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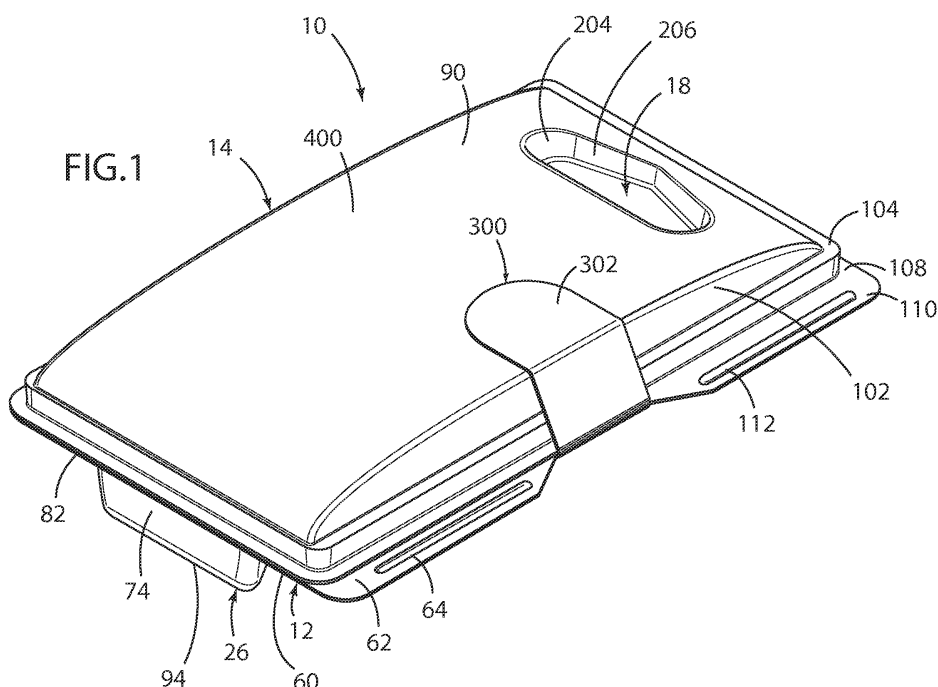
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<div>(84) Designated Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR</div> <div>(30) Priority: 25.06.2008 US 145859</div> <div>(71) Applicant: Eveready Battery Company, Inc. St Louis, Missouri 63141 (US)</div> <div>(72) Inventors: • Watson, Tyler T. Auburn, NY 13021 (US)</div>	<div> <div>• Osiecki, Scott W. Skaneateles, NY 13152 (US)</div> <div>• Ferguson, Mark A. Memphis, NY 13112 (US)</div> </div> <div>(74) Representative: Weber, Thomas Patentanwälte von Kreisler Selting Werner Deichmannhaus am Dom Bahnhofsvorplatz 1 50667 Köln (DE)</div>
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(54) Thermoformed battery package

(57) A battery package comprises a rear member, a front member pivotally connected to the rear member and batteries. The package has an open and a closed position. At least one of the front member and the rear member include support structure for supporting the batteries in the interior space. The rear member includes a foot allowing the battery package to stand substantially upright on a horizontal surface. The front member and the rear member include aligned openings for allowing the package to be hung on a rod. Therefore, the package can alternatively be positioned on the horizontal surface and be hung on a rod by extending the rod through the aligned openings for display purposes. The package can also include a resealable closure allowing the front member and the rear member to be maintained in the closed position.



Description

FIELD OF THE INVENTION

[0001] The present invention relates to packaging, and in particular to packaging for batteries.

SUMMARY OF THE PRESENT INVENTION

[0002] An aspect of the present invention is to provide a battery package comprising a rear member, a front member pivotally connected to the rear member and batteries. The front member is pivotable about the rear member at a pivot, with the battery package having a closed position wherein the front member is engaged with the rear member and defining an interior space therebetween. The battery package also includes an open position allowing access to the interior space. The batteries are in the interior space. At least one of the front member and the rear member includes support structure for supporting the batteries in the interior space. The rear member includes a foot allowing the battery package to stand substantially upright on a horizontal surface. The front member and the rear member include aligned openings. The battery package can alternatively be positioned on the horizontal surface and be hung on a rod by extending the rod through the aligned openings for display purposes.

[0003] Another aspect of the present invention is to provide a battery package comprising a rear member, a front member pivotally connected to the rear member and batteries. The front member is pivotable about the rear member at a pivot, with the battery package having a closed position wherein the front member is engaged with the rear member and defining an interior space therebetween. The battery package also includes an open position allowing access to the interior space. The batteries are in the interior space. At least one of the front member and the rear member includes support structure for supporting the batteries in the interior space. The front member and the rear member include aligned openings. A resealable closure allows the front member and the rear member to be maintained in the closed position.

[0004] Yet another aspect of the present invention is to provide a battery package comprising a rear member, a front member pivotally connected to the rear member and batteries. The front member is pivotable about the rear member at a pivot, with the battery package having a closed position wherein the front member is engaged with the rear member and defining an interior space therebetween. The battery package also includes an open position allowing access to the interior space. The batteries are in the interior space. The rear member includes support structure for supporting the batteries in the interior space. The rear member includes a foot allowing the battery package to stand substantially upright on a horizontal surface. The front member and the rear member include aligned openings. A resealable closure allows

the front member and the rear member to be maintained in the closed position. The battery package can alternatively be positioned on the horizontal surface and be hung on a rod by extending the rod through the aligned openings for display purposes.

[0005] These and other aspects, objects, and features of the present invention will be understood and appreciated by those skilled in the art upon studying the following specification, claims, and appended drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0006] FIG. 1 is a perspective view of a thermoformed battery package of the present invention in a closed configuration.

[0007] FIG. 2 is a side view of the thermoformed battery package of the present invention in the closed configuration.

[0008] FIG. 3 is a perspective view of a front member and a rear member of the thermoformed battery package of the present invention in an open configuration.

[0009] FIG. 4 is a cross-sectional perspective view of the thermoformed battery package of the present invention in the closed configuration.

[0010] FIG. 5 is an exploded front view of the thermoformed battery package of the present invention in the open position.

[0011] FIG. 6 is rear perspective view of the front member and the rear member of the thermoformed battery package of the present invention in the closed position.

