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(54) A cover for a paper-retaining device

(57) A cover (102, 202, 302, 402, 502, 602, 702, 802, 902, 1002, 1102, 1202, 1302) for a document file (100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300) is disclosed as including a front cover (104, 304, 404, 704, 804, 904, 1004, 1204, 1304) and a back cover (106, 406, 706, 906, 1006, 1206, 1306) joined with each other, in which the back cover is engageable with a paper-retaining mechanism (116, 316, 416, 616, 716, 916, 1016, 1216, 1316) with at least two openable rings (122, 322, 422, 622, 922, 1022, 1222, 1322), in which the front and back covers are movable relative to each other to a closed configuration in which the front and back covers generally face each other, and the front cover includes hooks (1120, 220, 320, 420, 620, 720, 1020, 1120) or a wire (1366) which, when the covers are in the closed configuration, extend from the front cover towards the back cover for releasable engagement with the rings. A document file (100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300) with such a cover is also disclosed.

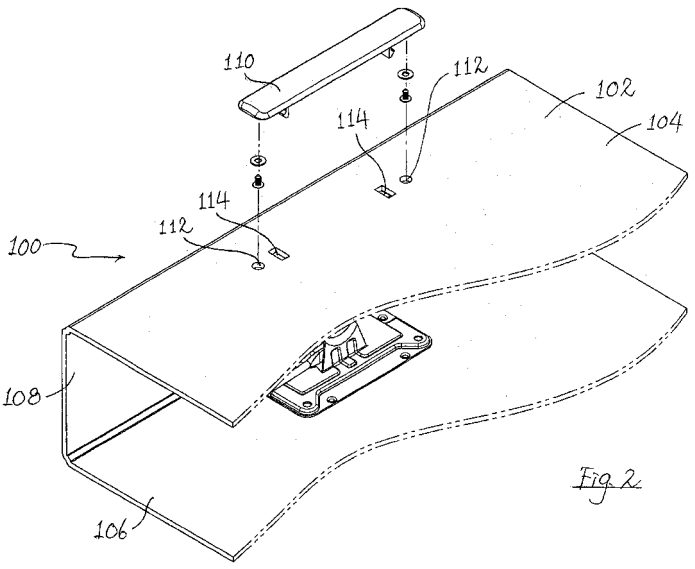

Fig. 2

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Description

[0001] This invention relates to a cover for a paper-retaining device and a paper-retaining device with such a cover.

[0002] Paper-retaining devices, such as document files with a paper-retaining mechanism, such as a ring binder mechanism or lever-arch type file mechanism, have long been available. Taking a document file with a lever-arch type file mechanism as an example, such has a front cover and a back cover joined with each other *via* a spine, such that the front cover and the back cover are pivotable relative to each other. A lever-arch type file mechanism is installed on the inner surface of the back cover such that a pair of openable ring members extend away from the inner surface of the back cover. To allow for more compact storage of such document files, especially when the document files are not full of paper, two slots are provided on the front cover, each for receiving therethrough the top part of a respective ring. Such allows the document file to assume a configuration in which the edges of the front cover and back cover which are not adjacent the spine are spaced apart from each other by a distance which is smaller than the width of the spine.

[0003] In such an arrangement, the front cover is freely pivotable relative to the paper-retaining mechanism. To avoid unintended opening of the document file, a protrusion is provided along a side of each respective slot and extending into the space of the slot, to loosely engage with the rings. However, it is found in practice that such an arrangement cannot provide reasonably reliable, yet releasable, engagement with the rings. In addition, the protrusion of the top part of the rings through the slots adversely affects the appearance of the document file, and may also cause damage to other articles, such as neighbouring document files.

[0004] It is thus an object of the present invention to provide a cover for a paper-retaining device and a paper-retaining device in which the aforesaid shortcomings are mitigated, or to provide at least a useful alternative to the public.

[0005] According to a first aspect of the present invention, there is provided a cover for a paper-retaining device, said cover including a first cover member and a second cover member joined with each other, wherein said second cover member is adapted to be engaged with a paper-retaining mechanism with at least two openable ring members, wherein said first and second cover members are movable relative to each other to a closed configuration wherein said first and second cover members generally face each other; characterized in that said first cover member includes engagement means which, when said cover members are in said closed configuration, extend from said first cover member towards said second cover member and are adapted to be releasably engaged with said ring members.

[0006] According to a second aspect of the present invention, there is provided a paper-retaining device including a cover, said cover including a first cover member and a second cover member joined with each other, wherein said second cover member is engaged with a paper-retaining mechanism with at least two openable ring members, wherein said first and second cover members are movable relative to each other to a closed configuration wherein said first and second cover members generally face each other; characterized in that said first cover member includes engagement means which, when said cover members are in said closed configuration, extend from said first cover member towards said second cover member and are releasably engaged with said ring members.

[0007] Embodiments of the present invention will now be described by way of examples only, and with reference to the accompanying drawings, in which:

Fig. 1 is a top perspective view of a document file according to a first embodiment of the present invention;
Fig. 2 is a partly exploded view of the document file shown in Fig. 1;
Fig. 3 is a front view of the file document file shown in Fig. 1;
Fig. 4 is a rear view of the document file shown in Fig. 1;
Fig. 5 is a top view of the document file shown in Fig. 1;
Fig. 6 is a bottom view of the document file shown in Fig. 1;
Fig. 7 is a right side view of the document file shown in Fig. 1;
Fig. 8 is a left side view of the document file shown in Fig. 1;
Fig. 9 is a partly sectioned top perspective view of the document file shown in Fig. 1;
Fig. 10 is a side view of the document file shown in Fig. 9;
Fig. 11A is a top view of an engagement bar of the document file shown in Fig. 1;
Fig. 11B is a front view of the engagement bar shown in Fig. 11A;
Fig. 11C is a bottom view of the engagement bar shown in Fig. 11A;
Fig. 11D is a right side view of the engagement bar shown in Fig. 11B;
Fig. 11E is a left side view of the engagement bar shown in Fig. 11B;
Fig. 12A shows the parts for fixing the engagement bar of Fig. 11A to the document file of Fig. 1;
Fig. 12B shows the parts of Fig. 12A engaged with one another;
Fig. 13A is a front view of the screw shown in Fig. 12A;
Fig. 13B is a top view of the screw shown in Fig. 13A;
Fig. 13C is a bottom view of the screw shown in Fig. 13A;
Fig. 14 is a partly sectioned top perspective view of

a document file according to a second embodiment of the present invention;
Fig. 15 is a side view of the document file shown in Fig. 14;
Fig. 16A is a top view of an engagement bar of the document file shown in Fig. 14;
Fig. 16B is a front view of the engagement bar shown in Fig. 16A;
Fig. 16C is a bottom view of the engagement bar shown in Fig. 16A;
Fig. 16D is a right side view of the engagement bar shown in Fig. 16B;
Fig. 16E is a left side view of the engagement bar shown in Fig. 16B;
Fig. 17 is a partly sectioned top perspective view of a document file according to a third embodiment of the present invention;
Fig. 18 is a side view of the document file shown in Fig. 17;
Fig. 19A shows the engagement bar and parts for fixing the engaging bar to the document file of Fig. 17;
Fig. 19B shows the parts of Fig. 19A engaged with one another;
Fig. 20A is a top view of the engagement bar shown in Fig. 19A;
Fig. 20B is a front view of the engagement bar shown in Fig. 20A;
Fig. 20C is a bottom view of the engagement bar shown in Fig. 20A;
Fig. 20D is a right side view of the engagement bar shown in Fig. 20B;
Fig. 20E is a left side view of the engagement bar shown in Fig. 20B;
Fig. 21A is a front view of the button shown in Fig. 19A;
Fig. 21B is a top view of the button shown in Fig. 21A;
Fig. 21C is a bottom view of the button shown in Fig. 21A;
Fig. 22 is a partly sectioned top perspective view of a document file according to a fourth embodiment of the present invention;
Fig. 23 is a side view of the document file shown in Fig. 22;
Fig. 24A shows the engagement bar and parts for fixing the engaging bar to the document file of Fig. 22;
Fig. 24B shows the parts of Fig. 24A engaged with one another;
Fig. 25A is a top view of the engagement bar shown in Fig. 24A;
Fig. 25B is a front view of the engagement bar shown in Fig. 25A;
Fig. 25C is a bottom view of the engagement bar shown in Fig. 25A;
Fig. 25D is a right side view of the engagement bar shown in Fig. 25B;
Fig. 25E is a left side view of the engagement bar shown in Fig. 25B;
Fig. 26A is a front view of the nut shown in Fig. 24A;
Fig. 26B is a top view of the nut shown in Fig. 26A;
Fig. 26C is a bottom view of the nut shown in Fig. 26A;
Fig. 27 is a top perspective view of a document file according to a fifth embodiment of the present invention;
Fig. 28 is a partly exploded view of the document file shown in Fig. 27;
Fig. 29A is a bottom view of the engagement bar of the document file shown in Fig. 27;
Fig. 29B is a front view of the engagement bar shown in Fig. 29A;
Fig. 29C is a top view of the engagement bar shown in Fig. 29A;
Fig. 29D is a right side view of the engagement bar shown in Fig. 29B;
Fig. 29E is a left side view of the engagement bar shown in Fig. 29B;
Fig. 30 is a top perspective view of a document file according to a sixth embodiment of the present invention;
Fig. 31 is a partly exploded view of the document file shown in Fig. 30;
Fig. 32 is a partly sectioned perspective view of the document file shown in Fig. 30;
Fig. 33 is a side view of the document file shown in Fig. 32;
Fig. 34A is a bottom view of the engagement bar of the document file shown in Fig. 30;
Fig. 34B is a front view of the engagement bar shown in Fig. 34A;
Fig. 34C is a top view of the engagement bar shown in Fig. 34A;
Fig. 34D is a right side view of the engagement bar shown in Fig. 34B;
Fig. 34E is a left side view of the engagement bar shown in Fig. 34B;
Fig. 35 is a top perspective view of a document file according to a seventh embodiment of the present invention;
Fig. 36 is a partly exploded view of the document file shown in Fig. 35;
Fig. 37 is a partly sectioned perspective view of the document file shown in Fig. 35;
Fig. 38 is a side view of the document file shown in Fig. 37;
Fig. 39A is a partly sectioned view showing engagement between the outer part and inner part of the engagement bar and two buttons of the document file shown in Fig. 35;
Fig. 39B is an exploded view of the parts shown in Fig. 39A;
Fig. 40A is a bottom view of the outer part of the engagement bar shown in Fig. 39A;
Fig. 40B is a front view of the outer part shown in Fig. 40A;
Fig. 40C is a top view of the outer part shown in Fig. 40A;
Fig. 40D is a right side view of the outer part shown

in Fig. 40B;
Fig. 40E is a left side view of the outer part shown in Fig. 40B;
Fig. 41A is a bottom view of the inner part of the engagement bar shown in Fig. 39A;
Fig. 41B is a front view of the inner part shown in Fig. 41A;
Fig. 41C is a top view of the inner part shown in Fig. 41A;
Fig. 41D is a right side view of the inner part shown in Fig. 41B;
Fig. 41E is a left side view of the inner part shown in Fig. 41B;
Fig. 42 is a top perspective view of a document file according to an eighth embodiment of the present invention;
Fig. 43 is a partly exploded view of the document file shown in Fig. 42;
Fig. 44 is a partly sectioned perspective view of the document file shown in Fig. 42;
Fig. 45 is a side view of the document file shown in Fig. 44;
Fig. 46A is a partly sectioned view showing engagement between the outer part and inner part of the engagement bar and two buttons of the document file shown in Fig. 42;
Fig. 46B is an exploded view of the parts shown in Fig. 46A;
Fig. 47A is a bottom view of the outer part of the engagement bar shown in Fig. 46A;
Fig. 47B is a front view of the outer part shown in Fig. 47A;
Fig. 47C is a top view of the outer part shown in Fig. 47A;
Fig. 47D is a right side view of the outer part shown in Fig. 47B;
Fig. 47E is a left side view of the outer part shown in Fig. 47B;
Fig. 48A is a bottom view of the inner part of the engagement bar shown in Fig. 46A;
Fig. 48B is a front view of the inner part shown in Fig. 48A;
Fig. 48C is a top view of the inner part shown in Fig. 48A;
Fig. 48D is a right side view of the inner part shown in Fig. 48B;
Fig. 48E is a left side view of the inner part shown in Fig. 48B;
Fig. 49 is a top perspective view of a document file according to a ninth embodiment of the present invention;
Fig. 50 is a partly exploded view of the document file shown in Fig. 49;
Fig. 51 is a top view of the document file shown in Fig. 49;
Fig. 52 is a bottom view of the document file shown in Fig. 49;
Fig. 53 is a front view of the document file shown in Fig. 49;
Fig. 54 is a rear view of the document file shown in Fig. 49;
Fig. 55 is a right side view of the document file shown in Fig. 49;
Fig. 56 is a left side view of the document file shown in Fig. 49;
Fig. 57 is a partly sectioned perspective view of the document file shown in Fig. 49;
Fig. 58 is a side view of the document file shown in Fig. 57;
Fig. 59A shows engagement among the engagement bar, buttons, springs and washers of the document file shown in Fig. 42;
Fig. 59B is an exploded view of the parts shown in Fig. 59A;
Fig. 60A is a bottom view of the engagement bar shown in Fig. 59A;
Fig. 60B is a front view of the engagement bar shown in Fig. 60A;
Fig. 60C is a top view of the engagement bar shown in Fig. 60A;
Fig. 60D is a right side view of the engagement bar shown in Fig. 60B;
Fig. 60E is a left side view of the engagement bar shown in Fig. 60B;
Fig. 61 is a top perspective view of a document file according to a tenth embodiment of the present invention;
Fig. 62 is a partly exploded view of the document file shown in Fig. 61;
Fig. 63 is a front view of the document file shown in Fig. 61;
Fig. 64 is a rear view of the document file shown in Fig. 61;
Fig. 65 is a right side view of the document file shown in Fig. 61;
Fig. 66 is a partly sectioned perspective view of the document file shown in Fig. 61;
Fig. 67 is a side view of the document file shown in Fig. 66;
Fig. 68A shows engagement among the engagement bar, buttons, springs and press bar of the document file shown in Fig. 61;
Fig. 68B is an exploded view of the parts shown in Fig. 68A;
Fig. 69A is a bottom view of the engagement bar of the document file shown in Fig. 68A;
Fig. 69B is a front view of the engagement bar shown in Fig. 69A;
Fig. 69C is a top view of the engagement bar shown in Fig. 69A;
Fig. 69D is a right side view of the engagement bar shown in Fig. 69B;
Fig. 69E is a left side view of the engagement bar shown in Fig. 69B;
Fig. 70 is a top perspective view of a document file according to an eleventh embodiment of the present

invention;
Fig. 71 is a partly exploded view of the document file shown in Fig. 70;
Fig. 72 is a front view of the document file shown in Fig. 70;
Fig. 73 is a rear view of the document file shown in Fig. 70;
Fig. 74 is a right side view of the document file shown in Fig. 70;
Fig. 75 is a partly sectioned perspective view of the document file shown in Fig. 70;
Fig. 76 is a side view of the document file shown in Fig. 75;
Fig. 77A shows engagement among the engagement bar, buttons, springs and press bar of the document file shown in Fig. 70;
Fig. 77B is an exploded view of the parts shown in Fig. 77A;
Fig. 78A is a bottom view of the engagement bar shown in Fig. 77A;
Fig. 78B is a front view of the engagement bar shown in Fig. 78A;
Fig. 78C is a top view of the engagement bar shown in Fig. 78A;
Fig. 78D is a right side view of the engagement bar shown in Fig. 78B;
Fig. 78E is a left side view of the engagement bar shown in Fig. 78B;
Fig. 79 is a top perspective view of a document file according to a twelfth embodiment of the present invention;
Fig. 80 is a partly exploded view of the document file shown in Fig. 79;
Fig. 81 is a front view of the document file shown in Fig. 79;
Fig. 82 is a rear view of the document file shown in Fig. 79;
Fig. 83 is a right side view of the document file shown in Fig. 79;
Fig. 84 is a partly sectioned perspective view of the document file shown in Fig. 79;
Fig. 85 is a side view of the document file shown in Fig. 84;
Fig. 86A shows engagement among the engagement bar, buttons and spring plates of the document file shown in Fig. 79;
Fig. 86B is an exploded view of the parts shown in Fig. 86A;
Fig. 87A is a front view of the spring plate shown in Fig. 86A;
Fig. 87B is a top view of the spring plate shown in Fig. 87A;
Fig. 87C is a right side view of the spring plate shown in Fig. 87A;
Fig. 87D is a left side view of the spring plate shown in Fig. 87A;
Fig. 88 is a top perspective view of a document file according to a thirteenth embodiment of the present invention;
Fig. 89 is a partly exploded view of the document file shown in Fig. 88;
Fig. 90 is a front view of the document file shown in Fig. 88;
Fig. 91 is a rear view of the document file shown in Fig. 88;
Fig. 92 is a right side view of the document file shown in Fig. 88;
Fig. 93 is a left side view of the document file shown in Fig. 88;
Fig. 94 is a top view of the document file shown in Fig. 88;
Fig. 95 is a bottom view of the document file shown in Fig. 88;
Fig. 96 is a partly sectioned perspective view of the document file shown in Fig. 88;
Fig. 97 is a side view of the document file shown in Fig. 96;
Fig. 98A shows engagement among the engagement bar, spring, press wire, bar and screws of the document file shown in Fig. 88;
Fig. 98B is an exploded view of the parts shown in Fig. 98A;
Fig. 99A is a bottom view of the engagement bar shown in Fig. 98A;
Fig. 99B is a front view of the engagement bar shown in Fig. 99A;
Fig. 99C is a top view of the engagement bar shown in Fig. 99A;
Fig. 99D is a right side view of the engagement bar shown in Fig. 99B;
Fig. 99E is a left side view of the engagement bar shown in Fig. 99B;
Fig. 99F is a top perspective view of the engagement bar shown in Fig. 99A;
Fig. 100A is a front view of the press wire shown in Fig. 98A;
Fig. 100B is a top view of the press wire shown in Fig. 100A;
Fig. 100C is a side view of the press wire shown in Fig. 100A; and
Fig. 100D is a top perspective view of the press wire shown in Fig. 100A.

[0008] A document file incorporated with a cover according to a first embodiment of the present invention is shown in Figs. 1 to 10, and generally designated as 100, with the cover designated as 102. The cover 102 has a front cover 104 and a back cover 106 joined with each other *via* a spine 108. The front cover 104 is a fixedly engaged with an engagement bar 110, the function and structure of which will be discussed below.

[0009] As shown in Fig. 2, the front cover 104 is provided with two holes 112 and two slots 114, and as shown in Figs. 9 and 10, a paper-retaining mechanism in the form of a lever-arch type file mechanism 116 is fixedly installed on an inner surface 118 of the back cover 106.

The engagement bar 110 has two flexible hooks 120 extending through the slots 114 (see Fig. 2), such that when the document file 100 is closed, in which the front cover 104 and the back cover 106 face each other (as shown in Figs. 1, 2, 3, 4 and 9), each of the hooks 120 is releasably engaged with a respective selectively openable and closable ring 122 of the lever-arch type file mechanism 116. The hooks 120 may be pulled out of engagement with the rings 122 by a user, so as to allow the front cover 104 to be pivoted away from the back cover 106 to open the document file 100. It can be seen that the rings 122 do not extend through the front cover 104.

[0010] As shown in Figs. 11A to 11E, the hooks 120 of the engagement bar 110 face opposite directions, and adjacent each longitudinal end of the engagement bar 110 is a threaded hole 124 which is inserted into a respective hole 112 on the front cover 104. As shown in Figs. 12A and 12B, the engagement bar 110 may be fixedly secured to the front cover 104 of the cover 102 by being threadedly engaged with two screws 126 and washers 128. Figs. 13A to 13C show various views of the screw 126.

[0011] A document file incorporated with a cover according to a second embodiment of the present invention is shown in Figs. 14 and 15, and generally designated as 200, with the cover designated as 202. A major difference between the document file 200 and the document file 100 discussed above resides in the engagement bar 210. It can be seen in Figs. 16A to 16E, in particular in Fig. 16B, that hooks of the engagement bar 210 face a same direction.

[0012] A document file incorporated with a cover according to a third embodiment of the present invention is shown in Figs. 17 and 18, and generally designated as 300, with the cover designated as 302. There are two differences between this document file 300 and the document file 200 discussed above. Firstly, an engagement bar 310 is affixed to a front cover 304 of the cover 302 by press fit. As shown in Figs. 19A and 19B, the engagement bar 310 has two posts 330, each sized and configured to be received within a hole 332 of a respective button 334 by press fit to fixedly engage the engagement bar 310 to the front cover 304. Secondly, the engagement bar 310, as shown in more detail in Figs. 20A to 20E, has two hook pairs 320. Each hook pairs 320 are releasably engageable with a respective openable ring 322 of a paper-retaining device, such as a lever-arch type file mechanism 316 secured to the cover 302. It can be seen that each hook pairs 320 engage with the respective ring 322 from opposite directions.

[0013] Turning to Figs. 22 and 23, such show a document file incorporated with a cover according to a fourth embodiment of the present invention, generally designated as 400, with the cover designated as 402. The cover 402 is similar to the cover 302 discussed above in that the cover 402 also has an engagement bar 410 with two hook pairs 420, each hook pair 420 being releasably engageable with a respective selectively openable and closable ring 422 of a paper-retaining mechanism, e.g. a lever-arch type file mechanism 416 secured to a back cover 406 of the cover 402, e.g. by a number of rivets or screws.

[0014] As can be seen more clearly in Figs. 24A to 26C, a special feature of the cover 402 of the document file 400 is that the engagement bar 410 has two downwardly-extending threaded posts 436 each being threadedly engageable with a respective nut 438, which is shown more clearly in Figs. 24A and 24B, for securing the engagement bar 410 to a front cover 404 of the cover 402.

[0015] Figs. 27 and 28 show a document file incorporated with a cover according to a fifth embodiment of the present invention, generally designated as 500, with the cover designated as 502. The cover 502 has a single injected piece of engagement bar 510 (shown more clearly in Figs. 29A to 29E) which is structurally similar to the engagement bar 410 discussed above, with the main difference being that the engagement bar 510 has a pair of posts 530 each sized and configured to be engageable with a respective button 534 for securing the engagement bar 510 to the cover 502 by press fit.

[0016] Figs. 30 to 33 show various views of a document file (generally designated as 600) with a cover 602 according to a sixth embodiment of the present invention. The cover 602 is fixedly engaged with an integrally formed metal engagement bar 610. The engagement bar 610 has two hook pairs 620 (shown more clearly in Figs. 34A to 34E) for releasably engaging two selectively openable and closable rings 622 of a lever-arch type file mechanism 616 secured to the cover 602, forming the document file 600.

[0017] The engagement bar 610 also has two legs 636 extending from its lower side, and bent oppositely to each other. The legs 636 are received into holes 638 of a front cover 604 of the cover 602 for securing the engagement bar 610 with the cover 602, as shown more clearly in Fig. 33, by snap fit.

[0018] Figs. 35 to 38 show various views of a document file (generally designated as 700) with a cover 702 according to a seventh embodiment of the present invention. The cover 702 is fixedly engaged with an engagement bar 710.

[0019] As shown more clearly in Figs. 39A to 41C, the engagement bar 710 has a plastic outer part 740 and an injected piece of inner part 742, which may be made of the same or a different plastic material as the outer part 740. The outer part 740 has a generally planar outer major surface 744 on which words, patterns, graphics or the like may be printed, affixed or provided in other known manners. As to the inner part 742, such includes two hook pairs 720 for releasable engagement with openable rings 722 of a lever-arch type file mechanism 716 of the document file 700, when the document file 700 is in a closed configuration in which front cover 704 and back cover 706 face each other, e.g. as shown in Figs. 35 to 37.

[0020] As shown in Figs. 39A and 39B, the outer part

740 and inner part 742 may be engaged with each other, e.g. by snap-fitting, to form the engagement bar 710. The engagement bar 710 may then be engaged with the front cover 704 of the cover 702 by press fit, as discussed previously in the context of other embodiments.

[0021] Figs. 42 to 45 show various views of a paper-retaining device in the form of a document file (generally designated as 800) with a cover 802 according to an eighth embodiment of the present invention. The document file 800 and the cover 802 are structurally very similar to the document file 700 and cover 702 discussed above. In particular, the cover 802 is fixedly engaged with an engagement bar 810 comprising an outer part 840 (as shown more clearly in Figs. 47A to 47E) and an inner part 842 (as shown more clearly in Figs. 48A to 48C). As shown in Figs. 46A and 46B, the outer part 840 and inner part 842 may be engaged with each other, e.g. by snap-fitting, to form the engagement bar 810. The engagement bar 810 may then be engaged with a front cover 804 of the cover 802. A main special feature of this engagement bar 810 is that the outer part 840 is made of a sheet of metal whereas the inner part 742 is an injected plastic piece.

[0022] Figs. 49 to 58 show various views of a document file (generally designated as 900) with a cover 902 according to a ninth embodiment of the present invention. The cover 902 is fixed with an engagement bar 910 by two buttons 934 by press fit, as discussed above.

[0023] Figs. 59A and 59B show that the engagement bar 910 has two hook pairs 920 each carrying a compression coil spring 946 and a washer 948. As shown in more detail in Figs. 53 to 55, 57 and 58, when the engagement bar 910 is fixed to the cover 902, the coil springs 946 are positioned between an inner major surface of the front cover 904 and the washers 948, and the washers 948 are positioned between the springs 946 and the free ends of the hook pairs 920. Such an arrangement ensures a closer engagement between the hook pairs 920 and selectively openable and closable rings 922 of a lever-arch type file mechanism 916 fixed to the cover 902. However, the coil springs 946 are not very stiff, such that they still allow the front cover 904 to pivot on its own weight towards the back cover 906, in particular when the document file 900 is not full of paper, so as to reduce the overall volume of the document file 900, for facilitating packaging and transport.

[0024] It can be seen in Figs. 60A to 60E that each hook pair 920 of the engagement bar 910 have a pair of shoulders 950 for engaging with the coil springs 946.

[0025] Figs. 61 to 67 show various views of a document file (generally designated as 1000) with a cover 1002 according to a tenth embodiment of the present invention. The cover 1002 is fixed with an engagement bar 1010 by two buttons 1034 by press fit. In particular, and as shown more clearly in Figs. 68A and 68B, the engagement bar 1010 has two posts 1030 which are engageable with the two buttons 1034 by press fit to engage the engagement bar 1010 to a front cover 1004 of the cover 1002.

[0026] As shown in Figs. 68A to 69E, the engagement bar 1010 has two oppositely facing hooks 1020 extending away from a lower side of the engagement bar 1010. Each hook 1020 carries a compression coil spring 1046, and a plate 1052 is carried by and engaged with the two hooks 1020. It can be seen in Fig. 67 that when the engagement bar 1010 is secured to the front cover 1004 of the cover 1002, the coil springs 1046 are disposed between the plate 1052 and the front cover 1004, which assists in ensuring a closer engagement between the hooks 1020 and selectively openable and closable rings 1022 of a lever-arch type file mechanism 1016. It can also be seen that the plate 1052 abuts, and is biased by the springs 1046 onto, the rings 1022. As in the case of the arrangement in the document file 900 discussed above, the coil springs 1046 are not very stiff, such that they still allow the front cover 1004 to pivot on its own weight towards the back cover 1006, in particular when the document file 1000 is not full of paper, so that the document file 1000 assumes a generally trapezoidal shape (when viewed from the front or rear), in order to reduce the overall volume occupied by the document file 1000, to allow more document files 1000 to be packed in a given volume, thus facilitating storage and transport.

