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(54) **Antipanic table, particularly for conference room chair**

(57) An antipanic table, particularly for a conference room chair, the antipanic table (10) comprising a flat supporting body (13) and a joint (14) that is embedded at least partially in the flat body (13) and has two movement units:
- a unit (15) for tilting the flat body (13) from a substantially horizontal arrangement (A) to a substantially vertical ar-

rangement (B) and vice versa about a tilting axis (17) that coincides substantially with the longitudinal axis of an armrest (12) of the chair (11) to which the antipanic table (10) is adapted to be applied,
- a unit (16) for the rotation of the flat body (13) about a rotation axis (19) that is perpendicular thereto.

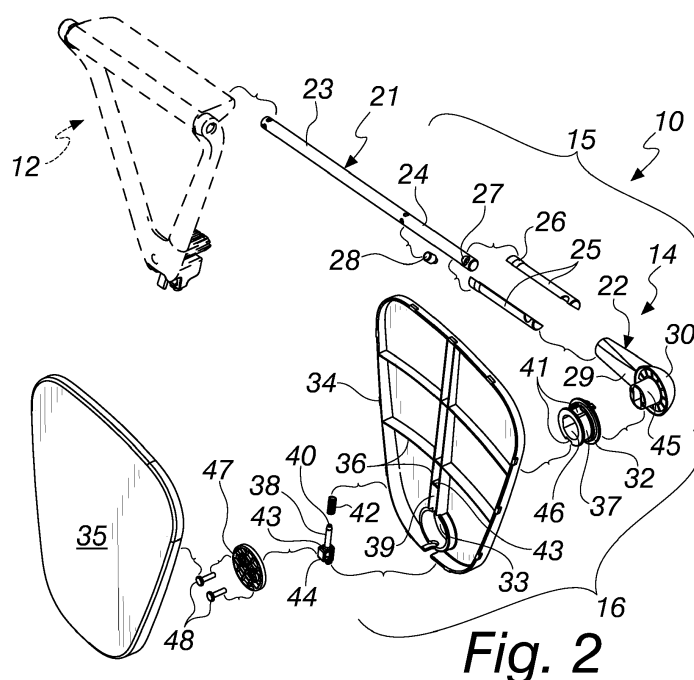


Fig. 2

Description

[0001] The present invention relates to an antipanic table, particularly for a conference room chair.

[0002] As is known, antipanic tables are tables associated with the end of an armrest of a chair, typically but not exclusively for conference rooms, and act as a writing desk.

[0003] Such tables must be provided with a gravity antipanic movement joint, i.e., a joint capable of allowing the user to change quickly and easily the arrangement of the table from a position for use, according to which the table, i.e., in particular the flat supporting body, is arranged horizontally in front of the user, to an inactive position, according to which the table is arranged vertically on the side of the chair.

[0004] In order to pass from one position to the other, the joint allows two types of movement: a tilting of the table from horizontal to vertical, and vice versa, and a rotation of the table on its own plane.

[0005] Currently, antipanic tables are known which are provided with a joint with a movement unit made of aluminum associated with the armrest and a hinged movement unit for a support made of plastics or steel, to which the table is fixed by means of screws, optionally hidden by caps.

[0006] Such unit is typically made of plastics or laminated wooden material or can be constituted by two half-shells, made of plastics material, which are arranged one downward and the other one upward when the table is in the position for use. In this last variation, the antipanic table is thus constituted mainly by four parts: the two movement units and the two half-shells.

[0007] Such antipanic tables are not devoid of drawbacks, among which it is necessary to point out the number of components, due particularly to the presence of the two half-shells and of the fixing screws, the laboriousness required by assembly and by mounting on the armrest.

[0008] Moreover, the antipanic table built in this manner, being subjected to numerous movements, has relatively high risks of wear and deterioration.

[0009] The aim of the present invention is to provide an antipanic table to be associated with the armrest of the chair easily and quickly, using a reduced number of components and fixing means.

[0010] Within this aim, an object of the invention is to provide an antipanic table that is resistant to wear and deterioration.

[0011] Another object of the invention is to provide an antipanic table with lower production costs than antipanic tables of the known type.

[0012] A further object of the invention is to provide an antipanic table that has a better aesthetic impact than tables of the known type.

[0013] This aim and these and other objects that will become better apparent hereinafter are achieved by an antipanic table, particularly for a conference room chair,

characterized in that it comprises a flat supporting body and a joint that is embedded at least partially in said flat body and has two movement units:

- 5 - a unit for tilting said flat body from a substantially horizontal arrangement to a substantially vertical arrangement and vice versa, about a tilting axis that coincides substantially with the longitudinal axis of an armrest of said chair, to which said antipanic table is adapted to be applied,
- 10 - a unit for the rotation of said flat body about a rotation axis that is perpendicular thereto.

[0014] Further characteristics and advantages of the invention will become better apparent from the description of a preferred but not exclusive embodiment of the antipanic table according to the invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a view of a conference room chair provided with an antipanic table according to the invention in a position for use;

Figure 2 is an exploded perspective view of the antipanic table according to the invention, dissociated from the armrest of the chair;

Figure 3 is a view, taken from above with respect to the armrest, of the antipanic table according to the invention in the horizontal position for use, opened in order to show some components thereof that are internal to the flat body, the table being associated with an armrest;

Figure 4 is a view, taken from above with respect to the armrest, of the antipanic table according to the invention associated with an armrest and in the position for use;

Figure 5 is a view, taken from the side with respect to the armrest, of the antipanic table associated with an armrest and in an intermediate inactive and vertical position;

Figure 6 is an enlarged-scale sectional view of Figure 4, taken along the line VI-VI;

Figure 7 is an enlarged-scale sectional view of Figure 5, taken along the line VII-VII;

Figure 8 is a view, taken from the front with respect to the armrest, of the antipanic table according to the invention associated with an armrest and in the same position as Figure 5;

Figure 9 is a view, similar to the one of figure 8, of the antipanic table according to the invention associated with an armrest and in a vertical resting position;

Figure 10 is an enlarged-scale sectional view of Figure 8, taken along the line X-X;

Figure 11 is an enlarged-scale sectional view of Figure 9, taken along the line XI-XI.