[0012] FIG. 7 is a close-up view of a pivot between the front member and the rear member of the thermoformed battery package of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0013] For purposes of description herein, the terms "upper," "lower," "right," "left," "rear," "front," "vertical," "horizontal," and derivatives thereof shall relate to the invention as orientated in FIG. 1. However, it is to be understood that the invention may assume various alternative orientations, except where expressly specified to the contrary. It is also to be understood that the specific devices and processes illustrated in the attached drawings, and described in the following specification are simply exemplary embodiments of the inventive concepts defined in the appended claims. Hence, specific dimensions and other physical characteristics relating to the embodiments disclosed herein are not to be considered as limiting, unless the claims expressly state otherwise.

[0014] The reference number 10 (FIGS. 1, 2, 4 and 5) generally designates a battery package embodying the present invention. In the illustrated example, the battery package 10 comprises a rear member 12, a front member 14 pivotally connected to the rear member 12 and batteries 16. The front member 14 is pivotable about the rear member 12 at a pivot 20, with the battery package

10 having a closed position (FIGS. 1, 2 and 4) wherein the front member 14 is engaged with the rear member 12 and defining an interior space 22 therebetween. The battery package 10 also includes an open position (FIGS. 3 and 5) allowing access to the interior space 22. The batteries 16 are in the interior space 22. At least one of the front member 14 and the rear member 12 include support structure 24 for supporting the batteries 16 in the interior space 22. The rear member 12 includes a foot 26 allowing the battery package 10 to stand substantially upright on a horizontal surface 28 (see FIG. 2). The front member 14 and the rear member 12 include aligned openings 18 for allowing the battery package 10 to be hung on a rod. Therefore, the battery package 10 can alternatively be positioned on the horizontal surface 28 and be hung on a rod by extending the rod through the aligned openings 18 for display purposes. The battery package 10 can also include a resealable closure 300 allowing the front member 14 and the rear member 12 to be maintained in the closed position.

[0015] The illustrated batteries 16 within the battery package 10 can comprise electrochemical cells for supplying voltage to battery powered devices. The batteries 16 can comprise any of the popular alkaline or lithium cells of the generally cylindrical shape that are commercially available in industry-recognized, standard sizes, including D-, C-, AA-, AAA-, and AAAA-size cells, as well as other sizes and configurations (e.g., 9 volt batteries). Alternatively, disc-shaped batteries commercially available for small electrically operated devices, such as hearing aids, could be used. In the illustrated embodiment, the battery package 10 includes four aligned cylindrical batteries 16 therein. However, it is contemplated that the battery package 10 could include any number of batteries 16 therein. Furthermore, it is contemplated that the battery package 10 could include different batteries 16 and/or a plurality of different size batteries 16.

[0016] In the illustrated example, the rear member 12 includes the support structure 24 for supporting the batteries 16. However, it is contemplated that the front member 14 could include the support structure 24 for supporting the batteries 16 or that the front member 14 and the rear member 12 could each have support structure and work in combination (or separately) to support the batteries 16 in the interior space 22.

[0017] The illustrated rear member 12 is configured to support the batteries 16 from the rear. The rear member 12 includes a bowed rear section 34 having a front surface 36 for accepting the batteries 16 thereon. In the illustrated embodiment, the batteries 16 comprise four cylindrical batteries. However, as discussed above, any number and shape of batteries could be used. As illustrated in FIGS. 3-5, the batteries 16 are positioned to abut the front surface 36 of the rear section 34 of the rear member 12. The batteries 16 are aligned vertically above one another with their cylindrical tubes being positioned horizontally. Outer surfaces of the cylindrical tubes of the batteries abut against the front surface 36 of the rear

section 34 of the rear member 12. The support structure 24 can comprise a shelf 37 having four curved battery receiving surface portions 39 defining wedge-shaped ribs 38. The curved battery receiving surface portions 39 receive the batteries 16 thereon and the wedge-shaped ribs 38 are located between the batteries 16 and above and below the batteries 16. As illustrated in FIG. 3, a first side stay member 42 abuts against a first end of the batteries 16 and a second side stay member 44 abuts against a second end of the batteries 16. In the illustrated example, each of the curved battery receiving surface portions 39 extend for more than 180°, thereby allowing the batteries 16 to snap into the curved battery receiving surface portions 39 and be maintained within the curved battery receiving surface portions 39. The tops of the ribs 38 will be able to deflect to allow the batteries 16 to be removed from the curved battery receiving surface portions 39. While the batteries 16 are illustrated as being supported by the support structure 24 in a substantially horizontal orientation, it is contemplated that the support structure 24 could be orientated such that the batteries 16 are supported in a vertical position. Furthermore, it is contemplated that the support structure 24 could have a different configuration than that outlined herein. For example, the support structure 24 could compress ends of the batteries 16 to maintain the batteries 16 using the support structure 24 (either with or without touching or engaging sides of the batteries 16). Moreover, it is contemplated that the support structure 24 could only maintain the batteries 16 in position when the battery package 10 is in the closed position.

[0018] The illustrated rear member 12 can also include a structure for providing stability to and for supporting the battery package 10. For example, the rear member 12 can include a first side wall 30 connected to a first side of the bowed rear section 34 and a second side wall 32 connected to a second side of the bowed rear section 34. The first side wall 30 includes a first side inwardly extending U-shaped channel section 46 defining the first side stay member 42 and the second side wall 32 includes a second side inwardly extending U-shaped channel section 48 defining the second side stay member 44. The first side inwardly extending U-shaped channel section 46 also includes a first top wall 50 and the second side inwardly extending U-shaped channel section 48 includes a second top wall 52. A peripheral inverted J-shaped step 54 is connected to a front edge of the first side wall 30, a front edge of the second side wall 32, a top edge of the bowed rear section 34, and a bottom edge of the bowed rear section 34 except for a bottom interruption 56. The peripheral inverted J-shaped step 54 provides support to the battery package 10 and assists in maintaining the battery package 10 in the closed position as discussed in more detail below. The peripheral inverted J-shaped step 54 forms a substantially rectangular surface 58, except for the bottom interruption 56. The peripheral inverted J-shaped step 54 tapers from a larger area in a front of the rear member 12 to a smaller area

in the rear of the rear member 12. A planar rim 60 is connected to the peripheral inverted J-shaped step 54 at the smaller area of the rectangular surface 58. The planar rim 60 also spans the bottom interruption 56. The planar rim 60 can include a pull tab extension 62 allowing a user of the battery package 10 to easily grip the rear member 12 for moving the battery package 10 to the open position. The pull tab extension 62 can include a channel 64 for providing support and strength to the pull tab extension 62. The front member 14 of the battery package 10 is pivotally connected to a first side of the planar rim 60 of the rear member 12.