[0027] Figs. 70 to 76 show various views of a document file (generally designated as 1100) with a cover 1102 according to an eleventh embodiment of the present invention. The cover 1102 is fixed with an engagement bar 1110 by two buttons 1134 by press fit, in the same manner as discussed above in the context of other embodiments.

[0028] The structure of the document file 1100 and the cover 1102 is very similar to that of the document file 1000 and cover 1002 discussed above, except that, as shown in Figs. 77A to 78E, the two hooks 1120 extending from a lower side of the engagement bar 1110 face a same direction.

[0029] Figs. 79 to 85 show various views of a document file (generally designated as 1200) with a cover 1202 according to a twelfth embodiment of the present invention. The cover 1202 is fixed with an engagement bar 1210 by two buttons 1234 by press fit, in the same manner as discussed above.

[0030] The structure of the document file 1200 and the cover 1202 is very similar to that of the document file 1000 and cover 1002 discussed above. As shown in Figs. 86A and 86B, the engagement bar 1210 has two posts 1230 extending from its lower side, each for engagement with a button 1234 by press fit to fixedly engage the engagement bar 1210 to a front cover 1204. Each post 1230 carries a bent spring plate 1254, the shape of which is shown in more detail in Figs. 87A to 87D. The spring plate 1254, which may be made of a metal sheet, has a rectangular first body part 1256 and a rectangular second body part 1258 formed integrally with each other. The first body part 1256 is formed with a hole 1260 for allowing insertion of one of the posts 1230. The spring plates 1254 may thus be carried by the engagement bar 1210 be-

tween its lower side and the buttons 1234.

[0031] By virtue of the inherent resilience and flexibility of the spring plates 1254, the spring plates 1254 bias the hooks 1220, once they are in engagement with selectively openable and closable rings 1222 of a lever-arch type file mechanism 1216, towards the lower side of the rings 1222 to tighten the engagement between the hooks 1220 and the rings 1222, while allowing the front cover 1204 to pivot, on its own weight, towards a back cover 1206 of the cover 1202, so that the document file 1200 assumes a generally trapezoidal shape when viewed from the front or rear, in order to reduce the overall volume occupied by the document file 1200, to allow more document files 1200 to be packed in a given volume, thus facilitating storage and transport.

[0032] Figs. 88 to 97 show various views of a document file (generally designated as 1300) with a cover 1302 according to a thirteenth embodiment of the present invention. The cover 1302 has a front cover 1304 and a back cover 1306 joined with each other *via* a spine 1308.

[0033] An engagement bar 1310 (as shown more clearly in Figs. 98A to 98E) is fixedly secured to the front cover 1304 by two screws 1326. The engagement bar 1310 has a block 1362 with an upper trough 1364 which is secured by the screws 1326 to a cover bar 1310a of the engagement bar 1310. A bent wire 1366 is engaged with the block 1362 in such way that part of the bent wire 1366 lies on the trough 1364 of the block 1362. By way of such an arrangement, the wire 1366 can swivel relative to the block 1362 about the trough 1364. A torsion spring 1368 is also provided for biasing the wire 1366.

[0034] When the document file 1300 is in the closed configuration in which the front cover 1304 and the back cover 1306 face each other, as shown in Fig. 90, and when shoulders 1370 of the bent wire 1366 are engaged with rings 1322 of a lever-arch type file mechanism 1316 (see Fig. 97), the torsion spring 1368 biases the bent wire 1366 towards the front cover 1304, in the direction indicated by the arrow A in Fig. 90, so as to tighten the engagement between the wire 1366 and the rings 1322, while allowing the front cover 1304 to pivot downwardly toward the back cover 1306. When the engagement bar 1310 is installed on the cover 1302, the wire 1366 is swivellable relative to the front cover 1304 about an axis L-L which is parallel to a longitudinal axis of the cover 1304.

[0035] It should be understood that the above only illustrates examples whereby the present invention may be carried out, and that various modifications and/or alterations may be made thereto without departing from the spirit of the invention. For example, although the invention has so far been described in the contexts of various covers installed with a lever-arch type file mechanism, it is envisaged that the covers of the present invention may be installed with a ring-binder mechanism to form various document files according to this invention.

[0036] It should also be understood that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may be provided in combination in a single embodiment. Conversely, various features of the invention which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any appropriate sub-combinations.

Claims

1. A cover (102, 202, 302, 402, 502, 602, 702, 802, 902, 1002, 1102, 1202, 1302) for a paper-retaining device (100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300), said cover including a first cover member (104, 304, 404, 704, 804, 904, 1004, 1204, 1304) and a second cover member (106, 406, 706, 906, 1006, 1206, 1306) joined with each other, wherein said second cover member is adapted to be engaged with a paper-retaining mechanism (116, 316, 416, 616, 716, 916, 1016, 1216, 1316) with at least two openable ring members (122, 322, 422, 622, 922, 1022, 1222, 1322), wherein said first and second cover members are movable relative to each other to a closed configuration wherein said first and second cover members generally face each other; **characterized in that** said first cover member includes engagement means (120, 220, 320, 420, 620, 720, 1020, 1120, 1366) which, when said cover members are in said closed configuration, extend from said first cover member towards said second cover member and are adapted to be releasably engaged with said ring members.

2. A cover according to Claim 1 further **characterized in that** engagement means is fixedly attached to said first cover member *via* fixing means (126, 334, 534, 934, 1034, 1134, 1234, 1326).

3. A cover according to Claim 2 further **characterized in that** said fixing means includes screws (126, 1326) or nuts (438).

4. A cover according to any of the preceding claims further **characterized in that** said engagement means is fixedly attached to said first cover member through threaded engagement, press fit or snap fit.

5. A cover according to any of the preceding claims further **characterized in that** said engagement means includes at least two hook members (120, 220, 320, 420, 620, 720, 1020, 1120) which, when said cover members are in said closed configuration, extend from said first cover member towards said second cover member, and each said hook member is adapted to be releasably engaged with a respective of said ring members.

6. A cover according to Claim 5 further **characterized in that** said hook members face either a same di-

rection or opposite directions.

7. A cover according to Claim 5 further **characterized in that** said engagement means includes at least two pairs of hook members, wherein each pair of hook members are adapted to be releasably engaged with a respective of said ring members.

8. A cover according to any of the preceding claims further **characterized in** including an outer part (740, 840) and an inner part (742, 842) engaged with each other, wherein said engagement means extends from said inner part.

9. A cover according to Claim 8 further **characterized in that** said outer part and inner part are made of a same material or of different materials.

10. A cover according to any of the preceding claims further **characterized in that** spring means (946, 1046, 1254, 1368) is operatively associated with said engagement means.

11. A cover according to Claim 10 further **characterized in that** said spring means is a coil spring (946, 1046), spring plate (1254) or torsion spring (1368).

12. A cover according to Claim 1 or 2 further **characterized in that** said engagement means is swivellably movable relative to said first cover member.

13. A cover according to Claim 12 further **characterized in that** said engagement means is swivellable relative to said first cover member about an axis which is substantially parallel to a longitudinal axis of said cover.

14. A cover according to Claim 12 or 13 further **characterized in that** said engagement means is a wire member (1366).

15. A cover according to Claim 12, 13 or 14 further **characterized in that** said engagement means is biased towards said first cover member.

16. A cover according to any Claim 15 further **characterized in that** said engagement means is biased towards said first cover member by spring means (1368).

17. A paper-retaining device (100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300) including a cover (102, 202, 302, 402, 502, 602, 702, 802, 902, 1002, 1102, 1202, 1302), said cover including a first cover member (104, 304, 404, 704, 804, 904, 1004, 1204, 1304) and a second cover member (106, 406, 706, 906, 1006, 1206, 1306) joined with each other, wherein said second cover member is engaged with a paper-retaining mechanism (116, 316, 416, 616, 716, 916, 1016, 1216, 1316) with at least two openable ring members (122, 322, 422, 622, 922, 1022, 1222, 1322), wherein said first and second cover members are movable relative to each other to a closed configuration wherein said first and second cover members generally face each other; **characterized in that** said first cover member includes engagement means (120, 220, 320, 420, 620, 720, 1020, 1120, 1366) which, when said cover members are in said closed configuration, extend from said first cover member towards said second cover member and are releasably engaged with said ring members.

