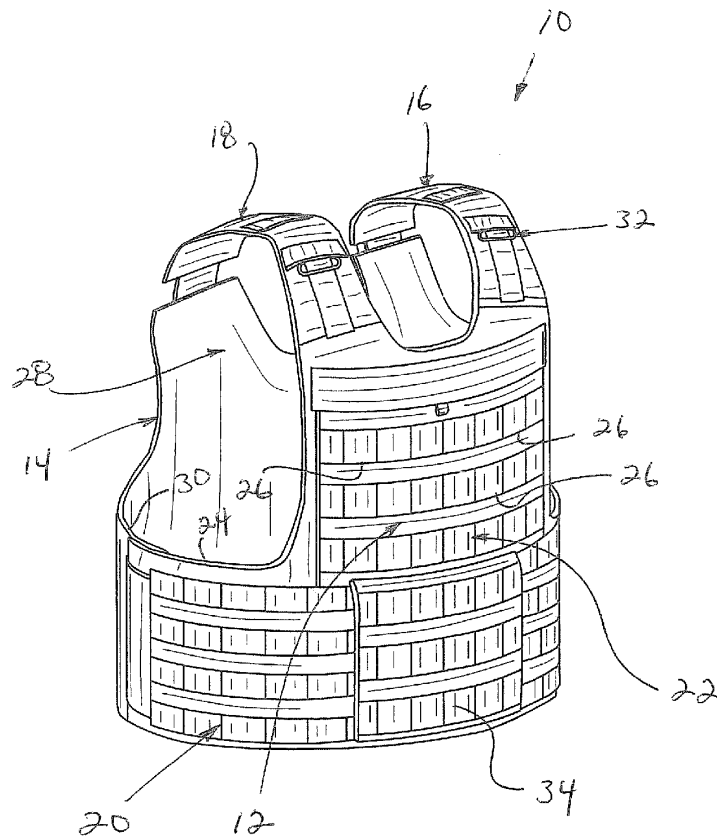


(10) **Pub. No.: US 2013/0312149 A1**