[0019] In the illustrated example, the front member 14 is connected to the rear member 12 and defines the interior space 22 when the battery package 10 is in the closed position. The front member 14 includes a bowed section 90 having a rear surface 92. The illustrated front member 14 can also include a structure for providing stability to and for supporting the battery package 10. For example, the front member 14 can include a first side wall 100 connected to a first side of the bowed section 90 and a second side wall 102 connected to a second side of the bowed front section 90. Front edges of the first side wall 100 and the second side wall 102 as well as the top and bottom ends of the bowed front section 90 connect to a peripheral inverted L-shaped step 104 for providing support to the battery package 10 and for assisting in maintaining the battery package 10 in the closed position as discussed in more detail below. The peripheral inverted L-shaped step 104 forms a substantially rectangular surface 106 that tapers from a larger area in a front of the front member 14 to a smaller area in the rear of the front member 14. A planar rim 108 is connected to the peripheral inverted L-shaped step 104 at the smaller area of the rectangular surface 106. The planar rim 108 can include a pull tab extension 110 allowing a user of the battery package 10 to easily grip the front member 12 for moving the battery package 10 to the open position. The pull tab extension 110 can include a channel 112 for providing support and strength to the pull tab extension 110.

[0020] In the illustrated example, the front member 14 is configured to rotate relative to the rear member 12 to move the battery package 10 between the open configuration and the closed configuration. As illustrated in FIGS. 3 and 5, a second side 113 of the front member 14 is pivotally connected to a first side 114 of the rear member 12 by having the planar rim 108 of the front member 14 at the second side 113 connect to the planar rim 60 of the rear member 12 at the first side 114. The planar rim 108 of the front member 14 can be connected to the planar rim 60 of the rear member 12 by a living hinge. It is further contemplated that the planar rim 108 of the front member 14 can be connected to the planar rim 60 of the rear member 12 via tape or any other connection means forming the hinge. The hinge allows the front member 14 to be rotated relative to the rear member 12. Furthermore, the front member 14 is configured to be at least partially

locked to the rear member 12 in the closed configuration. In the illustrated embodiment, the rectangular surface 58 of the J-shaped step 54 of the rear member 12 is configured to be accepted within the rectangular surface 106 of the L-shaped step 104 of the front member 14 (see FIG. 4). Moreover, at least one side of both the rectangular surface 58 of the J-shaped step 54 of the rear member 12 and the rectangular surface 106 of the L-shaped step 104 of the front member 14 can be tapered towards the rear. For example, all four sides of both the rectangular surface 58 of the J-shaped step 54 of the rear member 12 and the rectangular surface 106 of the L-shaped step 104 of the front member 14 can be tapered towards the rear (e.g., like the sides of a pyramid). Accordingly, when the battery package 10 is moved to the closed configuration from the open configuration, the rectangular surface 106 of the L-shaped step 104 of the front member 14 will snap over the rectangular surface 58 of the J-shaped step 54 of the rear member 12, thereby at least partially locking the battery package 10 in the closed position.

[0021] As discussed above, the battery package 10 includes at least two features for displaying the battery package 10: the foot 26 and the aligned openings 18. The illustrated rear member 12 includes the foot 26, which allows the battery package 10 to stand substantially upright on the horizontal surface 28 (see FIG. 2). The foot 26 comprises an angled U-shaped top wall 68, a first side wall 70, a second side wall 72 and a bottom wall 74. The angled U-shaped top wall 68 extends rearwardly from a bottom of the bowed rear section 34 and a bottom of the shelf 37 adjacent the bottom interruption 56. The bottom wall 74 extends rearwardly from a top edge of the planar rim 60 that extends along the bottom interruption 56. The first side wall 70 and the second side wall 72 are substantially triangular and are each connected to the angled U-shaped top wall 68, the bottom wall 74 and the bowed rear section 34 of the rear member 12. As illustrated in FIG. 2, an intersection 94 between the bottom wall 74 and the angled U-shaped top wall 68 act with a planar edge 82 at a bottom of the planar rim 60 of the rear member 12 to allow the battery package 10 to stand substantially upright on the horizontal surface 28. It is contemplated that the foot 26 could have other configurations that allow the battery package 10 to stand substantially upright on the horizontal surface 28. For example, the walls could be curved and/or have any peripheral shape.

[0022] In the illustrated example, the battery package 10 can include a feature for allowing the battery package 10 to be hung from a display rack (not shown): the aligned openings 18. The rear member 12 includes a rear hanging opening tube 200 having a rear central opening 202. The front member 14 includes a front hanging opening tube 204 having a front central opening 206. The front hanging opening tube 204 is aligned with the rear hanging opening tube 200 such that the front central opening 206 is aligned with the rear central opening 202 of the rear

hanging opening tube 200. In the illustrated embodiment, the aligned openings 18 comprise the front central opening 206 and the rear central opening 202, which are configured to accept a hanger rod (not shown) typically used to display batteries in a store as is well known to those skilled in the art therein.

[0023] The illustrated battery package 10 can be easily formed and batteries can easily be packaged in the battery package 10. It is contemplated that the front member 14 and the rear member 12 can be formed as one piece and folded relative to each other. For example, the front member 14 and the rear member 12 can be thermoformed. The batteries 16 can also be placed onto the rear member 12 and the battery package 10 can be moved to the closed configuration to thereby package the batteries 16 in the battery package 10. It is contemplated that the pivot line between the front member 14 and the rear member 12 can be perforated or weakened to allow the elements to easily pivot relative to each other. It is also contemplated that the front member 14 and the rear member 12 could have a C-shaped pivot 600 to allow the front member 14 to easily pivot relative to the rear member 12 (see FIG. 7).

[0024] FIG. 5 illustrates an exploded view of the battery package 10 during assembly of the battery package 10. In assembling the battery package 10, the battery package is positioned in the open position and the batteries 16 are placed within the support structure 24 as described above.

[0025] In the illustrated embodiment, the battery package 10 can include a releasable closure 300 for maintaining the battery package 10 in the closed position. The releasable closure 300 can include a strip of material connected to the rear member 12 (see FIGS. 4 and 5). The strip of material can include a pull tab 302 extending around a side of the battery package 10 and releasably connected to the front member 14 by a releasable adhesive. The pull tab 302 can be connected to the front member 14 to maintain the battery package 10 in the closed position and the pull tab 302 has to be removed from the front member 14 or broken before the battery package 10 can be moved to the open position to allow access to the interior space 22 and the batteries 16. It is noted that the pull tab extension 62 and the pull tab extension 110 can be easily grasped and moved away from each other to move the battery package 10 to the open position.