[0015] With reference to the figures, the antipanic table

according to the invention is generally designated by the reference numeral 10.

[0016] The antipanic table 10 is designed particularly but not exclusively, to be associated with conference room chairs 11, such as the one shown in Figure 1, obviously provided with armrests 12, to one of which the antipanic table 10 is applied.

[0017] The antipanic table 10 comprises mainly a flat supporting body 13, which acts substantially as a desk during use, and a joint 14, at least partially embedded in the flat body 13, in the manner that will become better apparent hereinafter.

[0018] The joint 14 has two movement units, i.e., a tilting unit 15 and a rotation unit 16, which are described hereinafter.

[0019] The tilting unit 15 allows to modify the position of the flat body 13 from a substantially horizontal arrangement A to a substantially vertical arrangement B and vice versa, about a tilting axis 17 that coincides substantially with the longitudinal axis of the armrest 12 of the chair 11, to which the antipanic table 10 is adapted to be applied.

[0020] As clearly visible in Figure 1, the horizontal arrangement A can coincide with the arrangement of the position for use of the antipanic table 10, which acts as a desk or in general as a supporting surface. This position for use is the same one shown also in Figure 3 and in Figure 4.

[0021] The vertical arrangement B is instead shown in Figure 5 and in Figure 8 in an intermediate inactive position and in Figure 9 in the inactive position.

[0022] The tilting unit 15 is provided with first means 18 for locking the tilting of the flat body 13 along the horizontal arrangement A and along the vertical arrangement B.

[0023] The rotation unit 16 allows to modify the position of the flat body 13 by rotating it about a rotation axis 19 that is perpendicular thereto, as indicated in Figure 8 and in Figure 9.

[0024] The rotation unit 16 is provided with second means 20 for locking the rotation of the flat body 13 according to two possible configuration positions defined on the same plane of arrangement, for example to lock the flat body 13 according to the intermediate vertical position or according to the resting vertical position.

[0025] With reference in particular to the tilting unit 15, it comprises mainly a pivot 21, which is to be associated integrally with the armrest 12 and is extended along the tilting axis 17, and a connecting element 22 between the armrest 12 and the flat body 13, which can rotate about the pivot 21.

[0026] As indicated in the exploded view of Figure 2, the pivot 21 has an insertion portion 23 in the structure of the armrest 12 and a remaining portion 24 for associating with the connecting element 22, at which it is covered by two complementary shells 25 with a convex portion 26 that prevents the exit of the pivot 21 from the structure of the armrest 12.

[0027] The associating portion 24 has a hole 27, formed correspondently in the cover of the shells 25, performed in a radial direction with respect to the pivot 21 for the insertion of a transverse element 28 that protrudes from the pivot 21 and is integral therewith.

[0028] Some parts of the tilting unit 15 are designated also in the sectional views of Figure 6 and of Figure 7.

[0029] The connecting element 22 has a sleeve-like portion 29 fitted on the pivot 21 and a head portion 30.

[0030] The first locking means 18 comprise the element 28 that is transverse to the pivot 21, which consists substantially of a screw to be screwed integrally to the pivot 21 proximate to one of its ends and adapted to abut with the head that protrudes from the pivot 21 against two walls of a cavity 31 of the head portion 30 of the connecting element 22 during the rotation of the latter, in the manner shown in the two configurations with the sectional views of Figure 6 and Figure 7.

[0031] Regarding the rotation unit 16 of the antipanic table 10, its components are indicated and clearly visible again in the exploded view of Figure 2 and, in their interaction, in the sectional views of Figure 10 and Figure 11.

[0032] By observing those figures, one can notice that said unit comprises a cylindrical element 32 that is integral with the head portion 30 of the connecting element 22, which is inserted in an opening 33 of the flat body 13 along the rotation axis 19 about which said body rotates.

[0033] In particular, the opening 33 is formed on a supporting structure 34 that is part of the flat body 13 together with a cover 35 that closes it. The supporting structure 34 is substantially the lower part of the flat body 13, with respect to the position for use of the antipanic table 10, while the cover 35 constitutes the resting surface during use.

[0034] In Figure 3, in which the flat body 13 is open, it is clearly visible that the supporting structure 34 has also stiffening ribs 36.

[0035] The cylindrical element 32 is provided laterally with a groove 37, clearly visible in Figure 2, for guiding rotation for the flat body 13.

[0036] In fact, the second locking means 20 comprise:

- a rod 38, which is accommodated in the flat body 13, in a compartment 39 that is provided between the stiffening ribs 36 of the supporting structure 34, and rotates integrally with the flat body 13 about the rotation axis 19 and is further adapted to slide with one end 40 on the groove 37 of the cylindrical element 32 along a rotation arc that is delimited by two recesses 41 of the groove 37 in which the rod 38 is inserted with the end 40,
- means 42 for contrasting the exit of the end 40 from the recesses 41.