(43) **Pub. Date: Nov. 28, 2013**



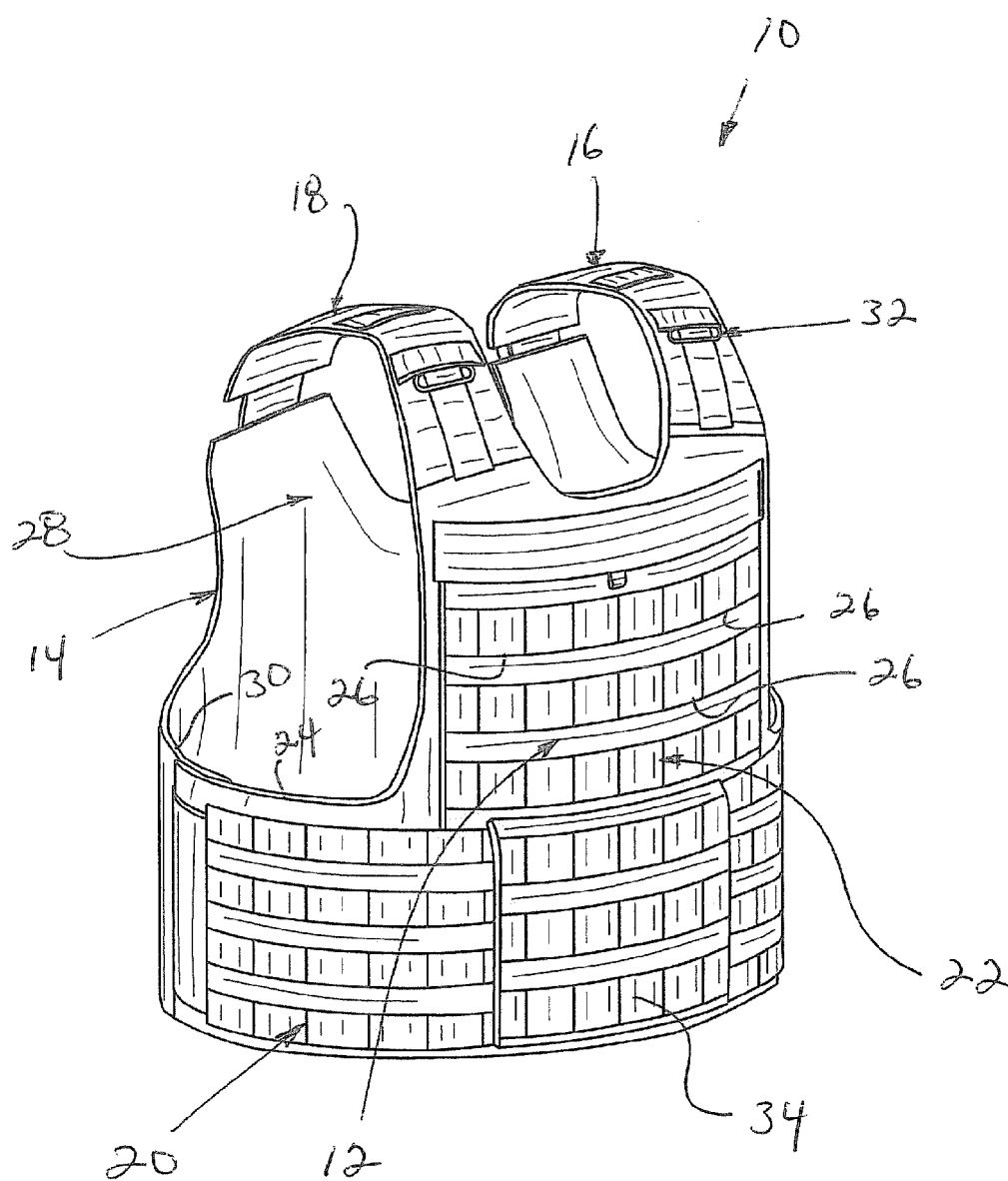
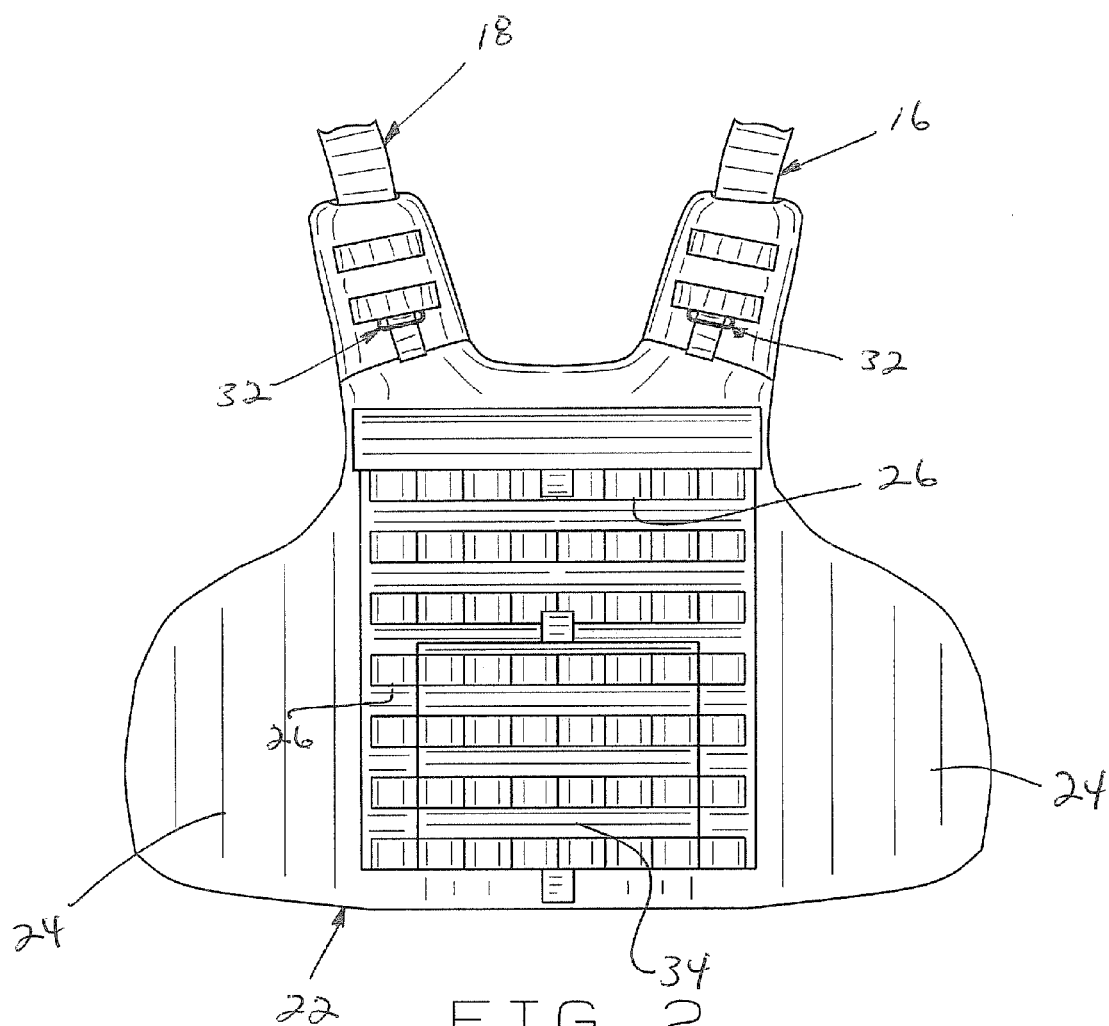