[0026] It is to be understood that variations and modifications can be made on the aforementioned structure without departing from the concepts of the present invention. For example, it is contemplated that the battery package 10 can be formed of any formable material (e.g., plastic (e.g., PETG)) and can be formed or molded in any manner. It is also contemplated that the battery package 10 could be thermoformed and made of plastic. Furthermore, it is contemplated that any portion or the entire battery package 10 can be transparent, translucent or opaque. It is also contemplated that a front sticker 400 can be placed on the front member 14 for advertising or

informational purposes and/or a rear sticker 402 can be placed on the rear member 12 for advertising or informational purposes (see FIG. 5). Furthermore, it is contemplated that the battery package 10 can be inclined on the support surface (as illustrated in FIG. 2) or can be vertical relative to the support surface. Moreover, it is contemplated that the battery package 10 could be entirely or almost entirely covered by a shrink wrap sleeve. It is to be understood that such concepts as described herein are intended to be covered by the following claims unless these claims by their language expressly state otherwise.

Claims

1. A battery package comprising:

a rear member;
a front member pivotally connected to the rear member;
the front member being pivotable about the rear member at a pivot, with the battery package having a closed position wherein the front member is engaged with the rear member and defining an interior space therebetween, the battery package also including an open position allowing access to the interior space;
batteries in the interior space;
at least one of the front member and the rear member including support structure for supporting the batteries in the interior space;
the rear member including a foot allowing the battery package to stand substantially upright on a horizontal surface; and
the front member and the rear member including aligned openings;
wherein the battery package can alternatively be positioned on the horizontal surface and be hung on a rod by extending the rod through the aligned openings for display purposes.

2. The battery package of claim 1, wherein:

the rear member and the front member are thermoformed.

3. The battery package of claim 2, wherein:

The rear member and the front member are unitary and integral.

4. The battery package of claim 1, further including:

a resealable closure allowing the front member and the rear member to be maintained in the closed position.

5. The battery package of claim 4, wherein:

- the resealable closure comprises engaging surfaces of the front member and the rear member for locking the battery package in the closed configuration.
6. The battery package of claim 5, wherein:
- the engaging surfaces each form four sides of a truncated pyramid.
7. The battery package of claim 5, wherein:
- the resealable closure further includes a strip of material connected to both the front member and the rear member, with the strip of material including a pull tab extending around a side of the battery package and releasably connected to the front member by a releasable adhesive.
8. The battery package of claim 1, wherein:
- the foot includes a bottom surface and a U-shaped wall extending from a rear surface of the rear member, the bottom surface of the foot and the U-shaped wall forming an intersection, with the intersection abutting the horizontal surface when the battery package is positioned on the horizontal surface.
9. The battery package of claim 1, wherein:
- the support structure comprises a plurality of slots receiving the batteries therein.
10. The battery package of claim 9, wherein:
- the plurality of slots comprises a plurality of aligned slots, with each one of the batteries being located in one of the aligned slots.
11. The battery package of claim 10, wherein:
- the slots are arcuate and cover more than 180° of a circle.
12. The battery package of claim 1, wherein:
- the support structure is located on the rear member.
13. A battery package comprising:
- a rear member;
- a front member pivotally connected to the rear member;
- the front member being pivotable about the rear member at a pivot, with the battery package having a closed position wherein the front member
- is engaged with the rear member and defining an interior space therebetween, the battery package also including an open position allowing access to the interior space;
- batteries in the interior space;
- at least one of the front member and the rear member including support structure for supporting the batteries in the interior space;
- the front member and the rear member including aligned openings; and
- a resealable closure allowing the front member and the rear member to be maintained in the closed position.
14. The battery package of claim 13, wherein:
- the rear member and the front member are thermally formed.
15. The battery package of claim 14, wherein:
- the rear member and the front member are unitary and integral.
16. The battery package of claim 13, wherein:
- the resealable closure comprises engaging surfaces of the front member and the rear member for locking the battery package in the closed configuration.
17. The battery package of claim 16, wherein:
- the engaging surfaces each form four sides of a truncated pyramid.
18. The battery package of claim 16, wherein:
- the resealable closure further includes a strip of material connected to both the front member and the rear member, with the strip of material including a pull tab extending around a side of the battery package and releasably connected to the front member by a releasable adhesive.
19. The battery package of claim 13, wherein:
- the foot includes a bottom surface and a U-shaped wall extending from a rear surface of the rear member, the bottom surface of the foot and the U-shaped wall forming an intersection, with the intersection abutting the horizontal surface when the battery package is positioned on the horizontal surface.
20. The battery package of claim 13, wherein:
- the support structure comprises a plurality of

slots receiving the batteries therein.

21. The battery package of claim 20, wherein:

the plurality of slots comprises a plurality of 5
aligned slots, with each one of the batteries being located in one of the aligned slots.

22. The battery package of claim 21, wherein:

the slots are arcuate and cover more than 180° 10
of a circle.

