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(54) **BOARD POCKET**

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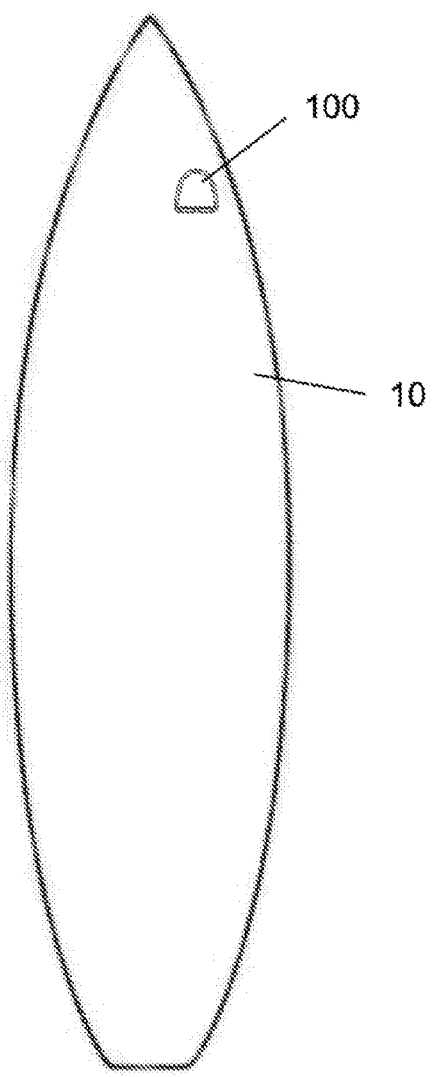
(57) **ABSTRACT**

A board pocket or flap shaped device to store objects on a flat rigid or semi-rigid surface for convenient retrieval. The board pocket may be used during a board sport and attached to a board such as a surfboard, paddle-board, kite-surfing board, wake-board, or wind-surfing board. The pocket may also be used for boards used in land and air sports such as skateboards and sky-surf boards. The board pocket employs a thermo-elastic polymer to grip, by friction, the objects to be stored therein. Any objects, for example, surfwax or car keys may be stored and retrieved from the board through a slit or opening in the pocket. The pocket is attached to the board by an adhesive or fastener.