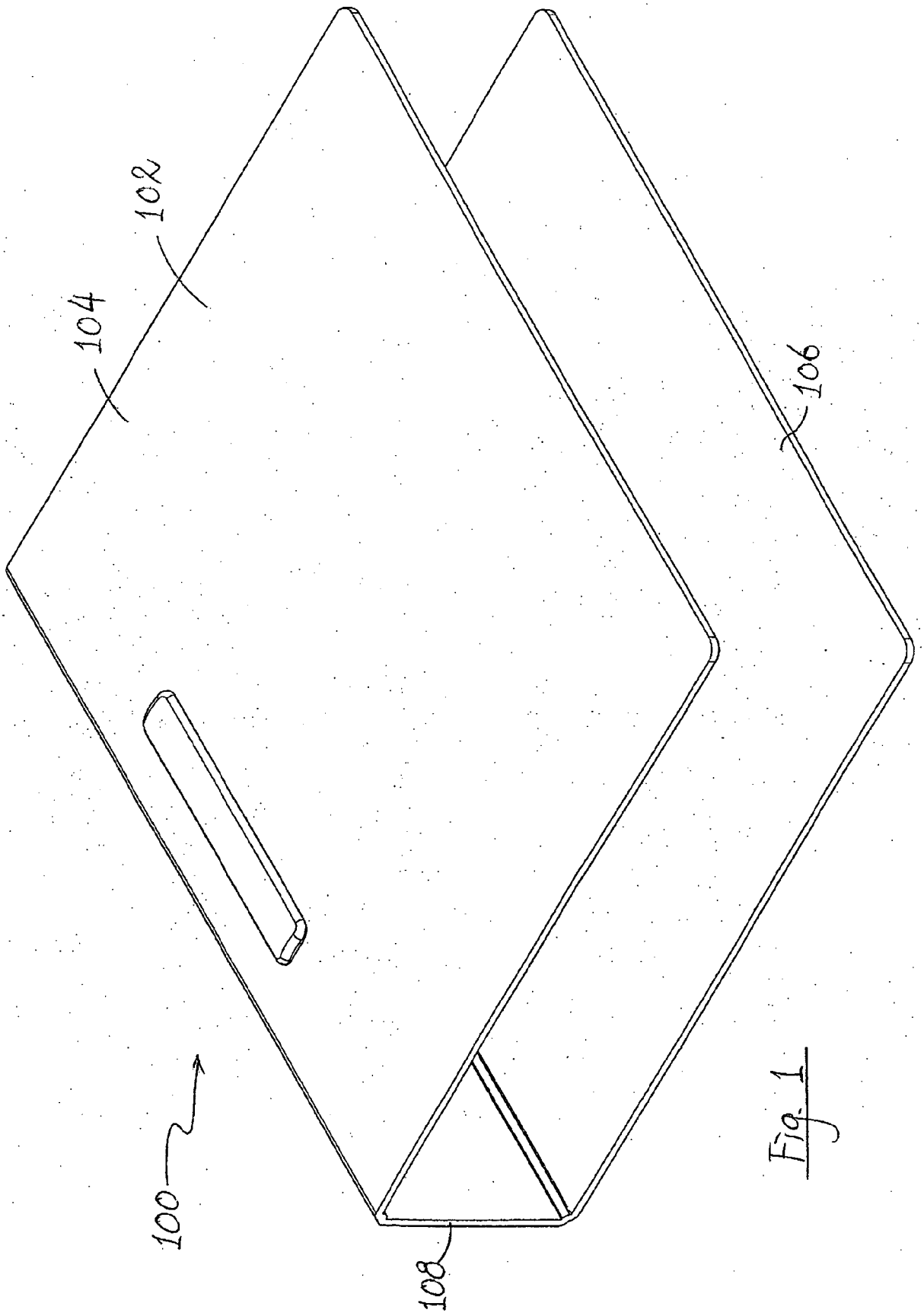


Fig. 1

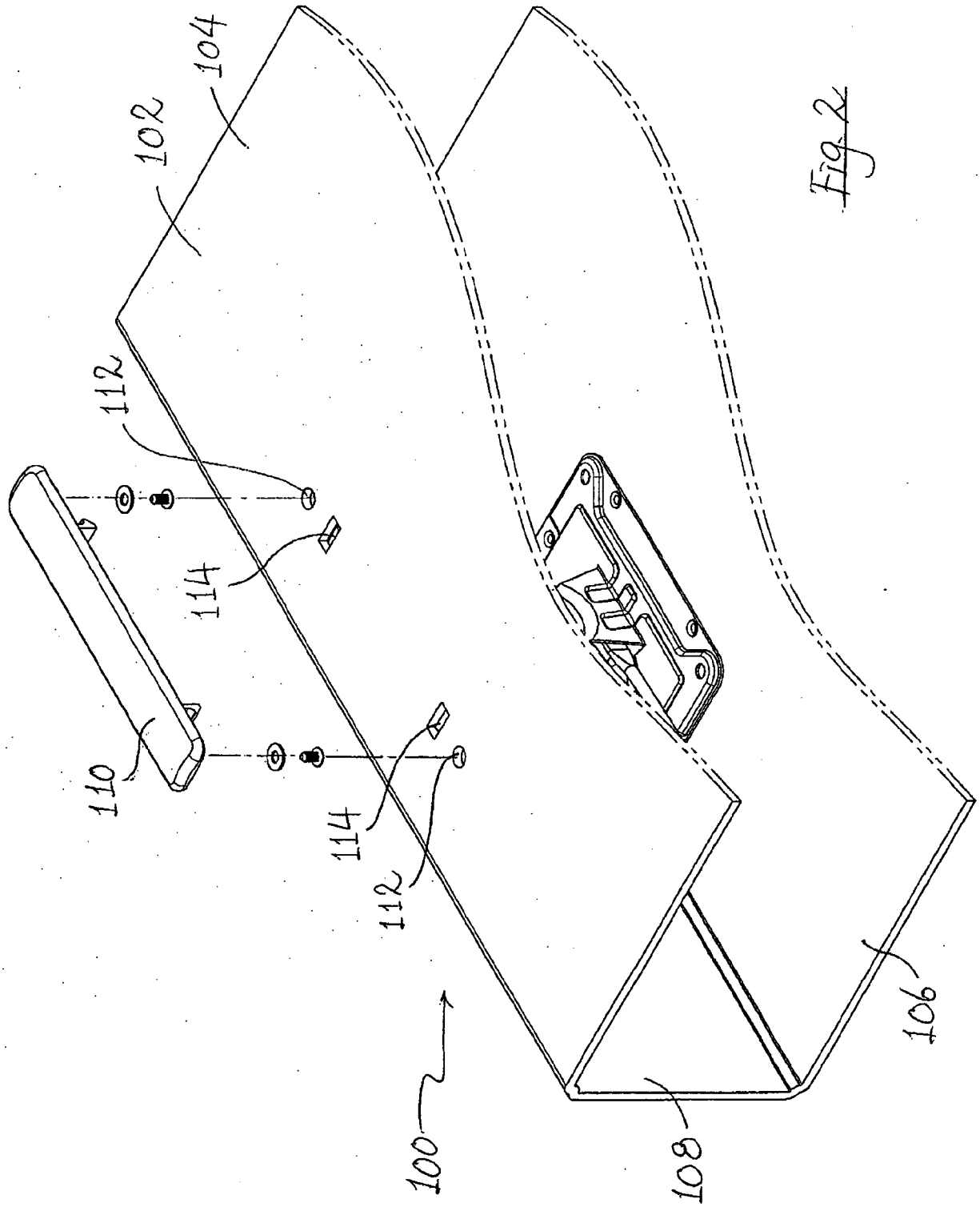


Fig. 2

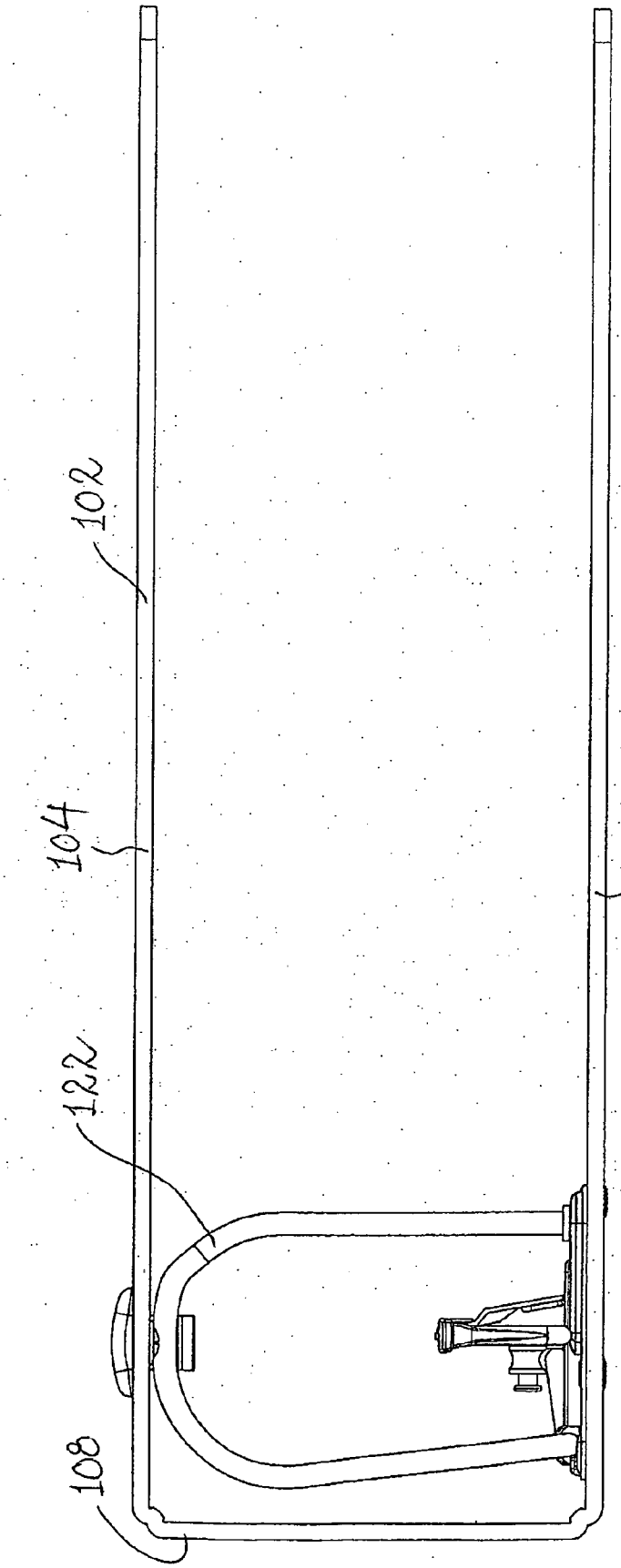


Fig. 3

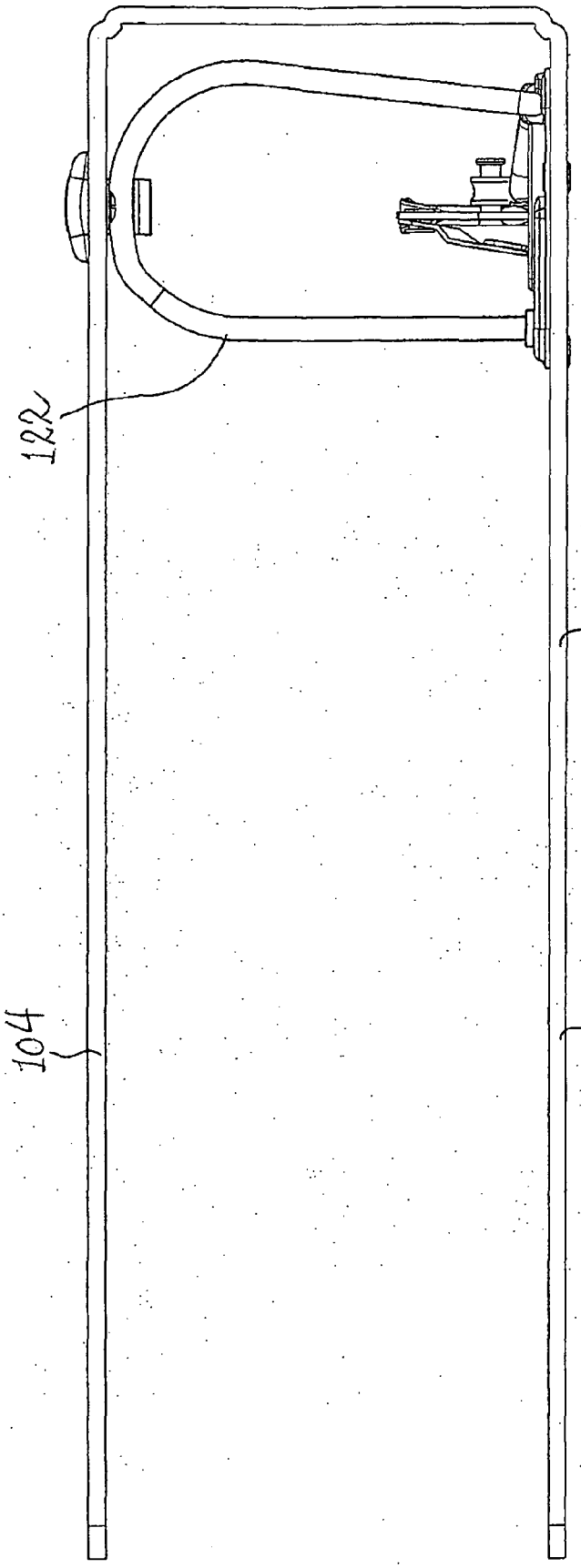


Fig. 4

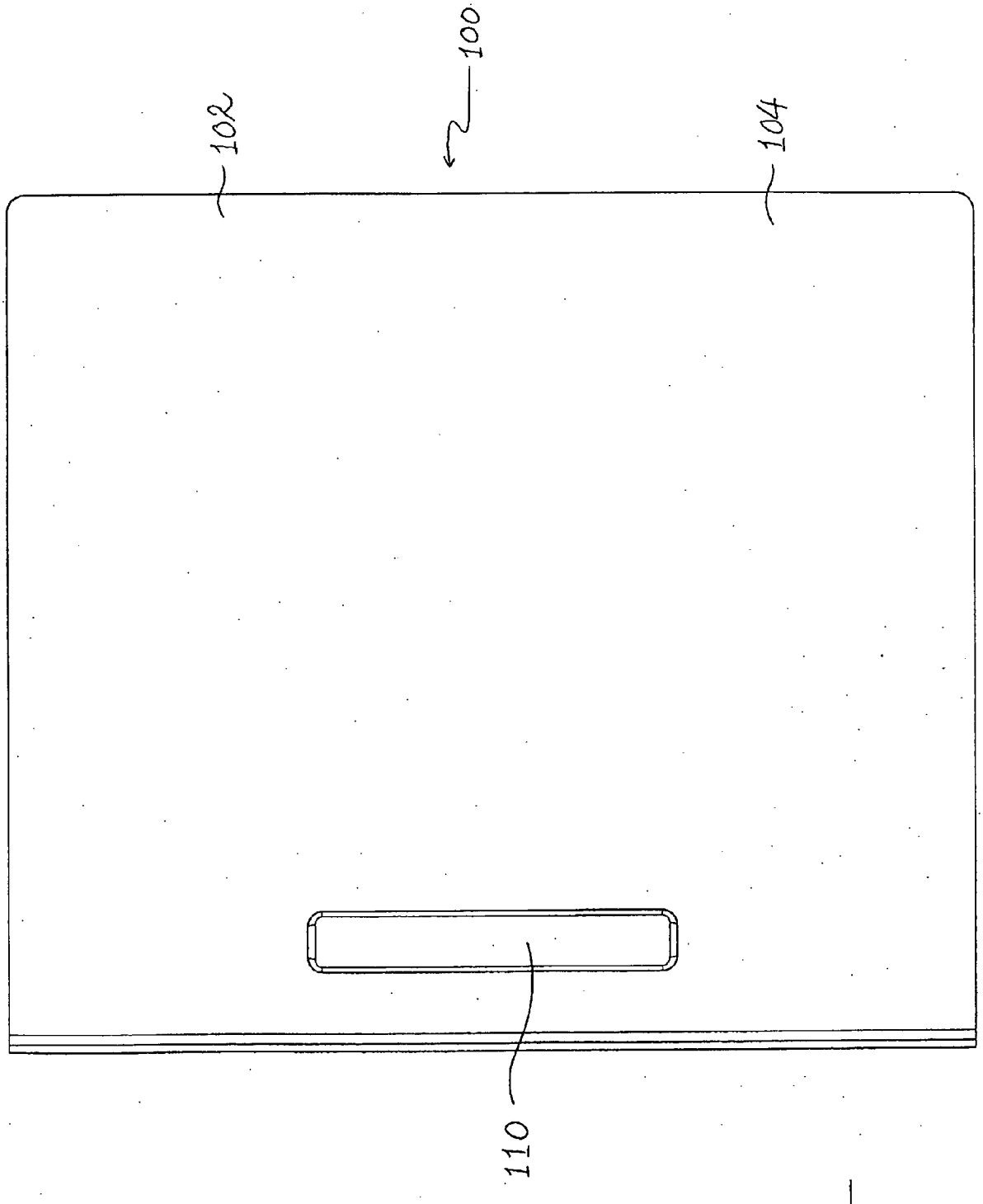


Fig. 5

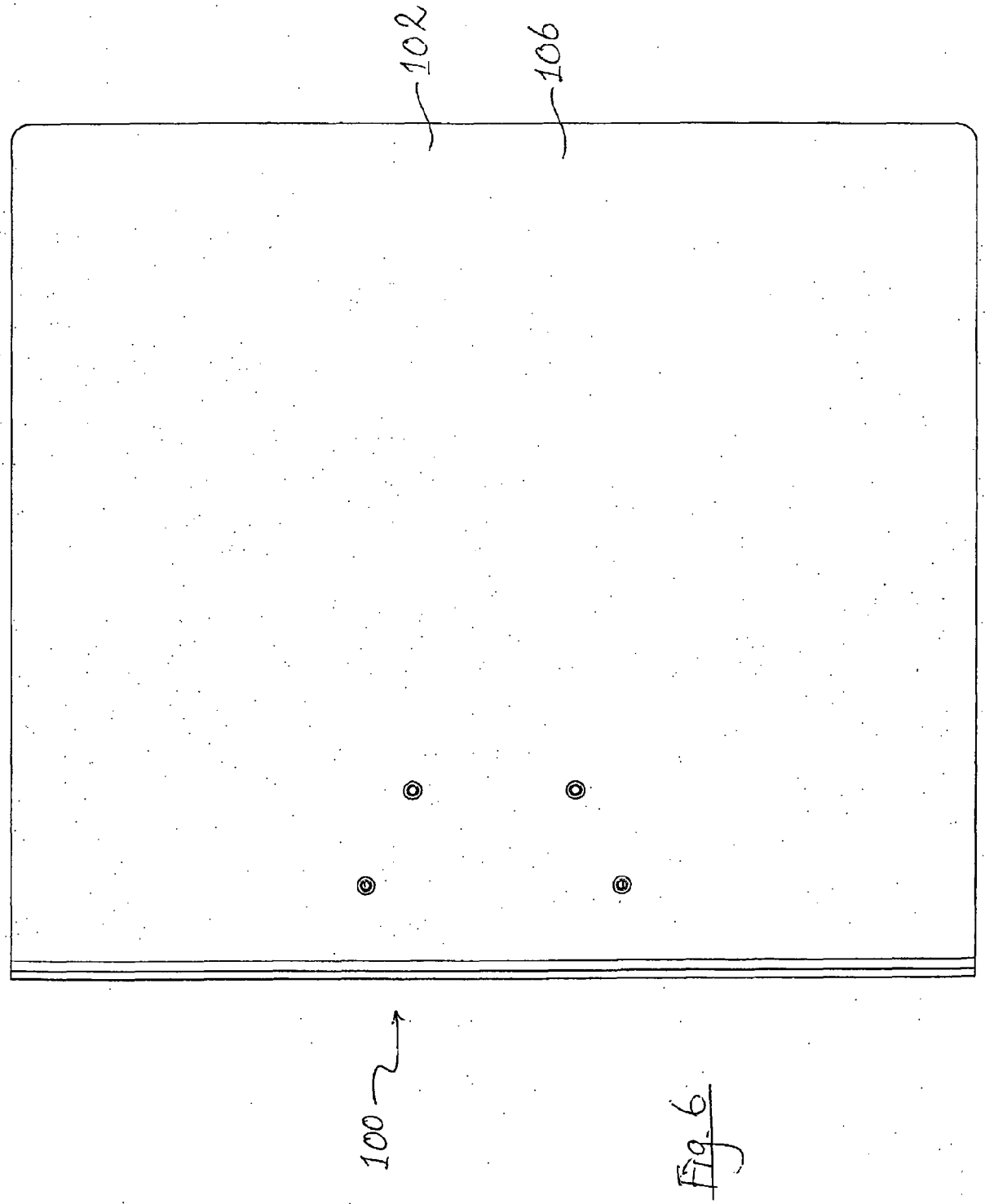


Fig. 6

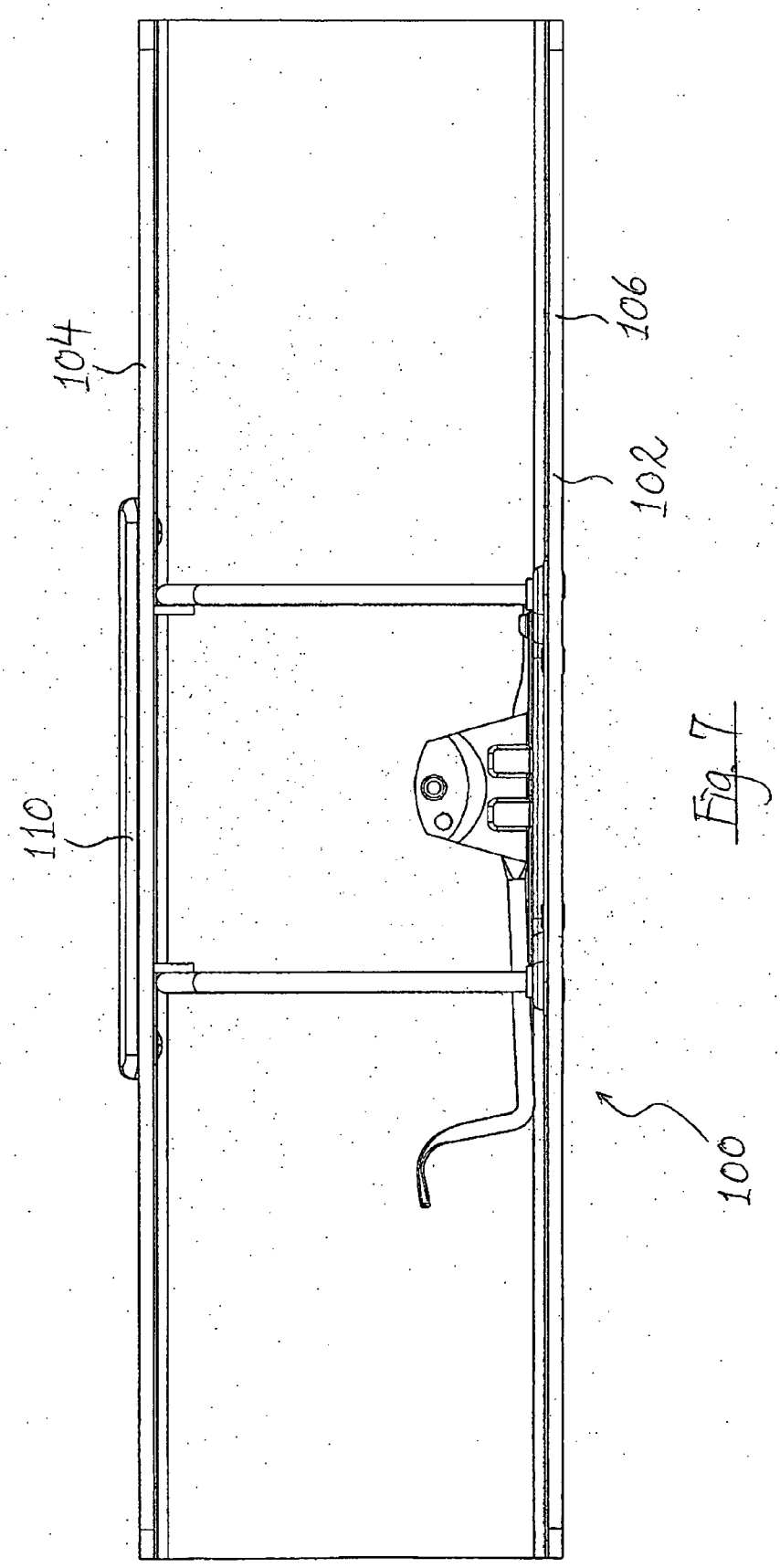


Fig. 7

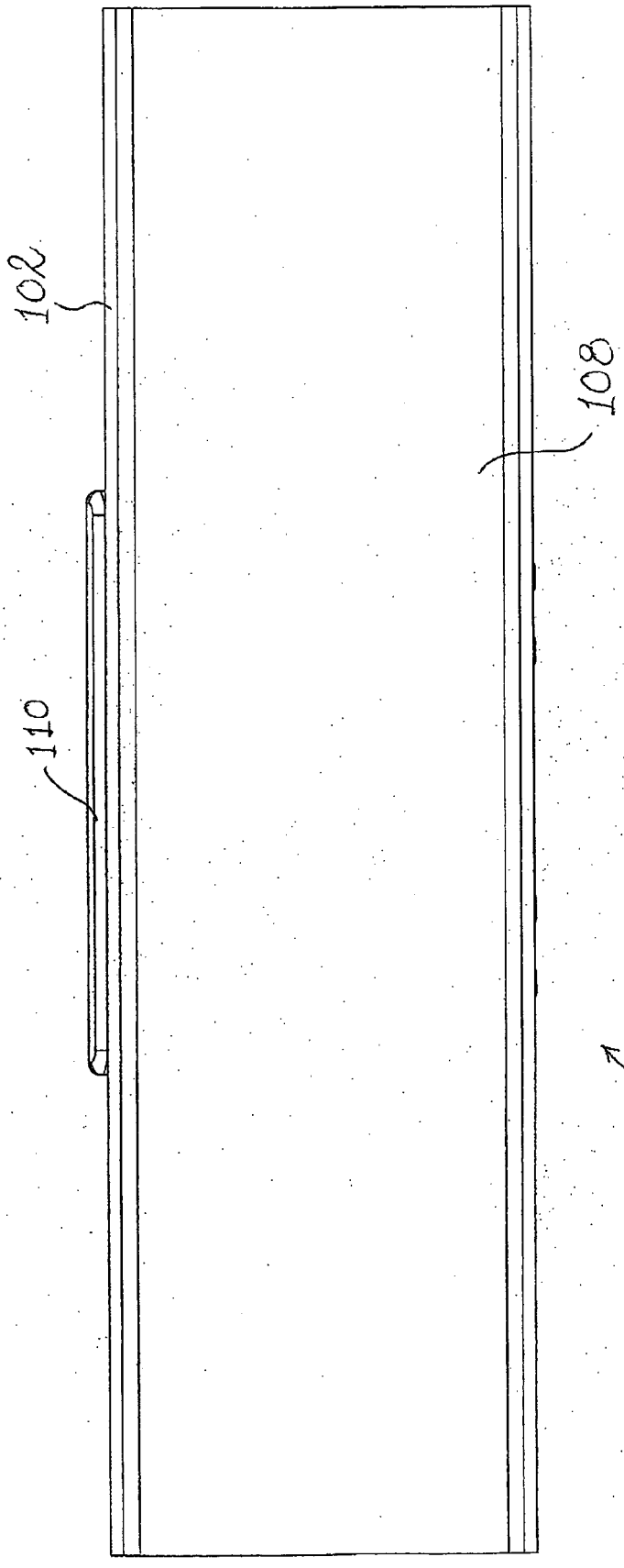


Fig. 8

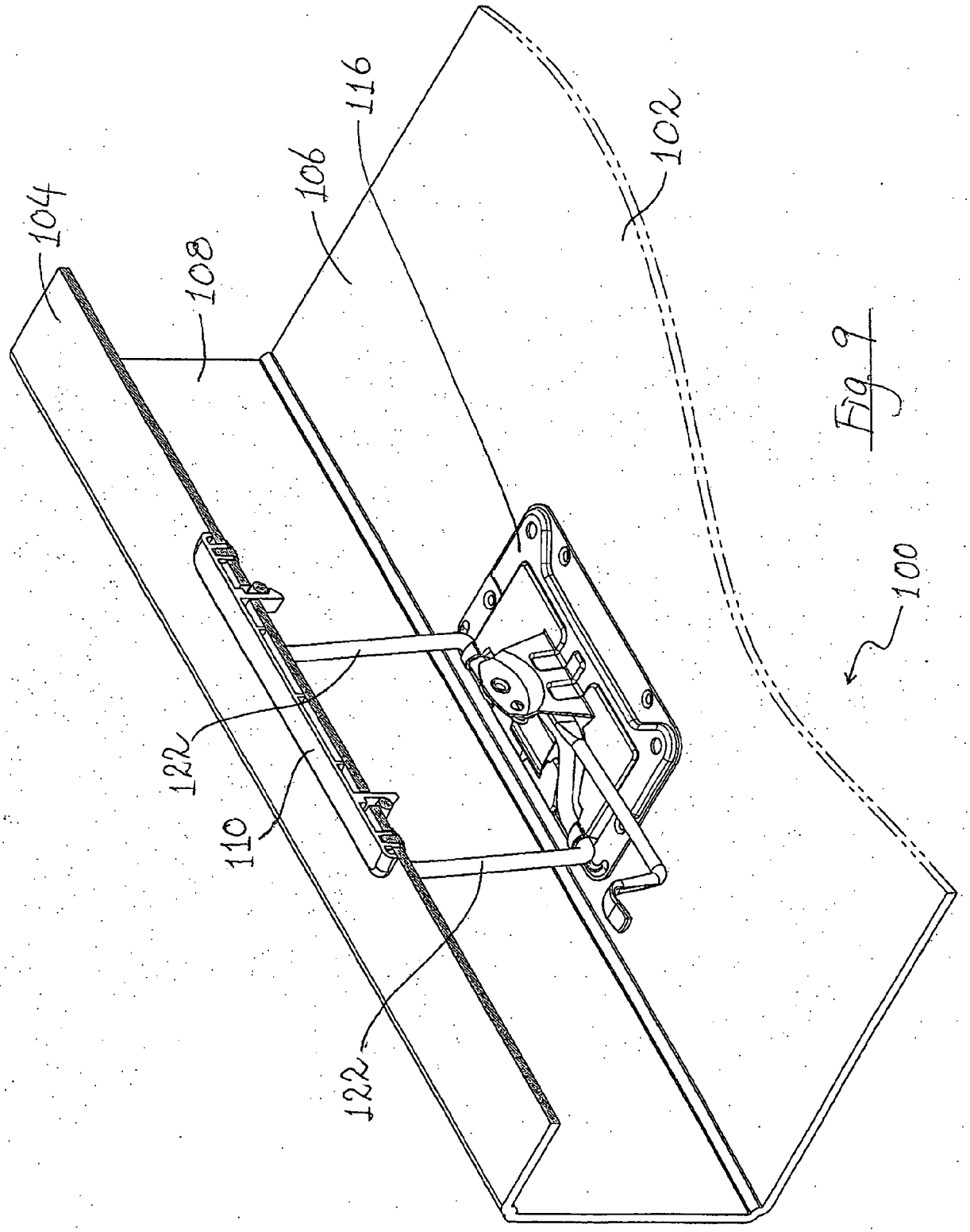


Fig 1

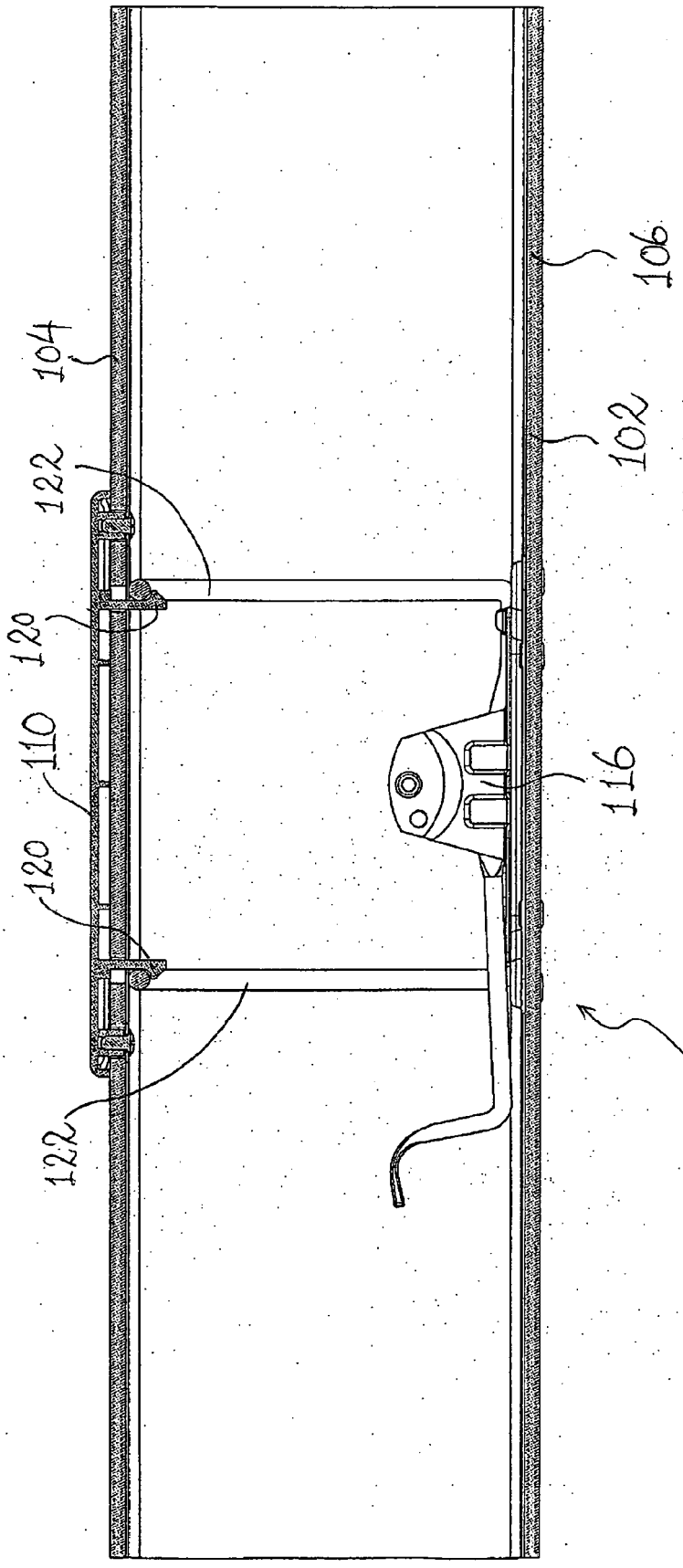


Fig. 10

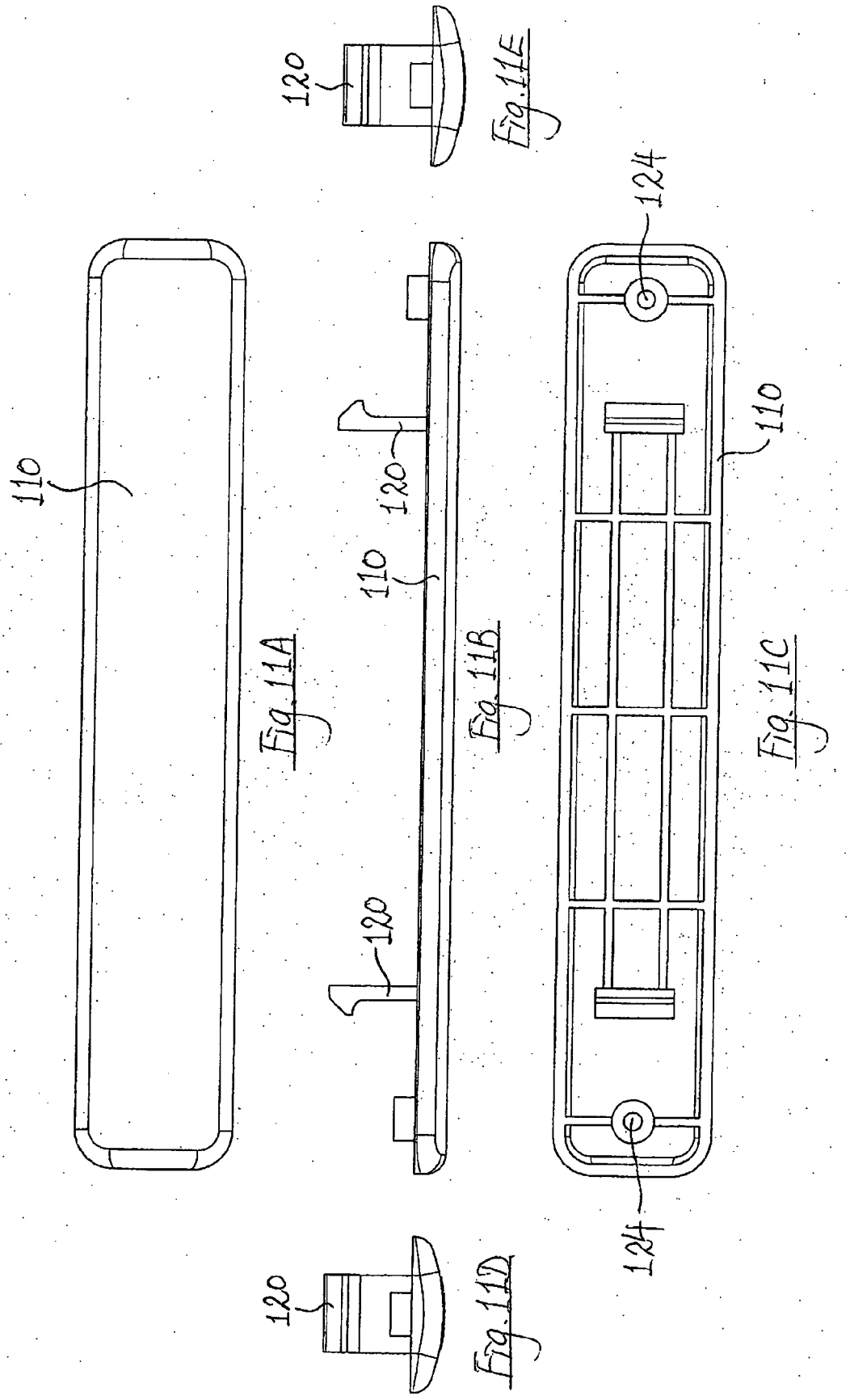


Fig. 11A

Fig. 11B

Fig. 11C

Fig. 11D

Fig. 11E

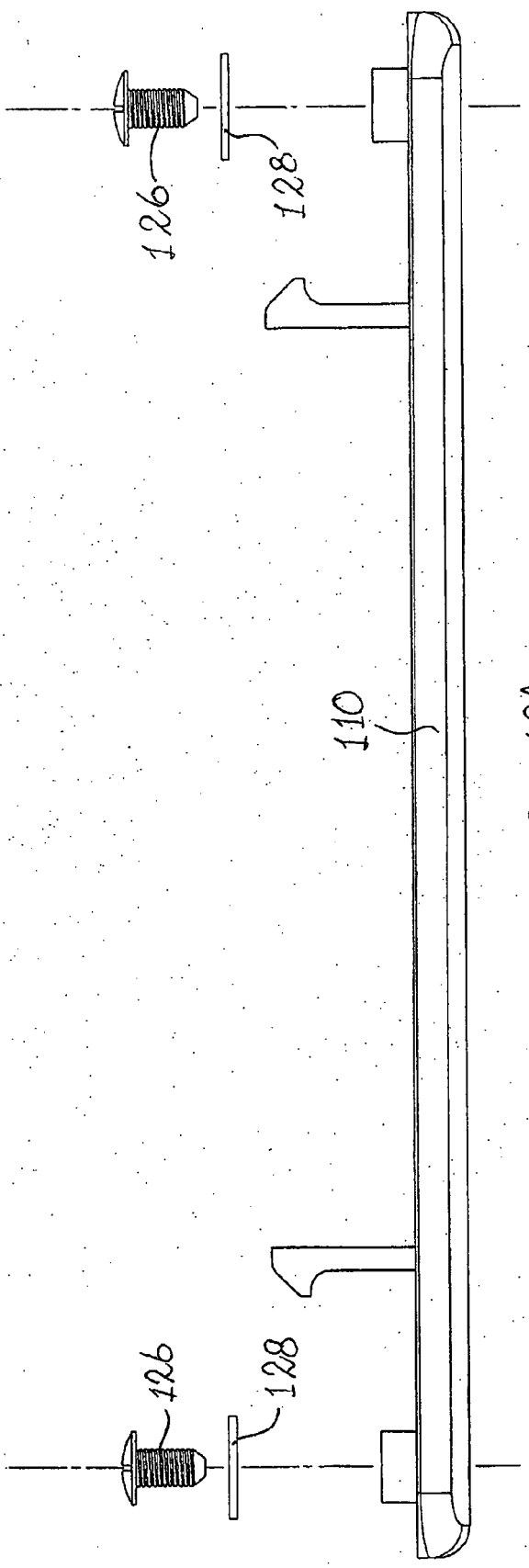