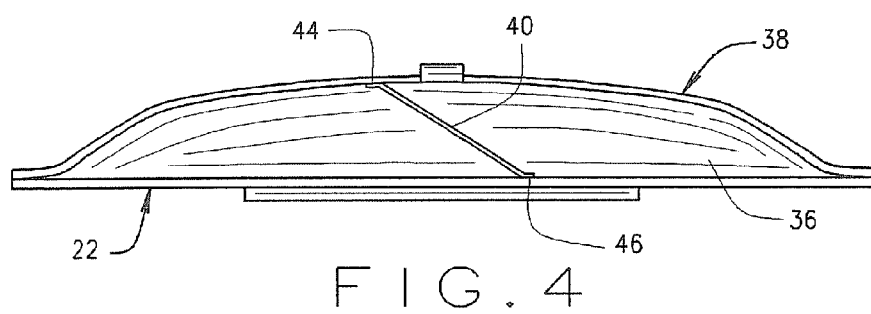
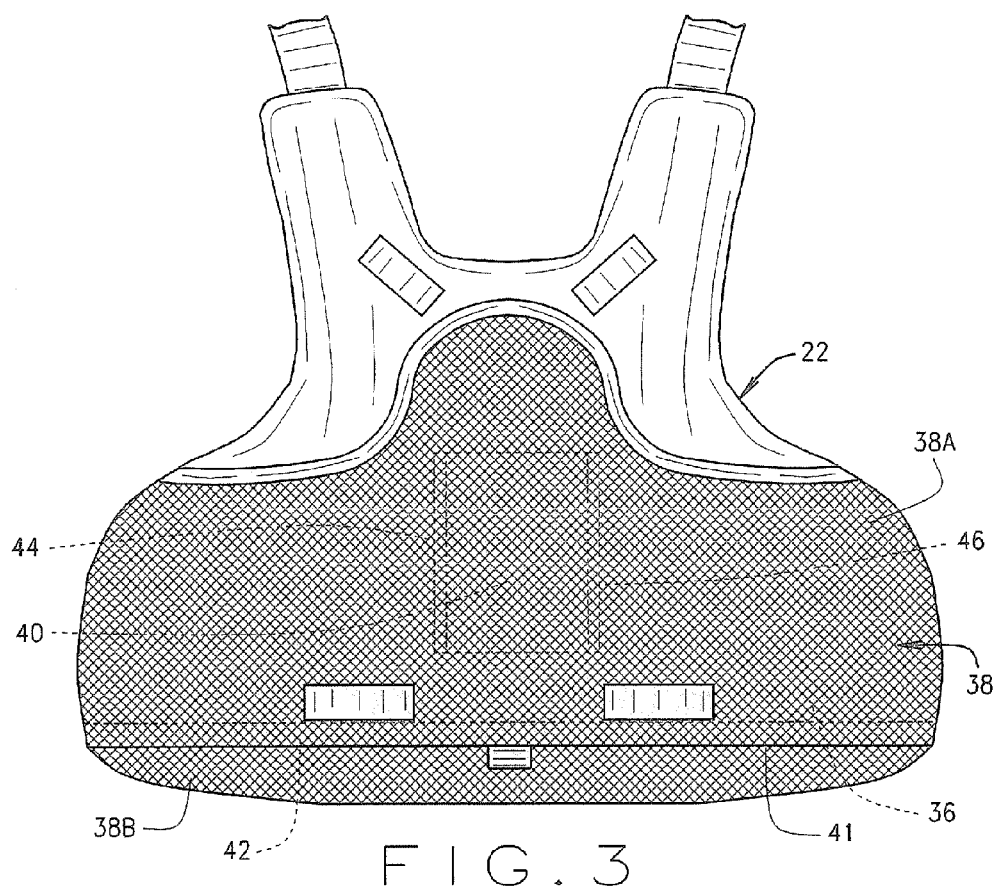