[0037] The contrast means 42 consist of a helical spring that is wound around the rod 38 and is coupled between two opposite walls 43 that are transverse to the rod 38.

[0038] One of the opposite walls 43 is substantially interposed between two stiffening ribs 36, while the other wall is part of a stability element 44 in which the rod 38 is inserted and which is designed to maintain it in the compartment 39.

[0039] By observing the cylindrical element 32, particularly in Figure 2, it can be noted that more precisely it is ring-shaped and is mounted in a unique position on a stem 45 of the head portion 30, surrounding it, with which the latter is inserted in the flat body 13.

[0040] The cylindrical element 32 is mounted in a unique position and rendered integral with the connecting element 22, having an internal cavity 46 that is shaped complementarily with respect to the outer wall of the stem 45, which has a lateral flattening.

[0041] As can be inferred, the tilting unit 15 and the rotation unit 16 are advantageously integrated in the joint 14 and are adapted to cooperate in the movement of the flat body 13.

[0042] Moreover, a cover fixing element 47 is also present, as shown in Figure 2, to be superimposed on the cylindrical element 32 and on the stem 45, fixing it to the latter with two fixing screws 48, from the internal side of the supporting structure 34.

[0043] Most of the described elements that compose the two movement units, i.e., the tilting unit 15 and the rotation unit 16, are made preferably of die-cast aluminum. In particular, the connecting element 22, the cylindrical element 32, the supporting structure 34 and the fixing element 47 are made of die-cast aluminum. The cover 35 is instead preferably made of plastic material.

[0044] All the components have been shown as parts of an antipanic table with right-handed actuation; however, they can be assembled in order to provide antipanic tables with left-handed actuation, apart from the cylindrical element 32, which for this purpose has to be provided in a substantially mirror-symmetrical manner with respect to the version shown.

[0045] Moreover, the cylindrical element 32 may have the two recesses 41 in such a position as to ensure a rotation through 180°C, such as the one shown, or a different rotation, according to the requirements.

[0046] Operation of the antipanic table, according to the invention, is as follows.

[0047] In order to move the flat body 13 of the antipanic table 10 from the position for use with horizontal arrangement A, shown in Figure 4, to the intermediate inactive position, with vertical arrangement B as shown in Figure 5, the user has to tilt the flat body 13 vertically by rotating it about the tilting axis 17.

[0048] During this movement, the flat body 13 moves integrally with the connecting element 22, which rotates about the pivot 21. The transverse element 28, which initially rests on a wall of the cavity 31 of the head portion 30, preventing the flat body 13 from rotating downwardly, abuts against the wall of the cavity 31 that is substantially opposite the preceding one, preventing the flat body 13 from turning through more than a right angle.

[0049] Subsequently, the user applies a rotation to the flat body 13 about the rotation axis 19, in order to move the flat body 13 of the antipanic table 10 from the intermediate vertical position with vertical arrangement B shown in Figure 8 to the inactive position shown in Figure 9.

[0050] During this movement, the flat body 13 rotates about the cylindrical element 32 and with respect to the head portion 30, inserted therein, which remain integral with the pivot 21.

[0051] The end 40 of the rod 38 initially pushes against the cylindrical element 32 at a recess 41, the uppermost one with respect to the illustration of Figure 10, by way of the contrast means 42.

[0052] When the antipanic table 10 is forced to rotate, the rod 38 is pushed toward the outside of the joint 14, compressing the helical spring of the contrast means 42, freeing the recess 41.

[0053] The rod 38 then slides with its end 40 inside the groove 37, during the rotation of the flat body 13, until it finds a second recess 41 (in the example shown in Figure 11 it is opposite with respect to the previous one) in which it is pushed by the spring of the contrast means 42.

[0054] The second locking means 20 then prevent the rod 38 from exiting accidentally with its end 40 from the recess 41 in which is inserted.

[0055] The antipanic table 10 can be sold already assembled, ready to be installed on the armrest of a chair.

[0056] This operation requires no fixing screws; it is in fact sufficient to fit the sleeve-like portion 29 of the connecting element 22 on the association portion 24 of the pivot 21 (with the interposition of the two shells 25), inserted in the structure of the armrest 12.

[0057] It should be noted that the fact that the joint 14 is constituted by two movement units integrated therein and that it is partially embedded in the flat body 13, renders the latter, particularly the supporting structure 34, substantially part of the joint 14, unlike the preceding known solutions, for which the flat supporting body was fixed externally to the joint.

[0058] In this manner, the antipanic table is no longer constituted mainly by four parts, but is instead constituted by three: the two movement units and the cover 35.

[0059] In practice it has been found that the invention achieves the intended aim and objects, by providing an antipanic table to be associated with the armrest of a chair easily and quickly, simply by fitting the sleeve-like portion of the connecting element on the pivot that protrudes from the armrest, without using fixing screws, since the joint is partially integrated in the flat body of the antipanic table.

[0060] In this manner the antipanic table is more resistant to wear and deterioration than antipanic tables of the known type.

[0061] Moreover, since there are no visible fixing means, the aesthetic impact is better than known antipanic tables.

[0062] Another advantage resides in that production

costs are reduced, because of the fewer components, since the supporting structure is substantially part of the joint and is not a component associated therewith.

[0063] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

[0064] In practice, the materials used, so long as they are compatible with the specific use, as well as the contingent shapes and dimensions, may be any according to requirements and to the state of the art.

[0065] The disclosures in Italian Patent Application No. PD2014A000088 from which this application claims priority are incorporated herein by reference.