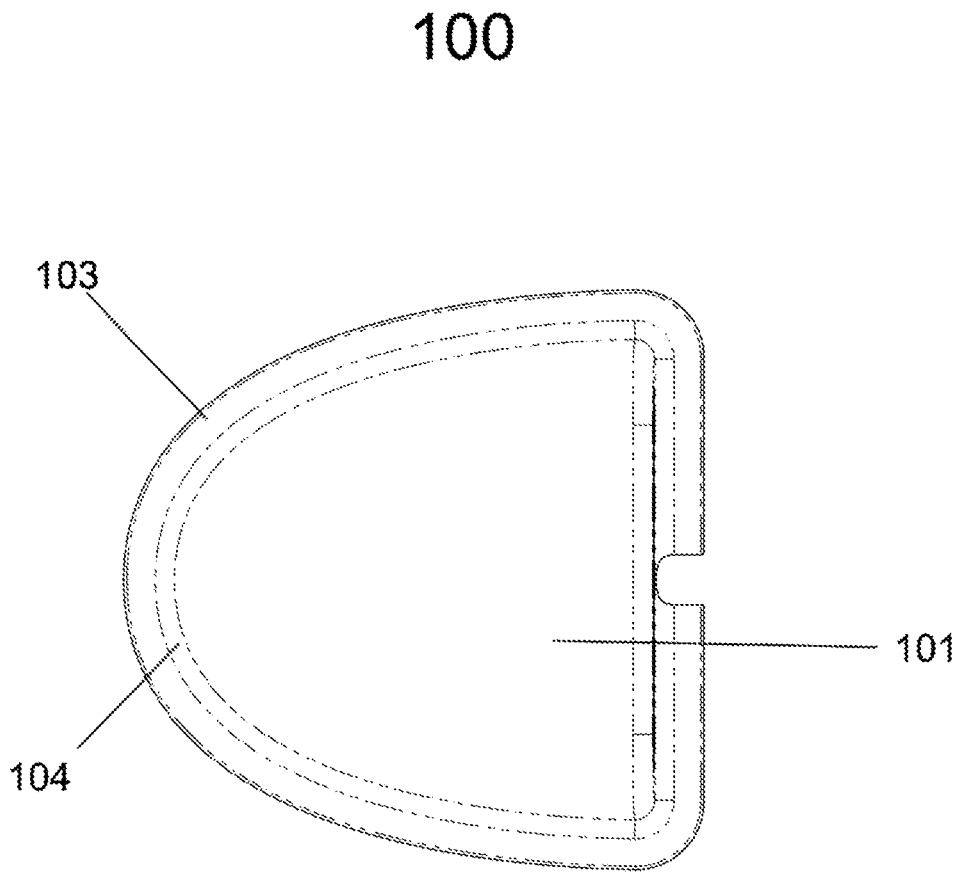


Fig. 1

100

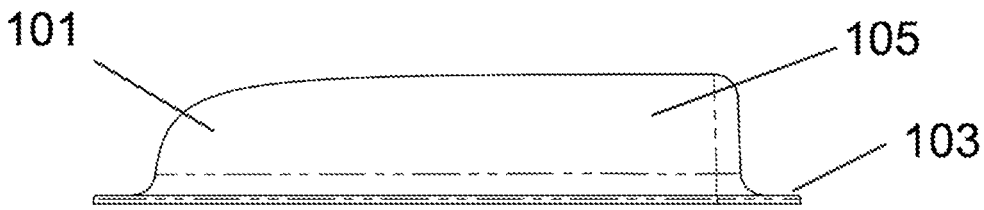


Fig. 2

100

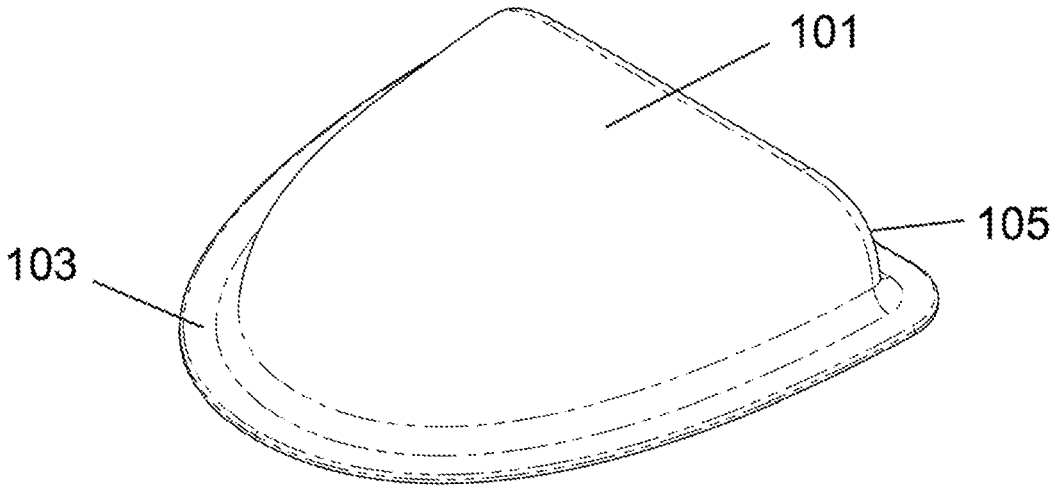


Fig. 3

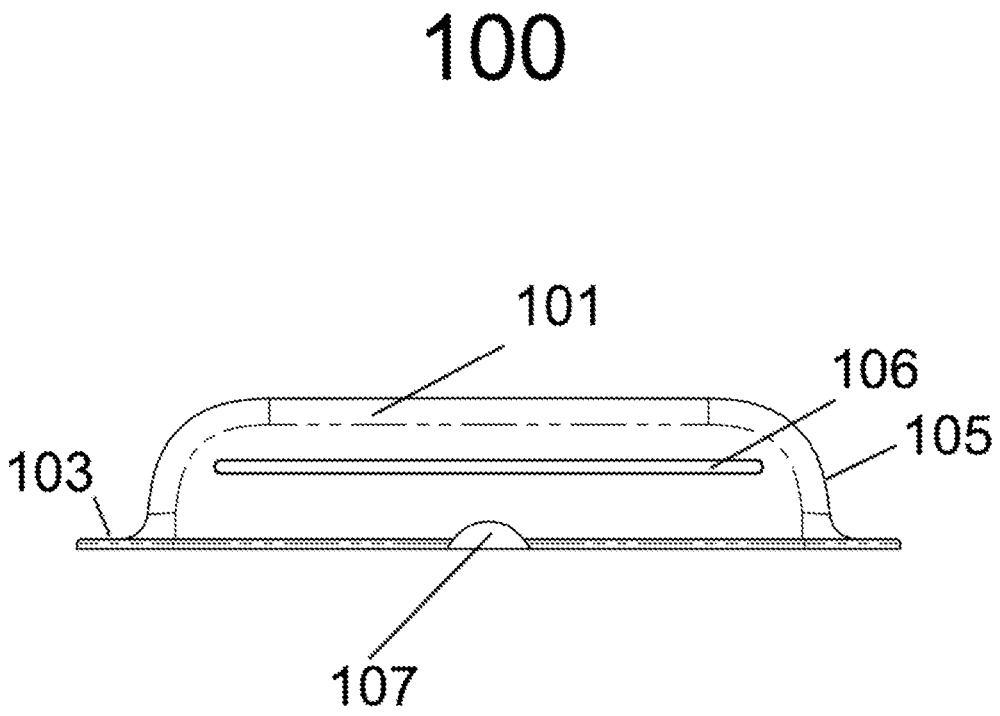


Fig. 4

200

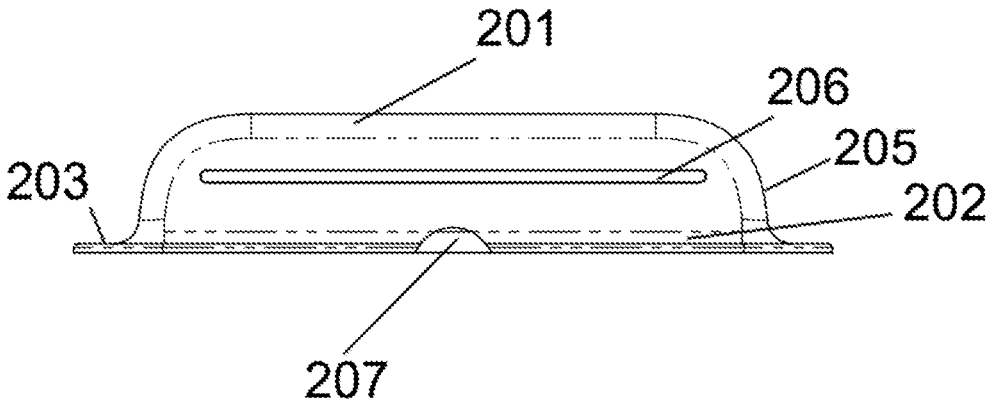


Fig. 5

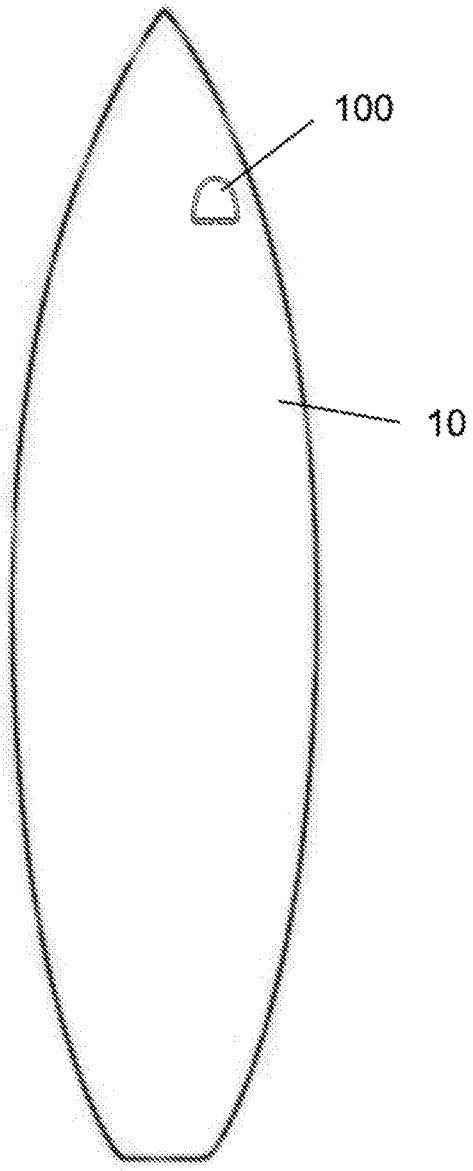


Fig. 6

BOARD POCKET

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] Not Applicable

STATEMENT REGARDING FEDERALLY FUNDED RESEARCH

[0002] Not Applicable

FIELD OF THE INVENTION

[0003] The present invention relates to a pouch or flap shaped device to store objects on a flat rigid or semi-rigid surface for convenient retrieval of the objects.

BACKGROUND

[0004] Board sports employ rigid or semi-rigid boards to support and transport those who engage in the sports over various terrain, surfaces, and media. Some of the board sports, particularly those that are engaged in water, allow very little gear or accessories to be carried by the user. For example, surfing, wakeboarding, stand-up paddling, kite-surfing, and wind surfing, do not allow the user to carry personal items or sports gear beyond that which can fit within the pockets of a bathing suit. The sports enthusiast or athletes that engage in such board sports cannot easily use bags, backpacks, or other external carrying means to carry items while using the boards since the external carrying means are bulky and interfere with the balance and agility required to engage in such sports. Equipment that may be useful in the sport activity, for example, tools to adjust the board or improve the ride on the board, such surf-wax cannot be carried easily