FIG. 1





INTERNAL VEST DIVIDER FOR ARMOR PLATING

BACKGROUND OF INVENTION

[0001] The present invention relates to vests and other similar garments and, more particularly, to tactical vests and tactical garments which utilize armor plating in the front and/or back portion thereof for protection of the wearer.

[0002] Tactical vests and other similar garments are well known, particularly in the military and law enforcement environments, and such vests and garments typically include pockets, pouches or other means for carrying ballistic armor plating for the protection of the wearer. Such armor plating is typically worn in the front and/or back portion of the vest or other similar garment and is made of suitable material to provide the necessary protection to the wearer depending upon the particular application such as stopping bullets, shrapnel, and other hazards associated with a particular tactical situation. In times past, tactical vests and similar garments were fabricated so as to be front-opening garments, that is, such garments were opened and closed via various mechanisms located on the front torso portion of the vest, usually in the vicinity of the center chest portion of the wearer. This front-opening arrangement made it easy for the wearer to don and remove the garment. Because most tactical vests were front-opening type vests, two separate armor plate members were necessary in order to provide adequate protection to the wearer, namely, an armor plate member sized and shaped to be inserted into a pocket associated with the left side of the front torso portion of the vest, and a minor plate member sized and shaped to be inserted into a pocket associated with the right side of the front torso portion of the vest.

[0003] Today, a wide variety of different types of tactical vests and other similar garments are available including vests and garments which open and close from the side of the garment. In a side-opening tactical vest, typically one large pocket or pouch is associated with the inside portion of the front torso portion for receiving either a single armor plate member specifically designed for that particular vest pocket, or two separate armor plate members placed in side-by-side relationship. In this situation, it is not uncommon for a user to use two separate minor plate members as previously used in a front-opening type vest to provide adequate protection in a side-opening vest since the pair of front-opening armor plate members are readily available. It is also common for manufacturers to specifically design two separate armor plate members for use in the front torso inner pocket to improve the handling and maneuverability of such armor plate members in the field and for insulation purposes. As a result, if two separate armor plate members are utilized in a side-opening type vest which includes one large inner pocket or pouch for housing the armor plate members, it is common for such plate members to move from side to side in the pocket during use thereby occasionally partially overlapping each other depending upon the activities of the wearer. When this occurs, such overlapping of the armor plate members decreases the protection area of the wearer and exposes previously protected front torso areas of the wearer. It is also common for such separate armor plate members to move or otherwise be maneuvered during activities of the wearer so as to position such plate members in positions relative to each other so as to likewise expose certain front torso areas of the wearer. For example, during tactical maneuvering of the wearer, such armor plate members may cross over or cause gaps in the side

areas of the front torso portion of the garment. This is an unacceptable condition in any tactical environment where the wearer is exposed to hostile fire.

