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(54) **GARMENT WITH MOLDED POCKETS FOR CONTAINMENT OF FLY FISHING ACCESSORIES AND METHOD OF MANUFACTURING SAME**

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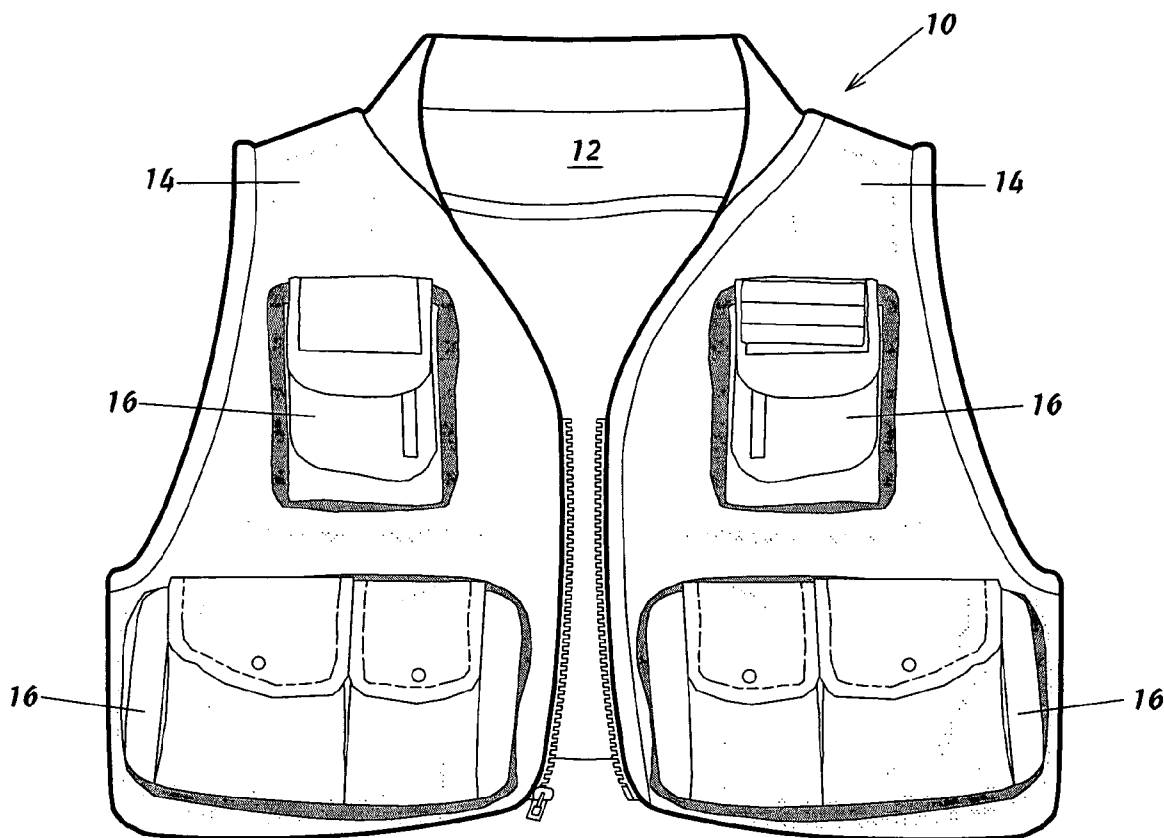
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(57) **ABSTRACT**

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An article of clothing with three-dimensional, molded pockets. Preferably, the molded pockets are constructed of a fabric/foam laminate that has been heat/compression molded. In a preferred embodiment, the molded pockets find utility in the containment of fly boxes and other accessories used in fly fishing. A method of manufacturing a garment with three-dimensional, molded pockets.

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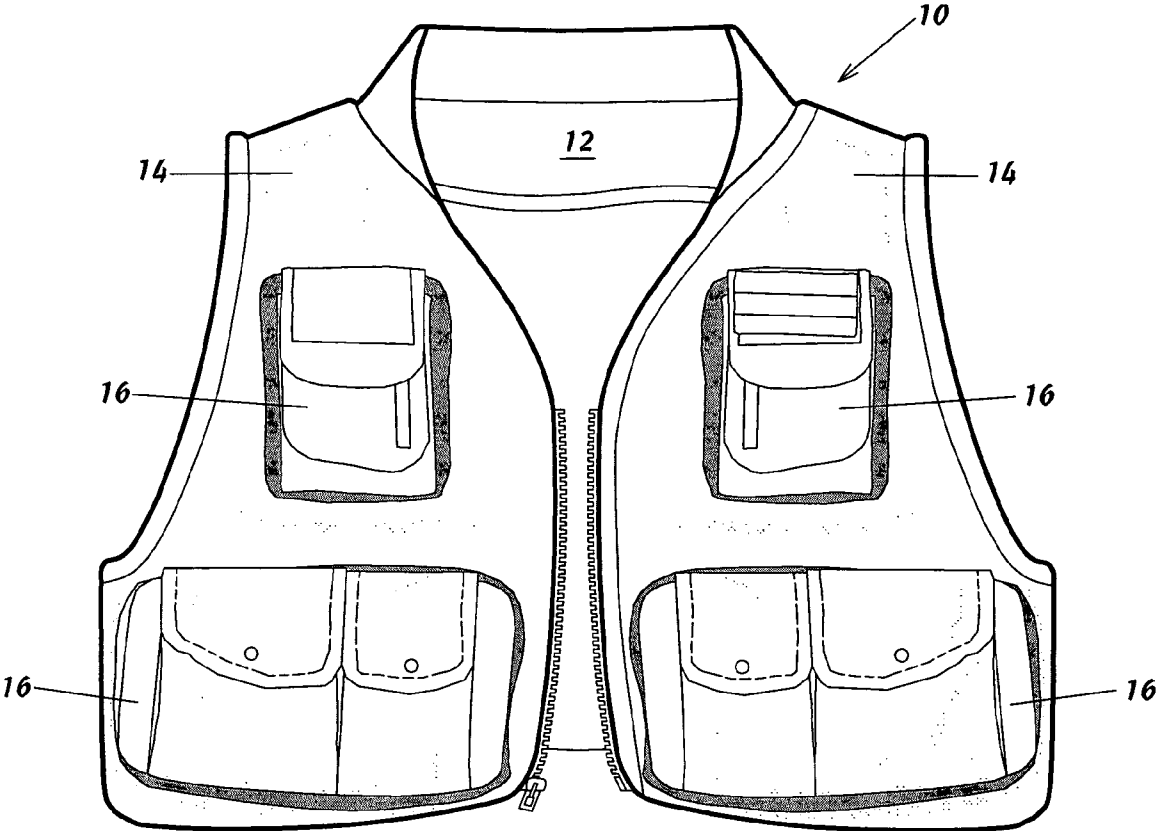


