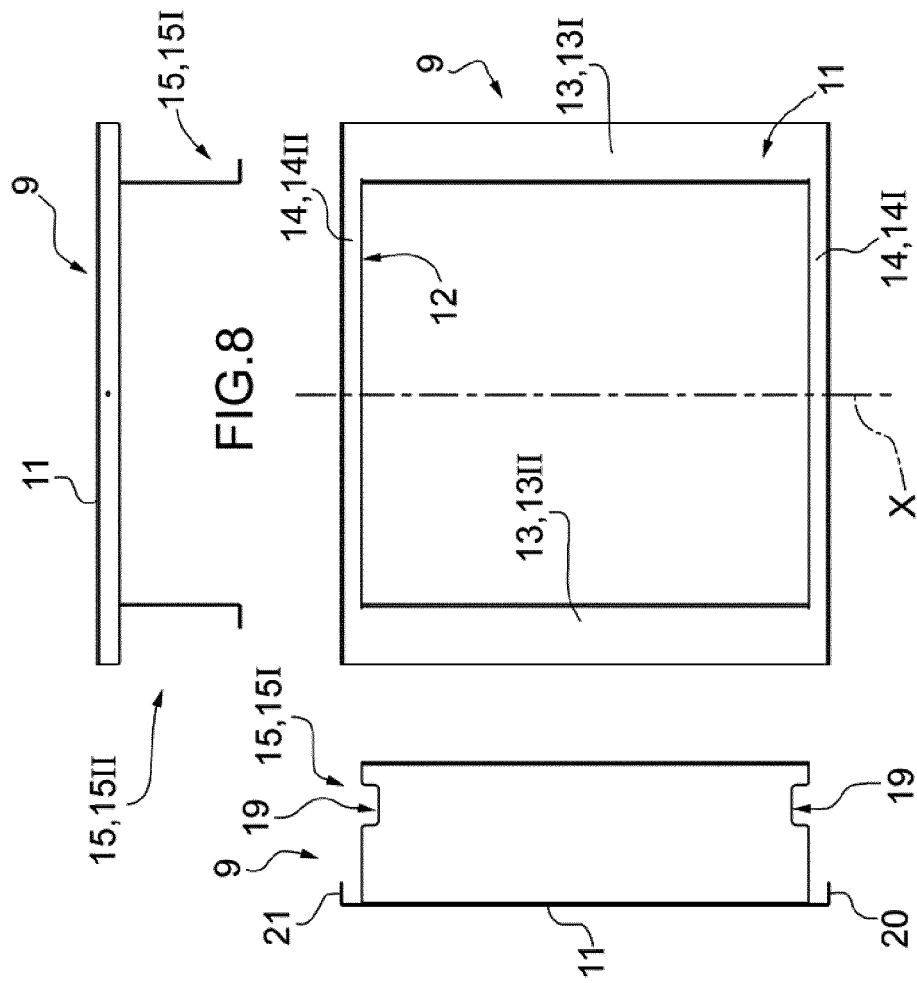


FIG.6

FIG.7

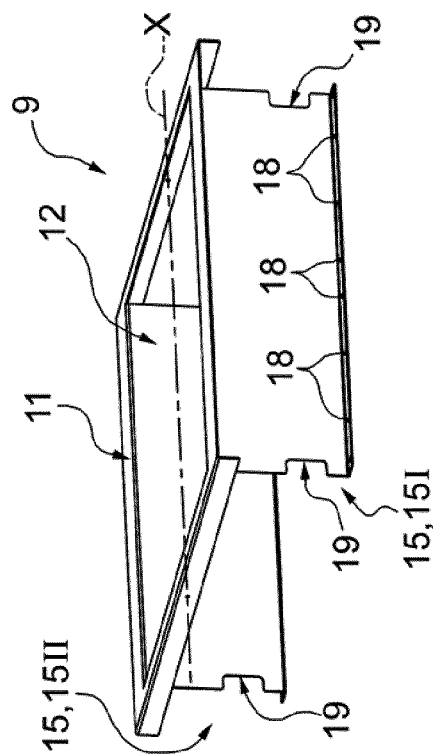
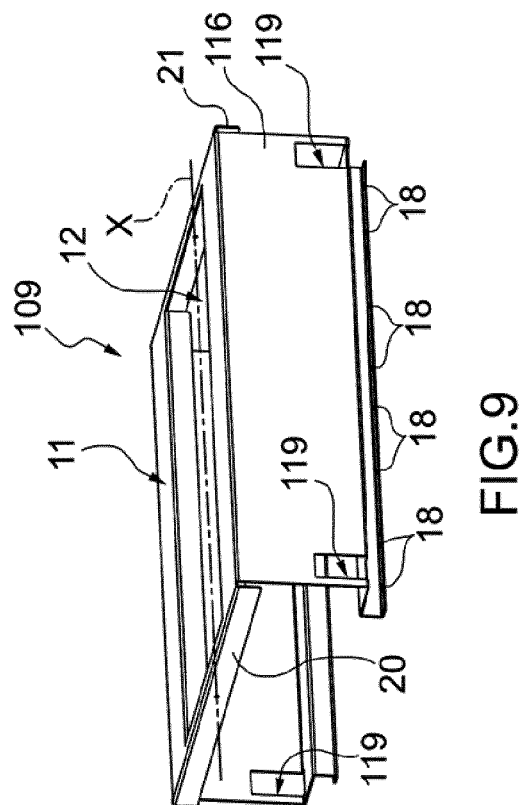
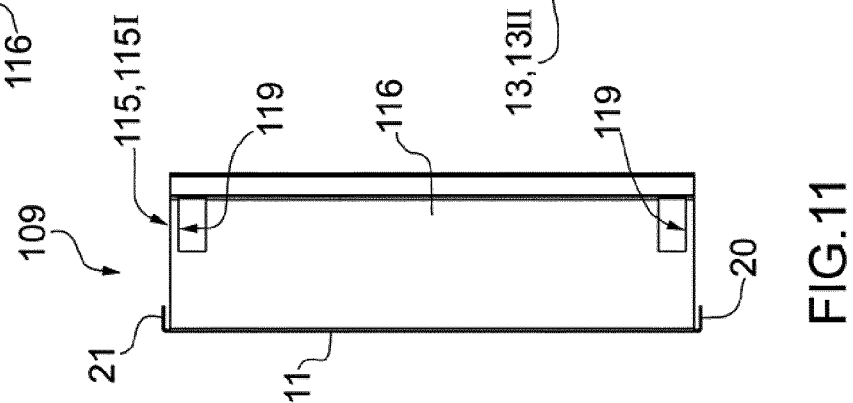