Fig. 12A

Fig. 12B

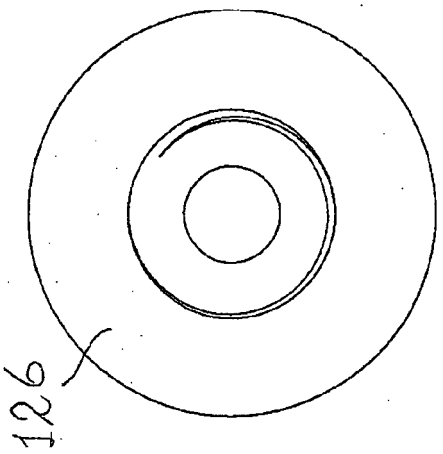


Fig.13C

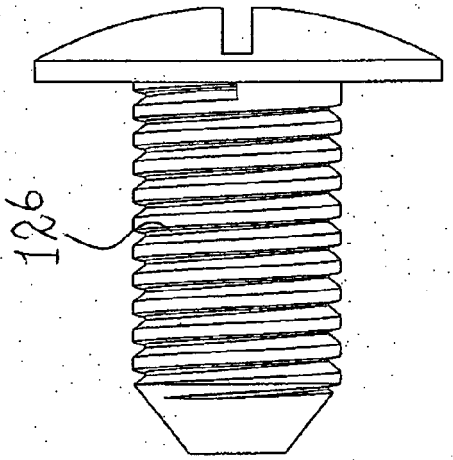


Fig.13A

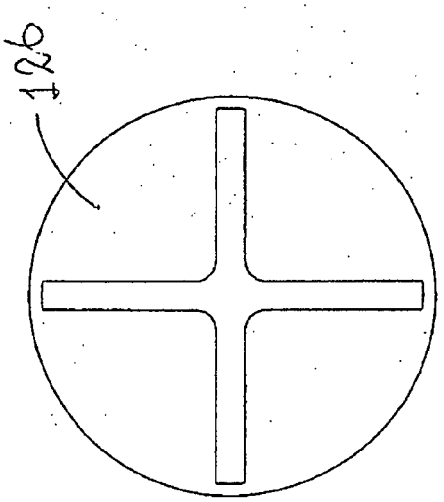


Fig.13B

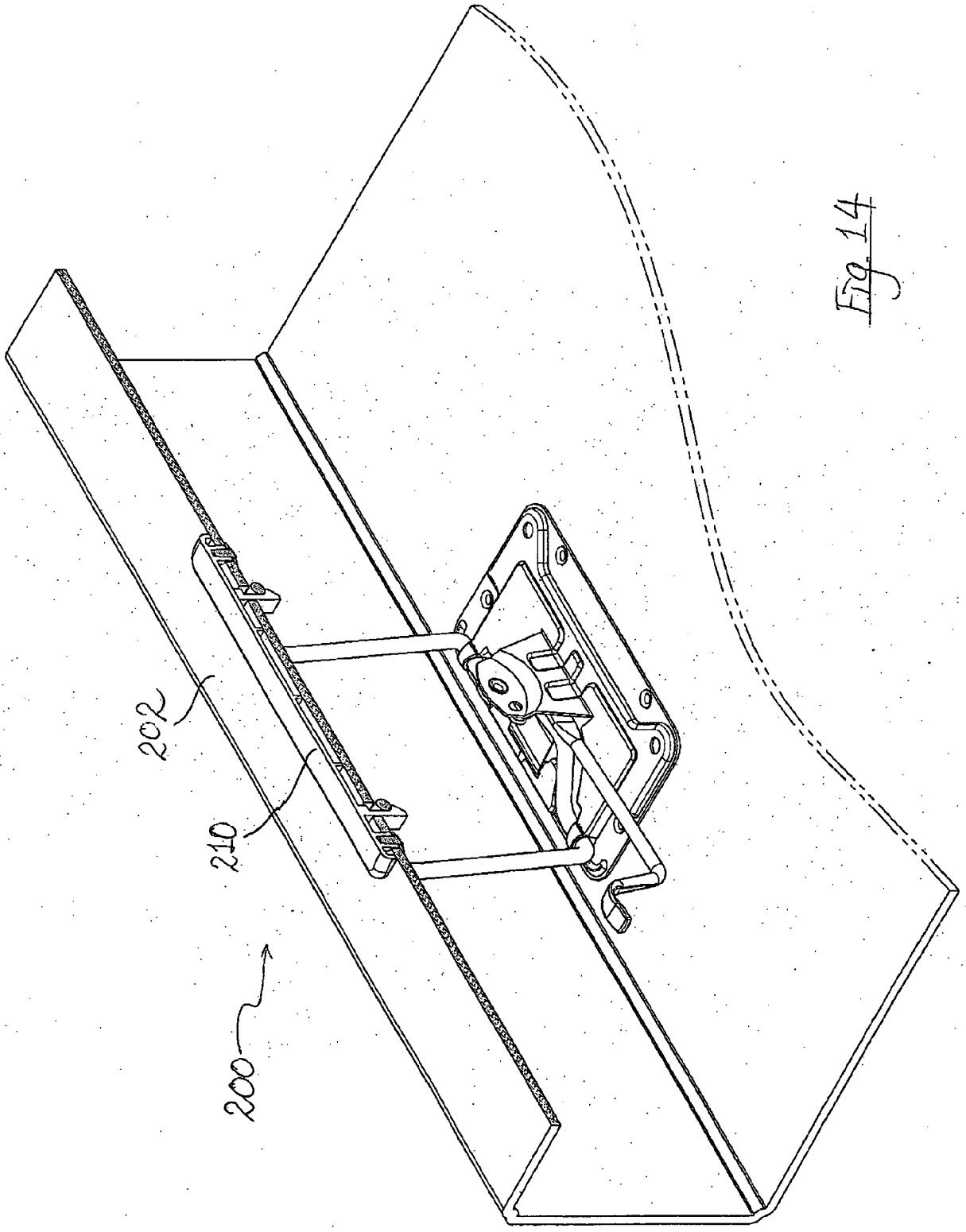


Fig. 14

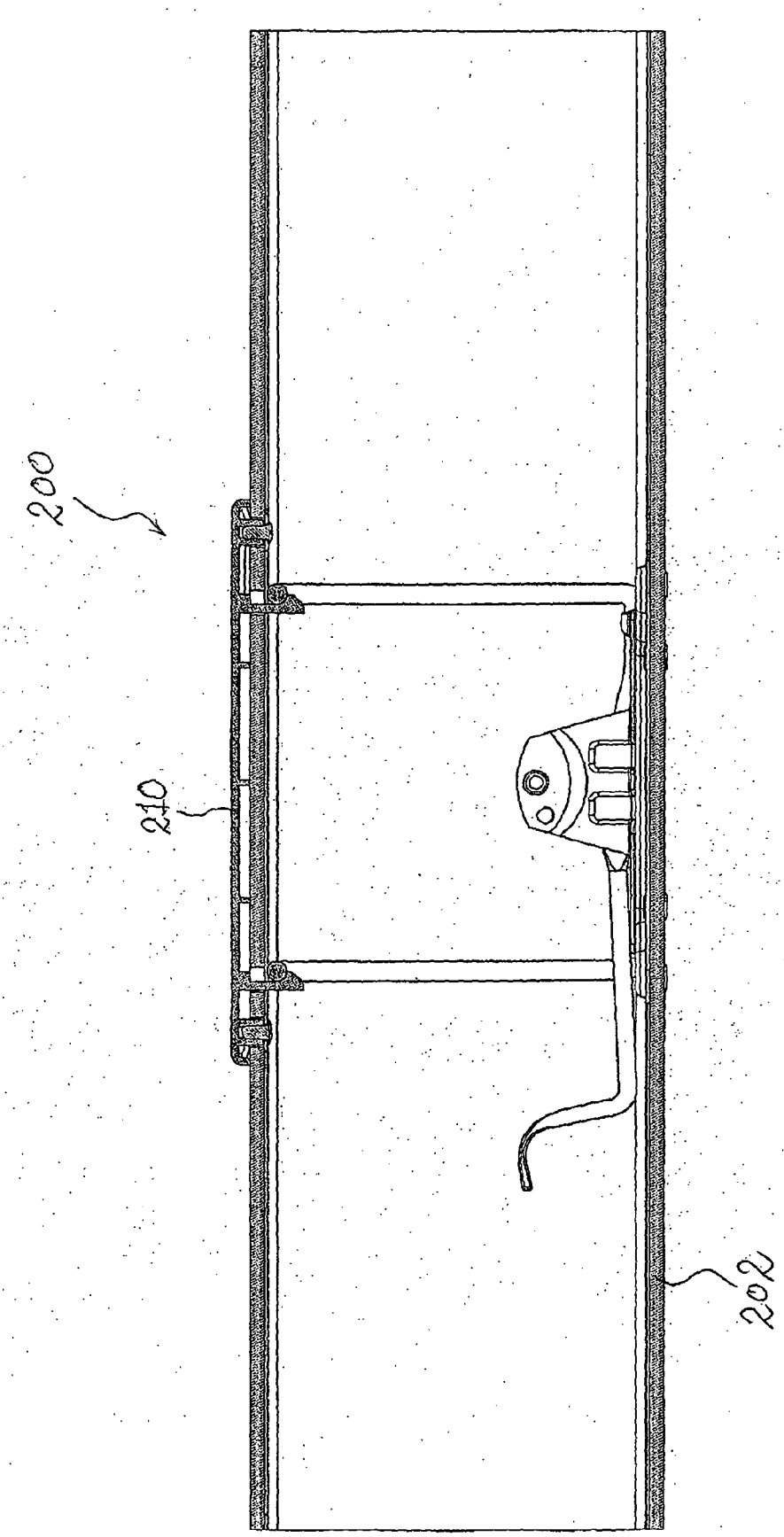


Fig.15

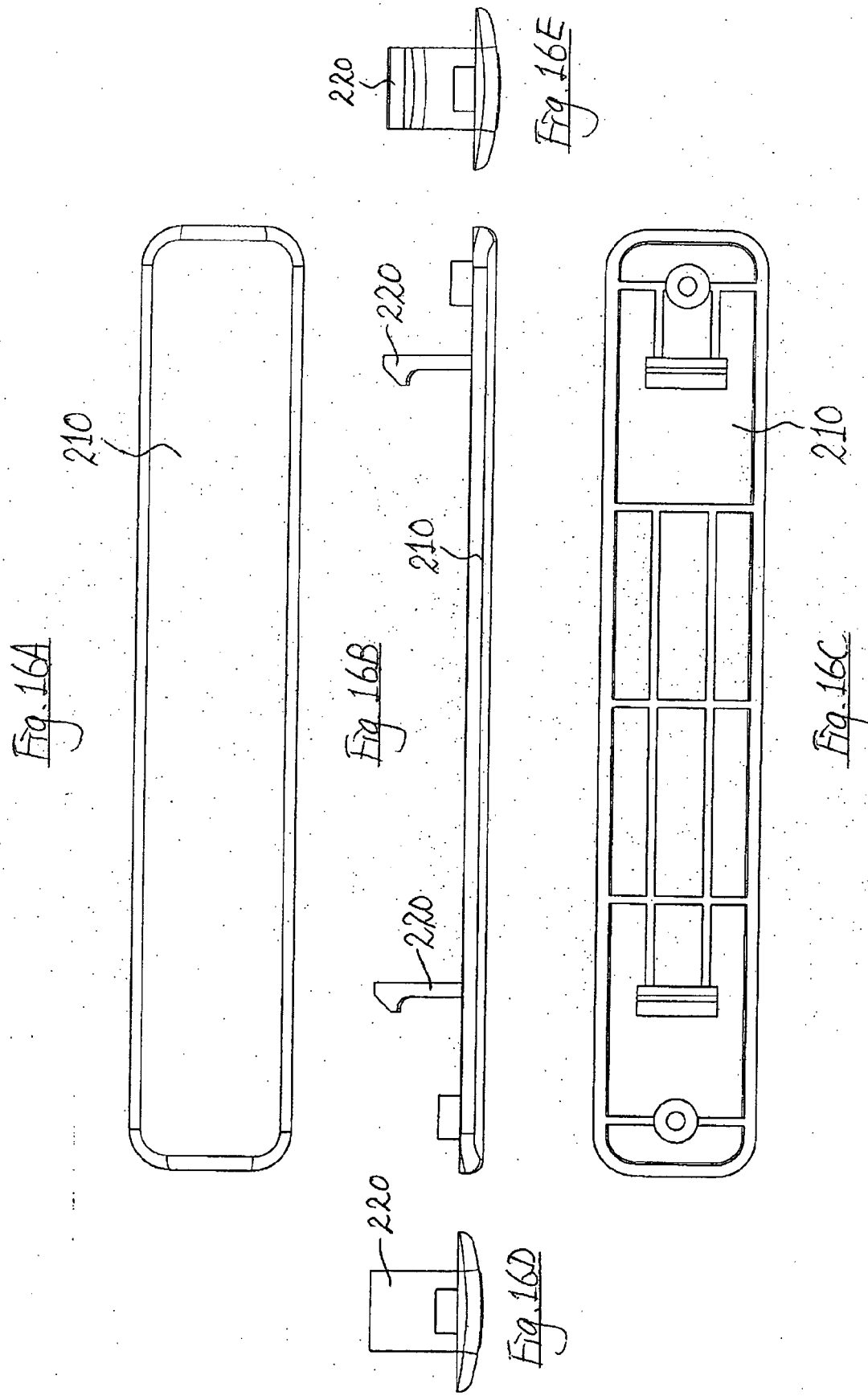


Fig. 16A

Fig. 16B

Fig. 16C

Fig. 16D

Fig. 16E

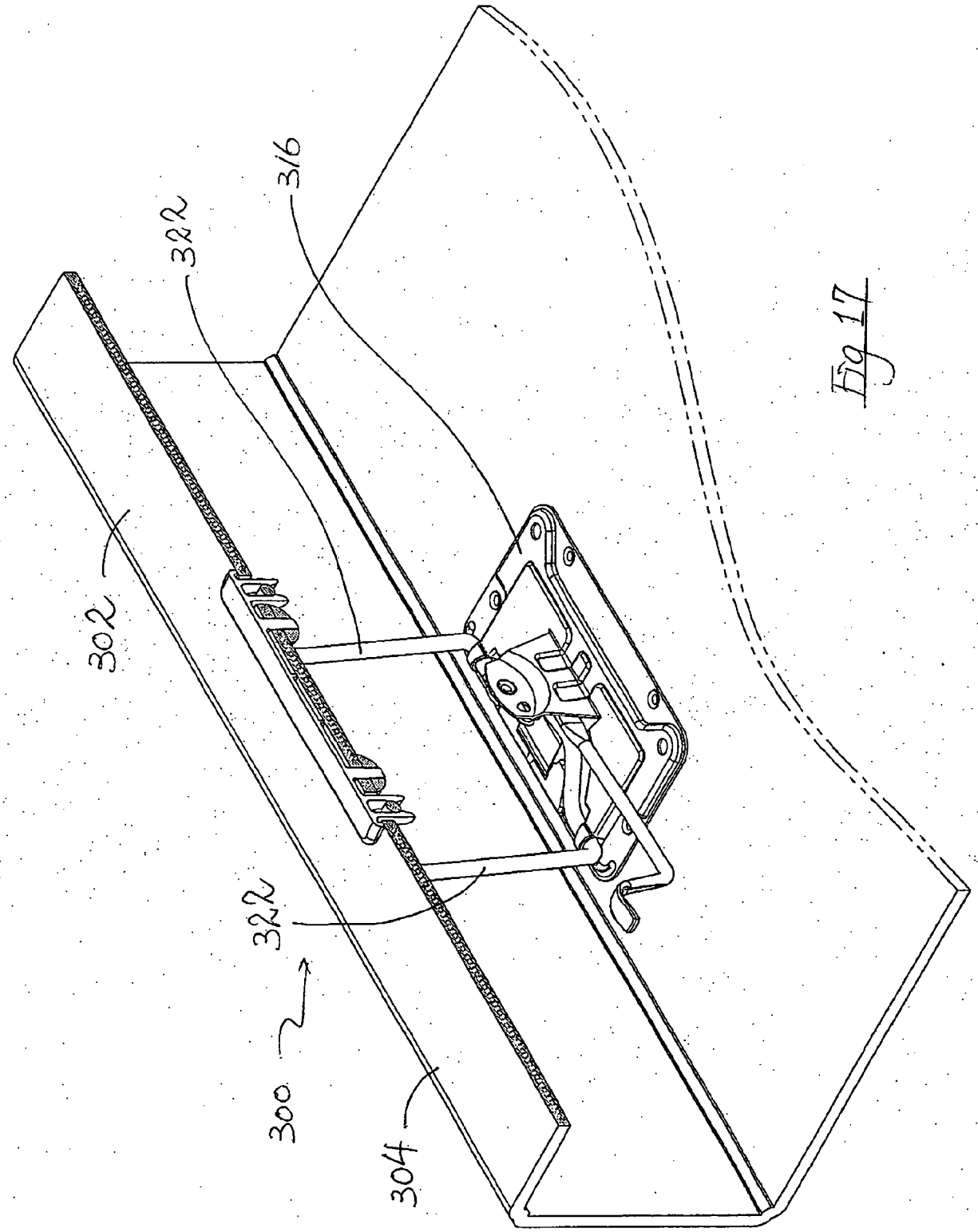


Fig 17

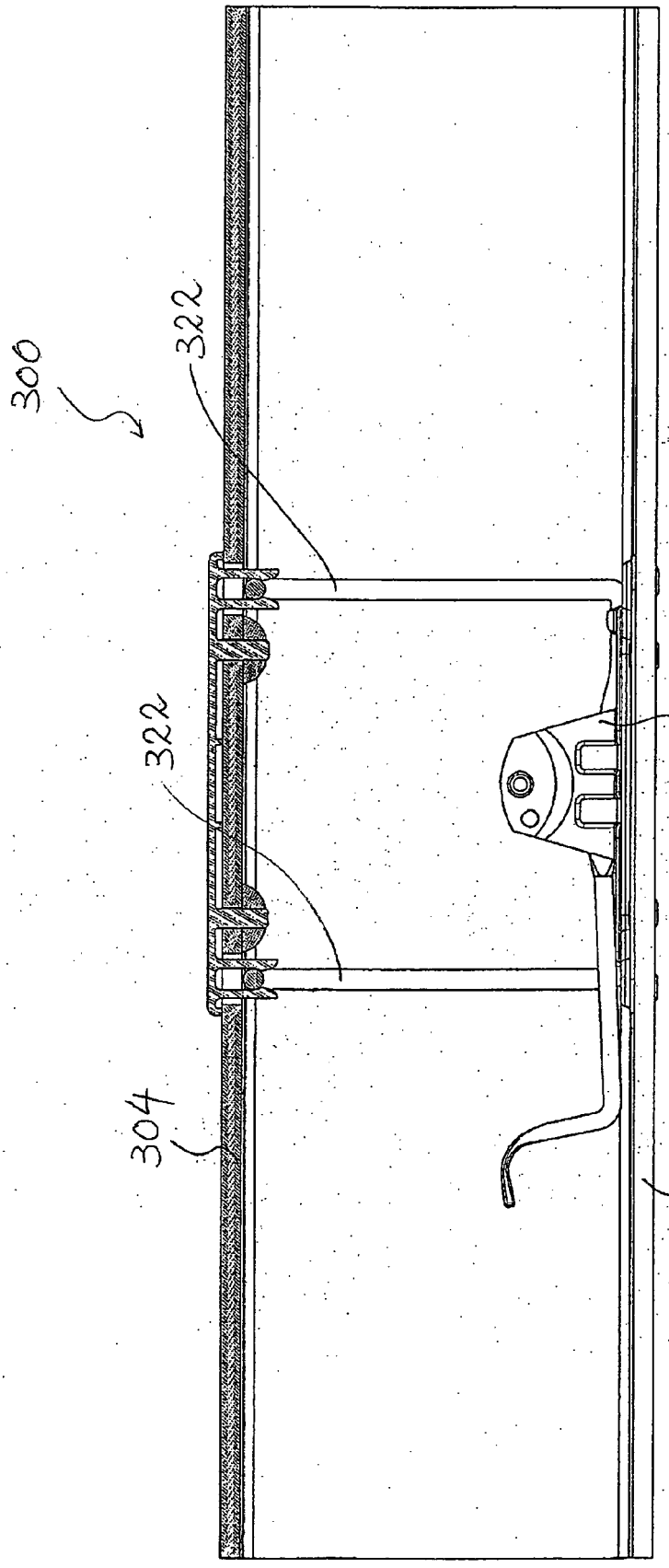


Fig 18

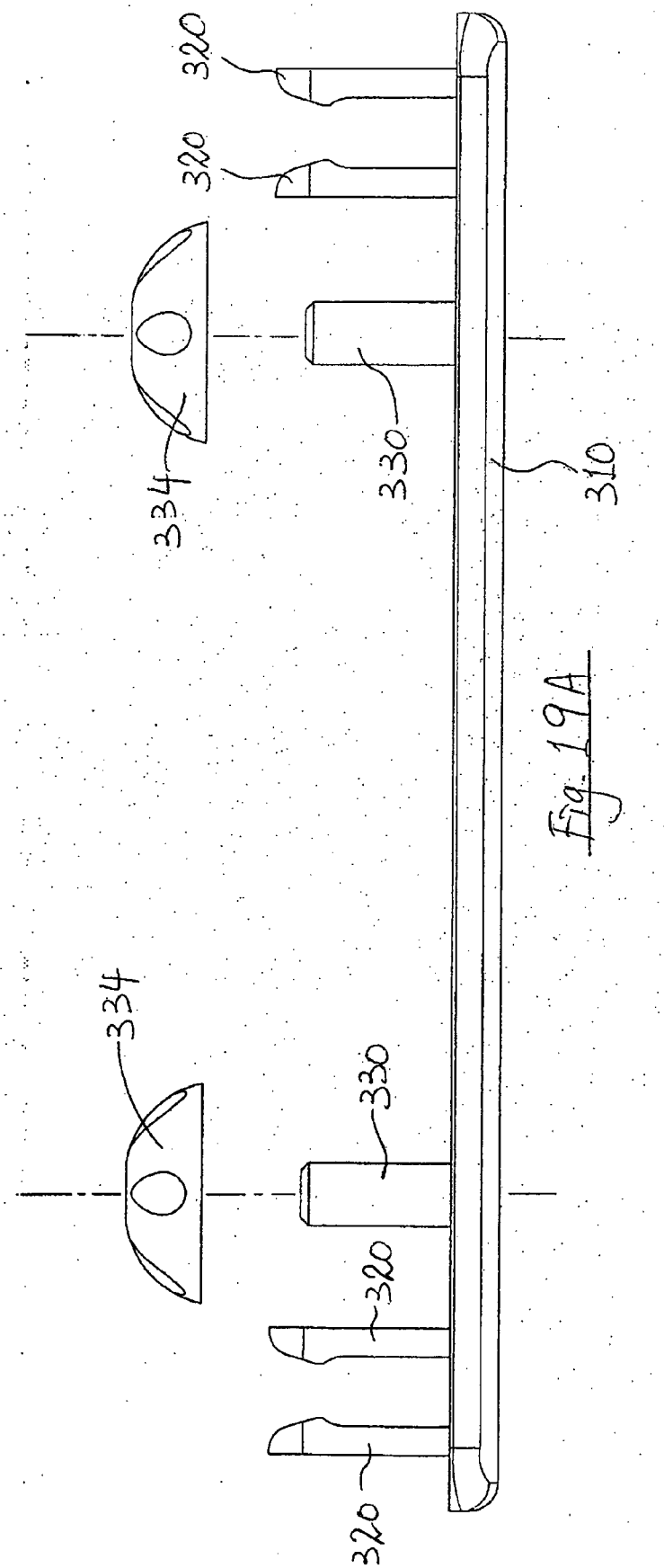


Fig. 19A

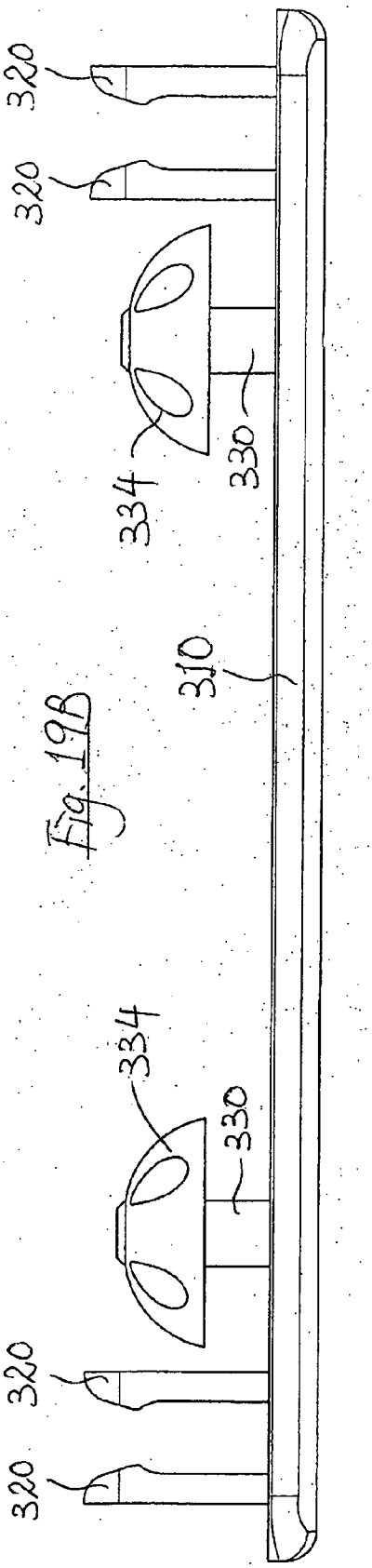
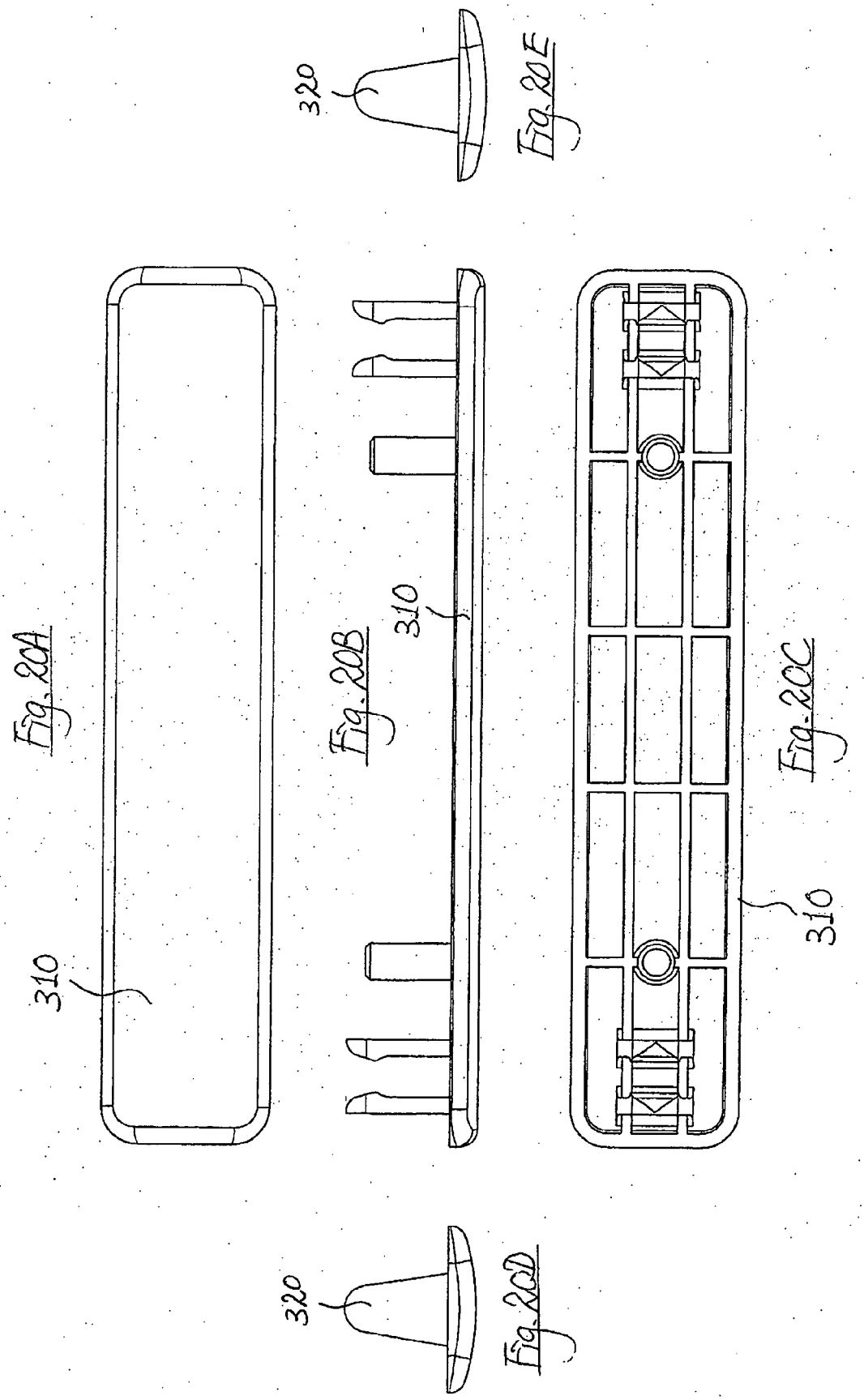


