(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 588 957 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
26.10.2005 Bulletin 2005/43

(51) Int Cl.[7]: **B65D 77/04**, B65D 43/02, B65D 25/04

(21) Application number: **05252423.8**

(22) Date of filing: **19.04.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR LV MK YU

(30) Priority: **23.04.2004 GB 0409146**

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(54) Container storage system

(57) A storage system comprising a container (10) having wall portions (16 to 24) which surround at least one item (40; 90; 140) contained in the container (10). The said at least one item (40; 90; 140) has a portion of greater depth at an inner region thereof than it has at an edge of that item, whereby finger pressure exerted on that edge flips up the opposite side of the item enabling it to be more easily removed from the container.

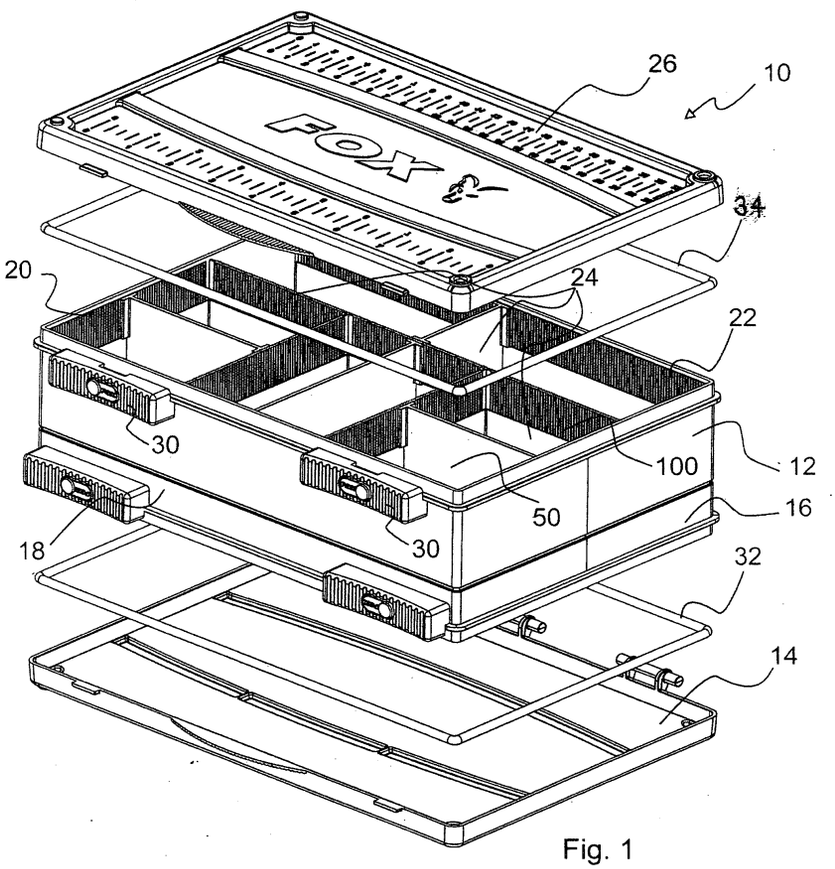

Fig. 1

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Description

[0001] The present invention relates to a storage system comprising a container having wall portions which define a receptacle of the container.

[0002] Sometimes it is difficult to gain a grasp on an item which is contained within such a container.

[0003] The present invention seeks to improve the ease with which an item within the container can be grasped and removed from the container.

[0004] Accordingly, the present invention is directed to a storage system comprising a container having wall portions which surround at least one item contained in the container, in which the said at least one item has a portion of greater depth at an inner region thereof than it has at an edge of that item, whereby finger pressure exerted on that edge flips up the opposite side of the item enabling it to be more easily removed from the container.

[0005] The said at least one item may be one of a stack of such items surrounded by the said wall portions.

[0006] In one embodiment of the present invention, a portion of greater depth may comprise a protuberance extending downwardly from an intended underside of the item. The item may be of a generally flat construction. Preferably, it has such protuberances on both its main sides so that it does not matter which way up it is placed in the container.

[0007] The flat item may comprise a rig board around which angling rigs may be wound for storage purposes.

[0008] In a different embodiment of the present invention, the portion of greater depth may be obtained by having a convex curvature on the underside of the item so that the latter is rocked on its underside when such finger pressure is exerted. The item in this case may itself be a smaller container. This is especially valuable for a storage system for use by anglers.

[0009] The main container of the storage system may comprise a plurality of compartments each having wall portions which surround such a stack of items.

[0010] Preferably the angle between an imaginary plane which passes through (a) the point or points of contact between the underside of the said at least one item and the bottom of the outer container, or the next item down, closest to the associated edge and (b) that associated edge, is greater than substantially 30° to a perpendicular through the bottom of the outer container, to facilitate the flip up action.

[0011] Example embodiments of the present invention are illustrated with reference to the accompanying drawings, in which:

Figure 1	shows an exploded view of an outer container having a number of storage compartments;
Figure 2	shows a top view of the outer container in an assembled condition;
Figure 3	shows a front view of the outer container shown in Figures 1 and 2;
Figure 4	shows a top view of a smaller inner container which is stackable within one of the compartments of the container shown in Figures 1 to 3;
Figure 5	shows an end view of the inner container shown in Figure 4;
Figure 6	shows a side view of the inner container shown in Figure 4;
Figure 7	shows an underneath view of the inner container shown in Figures 4 to 6;
Figure 8	shows a perspective view of the inner container shown in Figures 4 to 7, with the lid thereof in a raised position;
Figures 9 to 13	show views corresponding to those views shown in Figures 4 to 8, of a variant inner container;
Figure 14	shows a plan view of a rig board;
Figure 15	shows an end view of the rig board shown in Figure 14; and
Figure 16	shows a side view of the rig board shown in Figures 14 and 15.