[0005] In addition, items such as car keys and wallets cannot be carried because they require waterproof devices that do not fit in sport clothing. The sports enthusiast who engages in the sport individually may need to leave such items in hiding on land during use of the board, thus risking theft of the items.

[0006] Disclosures for storage devices for surfboards exist in the prior art. In U.S. Pat. No. 8,671,502 B2, Nazzari, I. discloses a surfwax comb and holder accessory allows a surfwax comb to be stored on a surfboard. Nazzari, describes a holder that is rigid and molded to accept only a rigid surfwax comb that specifically fits the opening of the holder. Nazzari also describe that the surfwax comb can alternatively fit, specifically, within a surf footrest. However, Nazzari does not describe a pocket for storage. The device described in Nazzari is not capable of holding anything other than a surf comb that fits the opening in the device described therein that is specifically configured to hold the surf comb. In addition, the device described in Nazzari requires that the surfwax comb protrudes from the holder or opening to allow retrieval.

[0007] The present invention is not limited to water sport boards and can be employed in sports engaged on land, such as skateboarding or engaged in the air, such as sky-surfing. The present invention may also be employed in any activity using a semi-rigid or rigid surface to store items that must be stored and retrieved easily.

[0008] The present invention also is not limited to retaining specific or unique objects in the board pocket of the invention. The present invention also provides for secure retention and convenient retrieval of any object or device that can fit within the opening of a pouch within the board pocket and thus will be stored therein.

SUMMARY

[0009] The present invention provides a means for storing objects on the surface of rigid or semi-rigid board. The present invention provides a pouch that has an opening and which may be attached to a board to provide a board pocket for storage. While the present invention is useful for water sports boards, it is not limited to boards used in water sports, such surfing, wakeboarding, or stand up paddle boarding, and may be employed in other board riding activities, including sports engaged on land and in the air.

[0010] The present invention may be attached to a board using adhesive, glue, double-sided adhesive tape, or via metal or plastic fasteners. The adhesive can be water resistant or waterproof for water sports. If metal or plastic fasteners are used to attach the present invention to a board for water sports then, optionally, a waterproofing material such as silicone, caulk, epoxies, or other means may be employed to waterproof the fasteners.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. **1** illustrates a top view of an embodiment of the board pocket of the present invention.

[0012] FIG. **2** illustrates a side view of an embodiment of the board pocket of the present invention.

[0013] FIG. **3** illustrates an isometric perspective view of an embodiment of the board pocket of the present invention.

[0014] FIG. **4** illustrates a front view of an embodiment of the board pocket of the present invention showing an opening of a pouch.