[0066] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. An antipanic table (10), particularly for a conference room chair (11), **characterized in that** it comprises a flat supporting body (13) and a joint (14) that is embedded at least partially in said flat body (13) and has two movement units:

- a unit (15) for tilting said flat body (13) from a substantially horizontal arrangement (A) to a substantially vertical arrangement (B) and vice versa, about a tilting axis (17) that coincides substantially with the longitudinal axis of an armrest (12) of said chair (11) to which said antipanic table (10) is adapted to be applied,
- a unit (16) for the rotation of said flat body (13) about a rotation axis (19) that is perpendicular thereto.

2. The antipanic table according to claim 1, **characterized in that** said tilting unit (15) is provided with first means (18) for locking the tilting of said flat body (13) according to said substantially horizontal arrangement (A) and said substantially vertical arrangement (B) and said rotation unit (16) is provided with second means (20) for locking the rotation of said flat body (13) according to at least two configuration positions defined on the same plane of arrangement.

3. The antipanic table according to claim 2, **characterized in that** said tilting unit (15) comprises:

- a pivot (21), which is to be associated integrally with said armrest (12) and is extended along

said tilting axis (17),

- an element (22) for connection between said armrest (12) and said flat body (13), which can rotate about said pivot (21) and is provided with a sleeve-like portion (29) fitted thereon, said first locking means (18) comprising an element (28) that is transverse to said pivot (21) and is integral therewith proximate to one of its ends, and is adapted to abut against two walls of a cavity (31) of a head portion (30) of said connecting element (22) during the rotation of the latter.

4. The antipanic table according to claim 3, **characterized in that** said rotation unit (16) comprises a cylindrical element (32) that is integral with said head portion (30) and is inserted in an opening (33) of said flat body (13) along said rotation axis (19) about which said flat body (13) rotates, being provided laterally with a groove (37) for guiding the rotation of said flat body (13).

5. The antipanic table according to claim 4, **characterized in that** said second locking means (20) comprise:

- a rod (38), which is accommodated in said flat body (13), rotates integrally with it on said rotation axis (19) and is adapted to slide with one end (40) on said groove (37) along a rotation arc that is delimited by two recesses (41) of said groove (37) in which said rod (38) is inserted with said end (40),
- means (42) for contrasting the exit of said end (40) from said recesses (41).

6. The antipanic table according to claim 5, **characterized in that** said contrast means (42) consist of a helical spring that is wound around said rod (38) and is coupled between two opposite walls (43) that are transverse to said rod (38).

7. The antipanic table according to claim 4, **characterized in that** said cylindrical element (32) is substantially annular and is mounted integrally and in a unique position on a stem (45) of said head portion (30), surrounding said stem, said head portion entering said flat body (13) with said stem.

8. The antipanic table according to claim 7, **characterized in that** said cylindrical element (32) is mounted integrally and in a unique position on said stem (45), being provided with an internal cavity (46) that is shaped complementarily with respect to the outer wall of said stem (45).

9. The antipanic table according to one or more of the preceding claims, **characterized in that** said tilting unit (15) and said rotation unit (16) are integrated in

said joint (14).

10. The antipanic table according to one or more of the preceding claims, **characterized in that** said flat body (13) comprises a supporting structure (34),
which is provided with said opening (33) and with stiffening ribs (36), between which a compartment (39) is provided for the containment of said rod (38), and a cover (35) that closes said supporting structure (34) and constitutes the resting surface during use of said antipanic table (10).
11. The antipanic table according to one or more of the preceding claims, **characterized in that** said tilting unit (15) and said rotation unit (16) are at least partially made of die-cast aluminum.
12. A conference room chair, **characterized in that** it comprises an antipanic table according to one or more of the preceding claims.

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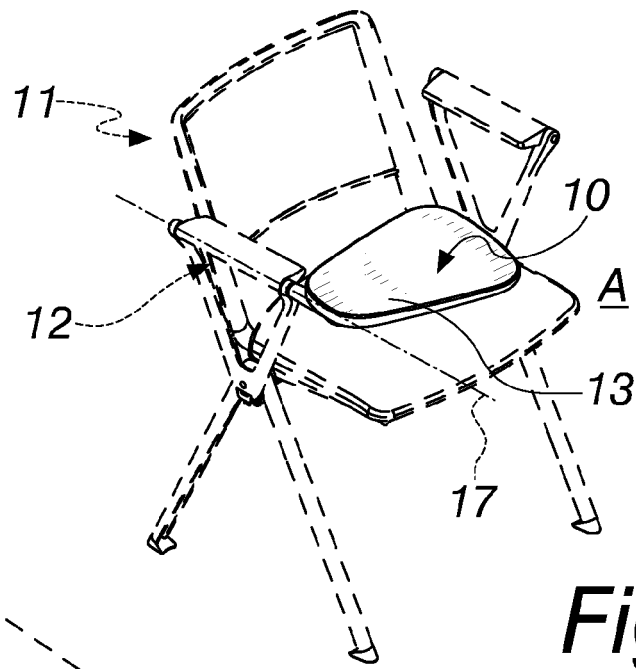