[0004] In an effort to overcome the above-identified problem and prevent the two front torso armor plate members from shifting or otherwise moving out of their operative protective positions during tactical maneuvering or other activities of the wearer, it is known to use a single divider member positioned within the front torso pocket extending the full height of such torso pocket so as to form two totally separate and isolated compartments within the front torso pocket. This full height center divider member functions to totally restrict any cross-over movement of such armor plate members from one compartment to the other. This known center divider member is fixedly attached in direct alignment with the two opposed side portions of the front torso pocket along its entire height. This arrangement causes binding of the opposed side portions forming the front torso pocket and it causes shrinkage of the outer panel or cover member forming one side portion of the front torso internal pocket from top to bottom during the manufacturing process since this divider member is typically sewn or otherwise stitched into its operative position. Because of this shrinkage factor, this full height fixedly attached divider member often times yields at least one of the two isolated compartments associated with the front torso pocket too small for accommodating the armor plate member designated for positioning therewithin. This results in field modification and other improvised changes to the internal pocket structure so as to allow the two separate armor plate members to be received and positioned within the two totally separate compartments formed by the full height divider member. This full height divider member, although it functions to prevent unwarranted shifting and/or movement of the armor plate members relative to each other, does not always yield separate compartments adequately sized to receive the separate armor plate members.

[0005] There is therefore a need for a mechanism associated with any tactical vest or other garment utilizing two separate armor plate members in the front and/or rear torso portion of the garment so as to hold such armor plate members in their proper protective position during tactical maneuvering to maximize protection to the wearer and to prevent such armor plate members from shifting and/or otherwise moving to positions which will reduce the maximum protection afforded by such armor plate members.

SUMMARY OF INVENTION

[0006] In one aspect of the present invention, a vest or other similar garment is provided with a front torso pocket or pouch accessible from the interior side portion thereof, such front torso pocket or pouch including a baffle or divider member strategically positioned therewithin so as to segregate the front torso pocket into two separate compartments for receiving two separate armor plate members. The present baffle or internal divider does not run the full height of the front torso pocket but instead extends partially along such height for reasons which will be hereinafter explained. One end portion of the present divider member can be either fixedly attached or removably attached to one side portion of the front torso pocket and the opposite end portion of such divider member can likewise be either fixedly attached or removably attached to the opposed side portion of the front torso pocket. When the present internal divider is removably attached to the opposed side portions of the front torso pocket, such divider member

can be easily removed so that the front torso pocket portion can accommodate a single armor plate member, and such internal divider can again be repositioned within the front torso pocket so as to accommodate a two plate system. When utilized, the internal baffle or divider member functions as a stop member and prevents the two separate armor plate members from moving out of their operational positions thereby unnecessarily exposing portions of the wearer's body to hostile fire.

[0007] In another aspect of the present invention, the internal divider member can be attached to the respective opposed side portions of the front torso pocket in an offset or non-aligned manner thereby providing some additional movement and maneuverability of the minor plates within the front torso pocket so as to further prevent binding or otherwise unduly hindering the movement or activities of the wearer in a tactical environment.

[0008] It is also recognized that the present internal divider member can likewise be utilized in association with a rear torso pocket or pouch associated with any particular tactical garment for housing armor plate members to protect the back portion of a wearer.

BRIEF DESCRIPTION OF DRAWINGS

[0009] FIG. 1 is a perspective view of a typical side-opening vest utilizing at least a front torso internal pocket for housing appropriate armor plate members;

[0010] FIG. 2 is a partial front elevational view of the tactical vest illustrated in FIG. 1 showing the front torso panel associated with said tactical vest;

[0011] FIG. 3 is a rear elevational view of the front torso panel of FIG. 2 showing the internal pocket associated therewith including the present internal divider member for housing two separate armor plate members therewithin; and

[0012] FIG. 4 is a bottom end elevational view looking into the internal pocket formed on the interior side portion of the front torso portion of FIG. 3.

DETAILED DESCRIPTION

[0013] FIGS. 1-4 illustrate one embodiment of a typical side-opening vest which houses at least an internal front torso pocket for receiving armor plate members for protection of the wearer. As best illustrated in FIG. 1, the typical vest 10 includes a front portion 12, a rear portion 14, a pair of shoulder straps 16 and 18, and at least a waist belt 20 which is releasable or otherwise unattachable from either the front or rear portions 12 and 14 so as to provide a means for the wearer to easily and quickly don and remove the vest. The front portion 12 includes a front torso panel 22 as best illustrated in FIGS. 2 and 3 which may include side portions 24 for wrapping partially around the waist of the wearer. The front torso panel 22 may include a Molle System which comprises a plurality of vertically and horizontally oriented loops such as the loops 26 which are adapted for receiving attachment means associated with pouches and other accessory equipment which can be easily attached and removed from the front portion of the vest. The Molle System can likewise be associated with the waist belt 20 as illustrated in FIG. 1.