Fig. 19B


320
Fig.20E
310
Fig.20A
310
Fig.20B
310
Fig.20C
320
Fig.20D

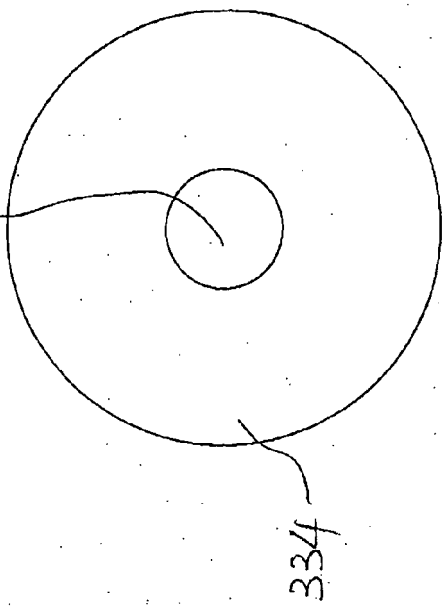


Fig. 21C

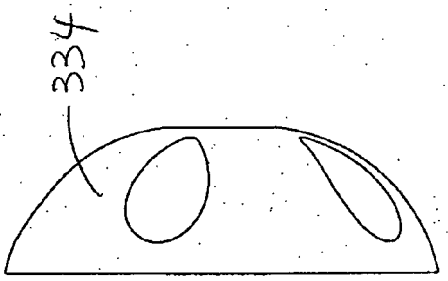


Fig. 21A

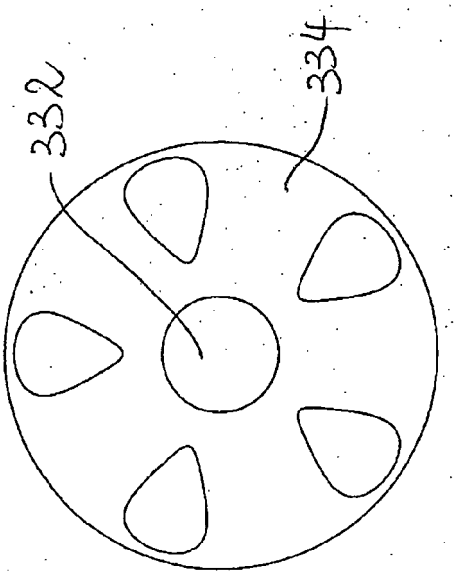


Fig. 21B

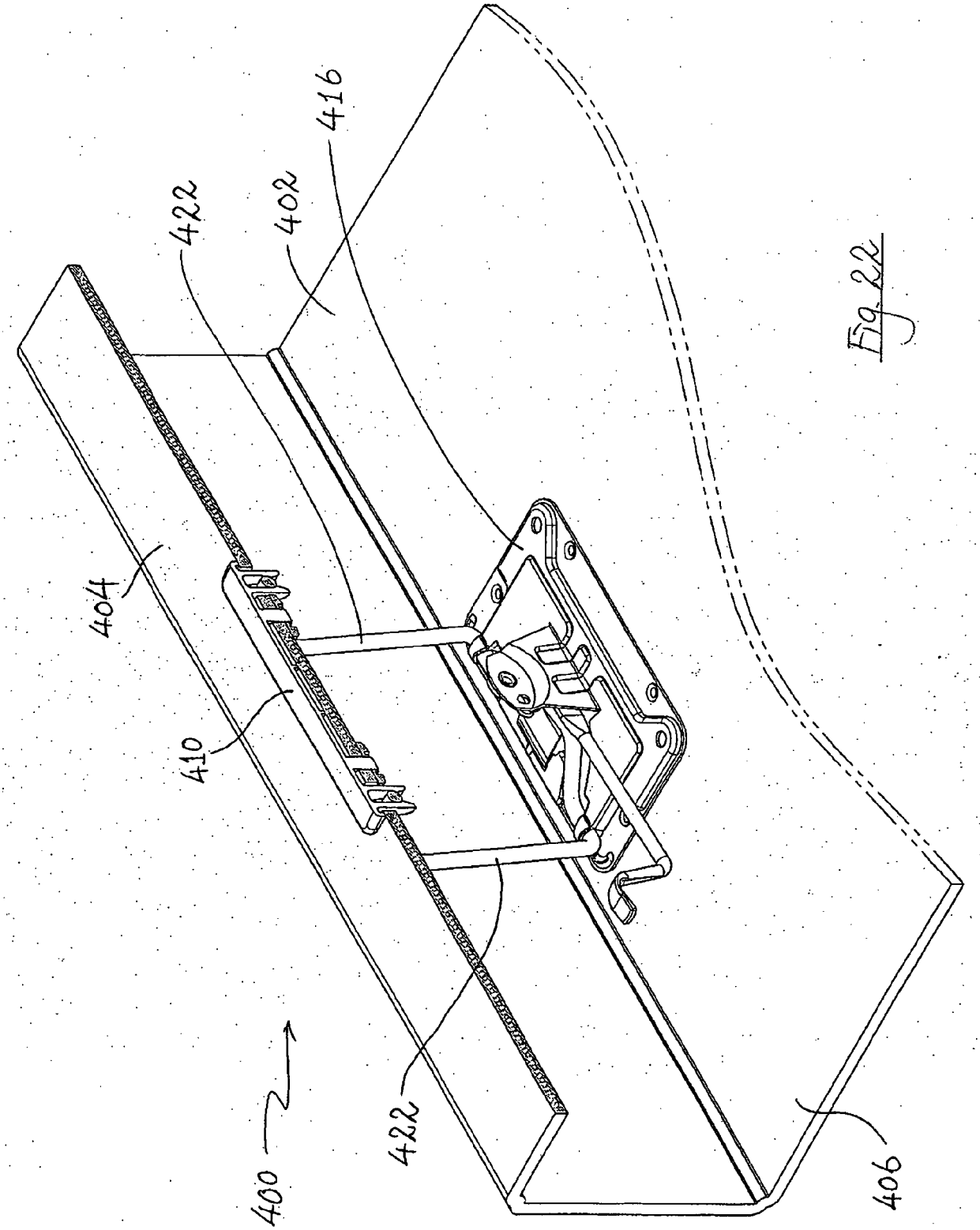


Fig. 22

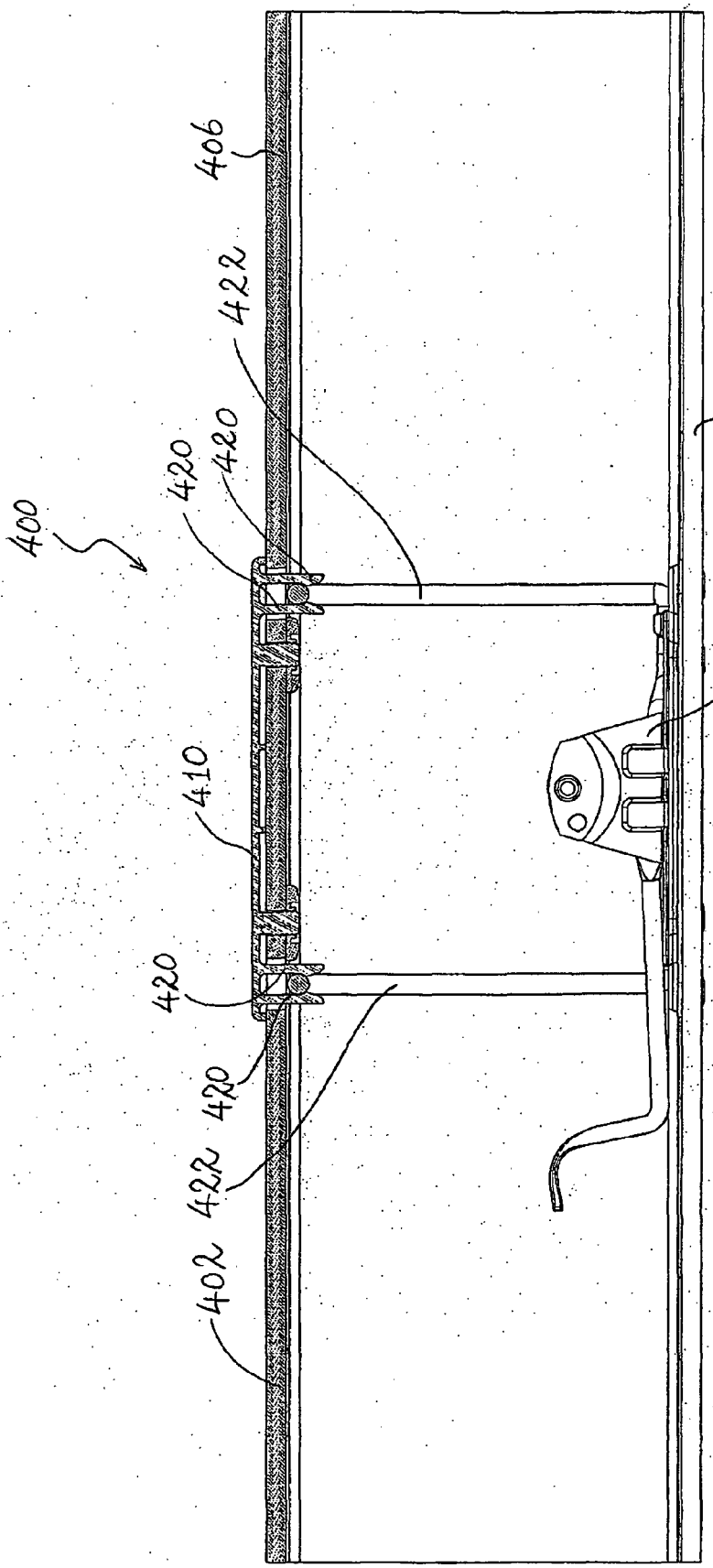


Fig. 23

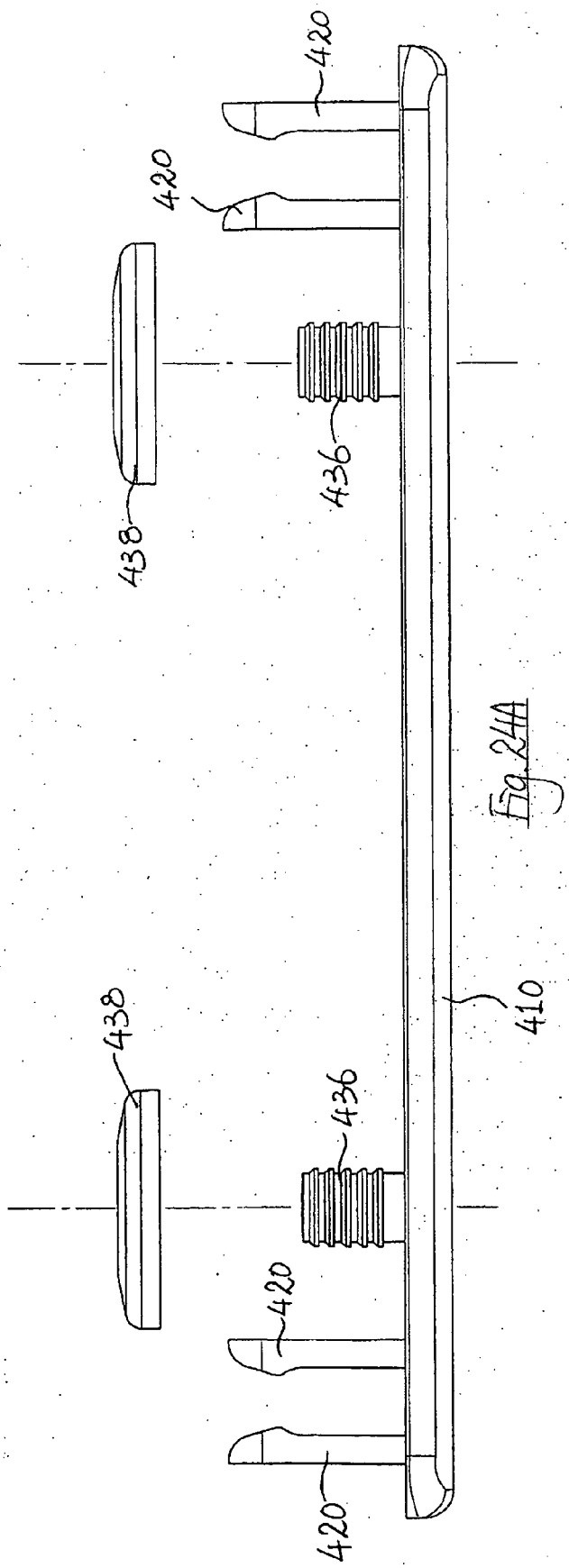


Fig. 24A

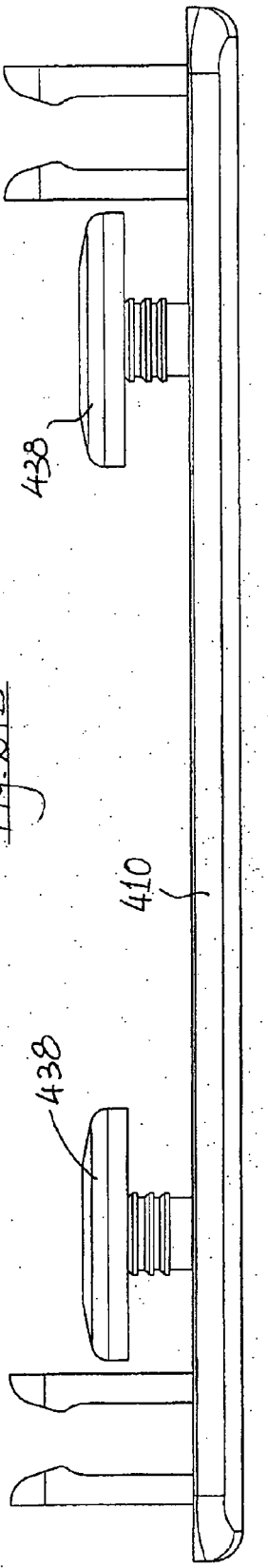
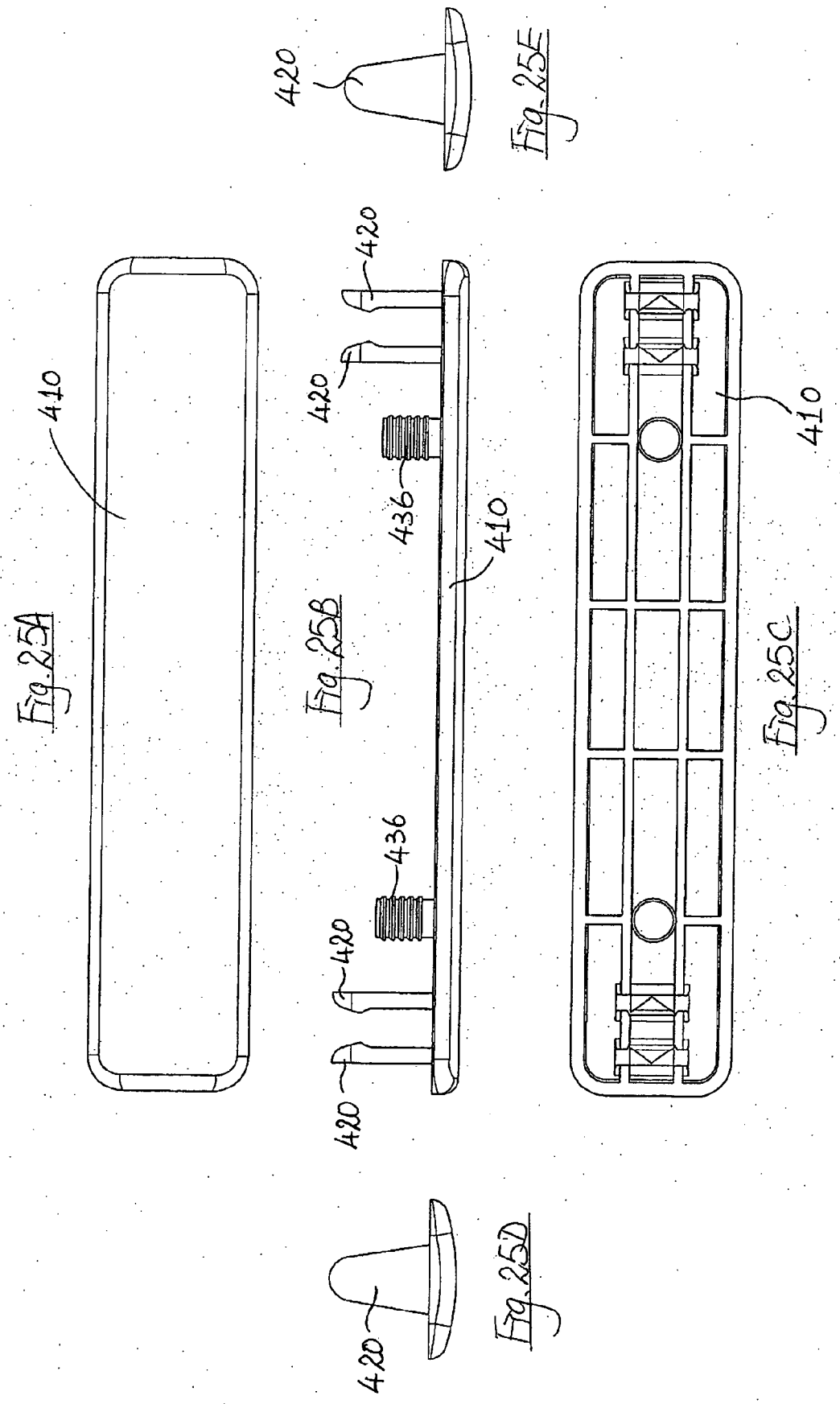