23. The battery package of claim 13, wherein:

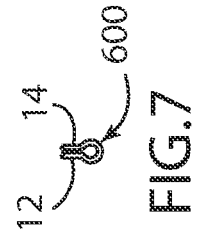
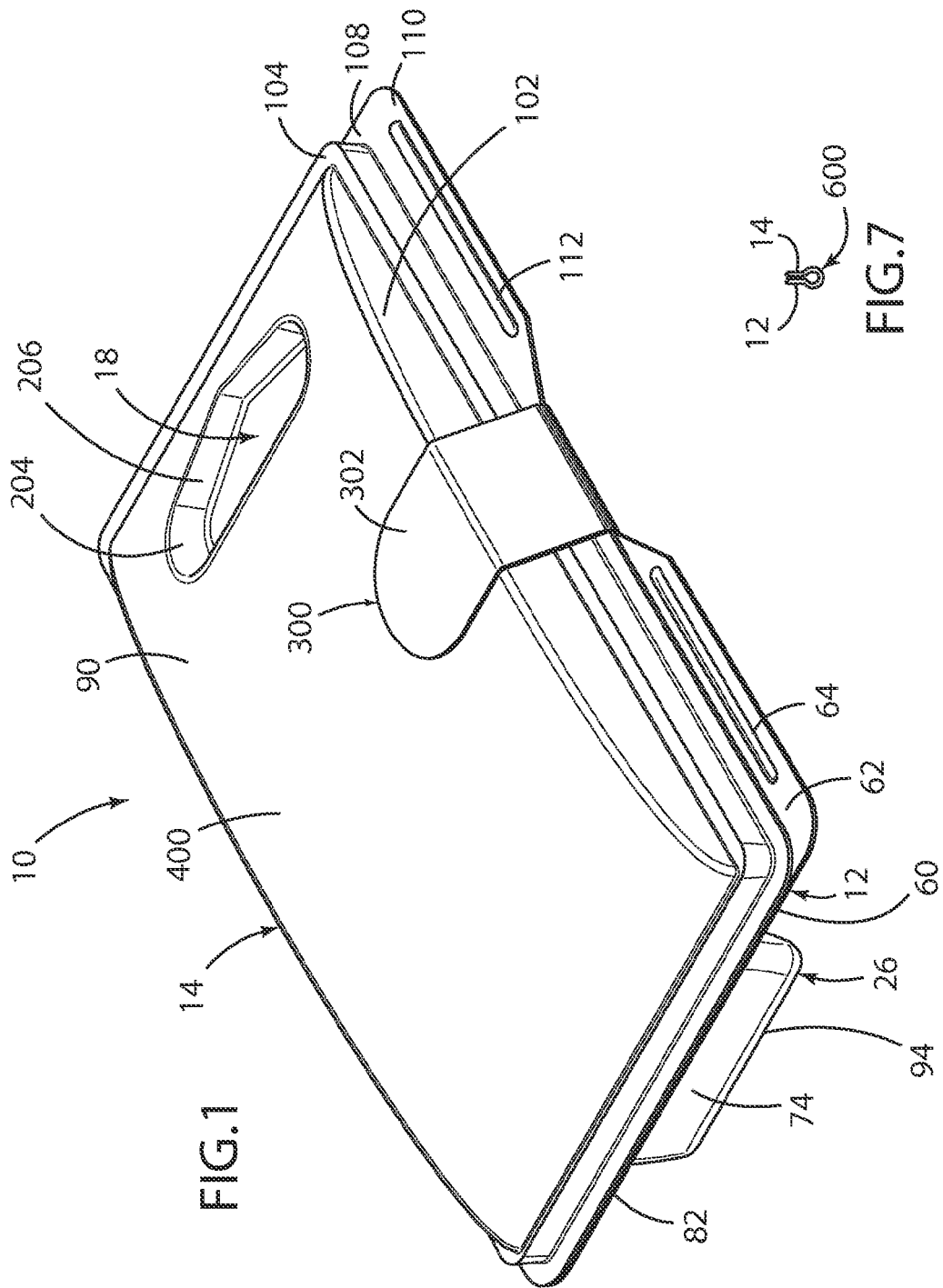
the support structure is located on the rear member. 15

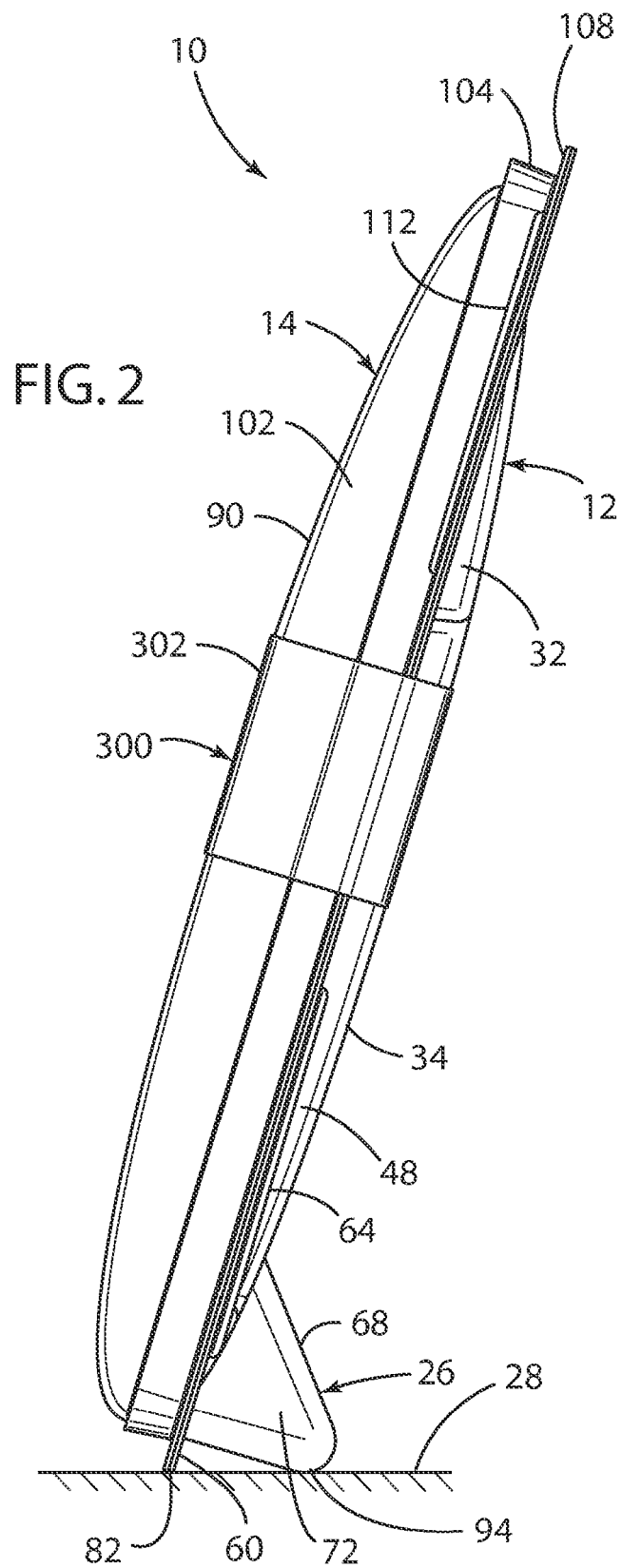
24. A battery package comprising:

a rear member; 20
a front member pivotally connected to the rear member;
the front member being pivotable about the rear member at a pivot, with the battery package having a closed position wherein the front member is engaged with the rear member and defining an interior space therebetween, the battery package also including an open position allowing access to the interior space; 25
batteries in the interior space; 30
the rear member including support structure for supporting the batteries in the interior space;
the rear member including a foot allowing the battery package to stand substantially upright on a horizontal surface; 35
the front member and the rear member including aligned openings;
a resealable closure allowing the front member and the rear member to be maintained in the closed position; 40
wherein the battery package can alternatively be positioned on the horizontal surface and be hung on a rod by extending the rod through the aligned openings for display purposes. 45