FIG. 1

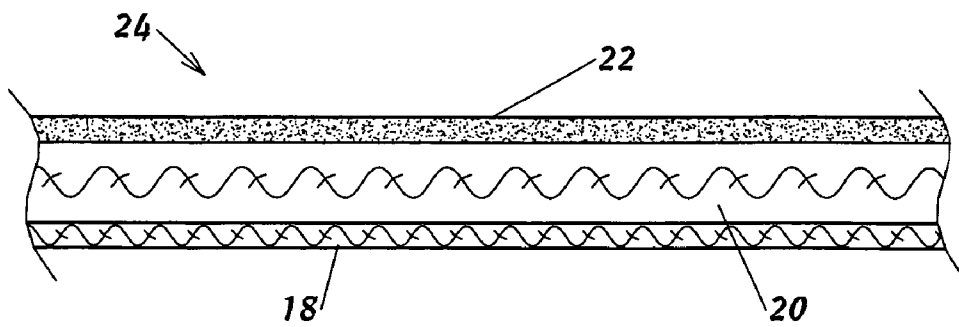


FIG. 2

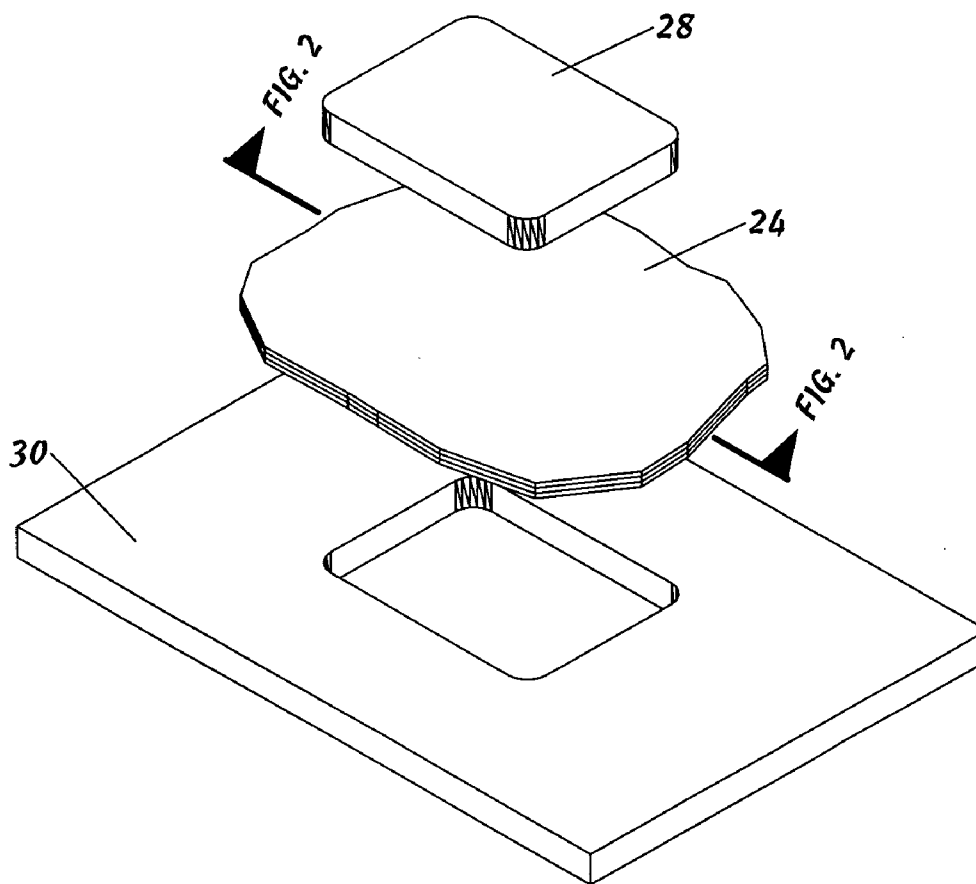


FIG. 3

GARMENT WITH MOLDED POCKETS FOR CONTAINMENT OF FLY FISHING ACCESSORIES AND METHOD OF MANUFACTURING SAME

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to clothing, and more specifically, to a garment that has molded pockets for the containment of fly fishing accessories.