[0012] It will be appreciated that when at least one of the items shown in Figures 2, 9 and 14 is held in the outer container shown in Figure 1, the resulting assembly embodies the present invention.

[0013] The storage container 10 shown in Figure 1 for use by anglers comprises a box 12 having a generally planar bottom 14, side walls 16, 18, 20 and 22 extending upwardly from the bottom 14, compartment walls 24 which divide the box up into a multiplicity of compartments and a generally planar lid 26. The lid is pivotable about hinges 28 and is shut tight by means of openable clasps 30. The bottom 14 and associated portions of the other parts of the container 10 to which it is attached are identical to the lid 28 and its associated parts so that the whole container can be flipped upside down so that what was the bottom 14 now becomes the openable lid and what was the lid 26 now becomes the bottom of the container.

[0014] A generally rectangular seal 32 is positioned around the rim of the undersides of the outer walls 16, 18, 20 and 22, to form a seal between those walls and the bottom 14, and a corresponding seal 34 is arranged on the upper rim of the outer walls 16, 18, 20 and 22 of the container 10 to form a seal between the lid 26 and those outer walls when the lid 26 is shut.

[0015] Figures 4 to 8 show a smaller container 40 which is received as a snug fit within one of the compartments of the outer container shown in Figures 1 to 3. It has a bottom 42, side walls 44, compartment walls 46 and a generally planar lid 48. The lid 48 can be snapped on to the top of the rest of the container 40 by means of snap-fitting interengaging portions 50 and 52. A number of inner containers, each as shown in Figures

4 to 8, can be stacked in one of the compartments 50 of the outer container 10 such that the planar lid 48 of each of the containers 40 is generally parallel to the bottom 14 and to the lid 26 of the outer container 10. The edges of the inner container 40 are immediately adjacent to the walls which define a compartment 50 of the outer container 10, so that the container 40 fits snugly in the compartment 50. This ensures that there is no wastage of space. However, the bottom 42 of the generally rectangular inner container 40 is curved in a convex fashion, so that the bottom 42 of the inner container extends upwardly in the region 54 where it extends towards and approaches an edge 56 of the inner container 40. As a result, downward finger pressure exerted on that edge 50 rocks the inner container 40 about the curved portion 54 of its underside so as to flip up the opposite edge 58 of the inner container 40, enabling the latter to be more readily grasped and removed from the outer container 10.

[0016] A generally rectangular inner container 90 shown in Figures 9 to 13 is similar to the construction of the inner container shown in Figures 4 to 8, except that it is shallower. Furthermore, it is formed with hinges 92 on one side of its lid and an openable catch 94 on the other side of the lid.

[0017] The rig board 140 shown in Figure 14 comprises a generally flat planar rectangular board 140. The shorter sides are formed with a series of grooves 142 to enable a plurality of rigs to be wound around the board. Apertures 144 extending through the board 140 enable loose ends to be threaded through them to reduce the likelihood that the rigs become unwound from the board. Protuberances 146 extend downwardly from both main sides of the board 140. They are located close to but inwardly of the shorter edges of the board 140 such that four such protuberances are associated with each shorter edge. The protuberances themselves are formed on the longer sides of the board 140. Thus, one pair of such protuberances extend from one of the main sides of the board 140 inwardly of the ends of one of the shorter sides of the board 140. Another pair is in registration with this first pair but extends in the opposite direction thereto. Likewise, at the other shorter side of the rectangular form of the board 140.

[0018] As with one of the inner boxes 40 or 90, the rig board 140 can be stacked in the outer container 10 shown in Figures 1 to 3 so that the stacking fits snugly, for example, in a compartment 100 of the outer container 10. The downwardly protruding protuberances 146 of one of the rig boards in the stack rest on the corresponding upwardly protruding protuberances 146 of the next rig board down in the stack. The uppermost board of the stack can be readily removed by finger pressure exerted on one of the shorter sides, that is to say on one of the ends of the generally rectangular board 140. This flips up the other of the shorter sides, or the other end, as the board pivots about the lower protuberances 146 closer to the application of the force, to enable the rig board to be readily grasped and removed from the outer container 10.

[0019] With both the items shown as 40 in Figure 6 and 90 in Figure 11, and with the rig board 140 shown in Figure 16, the angle α between an imaginary plane which passes through (a) the points of contact between the underside of the item and the bottom 14 of the container 10, or the next item down, closest to the associated edge and (b) that associated edge, is greater than 30° to a perpendicular through the bottom 14 of the container 10, to facilitate the flip up action.

[0020] Numerous modifications and variations may occur to the reader without taking the resulting construction outside the scope of the present invention. To give one example only, instead of both ends of the bottom 42 of the inner box shown in Figure 4 being curved, only one of those ends might be curved, with a corresponding marker on the upper side of the inner container 40 to show which end should be pushed down to enable the other end to be flipped up.

Claims

1. A storage system comprising a container (10) having wall portions (16 to 24) which surround at least one item (40; 90; 140) contained in the container (10), **characterised in that** the said at least one item (40; 90; 140) has a portion of greater depth at an inner region thereof than it has at an edge of that item, whereby finger pressure exerted on that edge flips up the opposite side of the item enabling it to be more easily removed from the container.

2. A storage system according to claim 1, **characterised in that** the said at least one item (40; 90; 140) is one of a stack of such items (40; 90; 140) surrounded by the said wall portions (16 to 24).

3. A storage system according to any preceding claim, **characterised in that** the said portion of greater depth comprises a protuberance (146) extending downwardly from an intended underside of the item (140).

4. A storage system according to any preceding claim, **characterised in that** the said at least one item (140) is of a generally flat construction.

5. A storage system according to claim 4, **characterised in that** the said at least one item (140) has such protuberances (146) on both its main sides so that it does not matter which way up it is placed in the container (10).