[0014] The rear portion 14 of the vest 10 likewise includes a rear torso panel 28 which may also be provided with corresponding side portions 30 for again wrapping partially around the waist of the wearer. The shoulder straps 16 and 18 connect together the front and rear torso panels 22 and 28. A wide

variety of different types of shoulder strap arrangements are available and can be utilized in a typical vest garment and such strap members can be both adjustable and removably attachable to the front and/or rear torso panels, depending upon the particular design, use and application of the vest. As illustrated in FIGS. 1 and 2, the vest embodiment 10 illustrated therein includes strap members 16 and 18 which are removably attachable to the front torso panel 22 via a conventional belt and eyelet arrangement 32. The strap members 16 and 18 may likewise be removably attachable via VELCRO fastening means as well as through the releasable means illustrated in Applicant's U.S. Pat. Nos. 6,769,137 and 7,020,897. Other releasable and adjustable strap means are likewise recognized and anticipated. Still further, the strap members 16 and 18 could likewise be permanently fixed to both the front and rear torso panels 22 and 28.

[0015] The front torso panel 22 may likewise include attachment means (not shown) associated therewith for releasably securing a portion of the waist belt 20 thereto. A flap or cover member 34 may be provided on the front portion of the front torso panel 22 to cover and provide protection to such attachment means and to cover portions of the waist belt fastened thereunder. The cover member 34 likewise functions to help retain the attachment or connection of the end portions of the waist belt to each other and to the front torso panel 22. The attachment means may include VELCRO fastening means or other appropriate means. The waist belt 20 functions to help secure the front and rear torso panels 22 and 28 to each other and to secure the vest 10 to a particular wearer. In this regard, it is also recognized that some vests may likewise include an internal cummerbund which may likewise be provided to help secure the vest to a wearer. Also, the waist belt 20 could be a cummerbund. Other vest constructions are likewise recognized and anticipated.

[0016] The present invention relates to an internal vest divider member or baffle member 40 associated with an internal pocket or pouch 36 associated with either or both the front and rear torso panels 22 and 28 as will be hereinafter further described. As best illustrated in FIGS. 3 and 4, the front torso panel 22 includes an internal pocket 36 which is specifically sized and shaped for carrying either a single armor plate member or a pair of armor plate members for providing protection to the wearer when the wearer is exposed to hostile fire and other tactical dangers. The pocket 36 is located on the inside portion of the front torso panel 22 (FIG. 3) and can be formed by attaching or otherwise overlaying another fabric member such as the member 38 (FIGS. 3 and 4) to the inside portion of the front torso panel 22 and providing an opening 40 through such member 38 for accessing the pocket or cavity 36 formed therebetween. The fabric member 38 may comprise a mesh type material as illustrated in FIG. 3, or such member may be made of any other suitable material. Access to the pocket 36 is provided by forming a slit, slot or separation along a sufficient portion of the inner panel member 38 such as the slot or opening 41 illustrated in FIG. 3 such that a single armor plate member or a pair of armor plate members can be inserted therethrough for operative positioning within the pocket 36. The opening or slot 41 can be maintained in a closed position through the use of any suitable conventional means such as conventional hook and loop fastener elements 42 associated with the respective end portions of the inner fabric portions 38A and 38B of the internal cover or panel member 38 adjacent the opening 41 which can be overlapped and easily secured to each other to close access to the pocket

36. Other suitable fastening means for accomplishing this task can likewise be utilized such as conventional snap fasteners, a zipper or button arrangement, and other suitable fastening means. In the embodiment illustrated in FIGS. 3 and 4, the internal pocket 36 is formed by the outer torso panel 22 and the inner cover or panel member 38. It is also recognized and anticipated that the pocket 36 could be formed from a single sheet of fabric material folded to yield opposing pocket portions or first and second pocket members having an access opening for receiving the armor plate members therewithin.