[0003] 2. Description of the Related Art

[0004] A typical fly fishing vest contains pockets that are made out of cut and sewn fabric pieces. These standard pockets are not as easy to access or as aesthetically interesting as the molded pockets of the present invention, nor do they provide the impact protection afforded by the present invention. Although some innovations relating to fishing vests have been patented, no one has yet applied the technology relating to molded pockets to provide a fishing vest with storage compartments that are more user-friendly, attractive, and impact-resistant than traditional pockets. Some examples of innovations in fishing vests are described below.

[0005] The background art is characterized by U.S. Pat. Nos. 4,852,293; 4,901,899; 5,063,614; 5,247,707; 5,465,425; 5,632,113; 6,119,269; and 6,536,156 and by U.S. Patent Application No. 2003/0173390; the disclosures of which patents and patent application are incorporated by reference as if fully set forth herein.

[0006] In U.S. Pat. No. 4,852,293 (Levine et al., 1989), the inventors patented a fishing accessory container. This invention is limited in that the container takes the form of a bag that contains removable transparent plastic inserts.

[0007] In U.S. Pat. No. 4,901,899 (Barrett, 1990), the inventor patented a foldable equipment carrier. This invention is limited in that it takes the form of a plurality of carrier packs that comprise a plurality of collapsible "puff" pouches.

[0008] In U.S. Pat. No. 5,063,614 (McSheffery, 1991), the inventor patented a reversible fishing garment, preferably in the form of a vest, with exterior flaps that open outward from the wearer's body. The exterior flaps include detachable, clear plastic pockets. The purpose of this invention is to give the wearer flexibility in terms of the number of pockets worn on the vest and also to provide clear visibility into the pocket contents. This invention is limited in that exterior flaps and detachable pockets are required to provide sufficient storage capacity.

[0009] U.S. Pat. No. 5,247,707 (Parker et al., 1993) describes a utility vest that can be used in connection with fly fishing or other outdoor activities. The main feature of this vest is a large pocket on the back of the garment that folds out into a backpack for carrying coats, sweaters and similar items that do not fit within the smaller pockets of the vest. This invention is limited in that it requires that a pair of straps run through the shoulder areas of the vest and terminate in belt loops for stabilizing the backpack.

[0010] U.S. Pat. No. 5,465,425 (Crispin, 1995) discloses a fishing garment with removable pockets. The pockets have fastening means on both the front and back sides of the

pocket, so that the pockets can be stacked on top of each other and so that the wearer can reposition the pockets as desired. The garment itself is shorter than a typical fishing vest so that it can be worn in deep water without getting the garment wet. This invention is limited in that its pockets must have fastening means on both the front and back sides of the pockets.

[0011] U.S. Pat. No. 5,632,113 (Raymond et al., 1997) discloses a fishing bait and tackle organizer. This invention is limited in that it takes the form of a casing member having binder rings that hold a plurality of self-sealing storage bags.

[0012] U.S. Pat. No. 6,119,269 (Imler et al., 2000) provides a fishing vest with a removable storage container system. The vest includes two large pockets, each of which is sized to hold a large container or slip. Each slip has a hinged cover and a number of adjustable sections within it. The vest also includes a rod holder loop near the bottom of the vest. This invention also includes a hand carrying case for storage of multiple slips. The invention is limited in that the large pockets are of a conventional design.

[0013] U.S. Pat. No. 6,536,156 (Peterson, 2003) discloses a fishing lure organizer. This invention is limited in that it takes the form of a container having compartments.

[0014] In U.S. Patent Application No. 2003/0173390 (Smith), the inventor described a harness-like fishing gear holder vest upon which various pouches are mounted for storing fishing supplies and caught fish. The harness comprises two shoulder straps and three pouches attached to the front of each strap. The straps are attached to a waist belt, which has two additional pouches attached to the sides. A chest strap holds the two shoulder straps together. The harness also provides two rod-holding rings, a detachable line cutter, and a snap hook for securing a fish net or stringer. The purpose of this invention is to provide a mechanism for holding fishing accessories that is easily adjusted to the size of the wearer and that can be substantially submersed in water. This invention is limited in that the pouches are of conventional design.

[0015] Molding of laminates to form containers is known in the art. For example, cases for sunglasses and compact discs (CDs) are formed in this way. The applicant was the first to discover that molded pockets can be incorporated into garments in accordance with the invention disclosed herein.

[0016] It is an object of preferred embodiments of the present invention to provide a mechanism for storing fly fishing accessories on a fishing vest or other garment worn by a person while fly fishing; however, the manner in which the present invention accomplishes this objective is vastly different from the prior art. It is a further object of preferred embodiments of the present invention to provide storage compartments that are easily accessible to the user and that add to the aesthetic appeal of the garment. It is a further object of preferred embodiments of the present invention to provide storage compartments with added impact protection. Finally, it is an object of the preferred embodiments of the present invention to accomplish all of the foregoing objects without restricting the range of motion of the wearer. None of the inventions described above accomplishes all of these objectives.

BRIEF SUMMARY OF THE INVENTION

[0017] The present invention involves the incorporation of three-dimensional, molded pockets into a garment. Preferably, the molded pockets are constructed of a fabric/foam laminate that has been heat/compression molded. In a preferred embodiment, the molded pockets find utility in the containment of fly boxes and other accessories used in fly fishing.