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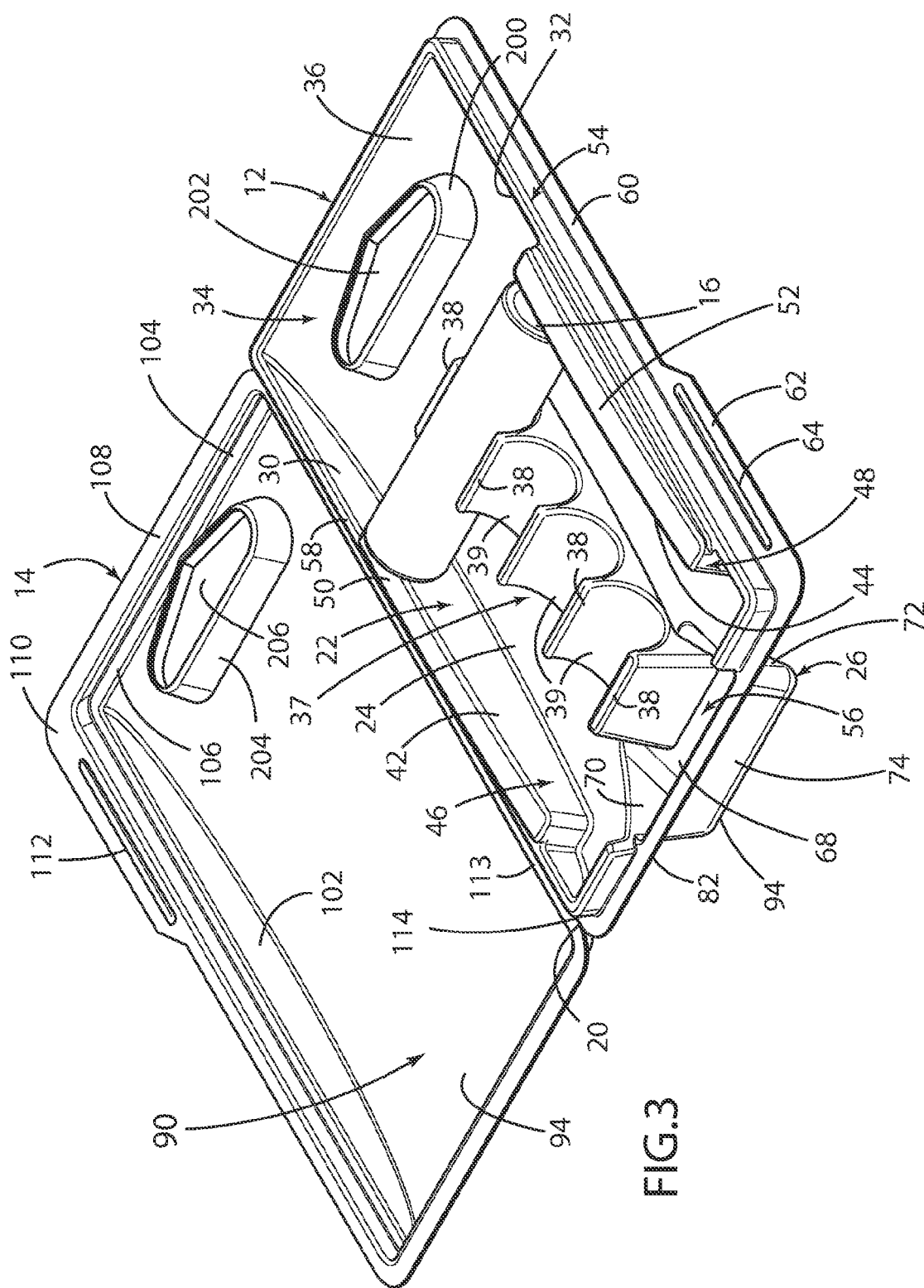