Fig. 1

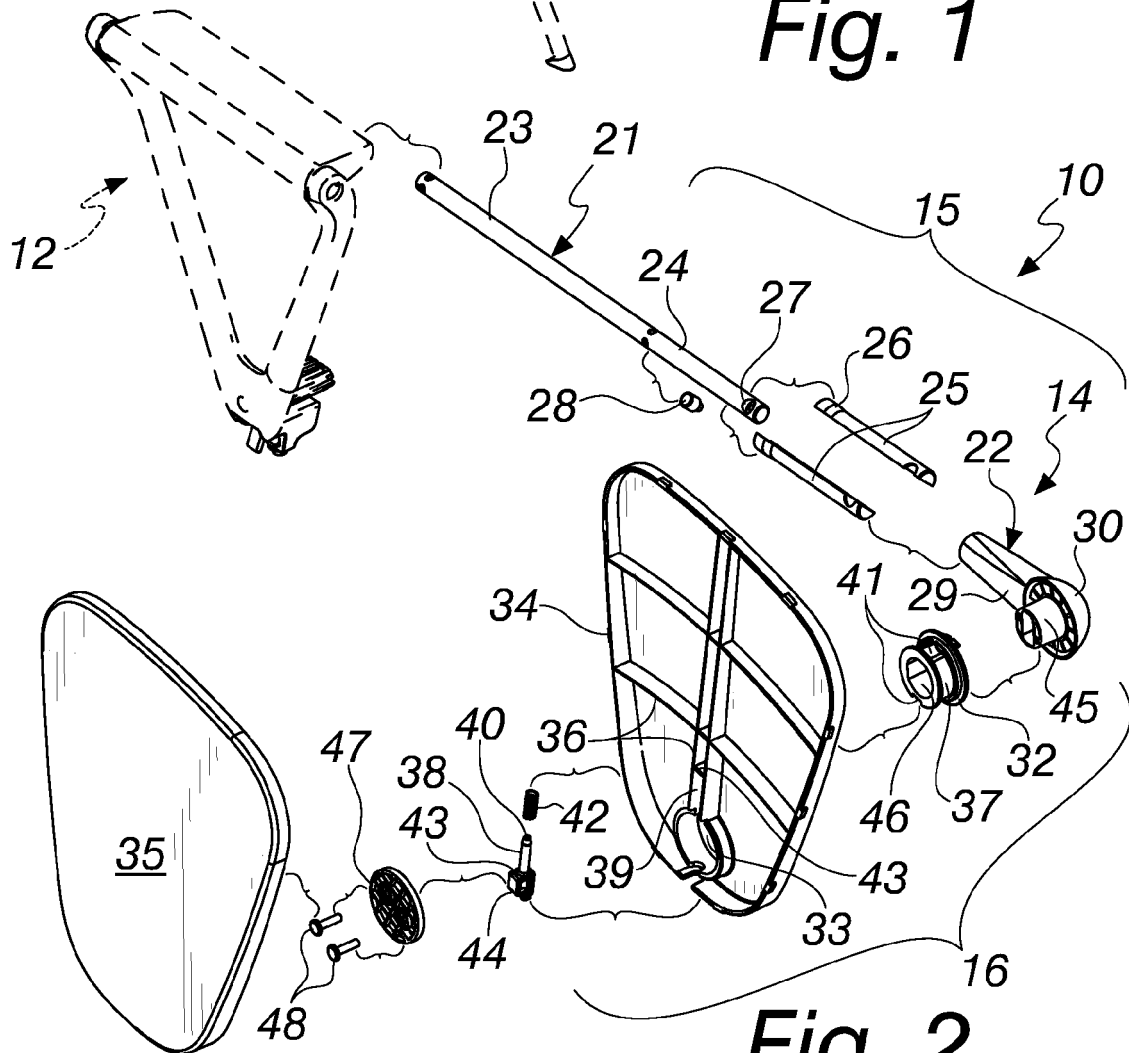
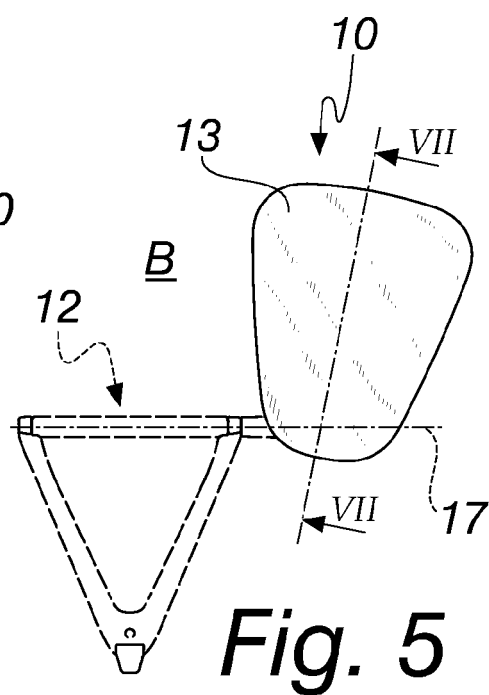