6. A storage system according to claim 4 or claim 5, **characterised in that** the said at least one item (140) comprises a rig board (140) around which an-

gling rigs may be wound for storage purposes.

7. A storage system according to claim 1 or claim 2, **characterised in that** the said portion of greater depth is obtained by having a convex curvature on the underside of the item (40; 90) so that the latter is rocked on its underside when such finger pressure is exerted.

8. A storage system according to claim 7, **characterised in that** the item (40; 90) is itself a smaller container.

9. A storage system according to claim 8, **characterised in that** the main container (10) of the storage system comprises a plurality of compartments each having wall portions (16 to 24) which surround such a stack of items.

10. A storage system according to any preceding claim, **characterised in that** the angle (α) between an imaginary plane which passes through (a) the point or points of contact between the underside of the said at least one item (40; 90) and the bottom of the outer container, or the next item down, closest to the associated edge and (b) that associated edge, is greater than substantially 30° to a perpendicular through the bottom of the outer container, to facilitate the flip up action.

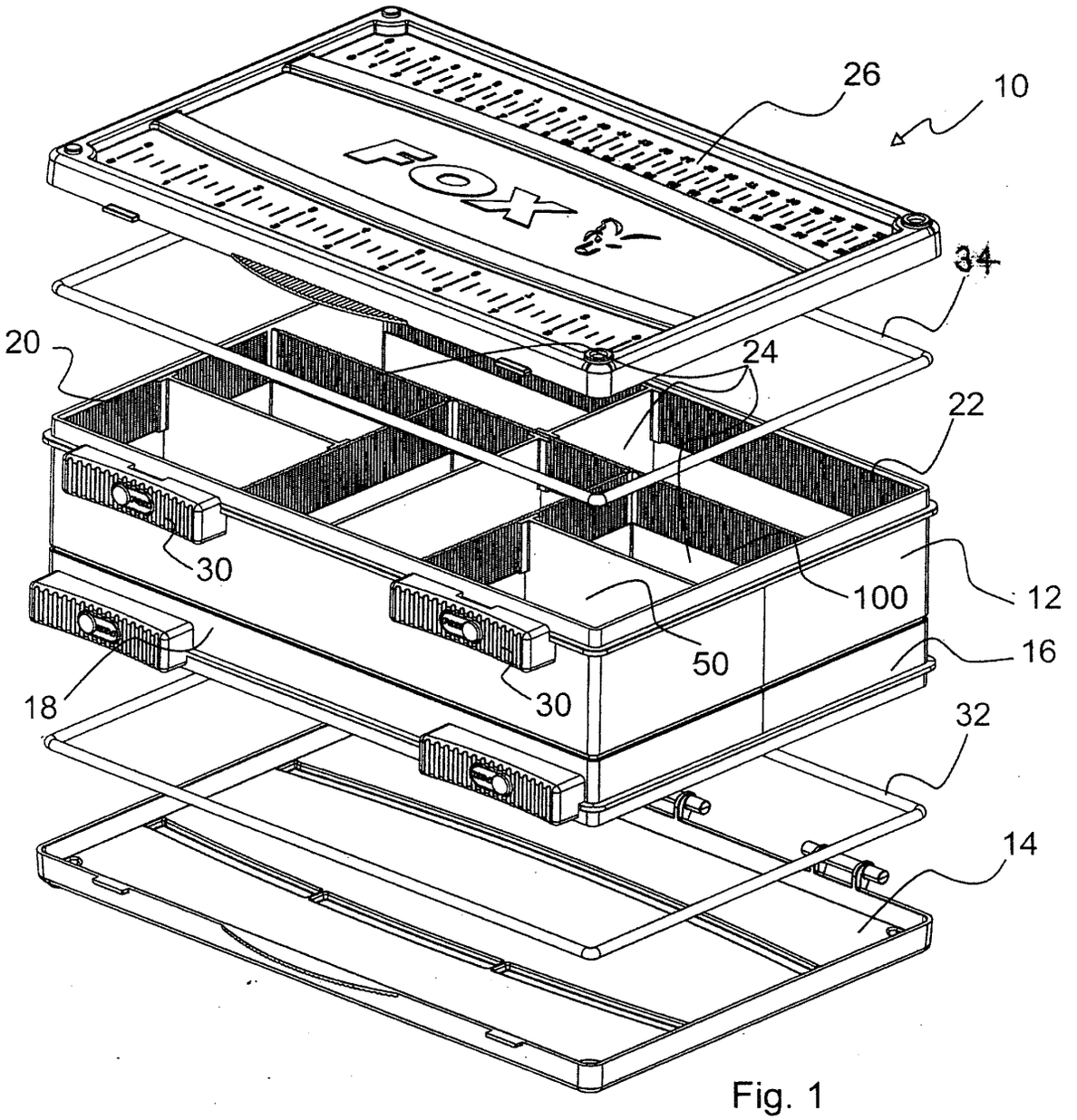

Fig. 1

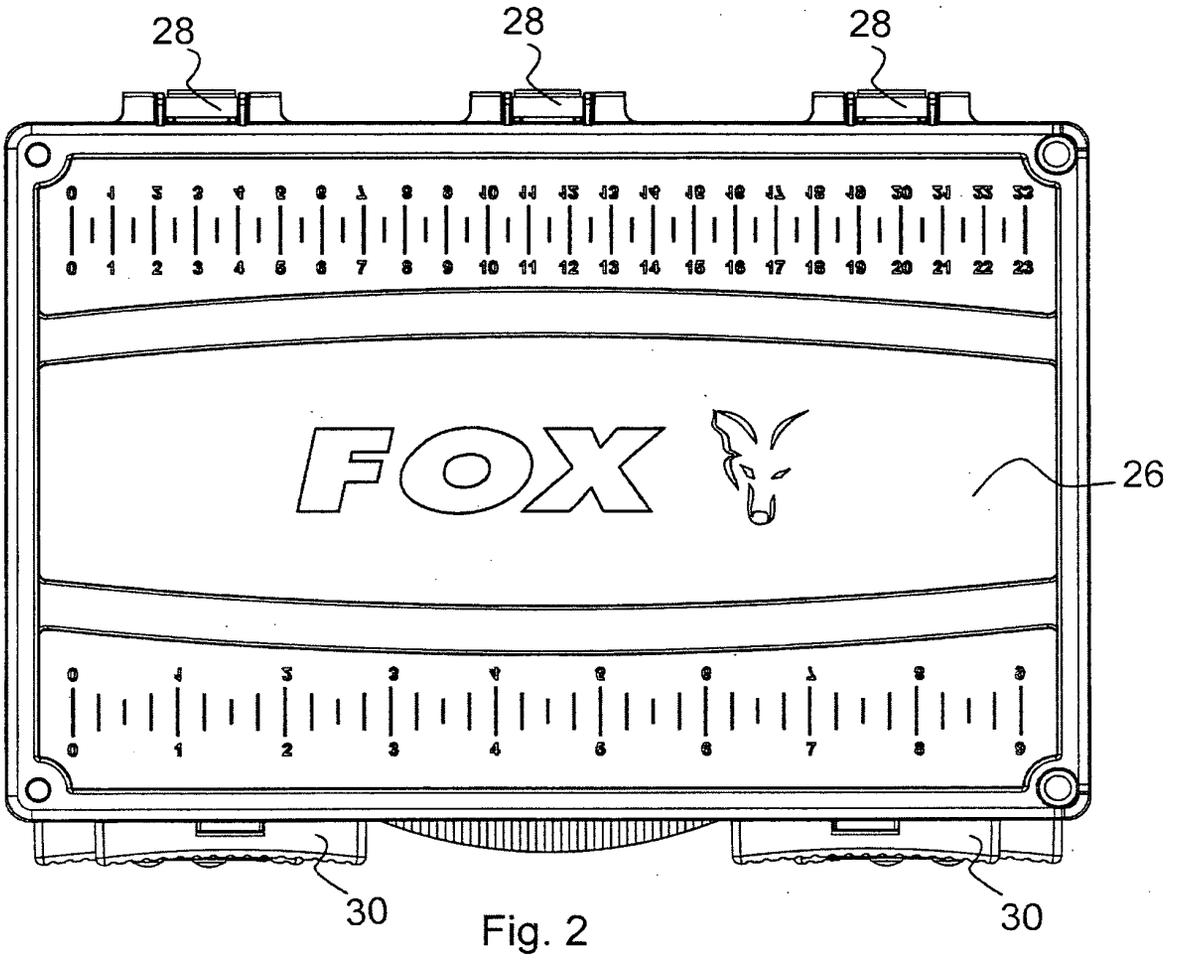

Fig. 2