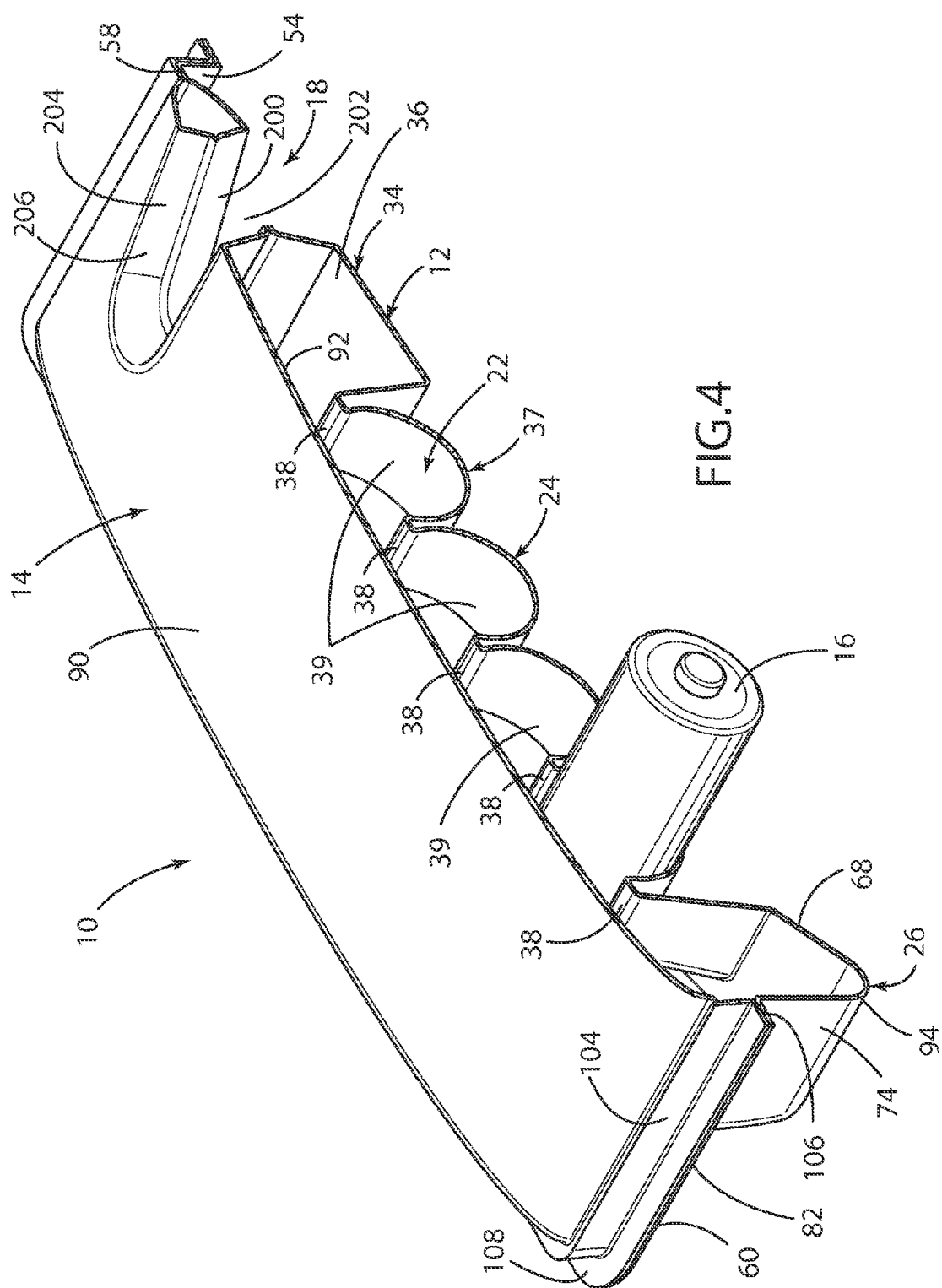
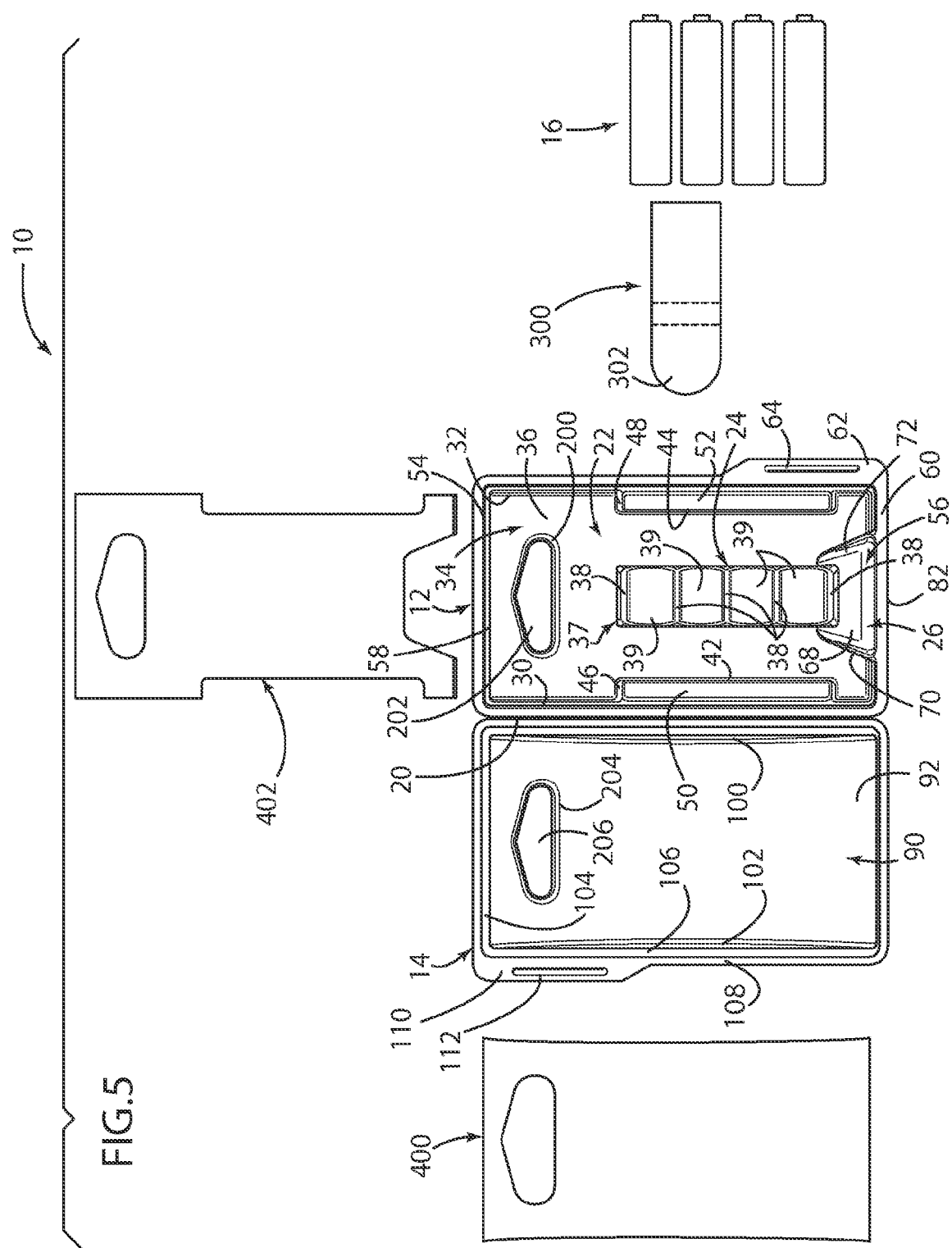
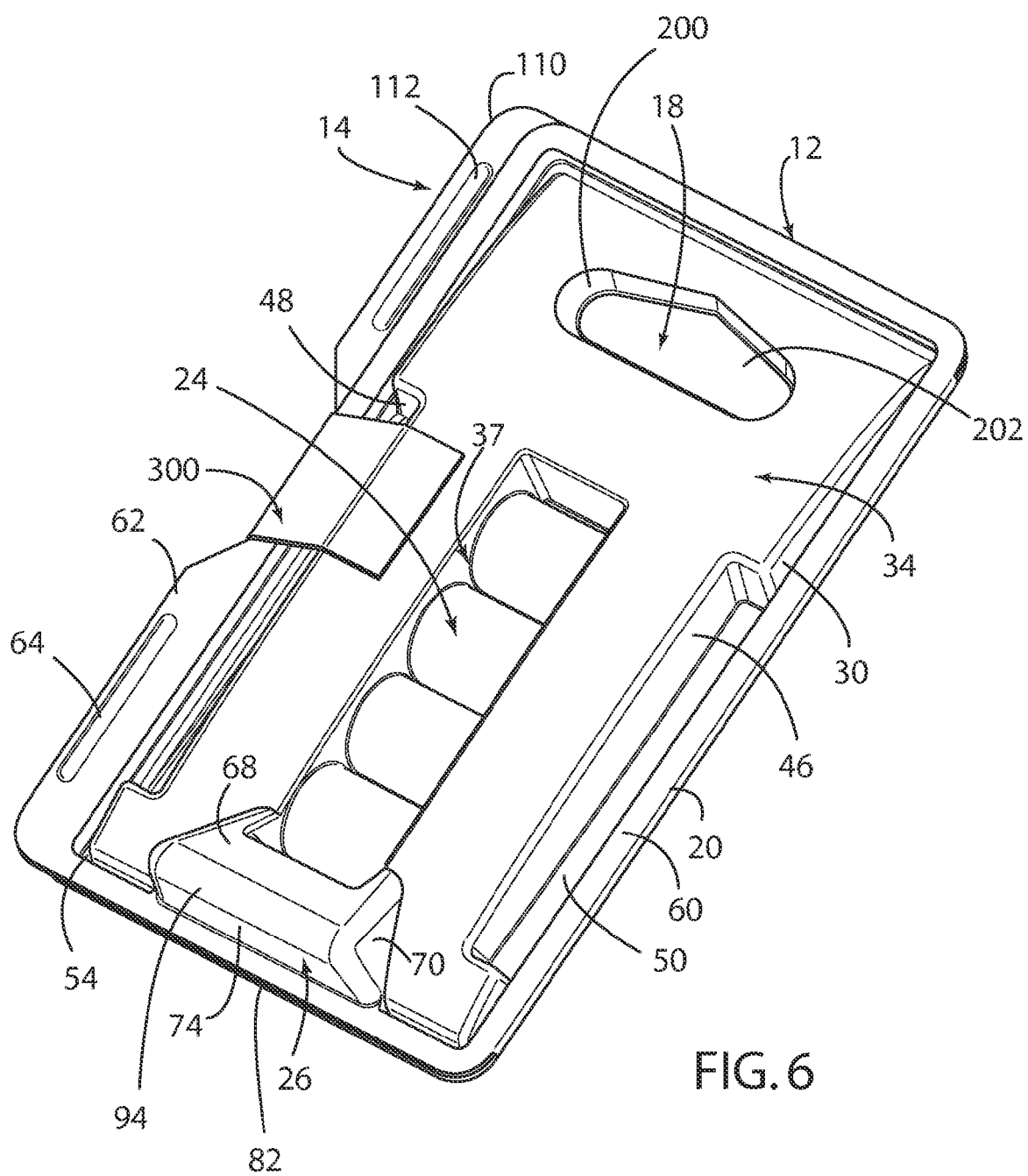