[0015] FIG. **5** illustrates a front view of a second embodiment of the board pocket of the present invention showing an opening of the pouch.

[0016] FIG. **6** illustrates an embodiment of the board pocket of the present invention attached to a surfboard.

DETAILED DESCRIPTION

[0017] The following descriptions are considered to be illustrative of the principles of the present invention and are not intended to be limiting. One of skill in the art will recognize and understand that there are suitable modifications and equivalents that may be used which fall within the scope of the invention described herein. The use of singular forms "a," "an," and "the" include plural references unless the context clearly requires otherwise. The embodiments are not limited to those illustrated in the drawings. It should also be understood that the drawings are not necessarily to scale. In certain instances, details may have been omitted that are not necessary for an understanding of the embodiments disclosed herein, for example, conventional fabrication and assembly.

[0018] The present invention is a board pocket comprising a flexible material having at least one wall and an outer edge wherein at least a majority of the outer edge of the material is attached to a rigid or semi-rigid surface thereby forming a pouch. The pouch has an interior, wherein an opening is defined within the pouch that allows objects to be placed within the interior of the pouch.

[0019] Alternatively, a minority of the outer edge is not attached to the rigid or semi-rigid surface and the minority

of the outer edge, which is not attached to the rigid or semi-rigid surface, defines the opening of the pouch.

[0020] Optionally, in an additional example embodiment, the board pocket of the present invention may further comprise wherein the entirety of the outer edge is attached to the rigid or semi-rigid surface and the opening is defined within the at least one wall.

[0021] Referring to FIG. **1**, an embodiment of a board pocket, **100**, of the present invention is illustrated comprising a flexible or elastic material having a single wall, **101**, and an outer edge, **103** wherein at least a majority of the outer edge of the material is capable of being attached to a rigid or semi-rigid surface. An adhesive material or strip, **104**, is also illustrated in FIG. **1**.

[0022] As illustrated in FIG. **2**, a board pocket of the present invention, the single wall, **101**, further defines a receptacle or pouch, **105**, having an interior in which objects may be retained or stored. Also illustrated in FIG. **2** is the outer edge, **103**.

[0023] FIG. **3** illustrates the single wall, **101**, the outer edge, **103** and the pouch, **105**.

[0024] FIG. **4** illustrates an embodiment of the board pocket of the present invention, **100**, showing the opening, **106**, defined within single wall, **101**. Also illustrated are the pouch, **105** defined by the single wall, **101**, the outer edge, **103**, and a drain hole, **107**, which is defined within the single wall, **101**. The drain hole, **107**, communicates with the interior of the pouch and allows water or liquids to drain more fully from the interior of the pouch.

[0025] FIG. **5** illustrates a second embodiment of the board pocket of the present invention, **200**, showing an outer wall, **201**, an inner wall, **202**, and the outer edge, **203**. Also illustrated are the pouch, **205**, having an interior, which pouch is defined within the outer wall, **201**, the opening, **206**, which defined within outer wall, **201**, and the drain hole, **207**, which is defined within the single wall, **201**. Objects may be stored in the interior of the pouch, **205**. The drain hole, **207**, communicates with the interior of the pouch, **205**, and allows water or liquids to drain more fully from the interior of the pouch, **205**.

[0026] FIG. **6** illustrates the board pocket of the present invention, **100**, employed and attached to a surfboard, **10**.

[0027] Alternatively, the flexible material of the board pocket is flat.

[0028] In another embodiment, the wall of the flexible material forms a hemi-spherical pouch.

[0029] In another embodiment, the flexible material is composed of natural rubber.

[0030] In one embodiment, the flexible material is comprised of a thermoplastic polymer, for example, a thermoplastic elastomer, including but not limited to a polyolefin or a thermoplastic polyurethane, thermoplastic vulcanizates. The flexible material is intended to provide a friction fit or compression fit to retain the objects stored in the pocket.

[0031] Thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore 00 from about 0 to about 100.

[0032] Alternatively, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore 00 from about 20 to about 95.

[0033] Alternatively, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore 00 from about 30 to about 70.

[0034] Additionally, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore A from about 0 to 80.

[0035] Alternatively, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore A from about 20 to about 70.