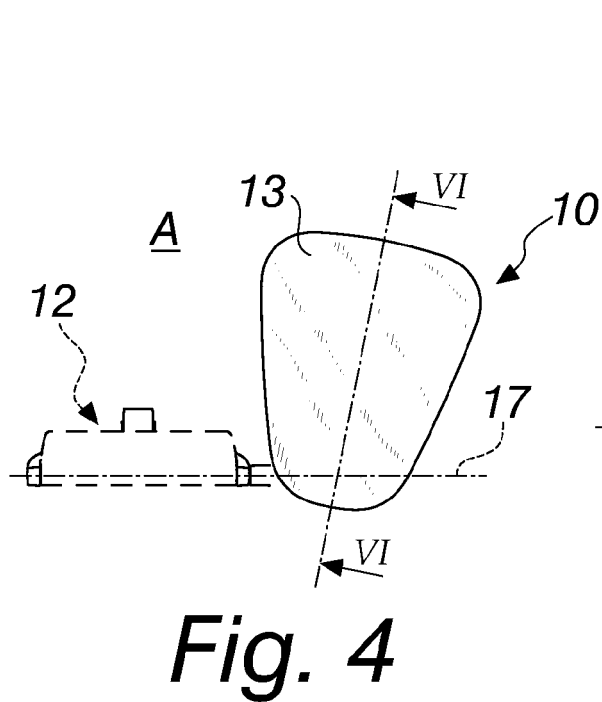
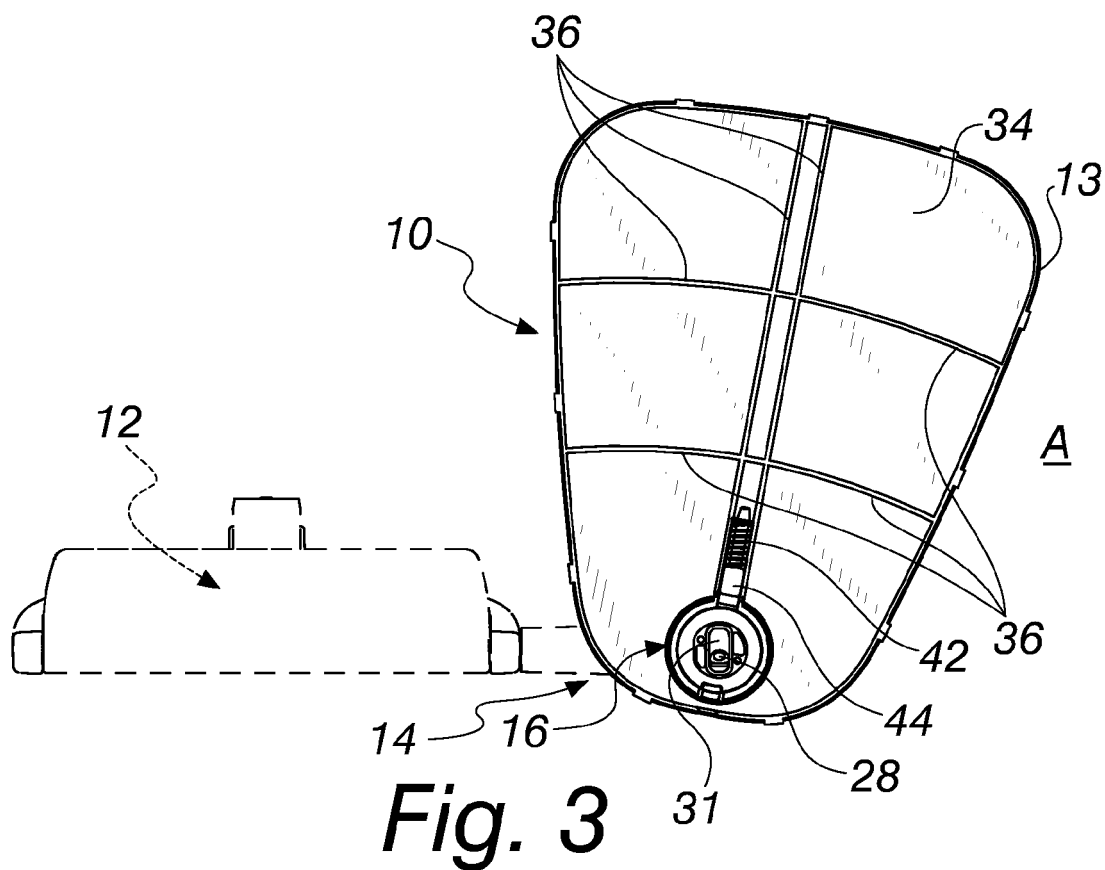