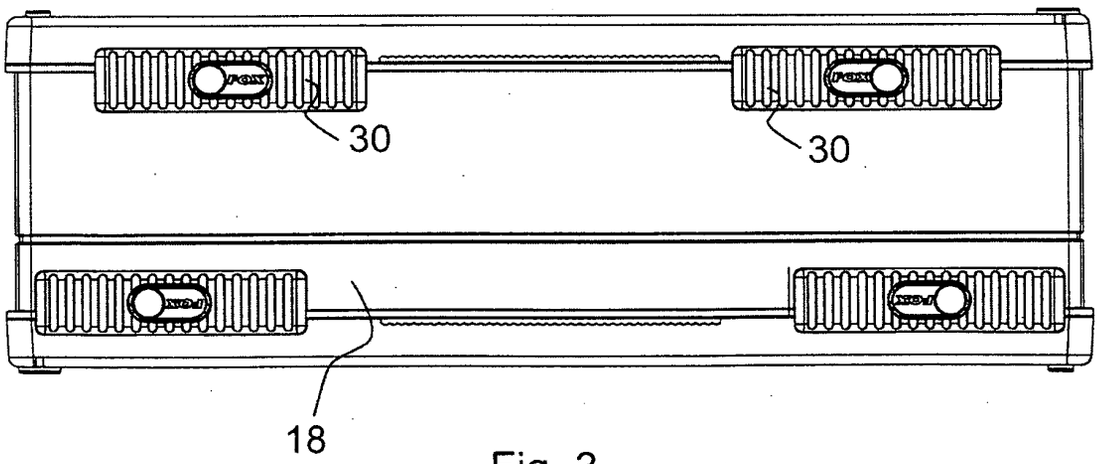

Fig. 3

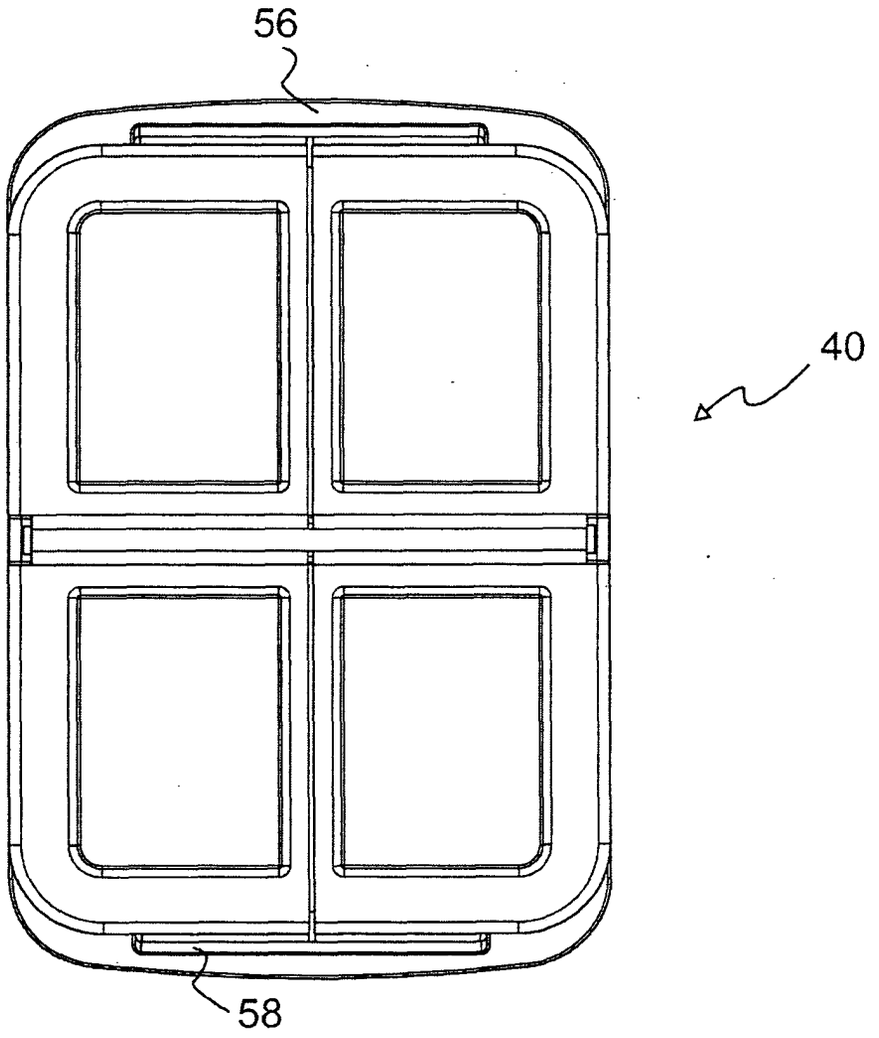

Fig. 4

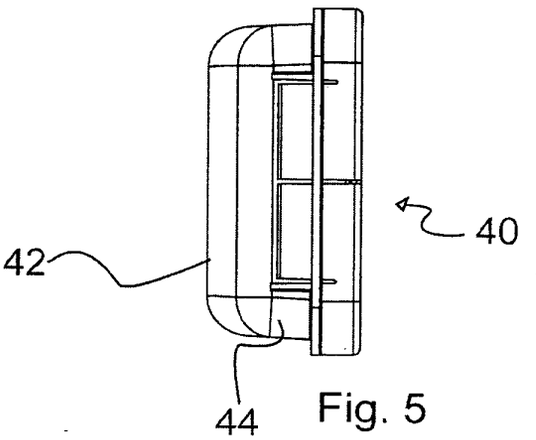

Fig. 5

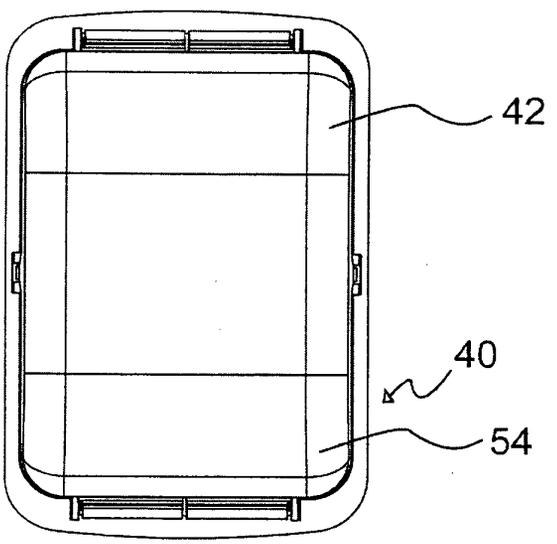

Fig. 7

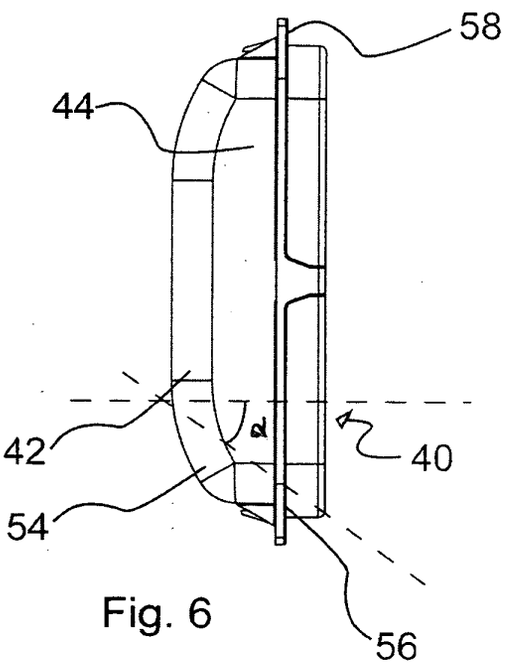

Fig. 6

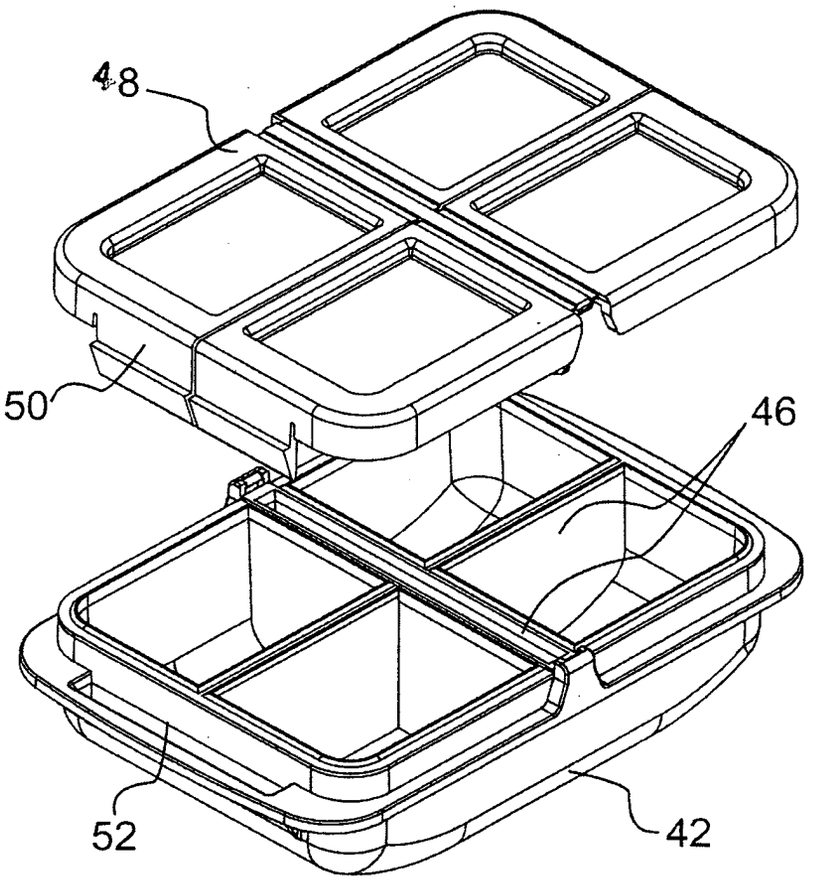

Fig. 8

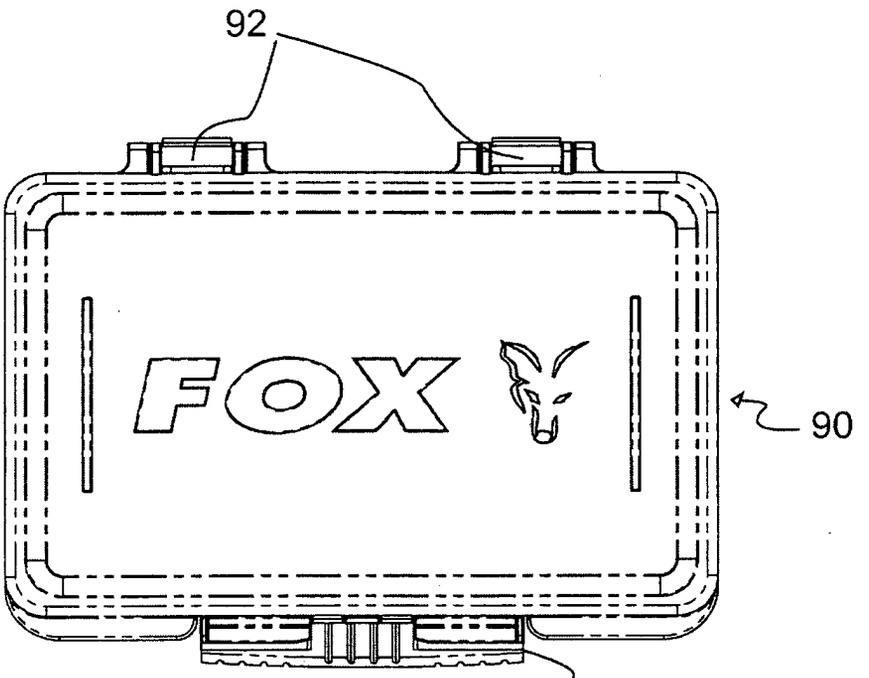

Fig. 9