[0018] In a preferred embodiment, the fishing vest of the present invention comprises molded vest pockets that are constructed of a compression-molded, foam/fabric, three-part laminate. The three-part laminate preferably comprises a stretch woven nylon outer fabric surface or outer layer, bonded to a thin layer of closed cell foam, and an inside layer comprising a light-weight knit nylon fabric layer bonded to the back/inside of the closed foam layer. The laminate is formed using techniques known in the art, such as flame lamination or adhesives, and then the molded pockets are formed by heating the laminated package until pliable (and until a uniform temperature is reached throughout) and placing the laminated package between male and female mold parts, which are pressed together and held in place until the laminated package has cooled to room/ambient temperature. The resulting formed/molded part is removed from the mold, its edges trimmed as necessary, and is then incorporated into the final assembly of the vest pocket. A zipper or other closure mechanism (such as a snap, button, Velcro or magnet closure) and/or other fabric elements are attached before the vest pocket is connected/sewn to the vest body.

[0019] In other preferred embodiments, various materials are used to construct the laminate to achieve different effects, or a different function or appearance. In alternative embodiments, two materials, or a single material, that accomplish(es) the functions of all three, are/is used. All of the preferred embodiments, however, involve a molded shape for the pocket(s). The fabrics selected to construct the laminate provide the desired surfaces, both inside and out, to achieve structural as well as aesthetic objectives.

[0020] In another preferred embodiment, the invention is a method of manufacturing molded pockets and a method of manufacturing a garment (preferably a fly fishing vest) having molded pockets. In an initial step, the materials are assembled for lamination. In the next step, the package is heated or otherwise treated to form a laminate. In the next step, the laminate is heated and positioned in a mold that is used for forming the molded pocket element of the vest, and sufficient pressure is applied to the mold to cause the laminate to take the shape of the mold. In the next step, the pockets are assembled (e.g., by trimming off excess material and adding closure mechanisms and/or other fabric elements) and attached to the vest body, producing a vest having molded pockets.

[0021] In another preferred embodiment, the invention is a fishing vest comprising: a back panel; two front panels joined to the front panel by sewing or other method of attachment; and one or more pockets joined to the back panel or to one or more of the front panels; wherein each pocket is formed of a plurality of materials that comprise a package that is processed to produce a laminate that is molded to form a component of a molded pocket that is capable of accommodating a fly box, said plurality of

materials comprising an outer fabric layer, a middle foam layer and an inner fabric layer, said outer layer comprising a stretchable, woven, nylon fabric, said middle foam layer comprising a closed cell foam, and said inner fabric layer comprising light-weight knit nylon fabric.

[0022] In another preferred embodiment, the invention is a method of manufacturing a fishing vest having a body, said method comprising: placing three layers of material adjacent to one another, said three layers comprising an outer layer, a middle layer and an inner layer, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric; forming a laminate out of the three layers of material; heating the laminated materials until the middle foam layer is pliable and has a consistent temperature throughout; placing the laminate between a male mold part and a female mold part, with the outer layer in direct contact with the female mold part and the inner layer in direct contact with the male mold part; pressing the mold parts together and holding them in place until the laminate has cooled substantially to room temperature, forming the molded pocket; removing the molded pocket from the mold; trimming the edges of the molded pocket and adding a closure mechanism and/or other fabric elements to produce an assembled molded pocket; and attaching the assembled molded pocket onto the body of the fishing vest.

[0023] In another preferred embodiment, the invention is a method of manufacturing a fishing vest having a body, said method comprising: fabricating the body of the fishing vest, said body having an outside surface; compression molding a laminate to produce a molded pocket, said laminate comprising an outer layer, a middle layer and an inner layer, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric; trimming the edges of the molded pocket to produce an assembled molded pocket; and attaching the assembled molded pocket onto the outside surface of the body of the fishing vest.

[0024] In another preferred embodiment, the invention is a fishing vest comprising: a body having a back panel and two front panels; and one or more molded pockets. Preferably, each of the one or more molded pockets is comprised of three layers of material. Preferably, the three layers of material are comprised of an outer layer, a middle layer, and an inner layer. Preferably, the outer layer is comprised of a stretch woven nylon fabric, the middle layer is comprised of closed cell foam, and the inner layer is comprised of a light-weight knit nylon fabric.

[0025] In another preferred embodiment, the invention is a method of manufacturing a vest disclosed herein, comprising the steps of: fabricating the body of the fishing vest, said body having at least one front panel and at least one back panel, each panel having an outside surface; molding a laminate to produce a molded pocket, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric; trimming the edges of the molded pocket to produce an assembled molded pocket; and attaching the assembled molded pocket onto the outside surface of one of the panels of the fishing vest.

Preferably, the method further comprises the step of attaching a closure mechanism and/or other fabric elements to each assembled molded pocket before it is sewn to the outside surface of the front and/or back panel(s) of the vest. Preferably, each of the one or more molded pockets is comprised of two layers of material. Preferably, one of the layers of material is selected from the group consisting of: a woven or knitted fabric, a fabric that is stretchable by virtue of its yarn type, and a fabric that is constructed via a weaving or knitting process with elastomeric yarns. Preferably, one of the layers of material is selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, and a heavy thermoplastic film (e.g., a polyester or polyurethane film).