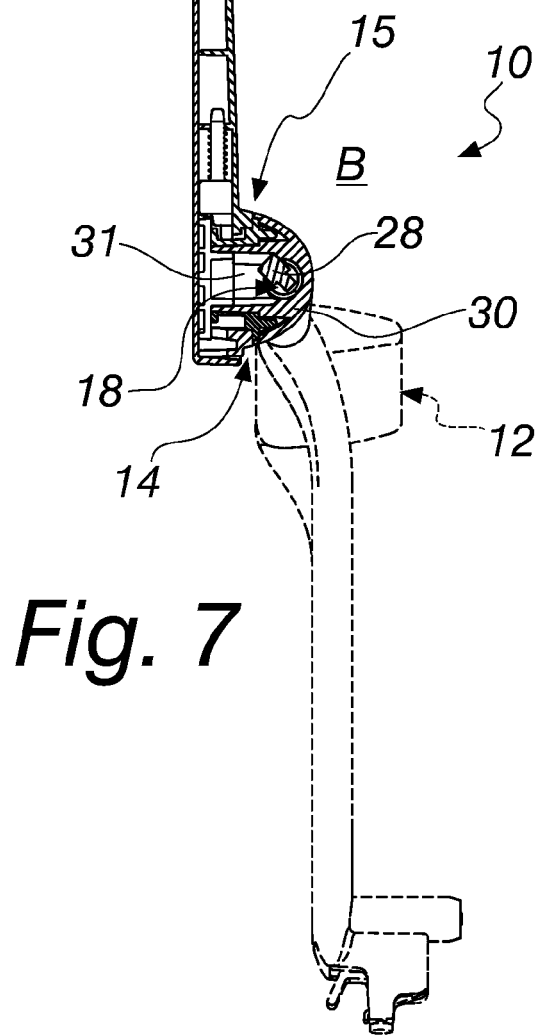
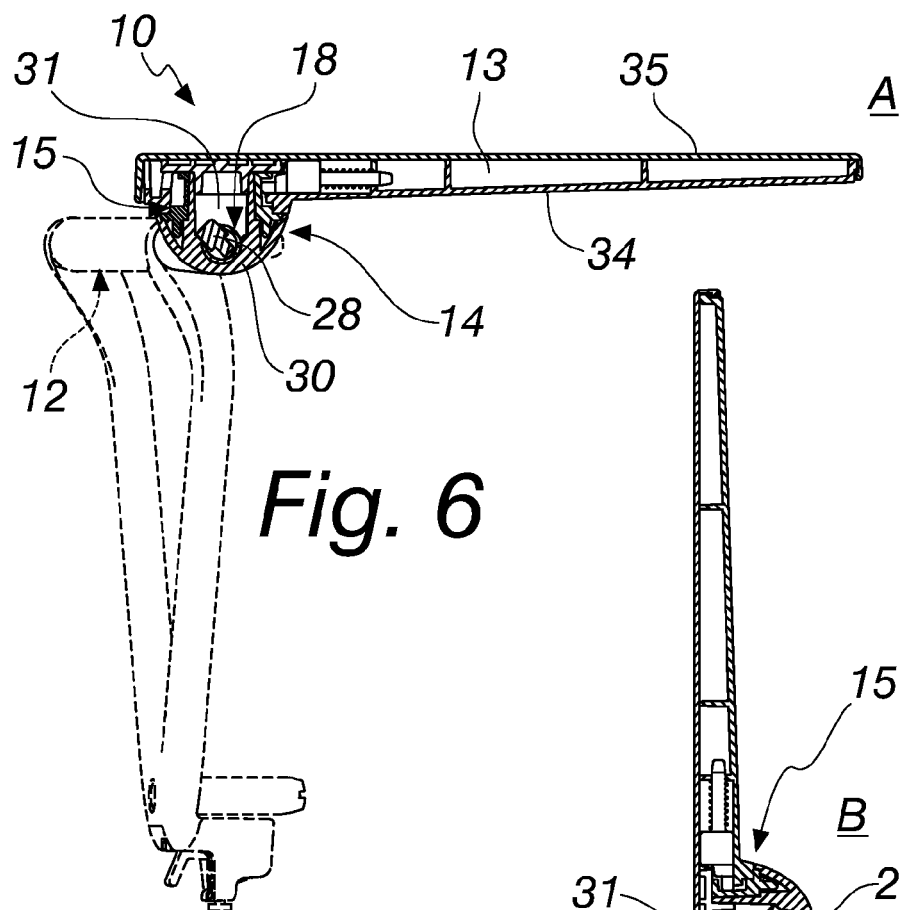