[0036] Alternatively, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore A from about 20 to about 40.

[0037] Additionally, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore D from about 0 to about 30.

[0038] Optionally, thermoplastic polymers that offer an appropriate friction fit have a Durometer hardness rating of Shore D from about 10 to about 20.

[0039] For example thermoplastic polymers such as polyolefins, including, but not limited to, polypropylene and polyethylene, synthetic rubbers including but not limited to polychloroprene, ethylene propylene diene monomer (M-class) rubber (EPDM), and NEOPRENE, nitrile rubbers, thermoplastic vulcanizates or thermoplastic elastomers, such as EPDM and polyolefin composites or combinations thereof, for example, SANTOPRENE (ExxonMobil Chemical Company 22777 Springwoods Village Parkway, Spring, Tex. 77389) and NEXPRENE (Lyondell Basell Advanced Polyolefins, Inc., Mansfield, Tex. 76063), and wherein the thermoplastic polymer has a favorable Durometer Shore hardness, for example, A45, provide high flexibility, elasticity, recovery, and adhesion and are suitable for the board pocket of the present invention.

[0040] The flexible material may be formed from prefabricated material that is cut to size and attached using an adhesive. Alternatively, the flexible material may be prepared from a thermoplastic polymer that is capable of being melted and molded to a desired size, shape, and configurations. For example, granules of a suitable thermoplastic polymer may be injection into a mold that is designed to create the pouch and the outside edges of the present invention. The opening and drain holes may be incorporated into the mold design or drilled or cut after molding.

[0041] An embodiment of the present invention that incorporates an inner wall and an outer wall may be created by using a suitable one piece mold or by molding an inner wall and an outer wall separately and attaching them together at the edges, for example, by an adhesive, solvent melt, or heat melt to form the pouch of the present invention.

[0042] Optionally, the flexible material of the present invention may be fabricated using a three-dimensional printing process that employs a suitable thermoplastic polymer.

[0043] In another embodiment, the flexible material may be comprised of elastic woven natural fibers, elastic man-made fibers, or combinations thereof. Examples of elastic natural fibers include bamboo, cotton, hemp, linen, rubber, silk, and wool. Examples of elastic man-made or synthetic fibers include polymers of cellulose, such as acetate, viscose, and rayon or polymers of hydrocarbons including acrylonitrile, elastane, nylon, polyamide, polyester, spandex and styrene. These examples of elastic fibers are not intended to be limiting. One of skill in the art will readily understand that an elastic material or fabric that can be stretched to accommodate and retain an object through friction or a compression fit will be suitable for use in the present invention.

[0044] In one embodiment, the majority of the outer edge of the board pocket has a flattened section that can be mated to the rigid or semi-rigid surface.

[0045] The present invention may be attached, for example, using adhesive, glue, double-sided adhesive tape, or via metal or plastic fasteners. The adhesive used may be a water resistant or waterproof type for use in water sports. If metal or plastic fasteners are used to attach the present invention to a board for water sports then, optionally, the fasteners may be waterproofed. A waterproofing material such as silicone, caulk, epoxies, or other suitable means, that will be readily understood by one of skill in the art, may be employed to waterproof the fasteners.

[0046] In one embodiment, the flexible material is attached to the board by an adhesive. Suitable adhesives are any adhesive that allows the flexible material to be attached to the board of interest, and does not degrade or interfere with the intended use of the flexible material or the board to which it is attached. In addition, for water-based sports, a water-resistant or waterproof adhesive may be desirable. Such water-resistant or waterproof adhesives include, but are not limited to, marine adhesives such as 3M Marine Adhesive Sealant 5200 3M Center, Building 223-1N-1, Saint Paul, Minn. 55144.

[0047] Optionally, the adhesive is a double-sided tape, strip, or patch, where one side of the adhesive adheres to the flexible material and another side is capable of being attached to the rigid or semi-rigid surface. For example, permanent outdoor tape is suitable to attach the board pocket to the board. 3M Center, Building 223-1N-1, Saint Paul, Minn. 55144.

[0048] In one embodiment, the opening further comprises a fastener in order to close the opening. For example, the fastener may be a snap, button, or VELCRO type closure.