[0026] In another preferred embodiment, the invention is a method of manufacturing a fishing vest, comprising the steps of: fabricating the body of the fishing vest, said body having two front panels and a back panel; molding a laminate to produce the one or more molded pockets; and attaching each of the one or more molded pockets onto one of the panels of the fishing vest. Preferably, the method further comprises the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn onto one of the panels of the fishing vest. Preferably, each of the molded pockets is comprised of one layer of material selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, and a heavy thermoplastic film (e.g., a polyester or polyurethane film).

[0027] In another preferred embodiment, the invention is a method of manufacturing each of the molded pockets of a vest disclosed herein, comprising the steps of: fabricating the body of the fishing vest, said body having two front panels and a back panel; molding a laminate to produce each of the molded pockets; and attaching each of the molded pockets onto one of the panels of the fishing vest. Preferably, the method further comprises the step of attaching closure mechanisms and/or other fabric elements to each of the molded pockets before it is sewn to the front and/or back panel(s) of the vest.

[0028] In another preferred embodiment, the invention is an article of clothing comprising at least one panel and one or more molded pockets. Preferably, each of the molded pockets is comprised of three layers of material, namely, an outer layer, a middle layer, and an inner layer. Preferably, the outer layer is comprised of a stretchable woven nylon fabric, the middle layer is comprised of closed cell foam, and the inner layer is comprised of a light-weight knit nylon fabric.

[0029] In another preferred embodiment, the invention is a method of manufacturing an article of clothing disclosed herein, comprising the steps of: fabricating the body of the article of clothing, said article of clothing having at least one panel; compression molding a laminate to produce each of the one or more molded pockets; and attaching each of the one or more molded pocket onto a panel of the article of clothing. Preferably, the method of manufacturing further comprises the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to the panel of the article of clothing.

[0030] In another preferred embodiment, the invention is an article of clothing disclosed herein, having one or more molded pockets comprised of two layers of material. Preferably, one of the layers of material is selected from the group consisting of: a woven or knitted fabric, a fabric that is stretchable by virtue of its yarn type, and a fabric that is constructed via a weaving or knitting process with an elastomeric yarn. Preferably, the other layer of material is selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, and a heavy thermoplastic film (e.g., a polyester or polyurethane film).

[0031] In another preferred embodiment, the invention is a method of manufacturing an article of clothing disclosed herein, comprising the steps of: fabricating the body of the article of clothing, said article of clothing having at least one panel; molding the layers of material to produce each of the one or more molded pockets; and attaching each of the one or more molded pockets onto the panel of the article of clothing. Preferably, the method of manufacturing further comprises the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to the panel of the article of clothing. Preferably, each of the one or more molded pockets is comprised of one layer of material selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, a heavy thermoplastic film (e.g., a polyester or polyurethane film), and a woven or knitted fabric.

[0032] In another preferred embodiment, the invention is a method of manufacturing an article of clothing disclosed herein, comprising the steps of: fabricating the body of the article of clothing, said article of clothing having at least one panel; compression molding the layers of material to produce each of the one or more molded pockets; and attaching each of the one or more molded pockets onto the panel of the article of clothing. Preferably, the method of manufacturing further comprises the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to the panel of the article of clothing.

[0033] Further aspects of the invention will become apparent from consideration of the drawings and the ensuing description of preferred embodiments of the invention. A person skilled in the art will realize that other embodiments of the invention are possible and that the details of the invention can be modified in a number of respects, all without departing from the concept. Thus, the following drawings and description are to be regarded as illustrative in nature and not restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] The features of the invention will be better understood by reference to the accompanying drawings, which illustrate presently preferred embodiments of the invention. In the drawings:

[0035] **FIG. 1** is a front perspective view of a preferred embodiment of the present invention.

[0036] **FIG. 2** is a schematic drawing of the three layers that comprise a preferred embodiment of the molded pocket of the present invention.

[0037] **FIG. 3** is an illustration of the mold used to manufacture a preferred embodiment of the molded pockets of the present invention.

[0038] The following reference numerals are used to indicate the parts and environment of the invention on the drawings:

- [0039] 10 fishing vest, article of clothing
- [0040] 12 back panel
- [0041] 14 front panel
- [0042] 16 molded pockets, pockets
- [0043] 18 outer layer
- [0044] 20 middle layer
- [0045] 22 inner layer
- [0046] 24 laminate
- [0047] 28 male mold part
- [0048] 30 female mold part

DETAILED DESCRIPTION OF INVENTION

[0049] Referring to **FIG. 1**, a front perspective view of a preferred embodiment of the present invention is shown. In this embodiment, fishing vest 10 comprises back panel 12, two front panels 14 and one or more molded pockets 16.

[0050] Typically, pockets on a fishing vest are comprised of cut and sewn fabric pieces. Molded pockets 16 of the present invention, on the other hand, create volume and shape that is both functional and aesthetically interesting. Although shown in **FIG. 1** on a fishing vest, the molded pockets of the present invention could be used on other types of clothing in which storage capacity and accessibility of pockets are important, such as shirts, jackets, pants and waders.

[0051] In a preferred embodiment, molded pockets 16 are comprised of three layers of material, as shown in **FIG. 2**, that are laminated together before being formed into molded pockets 16. First layer 18, which comprises the outside of pockets 16, is preferably comprised of a stretchable, woven, nylon fabric. Second layer 20, which determines the shape of pockets 16 and provides a degree of impact protection, is preferably comprised of a closed cell foam. Third layer 22, which comprises the inside of pocket 16, is preferably comprised of a light-weight knit nylon fabric.