Fig. 2





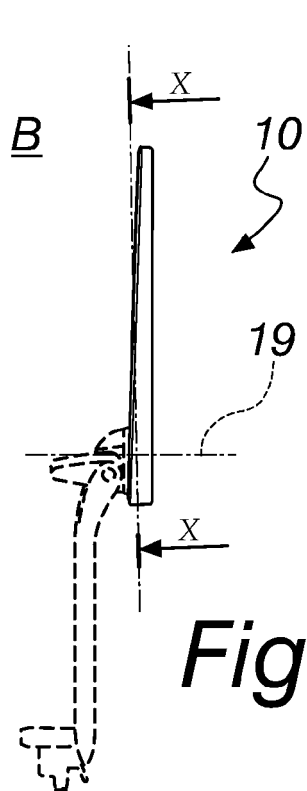


Fig. 8

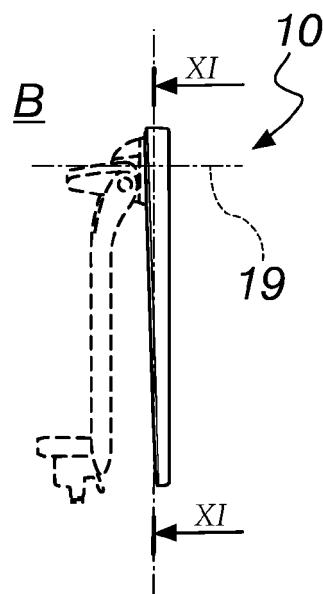


Fig. 9

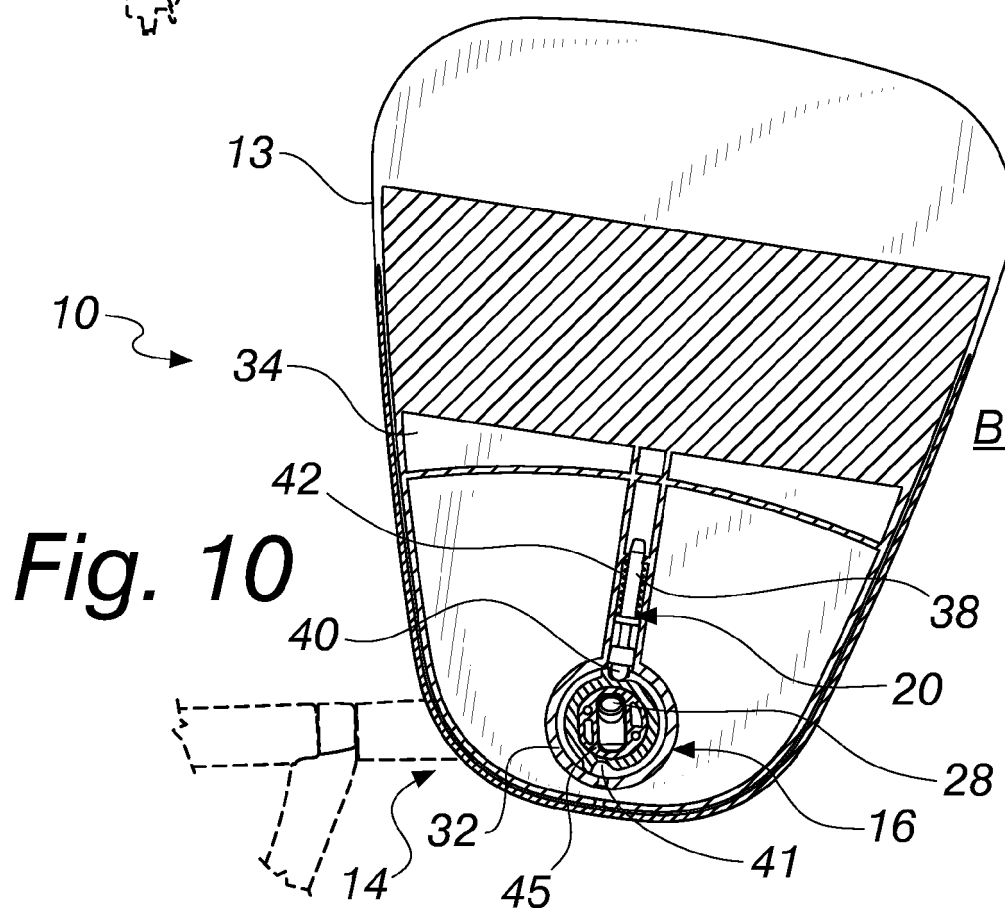


Fig. 10

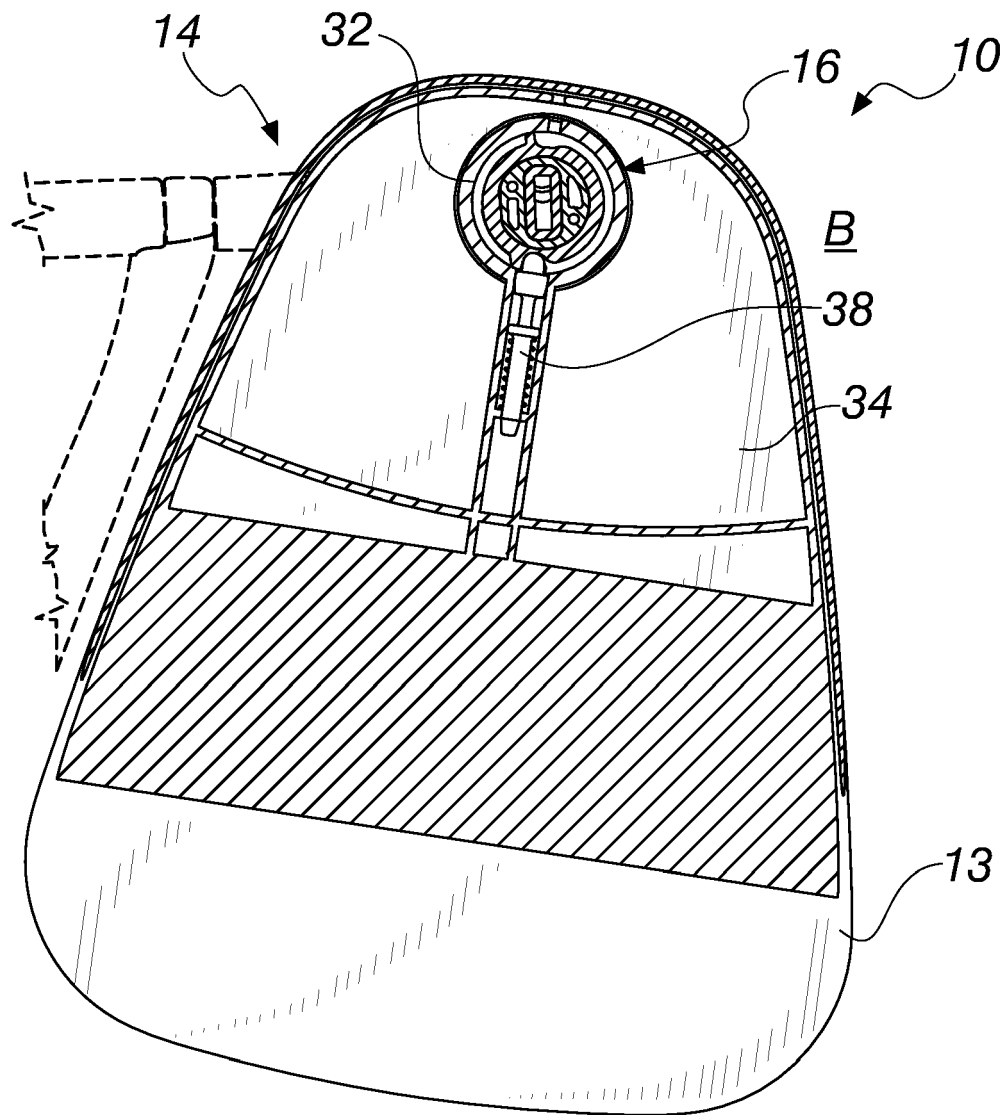


Fig. 11



EUROPEAN SEARCH REPORT

Application Number
EP 15 16 2242

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 13 August 2015	Examiner Sainz Martínez, M
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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