[0049] The flexible material may be of any shape that allows objects of interest to be placed within the pouch. For example, the flexible material of the board pocket may be formed in a square, rectangular, rhomboid, circular, semi-circular, or oval shape.

[0050] In another embodiment a board pocket of the present invention comprises, a flexible material, wherein, the flexible material has an inner wall and an outer wall that are joined at an outer edge and define the pouch. The pouch has an interior and a slit or opening that is defined in the outer edge that allows access to the interior of the pouch.

[0051] The variations in the elements of the invention will be readily understood by one of skill in the art to be interchangeable with the elements described herein. These descriptions of the element variations in the present invention are intended to be exemplary and are not intended to be limiting in any way.

Example

[0052] The following is one example of a method to fabricate the board pocket of the present invention. A one-piece metal injection mold for production of the invention was created. Granules of the thermoplastic NEXPRENE (Lyondell Basell Advanced Polyolefins, Inc., Mansfield, Tex. 76063) were then loaded into a 110 ton Fortune International, Inc. model number VE-110 injection molding machine. Fortune International, Inc. from Victor Taichung Machinery Works Co., Ltd., 2088, Sec. 4., Taiwan Bldg, Taichung, Taiwan, R.O.C. Telephone: 886-4-23580701

[0053] The mold was hand loaded into the injection molding machine and then injected with the thermoplastic material using an injection temperature of between 390 to 410 F melt at 1200 per square inch. The injected mold was then cooled and the part ejected out of the injection molding machine press. The hand loaded insert is then pulled away from the part and loaded back into the press for the next injection. It is not necessary to predry the granular thermoplastic material but in the event of moisture accumulation or evidence of splay, the material can be dried for 2-3 hours at 150-160 degrees Farenheit.

I claim:

1. A board pocket comprising: a flexible material having at least one wall and an outer edge wherein at least a majority of the outer edge of the material is attached to a rigid or semi-rigid surface thereby forming a pouch, the pouch having an interior, wherein an opening is defined within the pouch that allows objects to be placed within the interior of the pouch.

2. The board pocket of claim **1** wherein a minority of the outer edge is not attached to the rigid or semi-rigid surface and the minority of the outer edge that is not attached to the rigid or semi-rigid surface defines the opening of the pouch.

3. The board pocket of claim **1** further comprises wherein the entirety of the outer edge is attached to the rigid or semi-rigid surface and the opening is defined within the at least one wall.

4. The board pocket of claim **1** wherein the wall of the flexible material is flat.

5. The board pocket of claim **1** wherein the wall of the flexible material forms a hemi-spherical or raised pouch.

6. The board pocket of claim **1** further comprising a drain hole defined within the at least one wall, wherein, the drain hole communicates with the interior of the pouch.

7. The board pocket of claim **1** wherein the flexible material is composed of natural rubber.

8. The board pocket of claim **1** wherein the flexible material is composed of a thermoplastic polymer.

9. The board pocket of claim **8** wherein the thermoplastic polymer has a Durometer hardness rating of Shore 00 from about 0 to about 100.

10. The board pocket of claim **8** wherein the thermoplastic polymer has a Durometer hardness rating of Shore A from about 0 to 80.

11. The board pocket of claim **8** wherein the thermoplastic polymer has a Durometer hardness rating of Shore D from about 0 to about 30.

12. The board pocket of claim **1** wherein the majority of the outer edge has a flattened section that can be mated to the rigid or semi-rigid surface.

13. The board pocket of claim **1** wherein the flexible material is attached by an adhesive material.

14. The board pocket of claim **13** wherein the adhesive material is double sided and wherein one side of the adhesive adheres to the flexible material and another side is capable of being attached to the rigid or semi-rigid surface.

15. The board pocket of claim **1** wherein the opening further comprises a fastener in order to close the opening.

16. The board pocket of claim **1** wherein the flexible material is of any shape that allows objects of interest to be placed within the pouch.

17. The board pocket of claim **11** wherein the shape of the flexible material is square, rectangular, rhomboid, circular, semi-circular, or oval.

18. A board pocket comprising: a flexible material, wherein the flexible material has an inner wall and an outer wall that are joined at an outer edge and define a pouch, having an interior, and wherein an opening is defined within the outer wall that allows access to the interior of the pouch.

* * * * *