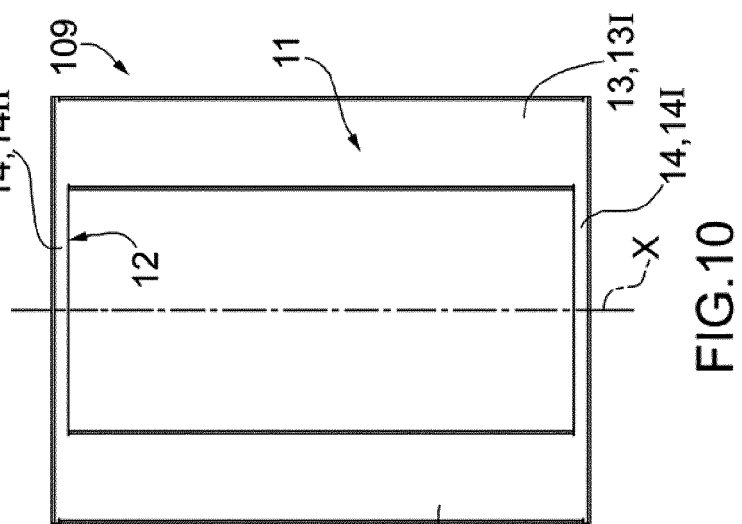
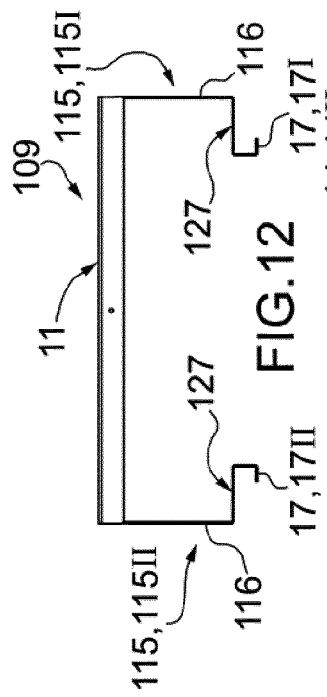


FIG.5





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