Fig. 24B


410
420
436
Fig.25A
Fig.25B
Fig.25C
Fig.25D
Fig.25E

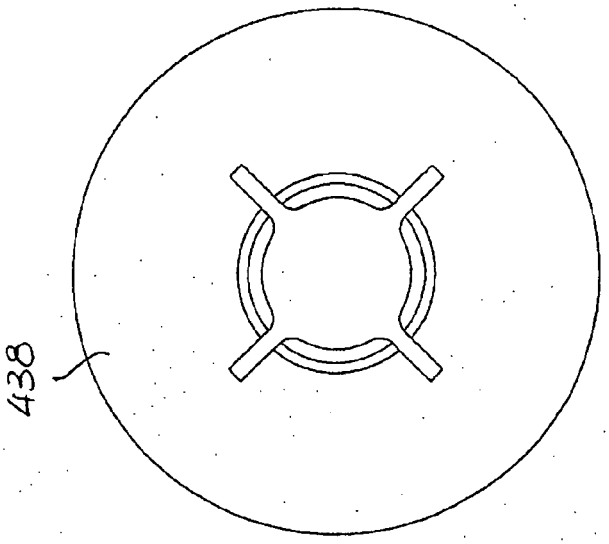


Fig. 26C

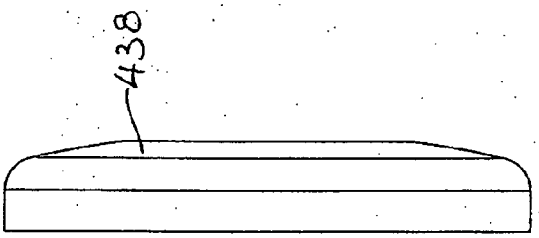


Fig. 26A

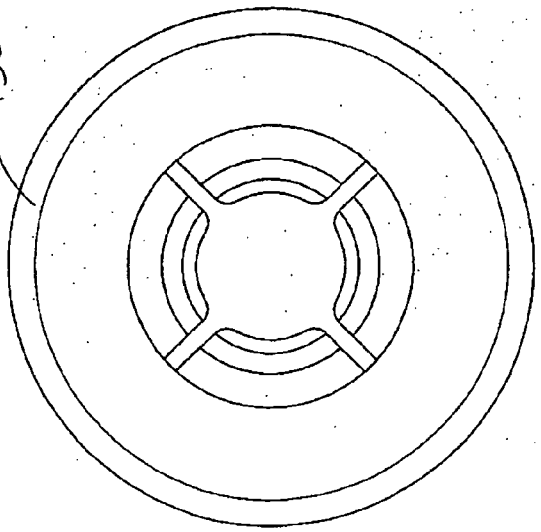


Fig. 26B

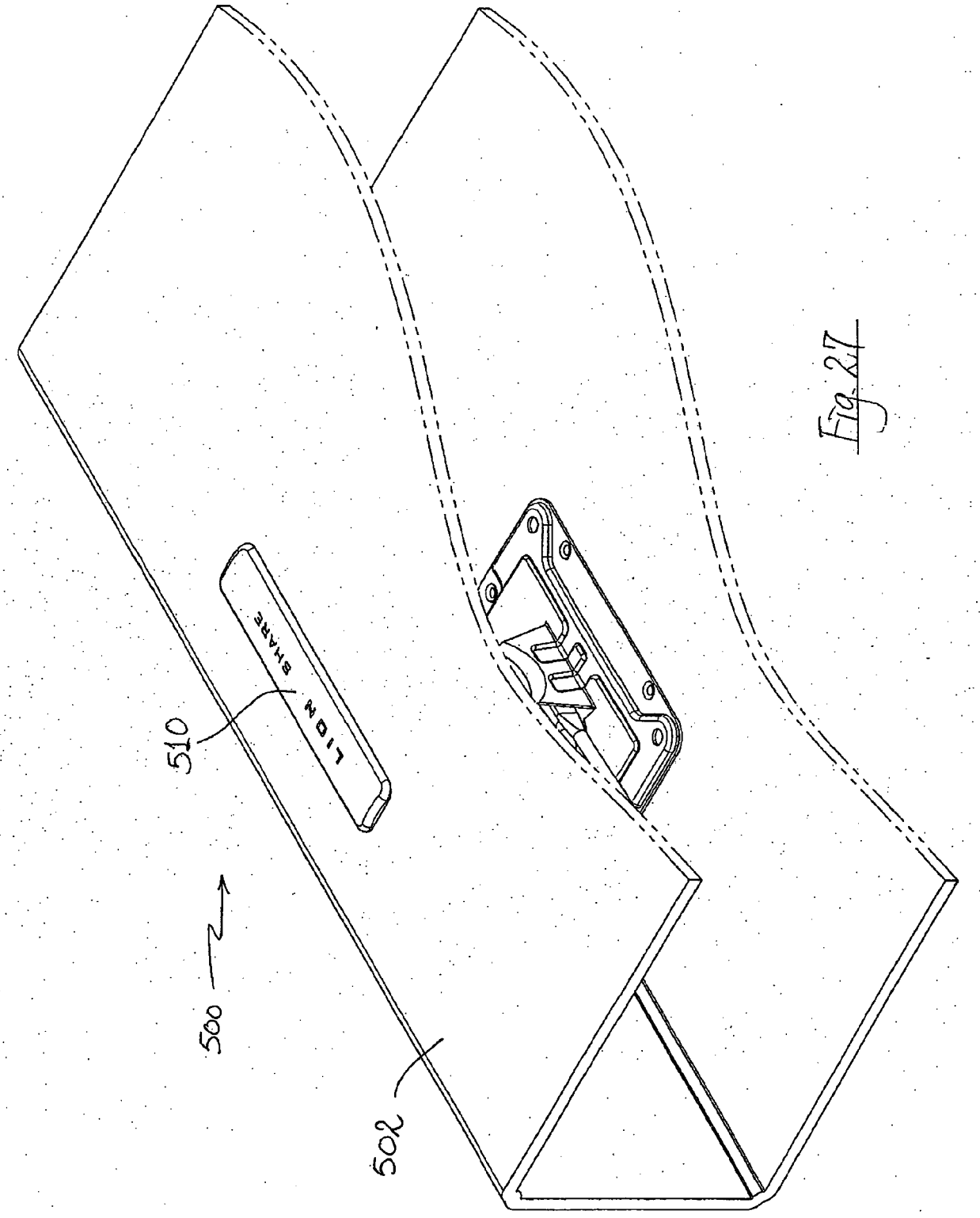


Fig. 27

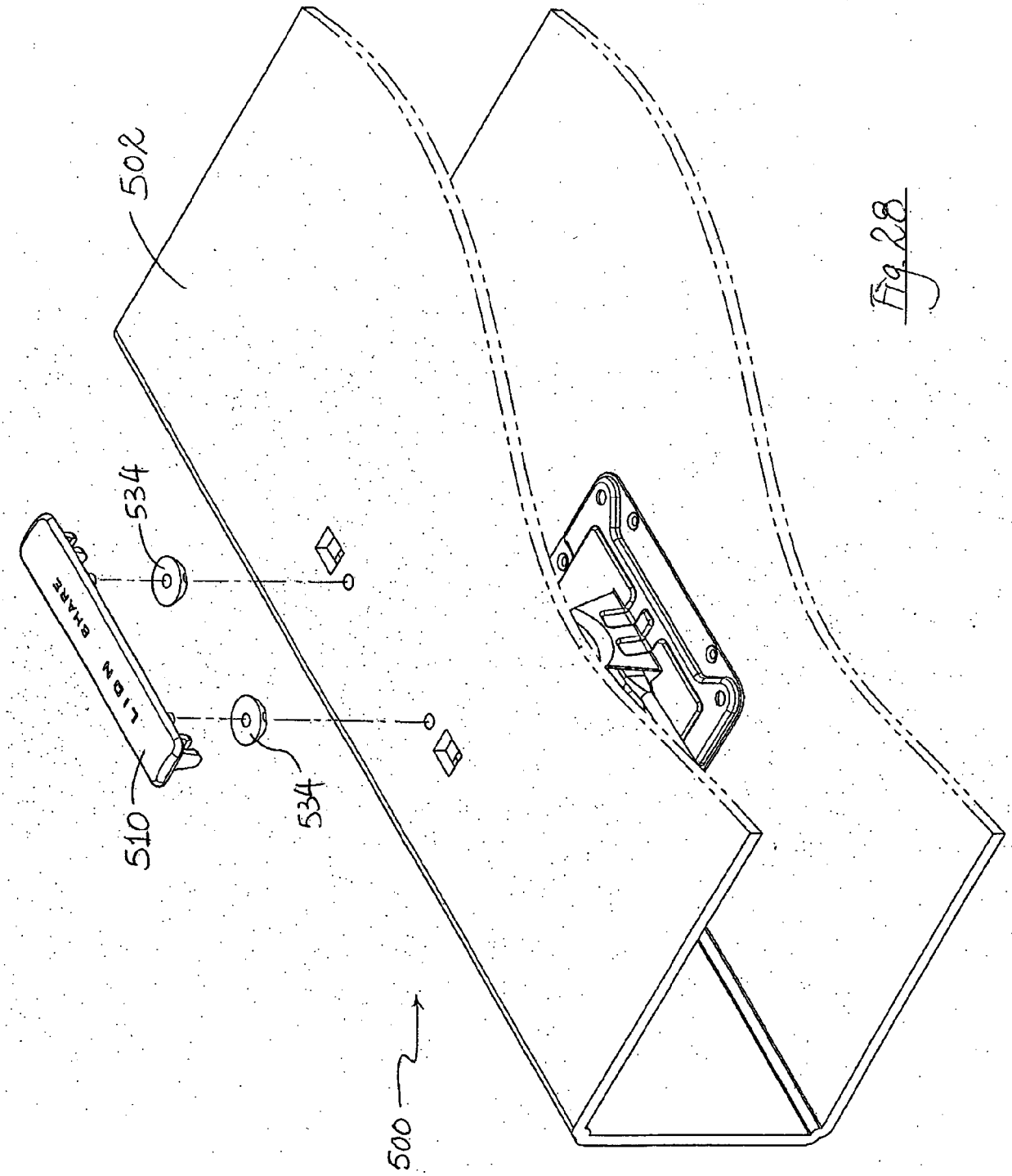


Fig.28

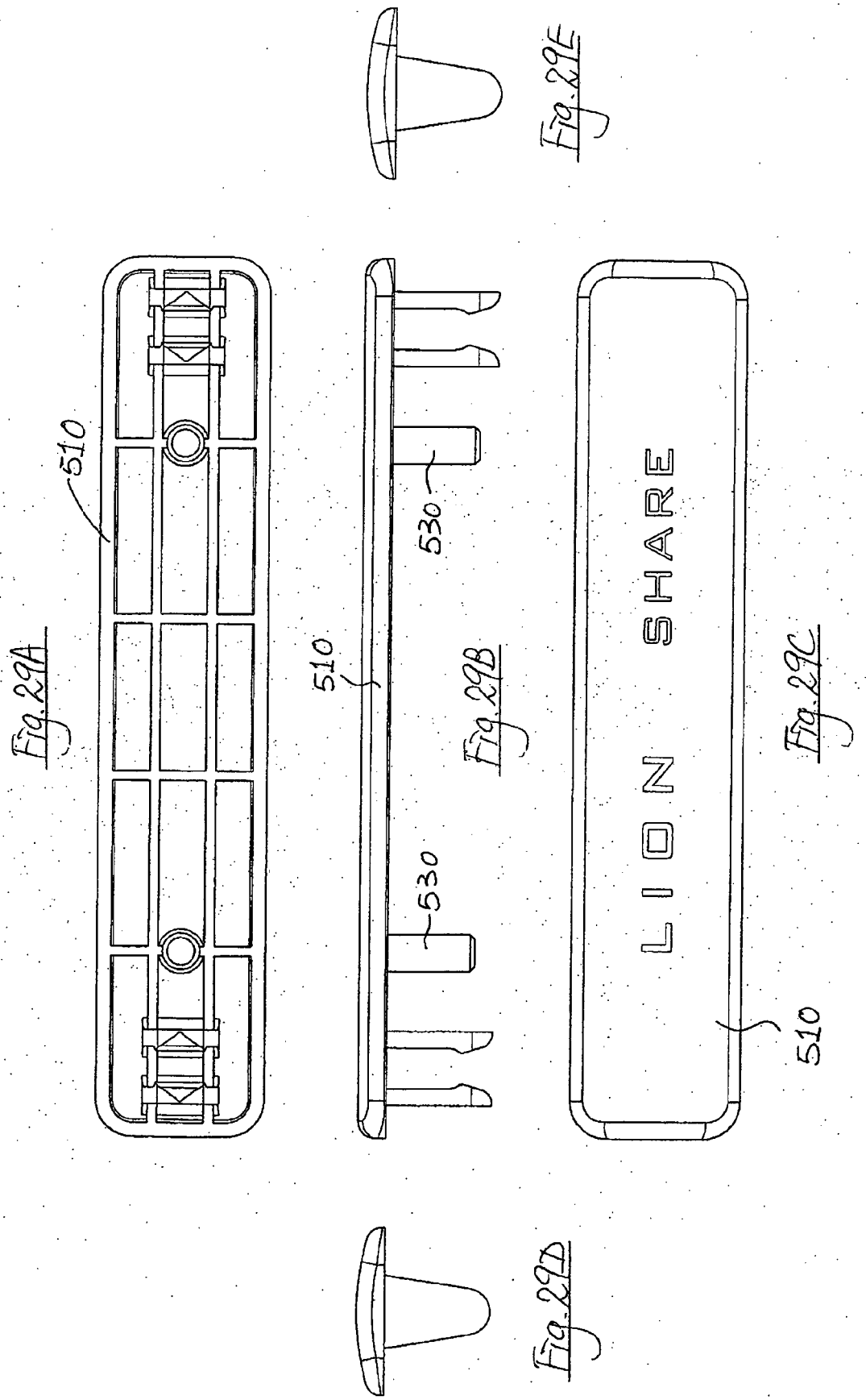


Fig.29A

Fig.29B

Fig.29C

Fig.29D

Fig.29E

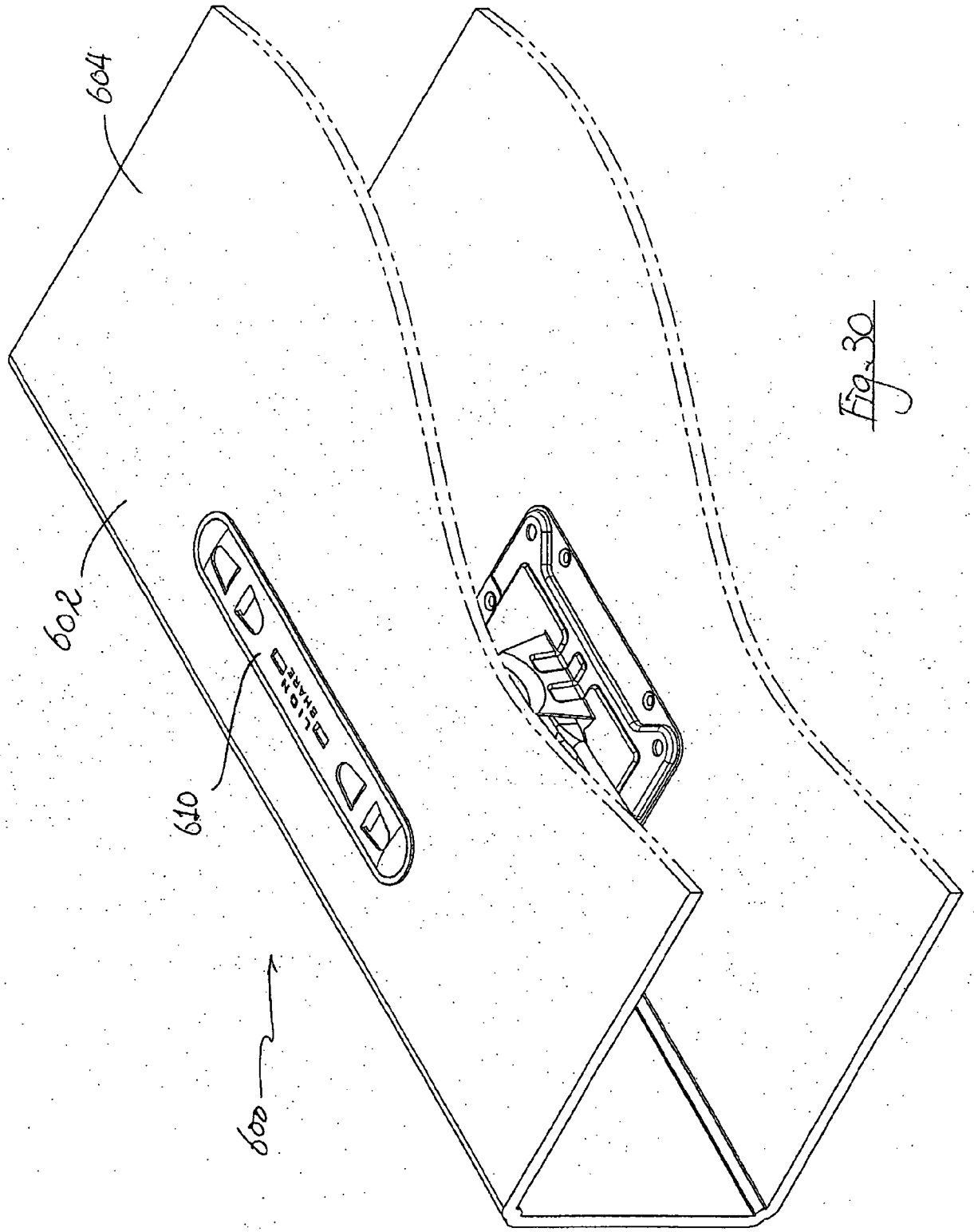


Fig. 30

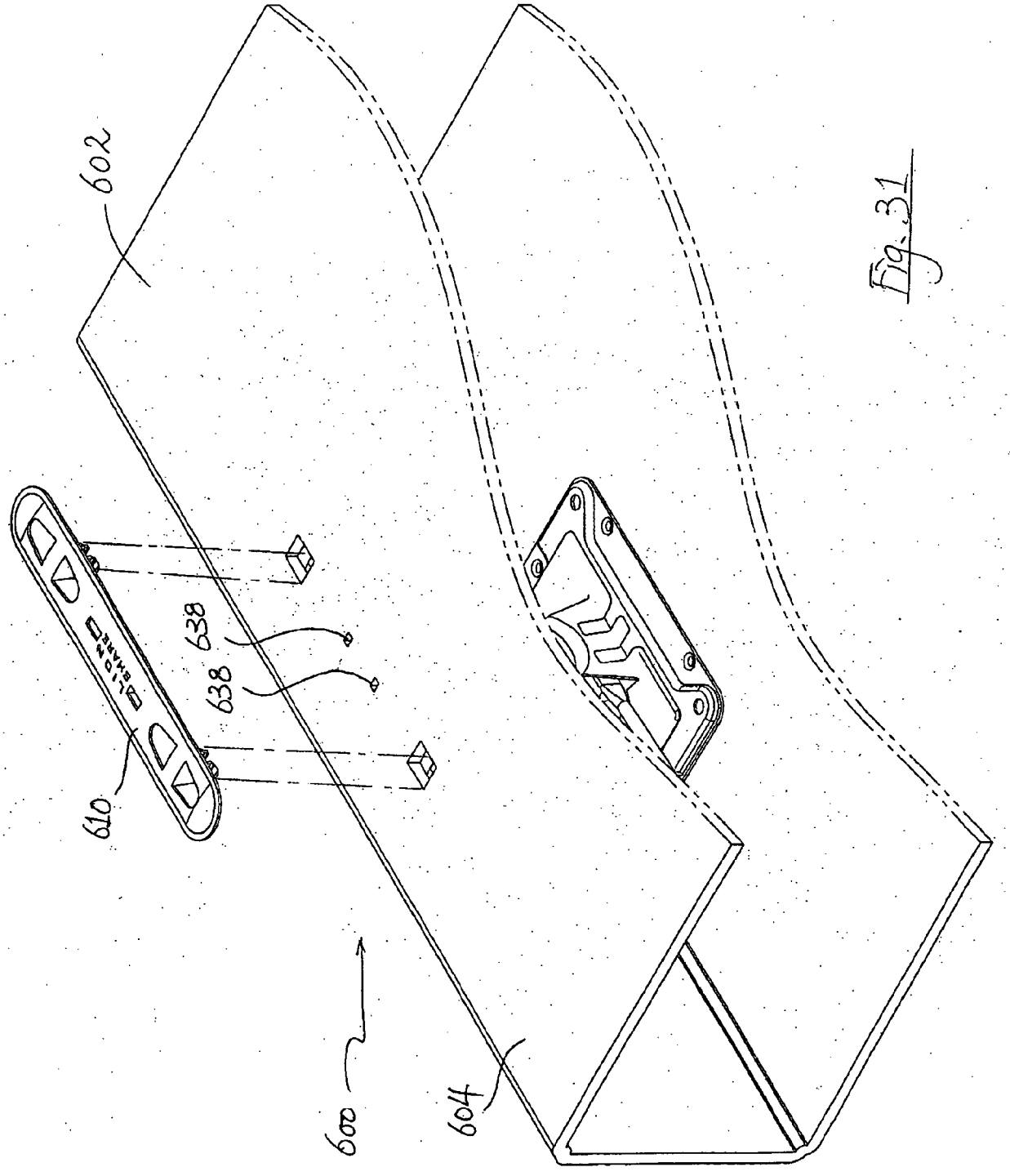


Fig. 31

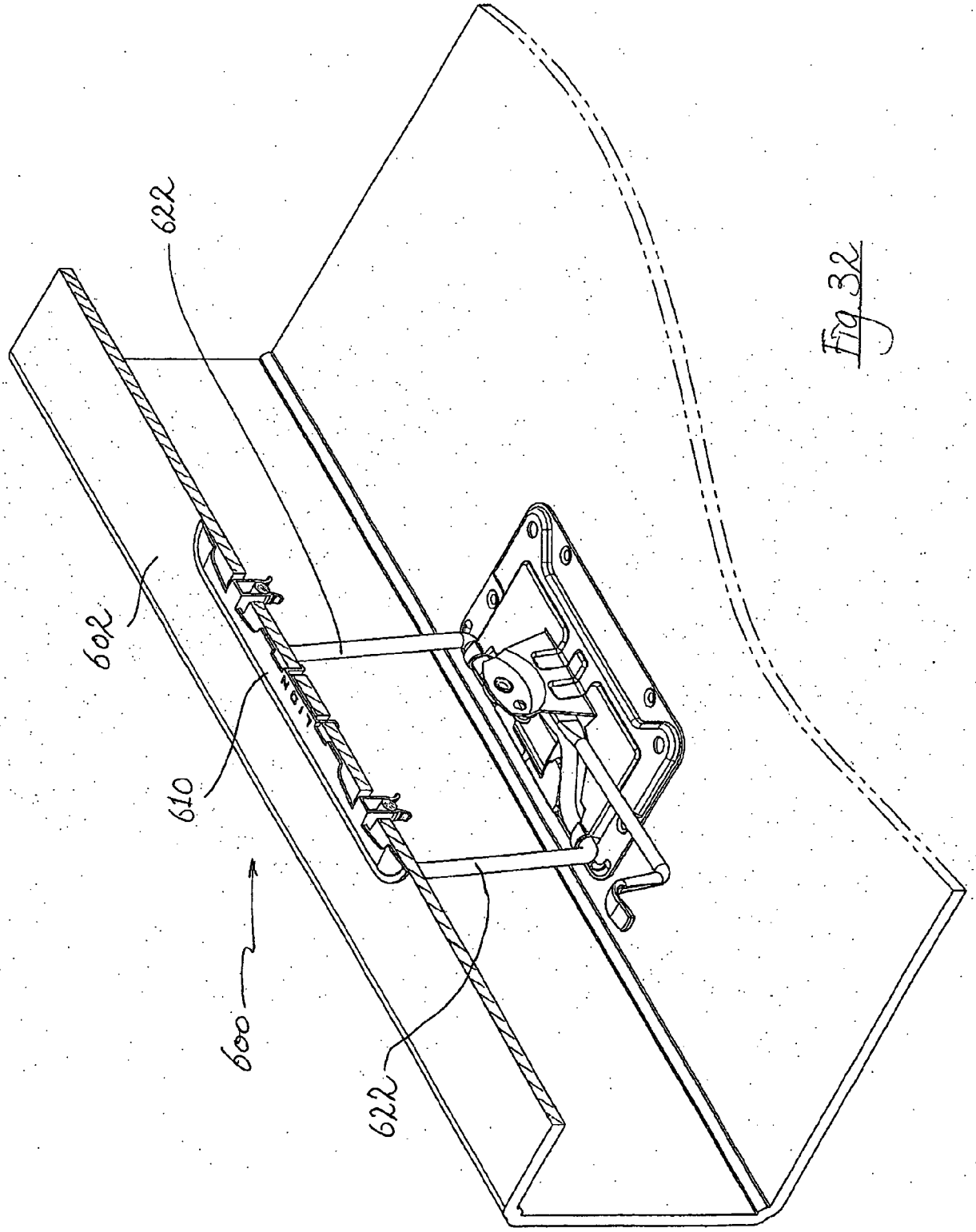


Fig 32

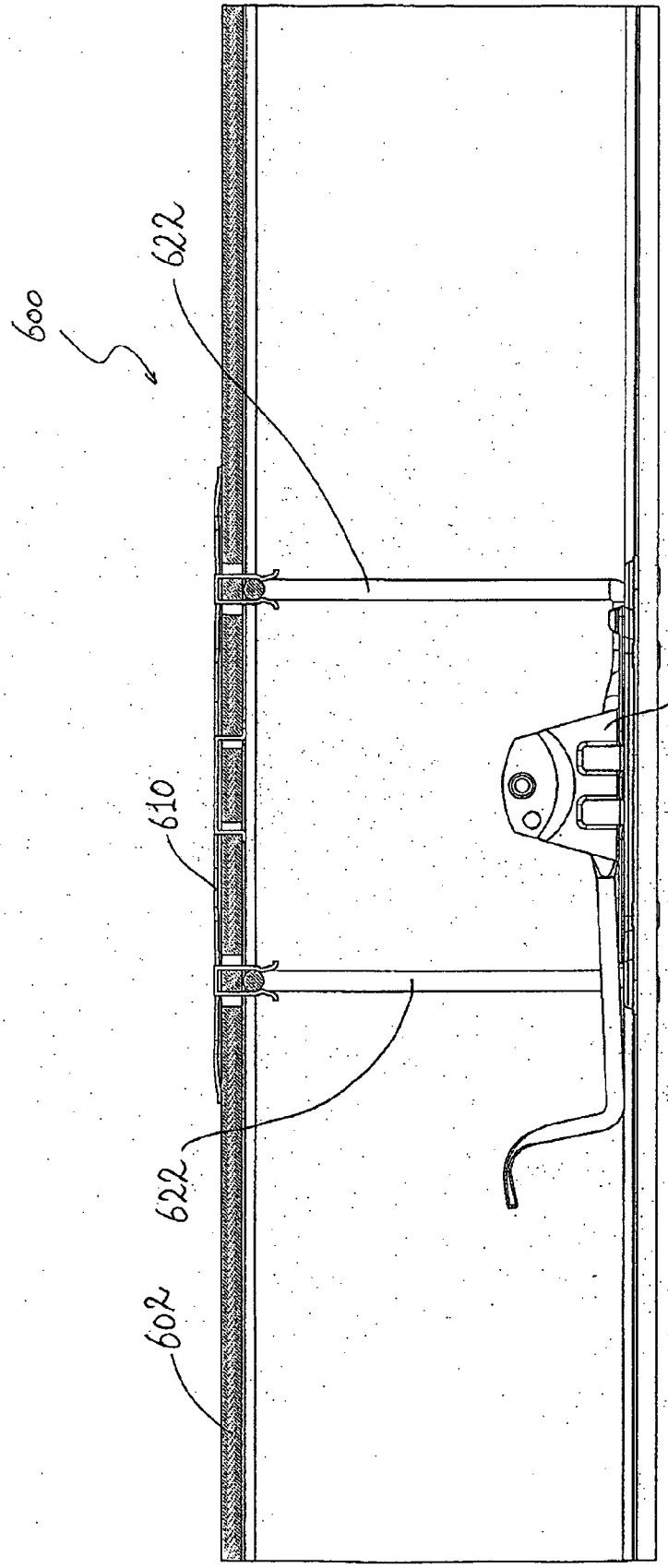


Fig. 33

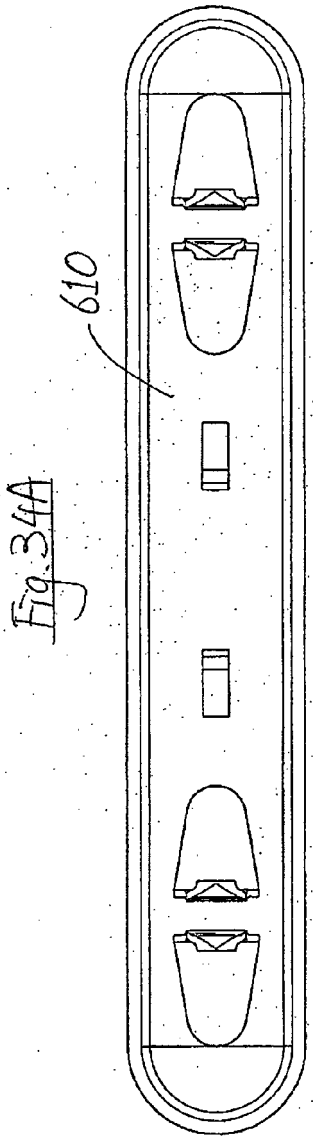


Fig. 34A

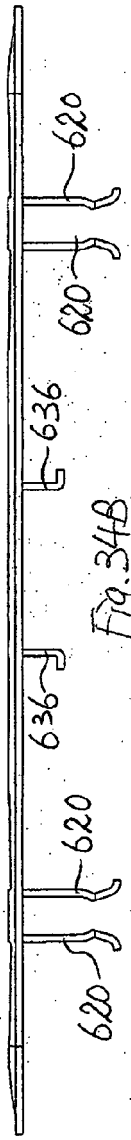


Fig. 34B

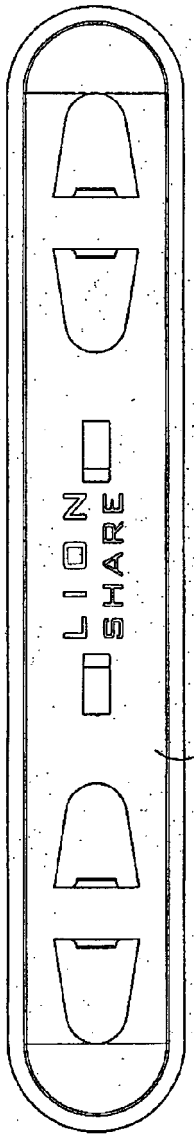


Fig. 34C

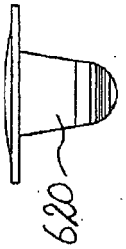


Fig. 34E

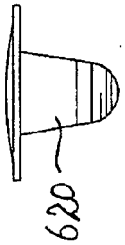
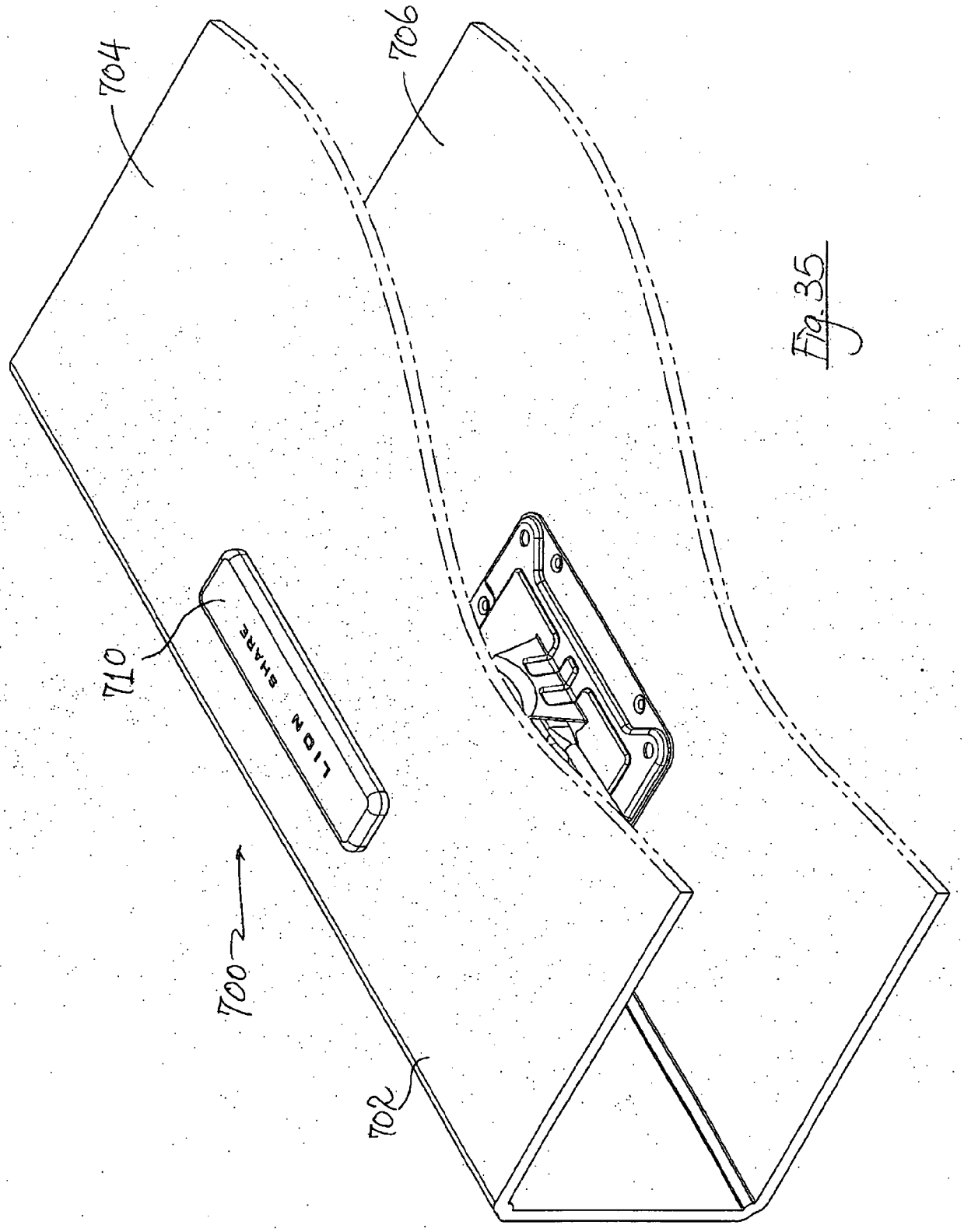


Fig. 34D



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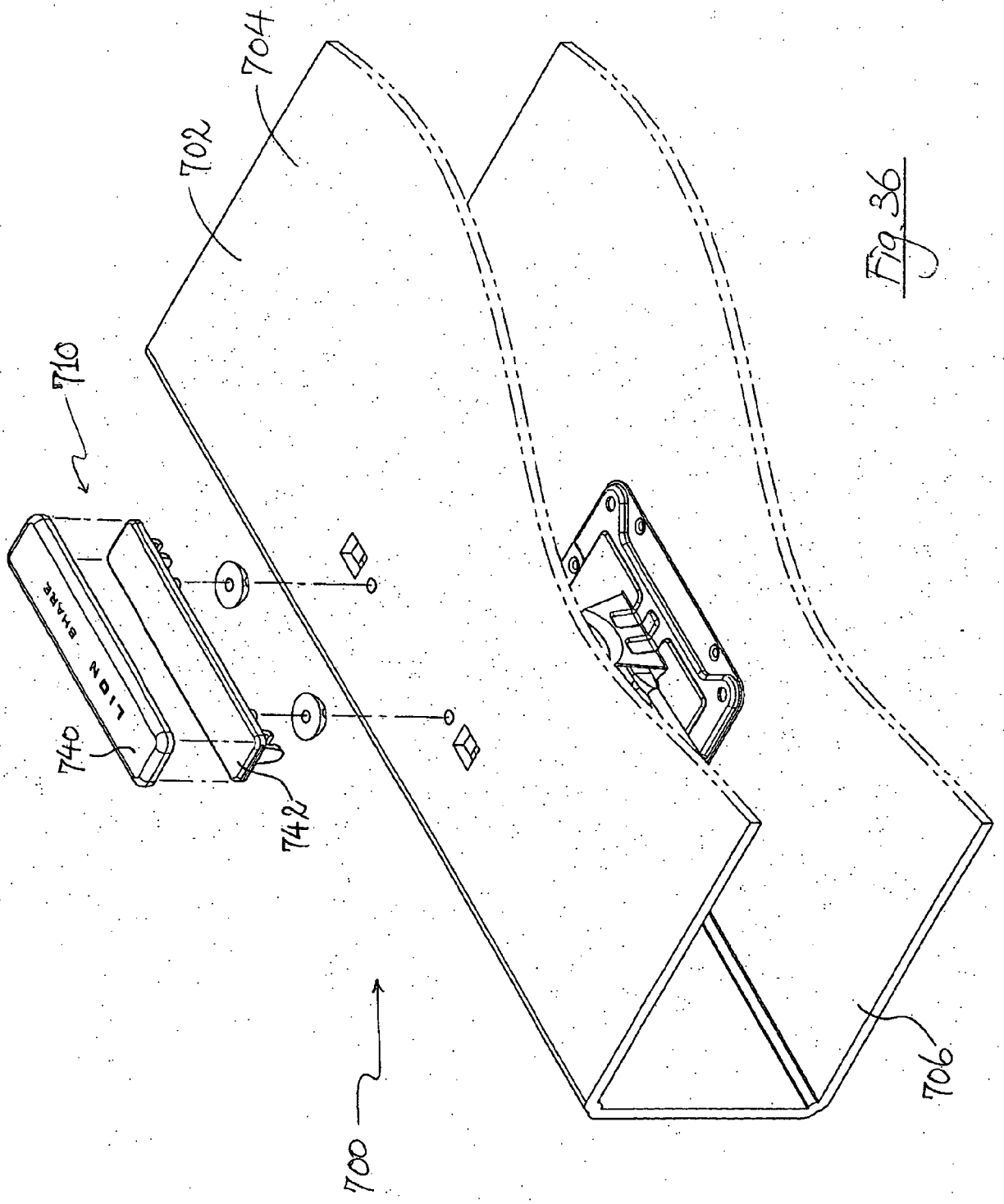