[0052] In a first step, the three layers 22, 20 and 18 are laid on top of each other, with outer layer 18 on the bottom. In a second step, three layers 22, 20 and 18 are heated to form a laminate 24 using techniques that are known in the art, such as flame lamination and adhesives. Next, the laminate is heated until the laminate is pliable and the temperature is consistent throughout the laminate. This step prepares the laminate for the molding process. The selected temperature for the molding process depends on the combination of materials that make up the layers. With the previously described combination of a stretchable, woven, nylon fabric, a closed cell foam and a light-weight knit nylon fabric, achieving a temperature of approximately 225° F. for approximately 12 minutes is appropriate. A person having ordinary skill in the art would be able to select the temperature and time required by the specific materials to facilitate

the molding process. A temperature of 225° F. is an appropriate temperature for nylon fabrics combined with polyether, polyester or ethyl-vinyl-acetate (EVA) foams. A person having ordinary skill in the art would not have to conduct excessive experimentation to select a temperature and a time that would be appropriate for other material combinations.

[0053] In a preferred embodiment, a polyethylene foam or an EVA foam is used as middle layer 20. With these materials, selected temperatures are as follows: with a polyethylene (e.g., VOLARA® brand) foam, 210-320 degrees Fahrenheit (F.) and with an EVA foam, 180-250 degrees F. These temperature ranges are guidelines for these foam chemistries. A person skilled in the art would understand that, depending on the density of the foam and the thickness, the selected temperature and time of exposure to the selected temperature may vary. Product configuration would also influence the required exposure to the selected temperature. Foam is an excellent insulator; therefore, the thicker and more dense the foam layer is, the longer it takes to heat up to an appropriate molding temperature. In a third step, laminate 24 is placed between male 28 and female 30 mold parts. **FIG. 3** illustrates a preferred embodiment of the mold parts 28 and 30 that are used in a preferred process for manufacturing molded pockets 16 of the present invention. The mold parts 28 and 30 are pressed together with sufficient force to thermoform laminate 24 and held in place until laminate 24 has cooled approximately to room temperature.

[0054] In a fourth step, the resulting molded pocket is removed from the mold (as shown in **FIG. 3**), the edges are trimmed if necessary, and the molded pocket is incorporated in the final assembly of article of clothing 10. Zippers or other closure mechanisms such as snaps, button, Velcro or magnet closures and/or other fabric elements (e.g., conventional pockets, fly holding flaps, etc.) are attached to the molded pocket before it is sewn or otherwise attached to the front or the back of the body of article of clothing 10.

[0055] In the preferred embodiment shown, laminate 24 comprises three layers; however, the outer and/or inner layers of material could be omitted, depending on the particular application and aesthetic considerations. Preferably, the outer and inner layers are comprised of any material that has enough stretch to prevent the formation of creases during the molding process. Thus, appropriate materials include woven fabrics, fabrics that can stretch by virtue of their yarn type (for example, the elastomeric yarn used in stretch wovens or knits), and fabrics that are constructed via knitting processes without elastomeric yarns (such as warp knit or circular knit fabrics). The fiber types are not determinative of the stretch characteristic and could be nylon, polyester, blends of both, or natural fiber such as wool or cotton.

[0056] The function of middle layer 20 is to retain the shape of the pocket and to provide some impact protection for the contents of the pocket. Materials other than closed cell foam could be used for the middle layer, as long as they possess acceptable shape retention and impact protection characteristics. Suitable materials for the middle layer include closed cell foam, open-cell foam or other non-woven materials, such as a non-woven polyester, lofted or non-lofted interfacing, needle punch (i.e., material made by converting batts or webs of loose fibers into a coherent

non-woven fabric), mesh scrim (i.e., a lightweight, open, coarse fabric), and a heavy thermoplastic film (e.g., a polyester or polyurethane film). If a heavy thermoplastic film is used, the preferable range of thickness is from 0.025 to 0.060 inches.

[0057] In another preferred embodiment, the invention is a method of manufacturing molded pockets for a garment (preferably a fly fishing vest). Preferably, the three materials that are used to make the pockets are an inner mesh backing, a foam center layer, an outer stretch-woven nylon fabric. In alternative embodiments, the outer fabric layer could be any one of a wide range of textiles, provided the fabric exhibits enough stretch to be forgiving in the molding process. A fabric chosen for the outer layer is preferably either loose enough in its construction to move easily and conform to the shape of the mold during the molding process (e.g., a woven fabric), or be stretchable due to its yarn type (e.g., an elastomeric yarn as used in stretch wovens or knits) or be constructed via knitting processes without elastomeric yarns (e.g., a warp knit or a circular knit). Fiber type is less important in the outer layer, and preferred fibers are nylon, polyester, blends of both, polypropylene or natural fiber (e.g., wool, cotton, hemp, etc.). Preferably, the middle foam layer not only provides cushioning, but is the element of the package that, when molded, holds/retains the shape of the pocket. Alternative materials that may be used for the middle layer and that would also perform the shape retention function include closed and open-cell foams, non-woven polyester and lofted or non-lofted interfacing, needle punch, mesh scrims, and heavy thermoplastic films (e.g., a polyester or polyurethane film). The fabric or surface of the inner layer of the layer has less technical importance and is selected primarily for aesthetics, although the selected material must not interfere or limit the molding process, for example, by limiting the stretch of the laminate. As in the case of the outer layer fabric, the inner layer fabric could be comprised of nylon, polyester, polypropylene, cotton, hemp, or wool.