FIG.3









EUROPEAN SEARCH REPORT

 Application Number
 EP 09 16 2424

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	US 5 485 919 A (SAMBERG STEVE [US] ET AL) 23 January 1996 (1996-01-23)	1-3, 8-10,12	INV. B65D75/24
Y	* columns 6-8; figures 1-6 *	4-7,11, 13-24	
Y	WO 01/98171 A2 (EVEREADY BATTERY INC [US]; MILLER CHAD RYAN [US]; RUBY NORMAN EDWARD) 27 December 2001 (2001-12-27) * pages 5-10; figures 1-7 *	4-6,11, 13-24	
X	US 4 549 654 A (TIESMAN RANDY J [US]) 29 October 1985 (1985-10-29) * columns 1-3; figures 1,2 *	1,3	
Y	US 3 111 220 A (DONALD BOSTROM JOHN) 19 November 1963 (1963-11-19) * column 1, line 68 - column 2, line 7; figure 3 *	6,17	
Y	WO 03/070123 A2 (SHAPE DESIGN LTD [NZ]; KLOSE SABINA IRIS [NZ]; CHAPPLE BRYN LINCOLN [N] 28 August 2003 (2003-08-28) * page 6, lines 19-30; figures 1A, 1E *	7,18	TECHNICAL FIELDS SEARCHED (IPC) B65D
A	WO 93/21878 A1 (PROCTER & GAMBLE [US]) 11 November 1993 (1993-11-11) * pages 20,21; figures 1-3 *	1-24	
A	US 2004/112790 A1 (LEE NOEL [US] ET AL) 17 June 2004 (2004-06-17) * figure 1 *	1-24	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 26 October 2009	Examiner Jervelund, Niels
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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 EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 16 2424

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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26-10-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5485919	A	23-01-1996	NONE
-----	-----	-----	-----
WO 0198171	A2	27-12-2001	AU 6866001 A 02-01-2002
-----	-----	-----	-----
US 4549654	A	29-10-1985	NONE
-----	-----	-----	-----
US 3111220	A	19-11-1963	NONE
-----	-----	-----	-----
WO 03070123	A2	28-08-2003	AU 2003209575 A1 09-09-2003
-----	-----	US 2005173292 A1 11-08-2005	-----
-----	-----	-----	-----
WO 9321878	A1	11-11-1993	AT 168261 T 15-08-1998
-----	-----	AU 679681 B2 10-07-1997	-----
-----	-----	AU 4291093 A 29-11-1993	-----
-----	-----	BR 9306312 A 30-06-1998	-----
-----	-----	CA 2118214 A1 11-11-1993	-----
-----	-----	CN 1082870 A 02-03-1994	-----
-----	-----	DE 69319726 D1 20-08-1998	-----
-----	-----	DE 69319726 T2 21-01-1999	-----
-----	-----	EG 19895 A 30-01-1997	-----
-----	-----	EP 0637950 A1 15-02-1995	-----
-----	-----	ES 2118960 T3 01-10-1998	-----
-----	-----	FI 945062 A 27-10-1994	-----
-----	-----	HK 1012902 A1 23-06-2000	-----
-----	-----	JP 3532199 B2 31-05-2004	-----
-----	-----	JP 7506034 T 06-07-1995	-----
-----	-----	KR 100271177 B1 01-12-2000	-----
-----	-----	MA 22884 A1 31-12-1993	-----
-----	-----	MX 9302496 A1 29-07-1994	-----
-----	-----	SG 54184 A1 16-11-1998	-----
-----	-----	TR 27814 A 29-08-1995	-----
-----	-----	-----	-----
US 2004112790	A1	17-06-2004	NONE
-----	-----	-----	-----