[0017] The present internal divider member or baffle member 40 is illustrated in FIGS. 3 and 4 and includes a flexible member strategically positioned within the internal pocket 36 so as to segregate the pocket 36 into two separate compartments for receiving two separate armor plate members. The present divider member 40 does not run the full height of the front torso pocket 36 as best illustrated in FIG. 3 but instead extends only partially along such height so as to provide unrestricted space between the two compartments both above and below the divider member 40. This construction prevents shrinkage of the outer torso panel 22 when the divider member 40 is attached thereto and likewise prevents binding of the opposed panels 22 and 38 when the divider member is again attached thereto. The unrestricted space between the segregated compartments both above and below the divider member 40 also allows some movement of the plate members within the respective compartments during movement of the wearer so as not to cause binding or discomfort to the wearer and so as not to unduly hinder the movement or activities of the wearer in a tactical environment. In this regard, one end portion of the divider member 40 such as end portion 44 can be either fixedly attached or removably attached to the inside portion of the front torso panel 22 or one of the opposed side pocket portions as illustrated in FIGS. 3 and 4, and the opposite end portion of divider member 40 such as end portion 46 can likewise be either fixedly attached or removably attached to the inside portion of inner panel member 38 or the other opposed side pocket portion as again illustrated in FIGS. 3 and 4. Although the opposite end portions 44 and 46 of divider member 40 can be attached to the members 22 and 38 in a substantially straight or parallel alignment with each other, the divider member 40 is illustrated in FIGS. 3 and 4 as being attached to the members 22 and 38 in an offset arrangement. This offset arrangement further reduces the possibility of binding the outer and inner panel members 22 and 38; it provides additional movement and maneuverability of the armor plate members within their respective segregated compartments so as not to restrict movement of the wearer; and it likewise reduces the possibility of shrinkage between the members 22 and 38. Nevertheless, it is also recognized that the divider member 40 can be positioned within the internal pocket 36 such that no offset occurs between the opposed divider end portions 44 and 46.

[0018] It is also recognized that the divider member 40 can be fixedly attached at both opposite end portions 44 and 46 to the respective outer and inner members 22 and 38 such that the divider member is permanently fixed within the internal pocket 36. In this scenario, two separate armor plate members will be utilized at all times within the pocket 36.

[0019] On the other hand, when the present divider member 40 is removably attached to at least one of the members 22 and 38, such divider member can be positioned in a substantially flat horizontal arrangement adjacent either the inside portion of the front torso panel 22 or the inside portion of the inner

cover member or panel 38 so as to accommodate a single armor plate member within the entire space of the pocket 36. This provides the wearer with the additional capability and flexibility to use either a single armor plate member or a pair of armor plate members within the space provided by pocket 36. When the removably attachable end portion of the divider member 40 is again reattached to its appropriate member 22 or 38, the divider member 40 can again function so as to accommodate a two plate system. Removable attachment means can take the form of hook and loop type fasteners, snap fasteners, hook and eyelet arrangement, button and eyelet arrangement, and other similar removably attachable means.

[0020] It is also contemplated that both opposite end portions 44 and 46 of the present divider member 40 can be removably attached to their corresponding members 22 and 38. In this particular situation, the entire divider member 40 can be easily removed from the front torso pocket 36 to again accommodate a single armor plate member when so desired.

[0021] When utilized, the present divider member 40 functions as a stop member and prevents two separate armor plate members from moving laterally within the pocket 36 during use thereby preventing any partial overlap of such armor plate members depending upon the maneuverability and activities of the wearer. In addition, since the present divider member 40 does not extend the full height of the pocket 36 as best illustrated in FIG. 3, the segregated compartments provide better maneuverability of the plate members when being positioned therewithin and, depending upon the particular shape of the respective armor plate members, such members can extend into the adjoining compartment space both above and below the divider member 40 if necessary yet still prevent such armor plate members from shifting and/or otherwise moving to positions which will reduce the maximum protection afforded by such members. The divider member 40 also prevents binding and/or shrinkage of the opposed pocket portions and affords greater mobility to the wearer during tactical maneuvering.