[0058] In an initial step, the materials are assembled in a complete package. In the next step, the materials are heated to form a laminate. The lamination step can be accomplished through the use of flame lamination, thermoplastic adhesive film, or any other conventional lamination method. With flame lamination, foam and fabrics are typically supplied off of rolls. Two of the layers (the middle layer and at least one of the other layers) come together and are laminated one side at a time. Immediately before the layers come together, a nozzle (e.g., a natural gas burner) directs a flame at the surface of the foam (not the fabric). Alternatively, the fabric may be heated slightly first so that it accepts the softened foam better. In this embodiment, the surface of this foam is melted and turned into a liquid. No adhesive or glue is involved, but the liquid foams down into the fabric. With thermoplastic adhesive film, the adhesive is in the form of a glue film that is situated between each pair of layers to form a package. The package is placed into a heated press in which the glue film melts and adheres the layers together. The glue can also be an extruded film or fusible interfacing acting as a thermoplastic adhesive. The adhesive can also be "printed" dots of thermoplastic adhesive or a powdered adhesive resin that is evenly distributed on the fabric and then melted/fused to the fabric in a continuous feed oven, for example. During the lamination step, the materials need to

be sufficiently bonded to survive the molding process and hold together for the life of the garment to which the molded pockets are attached.

[0059] In the next step, the laminate is heated to prepare it for the molding process. In the molding process, the materials are preferably heated but not actually melted, that is, the package is heated just to the point at which it becomes pliable and, when its temperature is reduced to ambient, it holds the new (molded) shape. The laminate is positioned in a mold that is used for forming the molded pocket element of the vest, and sufficient pressure is applied to the mold to cause the laminate to take the shape of the mold. In a preferred embodiment, the fabric layers are held around their perimeters (e.g., with short pins or other means for stabilizing the layers) to prevent wrinkles from forming at the corners of the molded part during the time required for the molded part to cool to ambient temperature. In an alternative embodiment, a coolant is passed through the mold to shorten the time required for cooling.

[0060] In the next step, the pockets are assembled (e.g., by trimming off excess material and adding closure mechanisms and/or other fabric elements) and attached to the vest body, producing a vest having molded pockets. In a preferred embodiment, two molded parts are combined to form the front and back halves of a molded pocket. In another preferred embodiment, only one molded part is used to construct a molded pocket with a fabric layer forming the back of the molded pocket.

[0061] In an alternative embodiment, a molding process other than compression molding is used to form the molded pocket. Other molding processes that may be used include: injection molding, vacuum molding and blow molding.

[0062] Although the preferred embodiment of the present invention has been shown and described, it will be apparent to those skilled in the art that many changes and modifications may be made without departing from the invention in its broader aspects. The appended claims are therefore intended to cover all such changes and modifications as fall within the true spirit and scope of the invention. For example, while preferred embodiments of the disclosed garment involve a fly fishing vest, the invention could be applied to other garment styles, including, but not limited to, shirts, jackets, pants and waders. The disclosed molded pockets create volume and a unique shape that is both functional (e.g., easy to get contents in and out of) and aesthetically interesting. When a foam is used as one layer in the laminate used to construct the molded pocket, the molded pocket provides some impact protection. While the molded pockets are shown on the front of a preferred embodiment of the garment, they could also be situated on the back of the garment, for example, if a larger pocket was required to accommodate a larger fly box, or even on the sides of pants or anywhere else on a garment where storage and accessibility is desired.

[0063] Although some embodiments are shown to include certain features, the applicants specifically contemplate that any feature disclosed herein may be used together or in combination with any other feature on any embodiment of the invention. It is also contemplated that any feature may be specifically excluded from any embodiment of an invention.

We claim:

1. A fishing vest comprising:
 - a back panel;
 - two front panels joined to the back panel; and
 - one or more pockets joined to the back panel or to one or more of the front panels;
 wherein each pocket is formed of a plurality of materials that comprise a package that is processed to produce a laminate that is molded to form a component of a molded pocket that is capable of accommodating a fly box, said plurality of materials comprising an outer layer, a middle layer and an inner layer, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric.
2. A method of manufacturing a fishing vest having a body, said method comprising:
 - placing three layers of material adjacent to one another, said three layers comprising an outer layer, a middle layer and an inner layer, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric;
 - processing the layers to form a laminate;
 - heating the laminate until it is pliable and the temperature is consistent throughout the laminate;
 - placing the laminate between a male mold part and a female mold part, with the outer layer in direct contact with the female mold part and the inner layer in direct contact with the male mold part;
 - pressing the mold parts together and holding them in place until the laminate has cooled substantially to room temperature, forming the molded pocket;
 - removing the molded pocket from the mold;
 - trimming the edges of the molded pocket and adding a closure mechanism and/or other fabric elements to produce an assembled molded pocket; and
 - attaching the assembled molded pocket onto the body of the fishing vest.
3. A method of manufacturing a fishing vest having a body, said method comprising:
 - fabricating the body of the fishing vest, said body having an outside surface;
 - molding a laminate to produce a molded pocket, said laminate comprising an outer layer, a middle layer and an inner layer, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric;
 - trimming the edges of the molded pocket to produce an assembled molded pocket; and
 - attaching the assembled molded pocket onto the outside surface of the body of the fishing vest.