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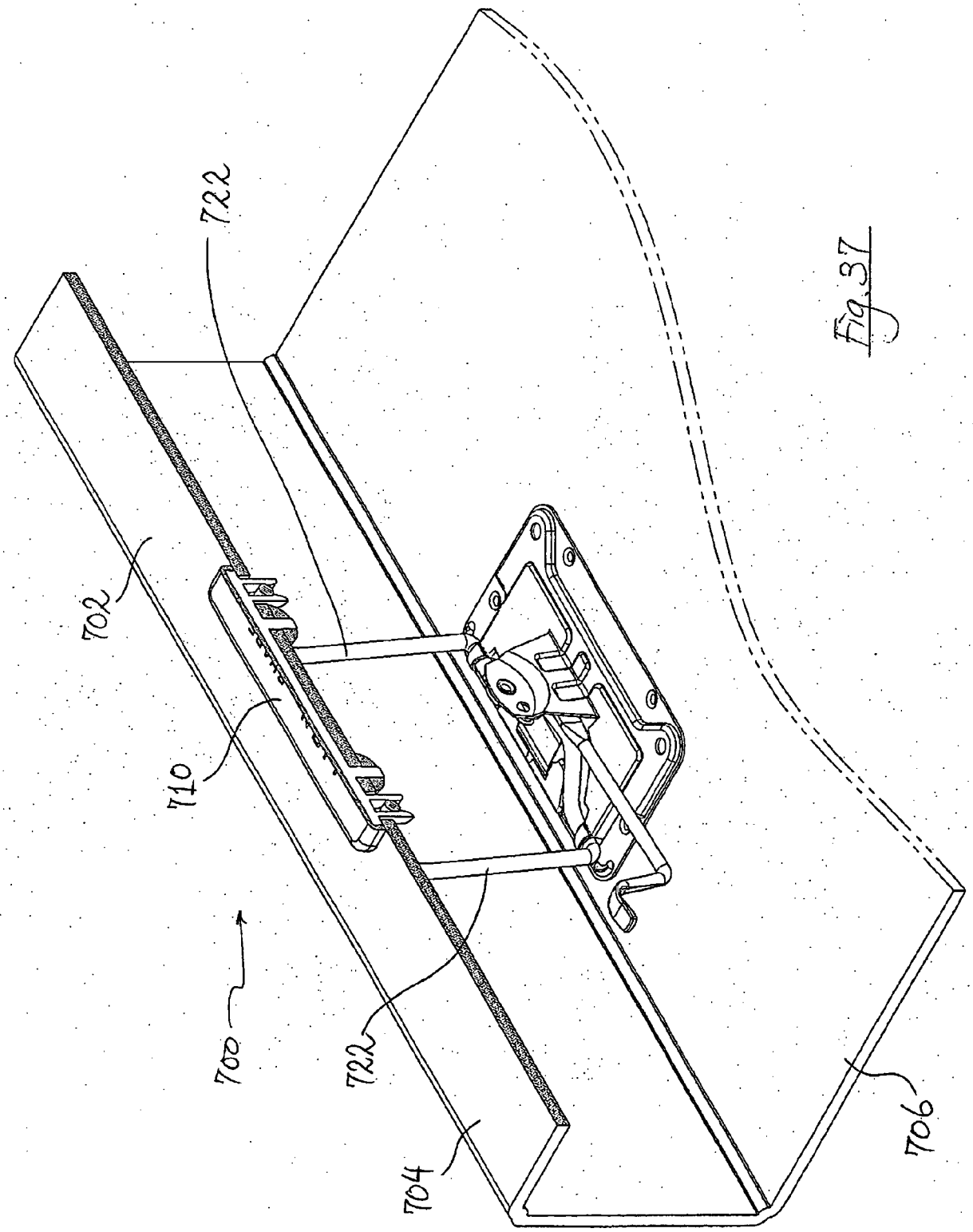