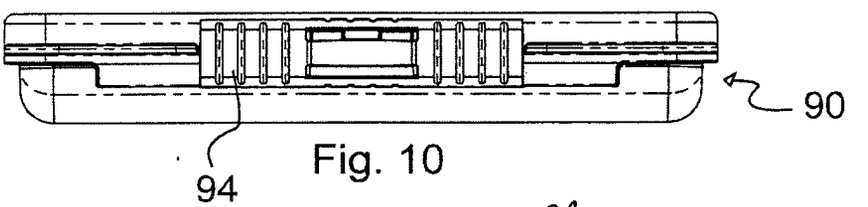

Fig. 10

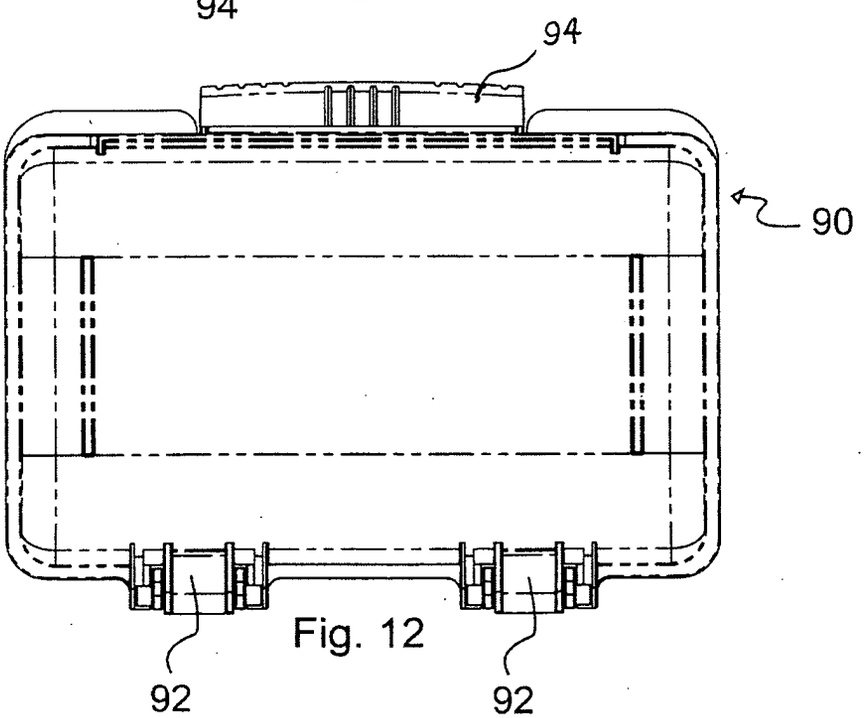

Fig. 12

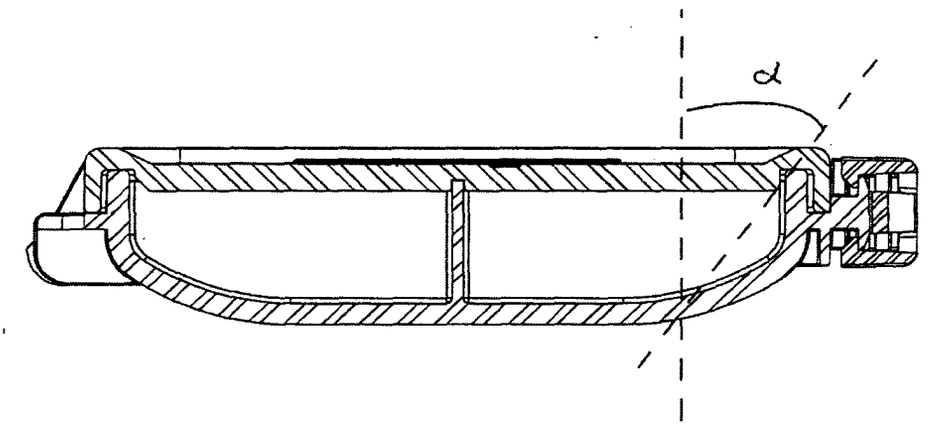

Fig. 11

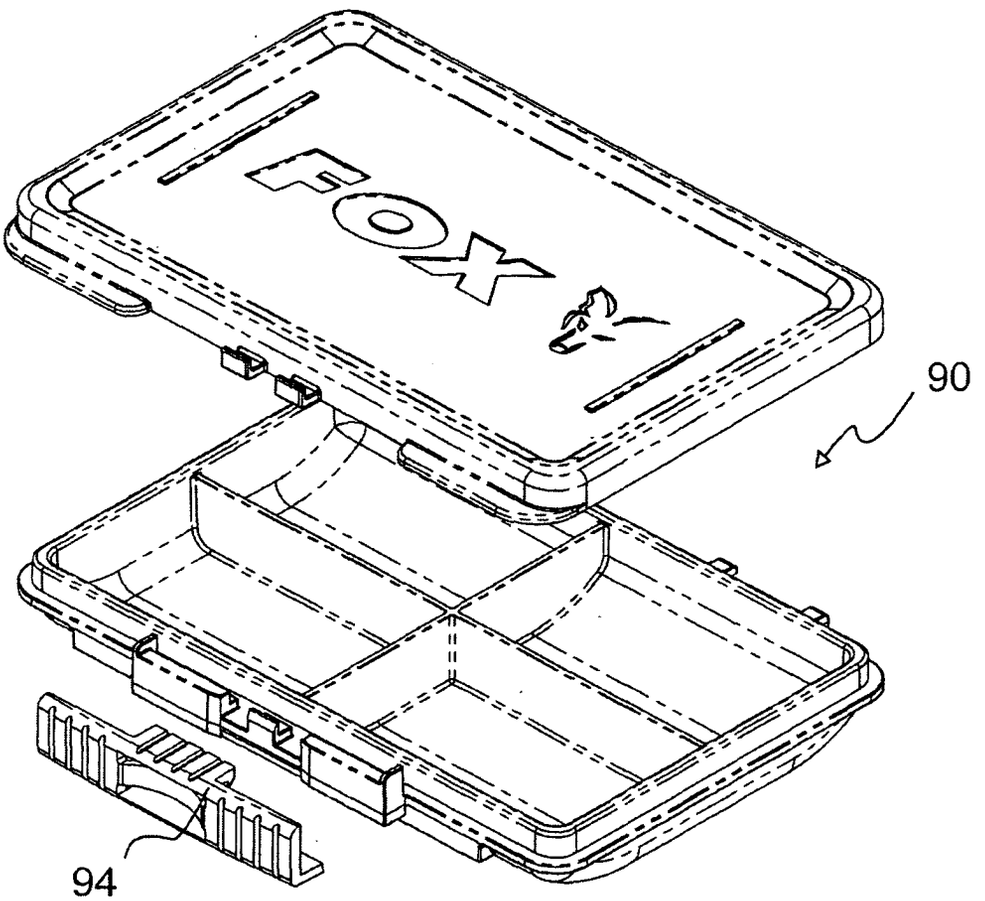

Fig. 13

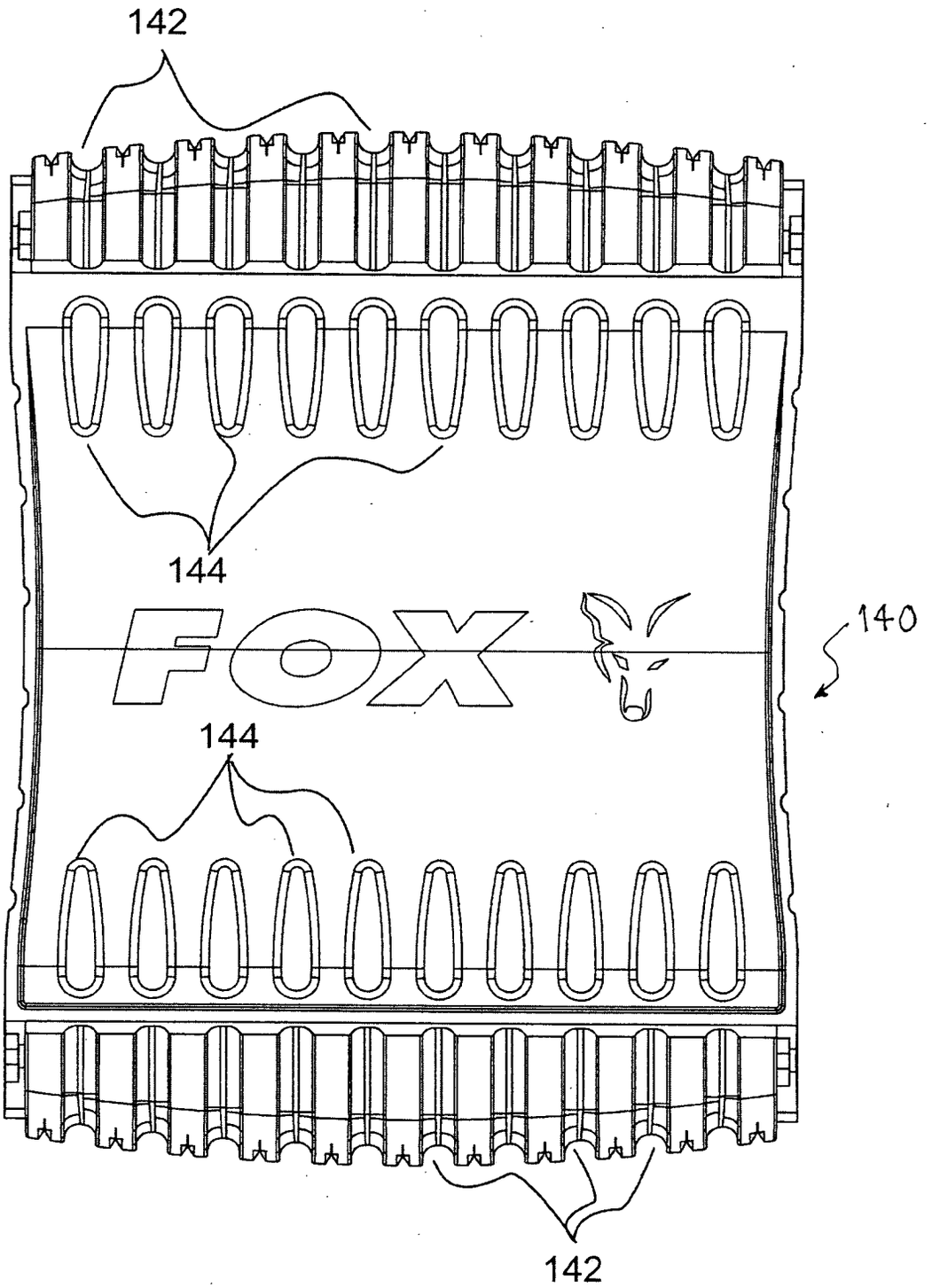

Fig. 14

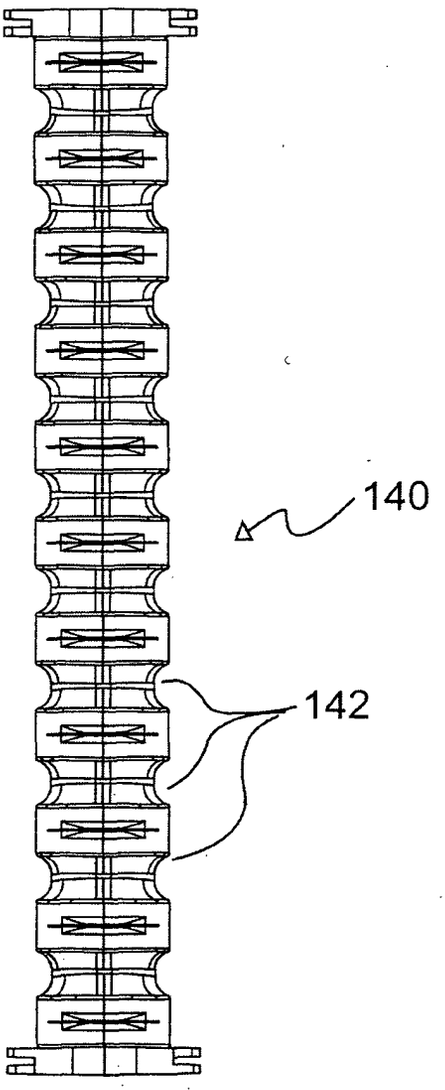

Fig. 15

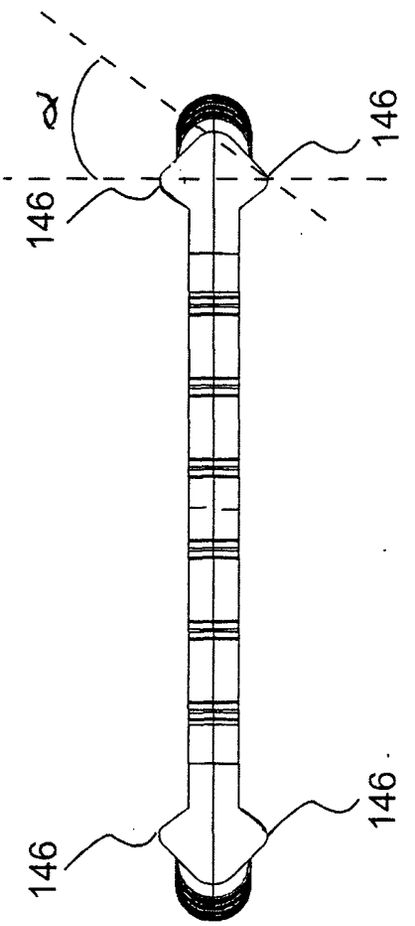

Fig. 16