4. A fishing vest comprising:
 - a body having a back panel and two front panels; and
 - one or more molded pockets.
5. The fishing vest of claim 4, wherein each of the one or more molded pockets is comprised of three layers of material.
6. The fishing vest of claim 5, wherein the three layers of material are comprised of an outer layer, a middle layer, and an inner layer.
7. The fishing vest of claim 6, wherein the outer layer is comprised of a stretch woven nylon fabric, the middle layer is comprised of closed cell foam, and the inner layer is comprised of a light-weight knit nylon fabric.
8. A method of manufacturing each of the molded pockets of the vest of claim 6, comprising the steps of:
 - fabricating the body of the fishing vest of claim 6, said body having the front panels and the back panel, each panel having an outside surface;
 - molding a laminate to produce a molded pocket, said outer layer comprising a stretchable, woven, nylon fabric, said middle layer comprising a closed cell foam, and said inner layer comprising light-weight knit nylon fabric;
 - trimming the edges of the molded pocket to produce an assembled molded pocket; and
 - attaching the assembled molded pocket onto the outside surface of one of the panels of the fishing vest of claim 6.
9. The method of manufacturing of claim 8, further comprising the step of attaching a closure mechanism and/or other fabric elements to each assembled molded pocket before it is sewn to the outside surface of one of the panels of the vest.
10. The fishing vest of claim 4, wherein each of the one or more molded pockets is comprised of two layers of material.
11. The fishing vest of claim 5 or 10, wherein one of the layers of material is selected from the group consisting of: a woven or knitted fabric, a fabric that is stretchable by virtue of its yarn type, and a fabric that is constructed via a weaving or knitting process with one or more elastomeric yarns.
12. The fishing vest of claim 5 or 10, wherein one of the layers of material is selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, and a heavy thermoplastic film.
13. A method of manufacturing the vest of claim 10, comprising the steps of:
 - fabricating the two front panels and the back panel of the fishing vest of claim 10;
 - molding a laminate to produce each of the one or more molded pockets; and
 - attaching each of the one or more molded pockets onto one of the panels of the fishing vest of claim 10.
14. The method of manufacturing of claim 13, further comprising the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn onto one of the panels of the fishing vest.

15. The fishing vest of claim 4, wherein each of the one or more molded pockets is comprised of one layer of material.

16. The fishing vest of claim 15, wherein the layer of material is selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, a heavy thermoplastic film, and a woven or knitted fabric.

17. A method of manufacturing each of the molded pockets of the vest of claim 15, comprising the steps of:

fabricating the body of the fishing vest of claim 15, said body having the two front panels and the back panel;

molding a laminate to produce each of the one or more molded pockets; and

attaching each of the one or more molded pocket onto one of the panels of the vest of claim 15.

18. The method of manufacturing of claim 17, further comprising the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to one of the panels of the vest of claim 15.

19. An article of clothing comprising

a body having at least one panel; and

one or more molded pockets.

20. The article of clothing of claim 19, wherein each of the one or more molded pockets is comprised of three layers of material.

21. The article of clothing of claim 20, wherein the three layers of material comprise: an outer layer, a middle layer, and an inner layer.

22. The article of clothing of claim 21, wherein the first layer is comprised of a stretchable woven nylon fabric, the second layer is comprised of closed cell foam, and the third layer is comprised of a light-weight knit nylon fabric.

23. A method of manufacturing the article of clothing of claim 21, comprising the steps of:

fabricating the body of the article of clothing of claim 21, said article of clothing having the at least one panel;

molding a laminate to produce each of the one or more molded pockets; and

attaching each of the one or more molded pockets onto one of the panels of the article of clothing of claim 21.

24. The method of manufacturing of claim 23, further comprising the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to one of the panels of the article of clothing of claim 21.

25. The article of clothing of claim 19, wherein each of the one or more molded pockets is comprised of two layers of material.

26. The article of clothing of claims 20 or 25, wherein one of the layers of material is selected from the group consisting of: a woven or knitted fabric, a fabric that is stretchable by virtue of its yarn type, and a fabric that is constructed via a weaving or knitting process with one or more elastomeric yarns.

27. The article of clothing of claims 20 or 25, wherein one of the layers of material is selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, and a heavy thermoplastic film.

28. A method of manufacturing the article of clothing of claim 25, comprising the steps of:

fabricating the body of the article of clothing of claim 25, said article of clothing having the at least one panel;

molding the layers of material to produce each of the one or more molded pockets; and

attaching each of the one or more molded pockets onto one of the panels of the article of clothing of claim 25.

29. The method of manufacturing of claim 28, further comprising the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to the panels of the article of clothing.

30. The article of clothing of claim 19, wherein each of the one or more molded pockets is comprised of one layer of material.

31. The article of clothing of claim 30, wherein the layer of material is selected from the group consisting of: a closed cell foam, an open-cell foam, a non-woven polyester, a lofted or non-lofted interfacing, a needle punch, a mesh scrim, a heavy thermoplastic film, and a woven or knitted fabric.

32. A method of manufacturing the article of clothing of claim 30, comprising the steps of:

fabricating the article of clothing of claim 30, said article of clothing having the at least one panel;

molding the one layer of material to produce each of the one or more molded pockets; and

attaching each of the one or more molded pockets onto one of the panels of the article of clothing of claim 30.

33. The method of manufacturing of claim 32, further comprising the step of attaching closure mechanisms and/or other fabric elements to each of the one or more molded pockets before it is sewn to the at least one panel of the article of clothing.

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