Fig.37

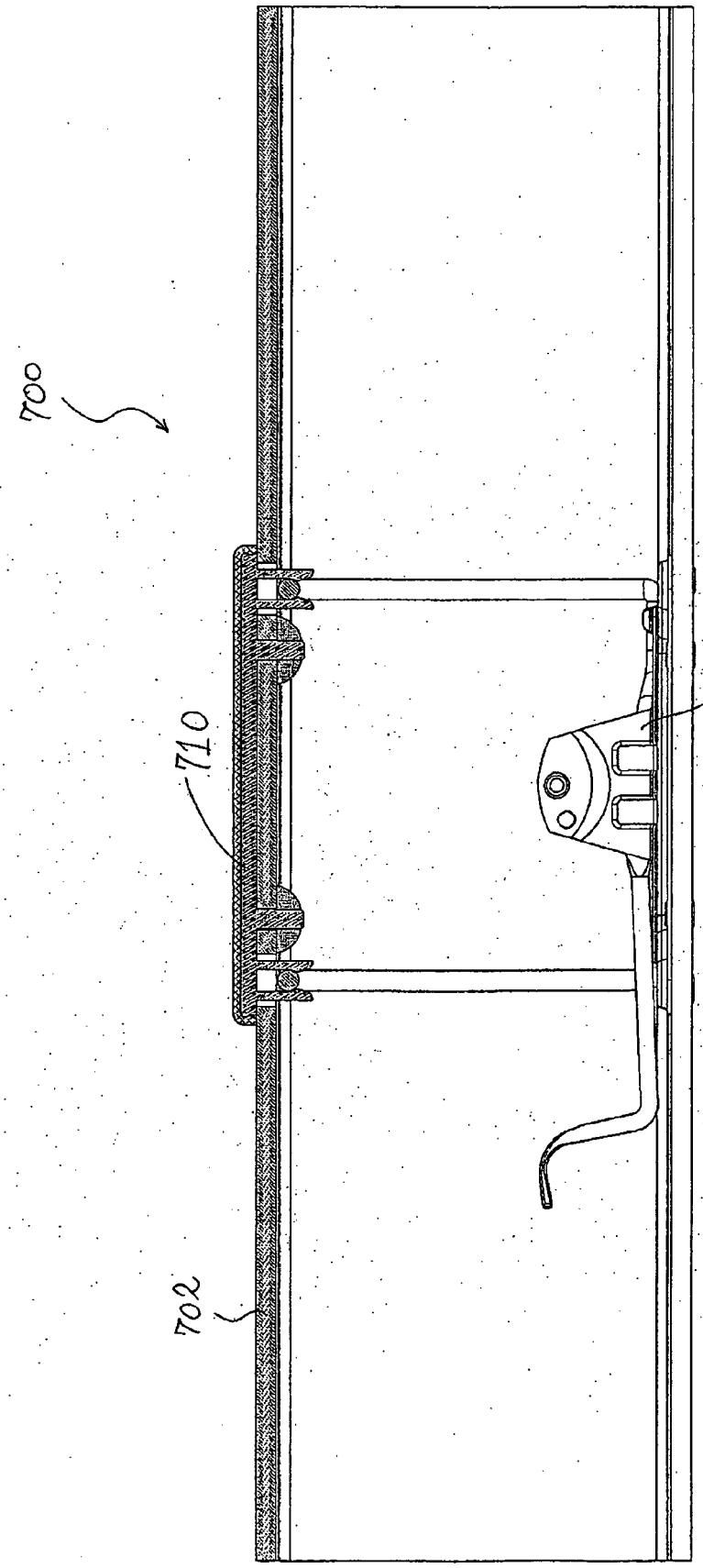

Fig. 38

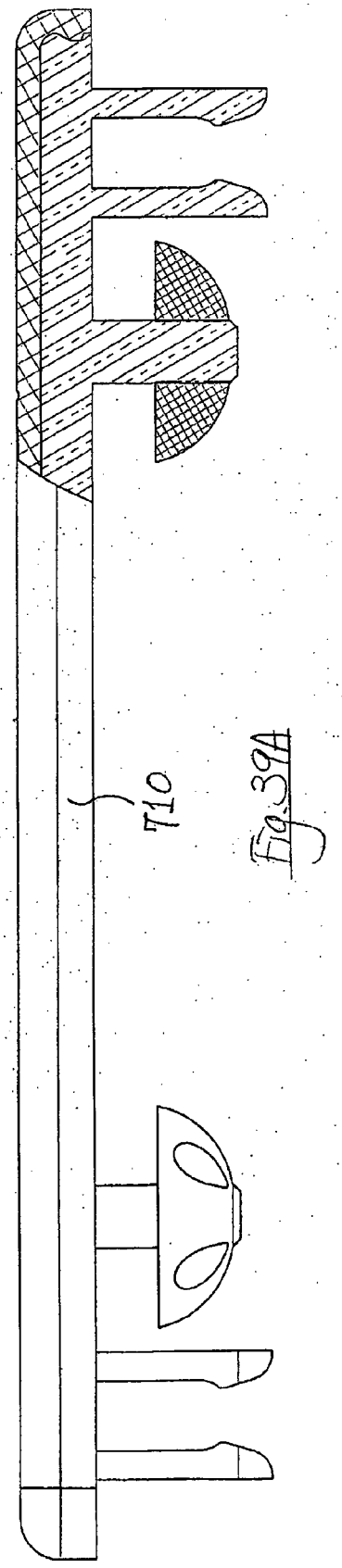

Fig.39A

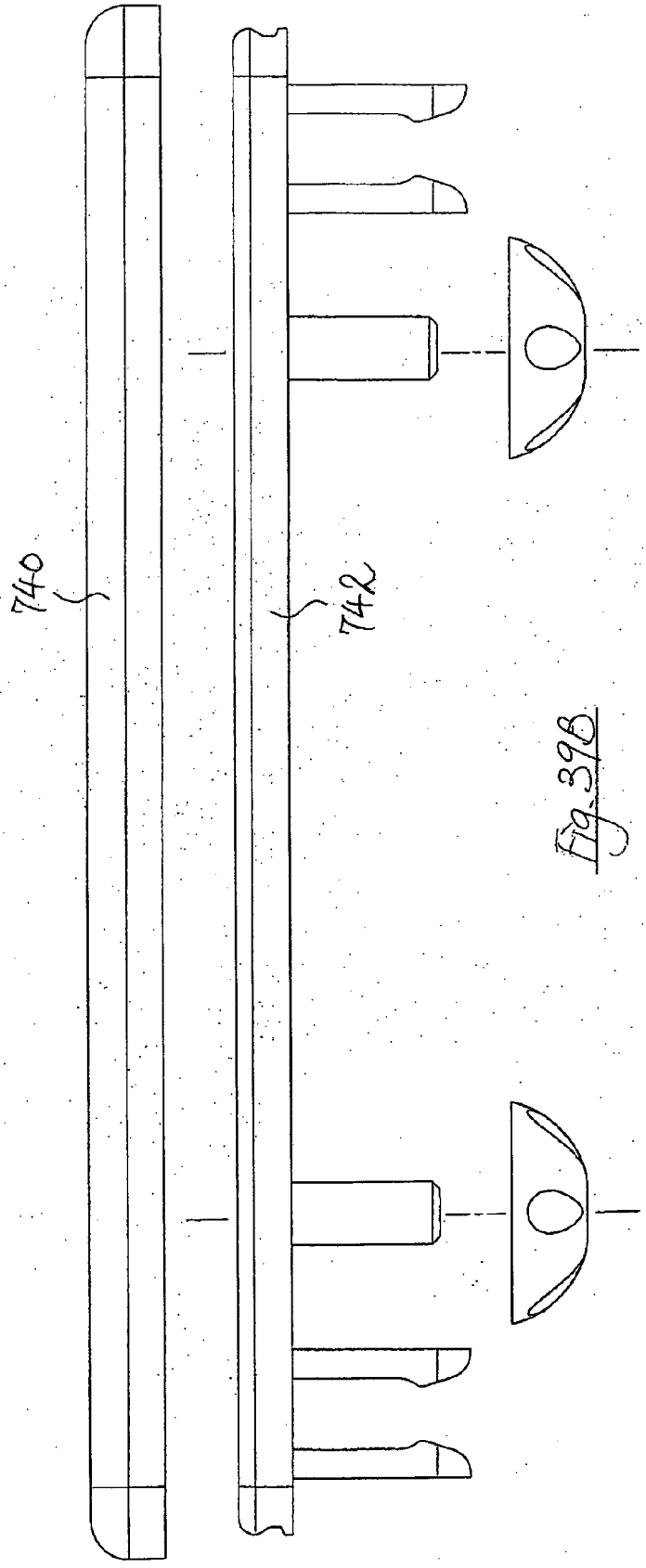

Fig.39B

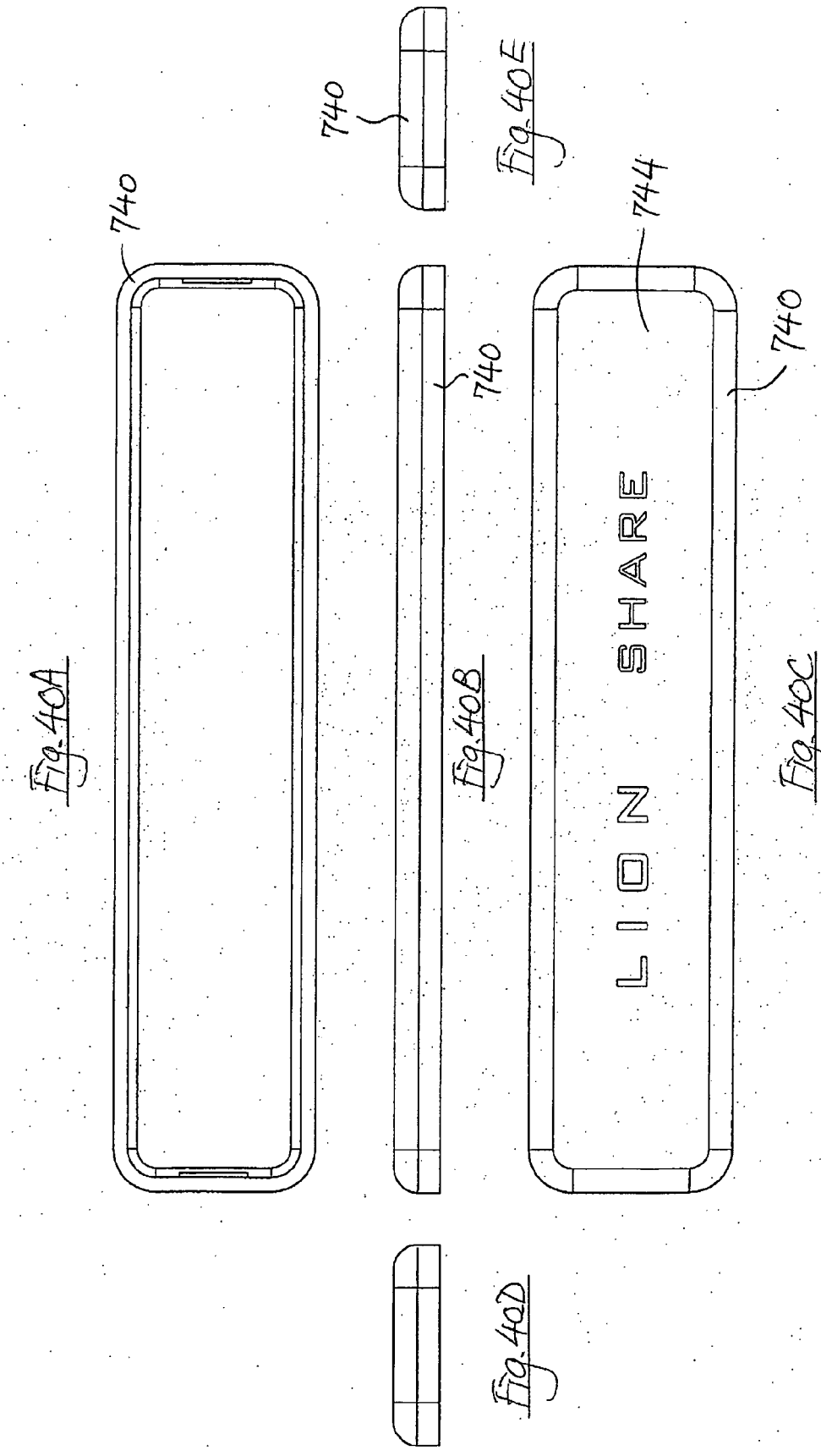

Fig.40A

Fig.40B

Fig.40C

Fig.40D

Fig.40E

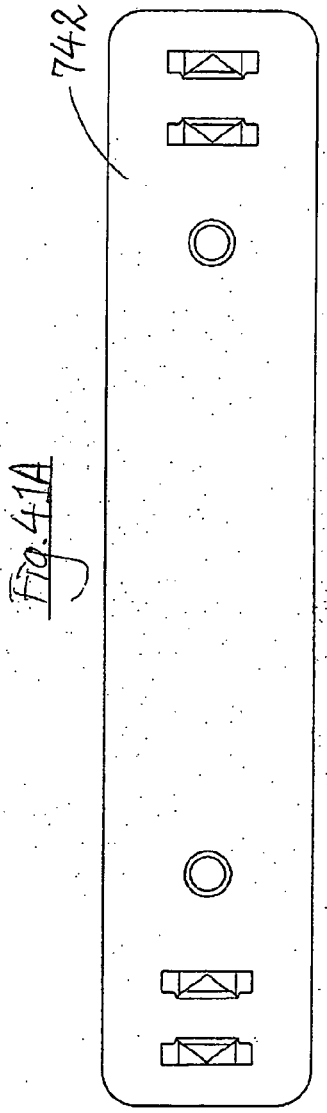

Fig. 41A

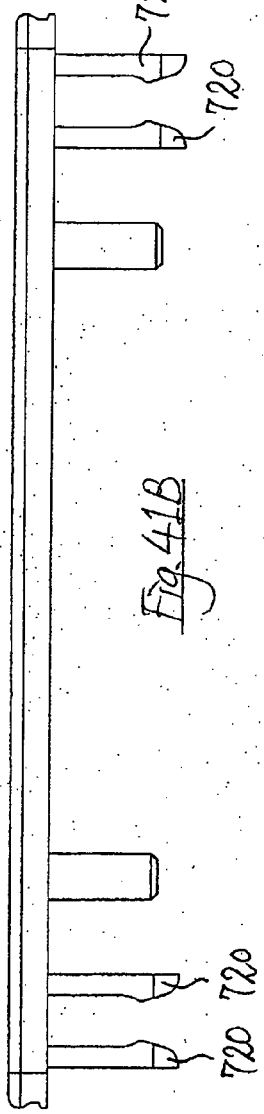

Fig. 41B

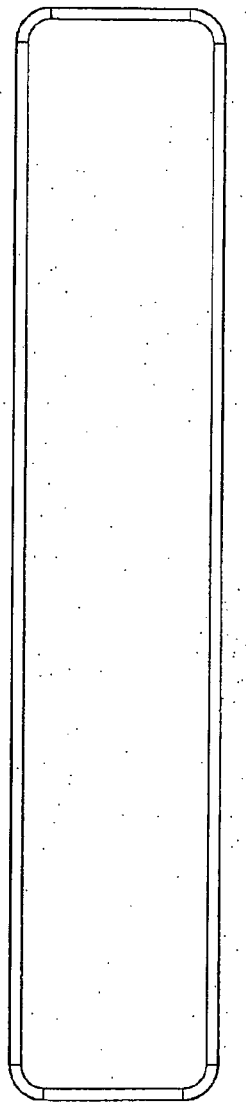

Fig. 41C

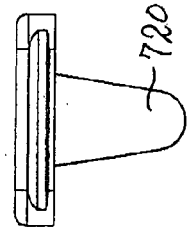

Fig. 41E

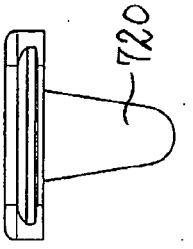

Fig. 41D

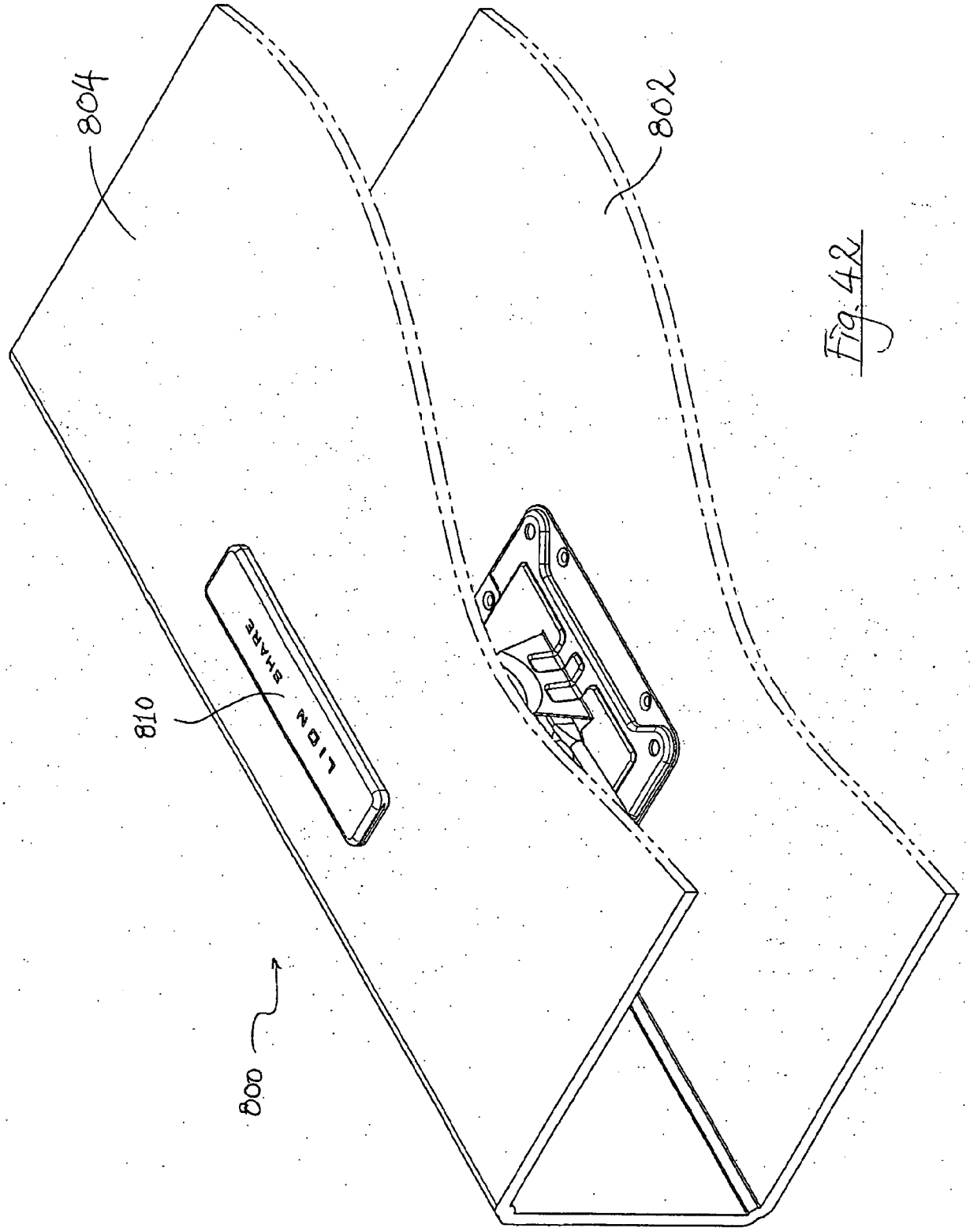

Fig. 42

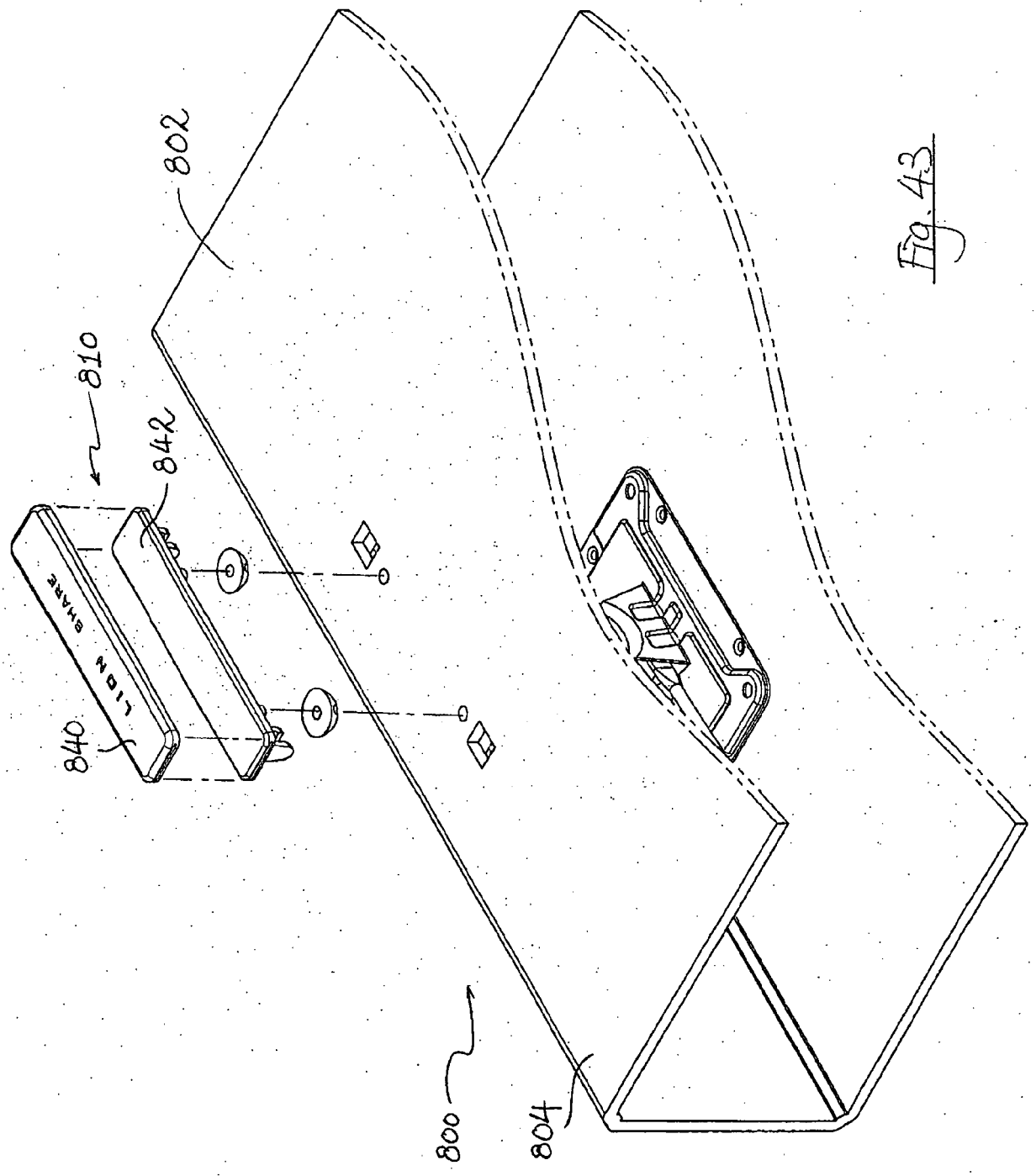

Fig. 43

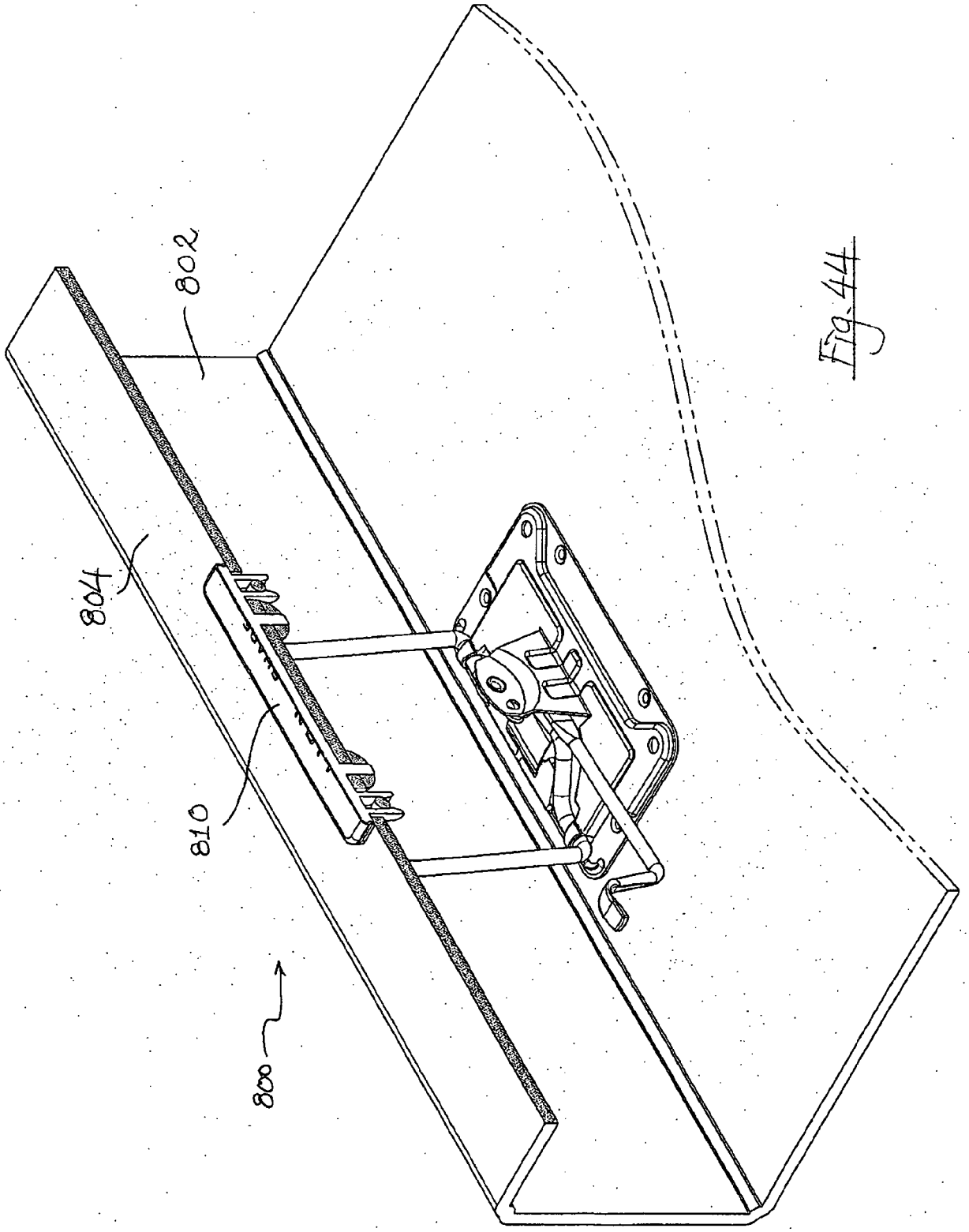

Fig. 44

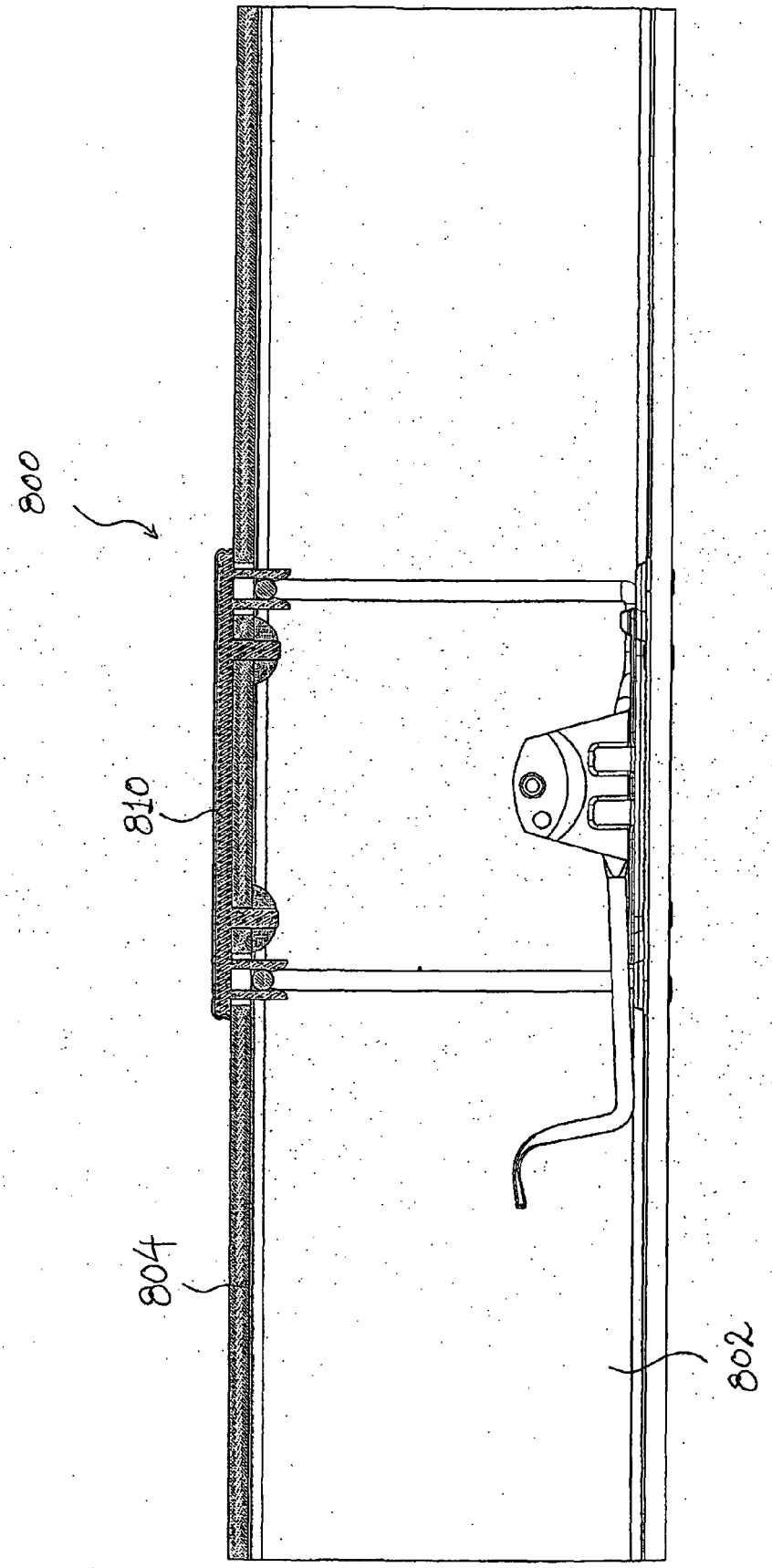

Fig. 45

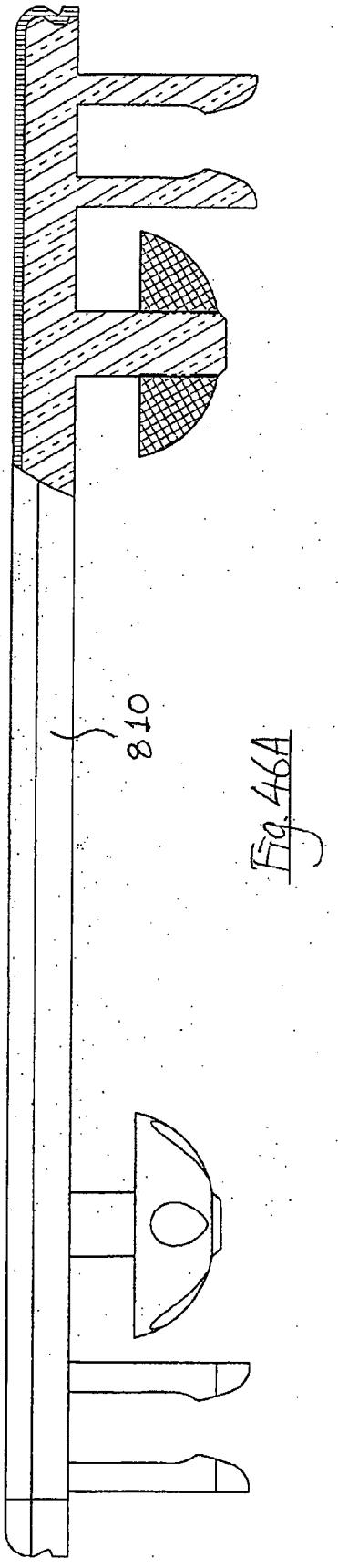

Fig. 46A

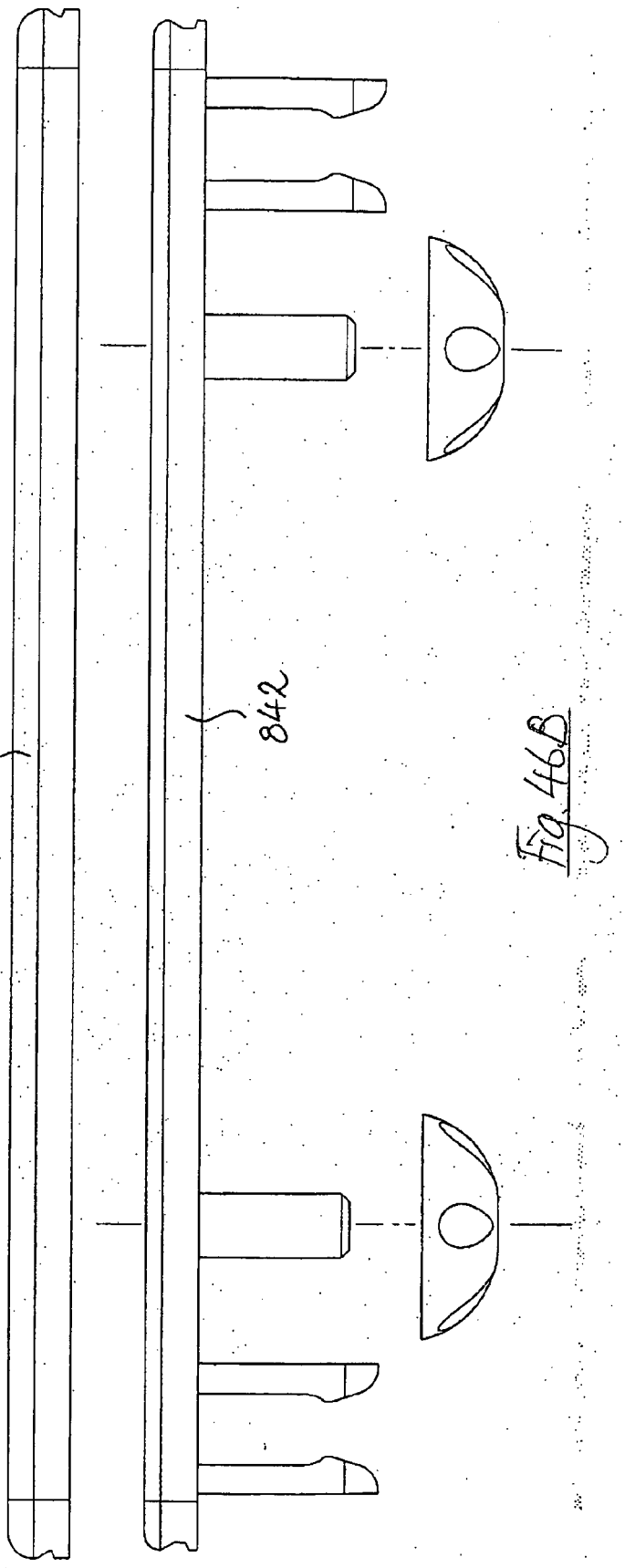

Fig. 46B

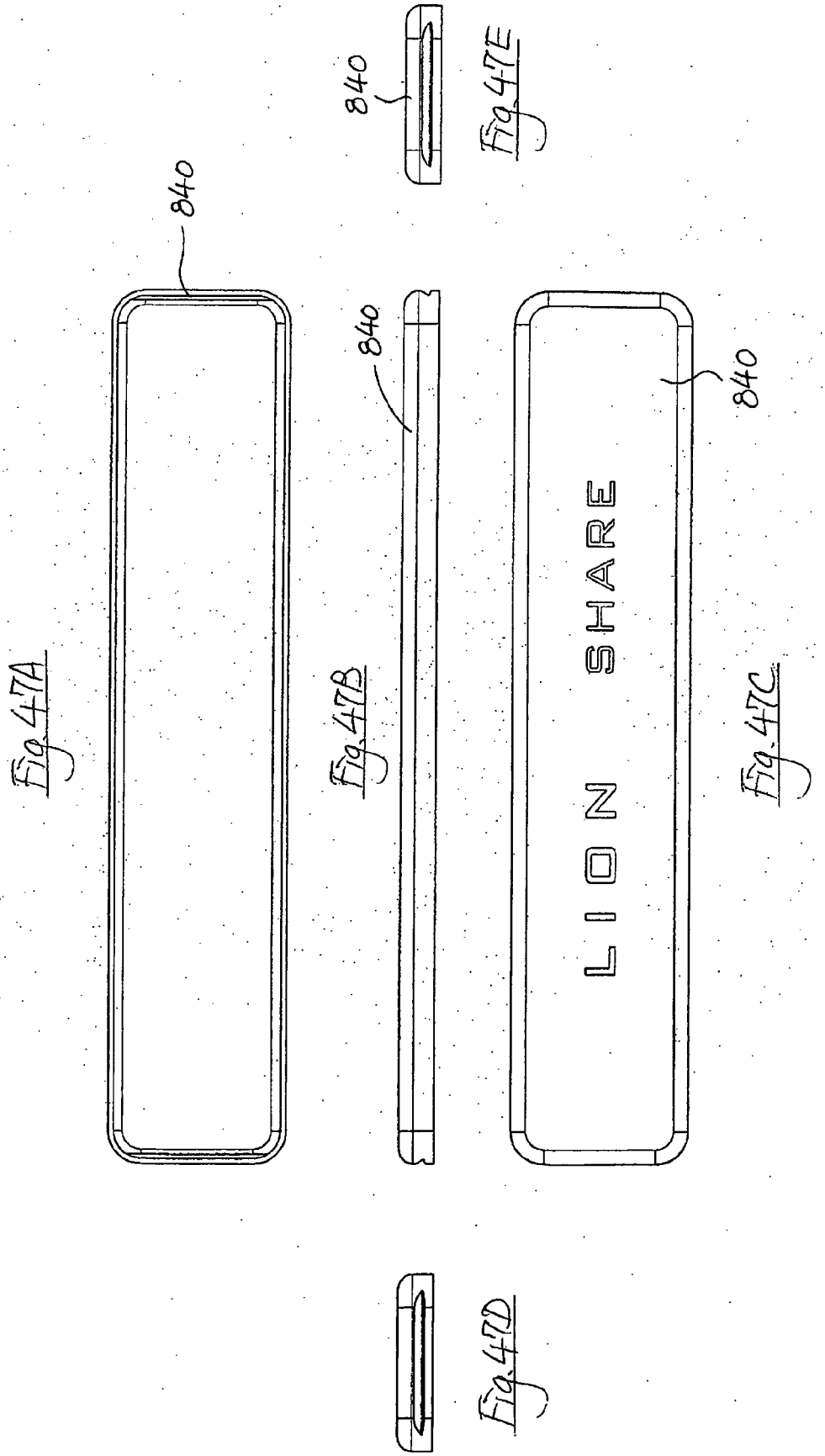

Fig.47A

Fig.47B

Fig.47C

Fig.47D

Fig.47E

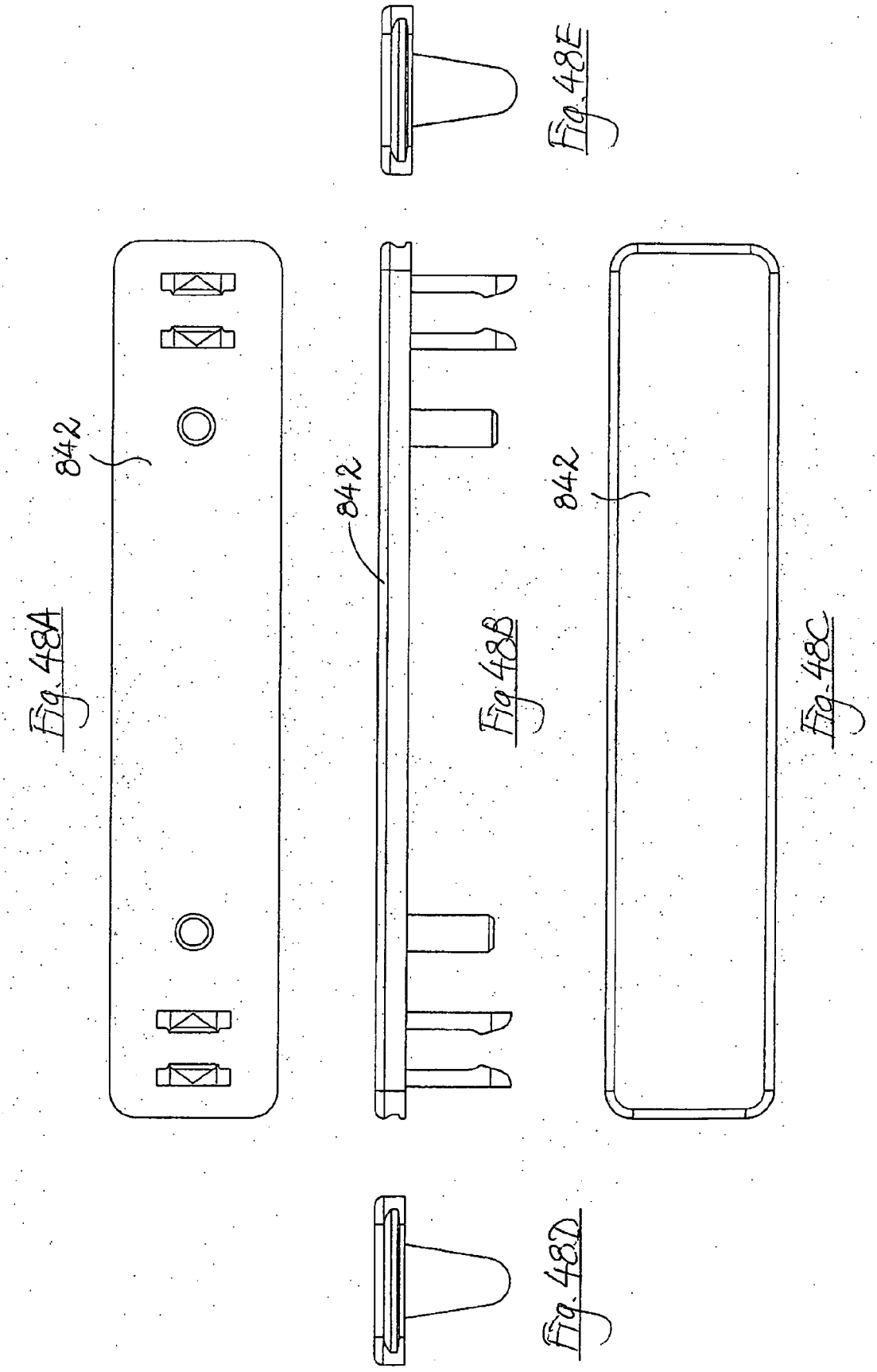

Fig. 48A

Fig. 48B

Fig. 48C

Fig. 48D

Fig. 48E

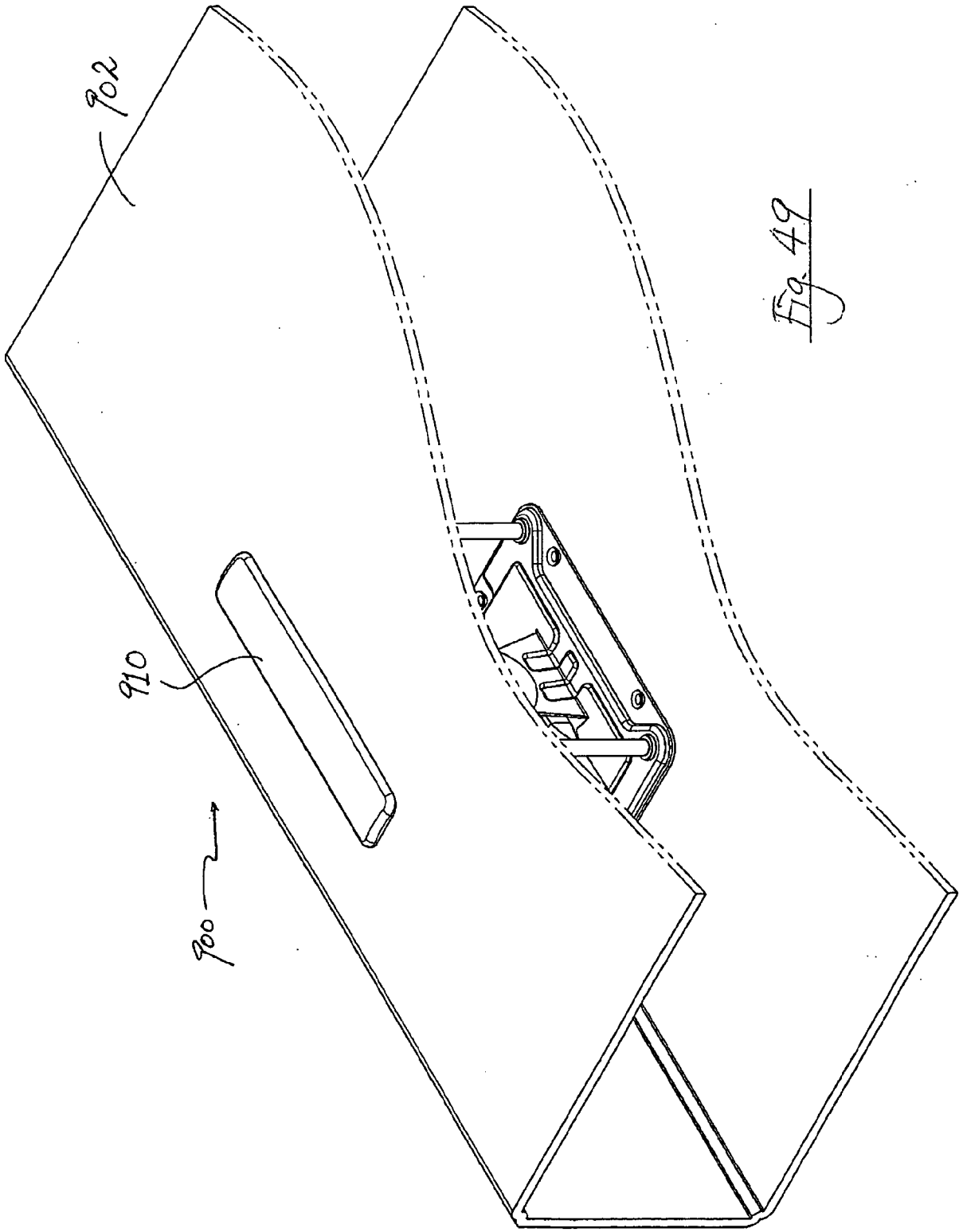

Fig. 49

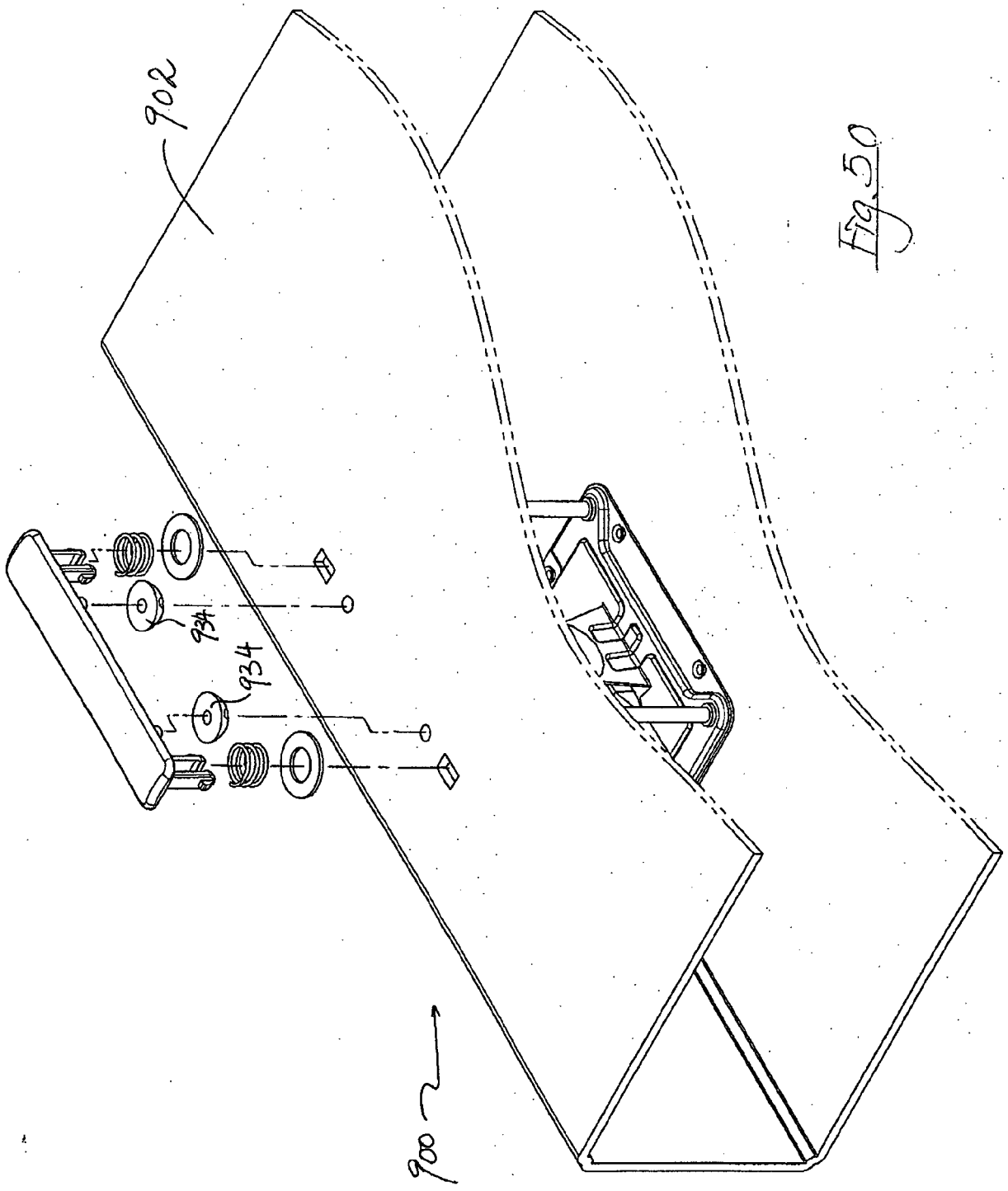

Fig. 50

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 25 3890

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 87 05 538 U1 (BUETTNER-PLASTIC INH. HERBERT BUETTNER APPARATEBAU U. PLASTICVERARBEIT) 11 June 1987 (1987-06-11) * page 9, line 29 - page 14, line 27; figures 1-4 *	1-4,17	INV. B42F13/24 B42F13/00
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X	DE 16 85 911 U (LEITZ FA LOUIS [DE]) 28 October 1954 (1954-10-28) * page 2, line 14 - page 4, line 15; figures 1-6 *	1,10,11, 15-17	
X	DE 296 14 509 U1 (IBA HARTMANN GMBH [DE]) 10 October 1996 (1996-10-10) * page 8, line 1 - page 11, line 10; figures 1-10 *	1,17	
			TECHNICAL FIELDS SEARCHED (IPC) B42F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	17 June 2008	Evans, Andrew

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