[0022] Although the present divider member 40 has been described with respect to a front torso pocket 36, it is recognized and anticipated that the present member 40 can likewise be utilized with a rear torso pocket when armor plating is desirable for protecting the back portion of the wearer.

[0023] The present divider member 40 can likewise be made from any suitable materials so long as such material is flexible enough to prevent binding of the outer and inner panels 22 and 38 when attached thereto, and to facilitate positioning and moveability of the armor plate members within the segregated compartments when such armor plate members are inserted therewithin and during movement of the wearer.

[0024] Thus, there has been shown and described several embodiments of a novel internal vest divider member which fulfills all of the objects and advantages sought therefore. Many changes, modifications, variations and other uses and applications of the present constructions will, however, become apparent to those skilled in the art after considering this specification and the accompanying drawings. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the present invention are deemed to be covered by the invention which is limited only by the claims which follow.

1. A tactical vest including a pocket for receiving at least one armor plate member comprising:

a front portion;
 a rear portion;
 said pocket being associated with said front portion and having an access opening for receiving said at least one armor plate member; and
 a divider member positioned within said pocket at an intermediate location therewithin for segregating said pocket into two separate compartments, each compartment being adaptable for receiving an armor plate member, said divider member being extendable only partially along the height of said pocket and having opposed end portions, each of said opposed end portions being releasably removable and re-attachable to a corresponding opposed pocket portion such that said divider member can be removed from said pocket to receive a single armor plate member and said divider member can be re-attached to said pocket to receive a pair of armor plate members, one in each segregated compartment.

2. (canceled)

3. (canceled)

4. The tactical vest defined in claim 1 wherein the opposed end portions of said divider member are releasably removable and re-attachable to said opposed pocket portions in an offset manner.

5. The tactical vest defined in claim 1 including a pocket portion associated with said rear portion having an access opening for receiving at least one armor plate member, and a divider member positioned within said rear pocket for segregating said rear pocket into two separate compartments, each compartment being adaptable for receiving an armor plate member, said divider member being extendable only partially along the height of said rear pocket, said divider member having opposed end portions releasably removable and re-attachable to opposed rear pocket portions.

6. The tactical vest defined in claim 1 including means for retaining the access opening of said pocket in a closed position.

7. A tactical vest having a pocket for receiving at least one armor plate member comprising:

a front torso portion;

a rear torso portion;

said pocket being associated with said front torso portion, said pocket being formed by first and second members and having an access opening for receiving said at least one armor plate member therewithin, said first member having a first attachment point and said second member having a second attachment point, said first attachment point and said second attachment point being offset from one another; and

a divider member positioned at an intermediate location within said pocket and extending only partially along the full height of said pocket for dividing said pocket into two separate compartments, each compartment being sized to receive an armor plate member, said divider member providing unrestricted space between the two compartments both above and below said divider member;

said divider member having opposed end portions, one of said opposed divider member end portions being releasably removable and re-attachable to said first member at said first attachment point and the other of said opposed divider member end portions being releasably removable and re-attachable to said second member at said second attachment point, said opposed divider member end portions being releasably removable and re-attachable to said first and second members in an offset manner.

8. (canceled)

9. (canceled)

10. The tactical vest defined in claim 7 including means for keeping the access opening of said pocket in a closed position.

11. The tactical vest defined in claim 7 wherein said rear torso portion includes a pocket formed by first and second members and having an access opening for receiving at least one armor plate member therewithin, and a divider member positioned within said rear pocket and extending only partially along the full height of said rear pocket dividing said rear pocket into two separate compartments, each compartment being sized to receive an armor plate member, said divider member having opposed end portions, one of said opposed divider member end portions being releasably removable and re-attachable to one of said first and second members forming said rear pocket and the other of said opposed divider member end portions being releasably removable and re-attachable to the other of said first and second members forming said rear pocket.

12. The tactical vest defined in claim 11 wherein the opposed divider member end portions associated with said rear pocket are releasably removable and re-attachable to said first and second members forming said rear pocket in an offset manner.

13. The tactical vest defined in claim 11 including means for keeping the access opening of said rear pocket in a closed position.

14-17. (canceled)

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