BALLISTIC SHIELD SUPPORT UNDERGARMENTS

Inventor: WILLIAM G. FEARON, Cedar Grove, NJ (US)

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ABSTRACT

The ballistic shield support garments are garments for use by soldiers, tactical personnel and the like, providing comfortable support for ballistic shielding, without limiting the wearer's dexterity or freedom of movement. The ballistic shield support garments include both underpants and an undershirt, preferably worn as a set. The pair of underpants include a waist portion and a pair of leg portions, as is conventionally known. A pair of pockets are provided, with each pocket being secured to a respective one of the leg portions by stitching or the like. A pair of ballistic shields, such as small arms protective inserts (SAPIs) or the like, are further provided, with each ballistic shield being removable received within a respective one of the pockets. Each pocket is positioned on the respective leg portion so that the respective ballistic shield received therein covers the wearer's femoral artery.
BALLISTIC SHIELD SUPPORT UNDERGARMENTS

CROSS-REFERENCE TO RELATED APPLICATION


BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to undergarments and body armor, and particularly to underpants and undershirts having pockets for receiving ballistic shielding.

[0004] 2. Description of the Related Art

[0005] Gunshot wounds and fragmentation from incendiary explosive devices (IED) to the femoral artery of the human body are typically fatal. Body armor has existed for many years, but typically only covers the user’s chest. Often, law enforcement officers who conduct raids are required to leave their desks without forewarning or time to properly prepare. These law enforcement officers typically do not wear bulletproof garments while in their offices, performing other tasks. These officers must be quickly put on bulletproof garments in order to protect themselves when conducting a raid or the like. Similarly, military personnel may be called into active combat at a moment’s notice, and must be able to apply body armor and shielding quickly and easily, preferably in a manner, which still allows for total body mobility.

[0006] Thousands of soldiers have been wounded, killed, or lost lower limbs in battlefields due to injuries to their unprotected lower bodies. Vascular injuries to the lower abdomen and lower extremities carry a high mortality rate. In a recent study, it was found that of 600 patients with penetrating trauma to the iliac vessels and femoral arteries, 39% of the patients died within 30 days of injury. In certain cases of penetrating trauma to the iliac vessels, cardiac arrest occurred within six minutes to eight minutes of impact.

[0007] A need exists for body armor which is ready for use almost instantly, and which provides protection for the femoral artery, the femoral artery path, and the lower spine. Such body armor should also preferably be light and flexible so that a user may easily wear the armor without losing flexibility or dexterity. Thus, a ballistic shield support undergarment solving the aforementioned problems is desired.

SUMMARY OF THE INVENTION

[0008] The ballistic shield support undergarments are undergarments for use by soldiers, tactical personnel and the like, providing comfortable support for ballistic shielding without limiting the wearer’s dexterity or freedom of movement. The ballistic shield support undergarments include both underpants and an undershirt, preferably worn as a set.

[0009] The pair of undershorts includes a waist portion and a pair of leg portions, as is conventionally known. A pair of pockets are provided, with each pocket being secured to a respective one of the leg portions by stitching or the like. A pair of ballistic shields, such as small arms protective inserts (SAPIs), level IIIA ballistic covers or the like, are further provided, with each ballistic shield being removably received within a respective one of the pockets. Each pocket is positioned on the respective leg portion such that the respective ballistic shield received therein covers the wearer’s femoral artery.

[0010] The undershirt includes a main body portion, a pair of sleeves and a neck portion, as is conventionally known. A pair of sleeve pockets are provided, with each sleeve pocket being secured to a respective one of the sleeves. A front pocket is further secured to a front panel of the main body portion, and a pair of sleeve ballistic shields and a front ballistic shield are removably received within the respective sleeve pockets and front pocket. A rear pocket may similarly be secured to a rear panel of the main body portion, by stitching or the like, for removably receiving a rear ballistic shield.

[0011] These and other features of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 is an environmental, partially exploded, perspective view of a set of ballistic shield support undergarments according to the present invention.

[0013] FIG. 2 is a partially exploded, perspective view of a pair of underpants of the set of ballistic shield support undergarments according to the present invention.

[0014] FIG. 3 is an anatomical diagram illustrating positioning of the femoral artery in relation to a human thigh.

[0015] FIG. 4A is a partially exploded, front perspective view of an undershirt of the set of ballistic shield support undergarments according to the present invention.

[0016] FIG. 4B is a partially exploded, rear perspective view of an undershirt of the set of ballistic shield support undergarments according to the present invention.

[0017] Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0018] FIG. 1 illustrates a user wearing a set of ballistic shield support undergarments. The ballistic shield support undergarments are undergarments for use by soldiers, tactical personnel and the like, providing comfortable support for ballistic shielding, without limiting the wearer’s dexterity or freedom of movement. The ballistic shield support undergarments include both underpants 10 and an undershirt 12, preferably worn as a set, as shown.

[0019] As best seen in FIG. 2, the pair of undershorts 10 include a waist portion 32 and a pair of leg portions 34, as is conventionally known. A pair of pockets 14 are provided, with each pocket 14 being secured to a respective one of the leg portions 34 by stitching or the like. Preferably, each pocket 14 has a substantially U-shaped contour, with an upper, substantially linear opening 16, and a closed, arcuate lower end.

[0020] A pair of ballistic shields 18, such as small arms protective inserts (SAPIs), level IIIA ballistic covers or the like, are further provided, with each ballistic shield 18 being removably received within a respective one of the pockets 14. It should be understood that SAPIs 18 are shown for exemplary purposes only, and that any suitable type of ballistic shield may be utilized. It should be further understood that the
contouring and relative dimensions of pockets 14 may be varied, dependent upon the type of ballistic shielding being used.

[0021] FIG. 3 illustrates the positioning of the femoral artery FA with respect to the thigh T of a typical human leg. Each pocket 14 is positioned on the respective leg portion 34 such that the respective ballistic shield 18 received therein covers and protects the wearer’s femoral artery FA.

[0022] As shown in FIGS. 4A and 4B, the undershirt 12 includes a main body portion 36, a pair of sleeves 38 and a neck portion 40, as is conventionally known. A pair of sleeve pockets 26 are provided, with each sleeve pocket 26 being secured to a respective one of the sleeves 38, by stitching or the like. A front pocket 20 is further secured to a front panel 21 of the main body portion 36, and a pair of sleeve ballistic shields 30 and a front ballistic shield 24 are removably received within the respective sleeve pockets 26 and front pocket 20. A rear pocket 42 may similarly be secured to a rear panel 23 of the main body portion 36, by stitching or the like, for removably receiving a rear ballistic shield.

[0023] The sleeve ballistic shields 30, the front ballistic shield 24, and the rear ballistic shield may be small arms protective inserts (SAPIs), level IIIa ballistic covers or any other suitable type of ballistic shield. It should be understood that the contouring and relative dimensions of pockets 20, 26 and 42 may be varied, dependent upon the type of ballistic shielding being used. Further, as shown, each sleeve pocket 26 preferably has a substantially U-shaped contour, with an upper, substantially linear opening 28, and a closed, arcuate lower end. Similarly, front pocket 20 preferably has a substantially U-shaped contour, with an upper, substantially linear opening 22, and a closed, arcuate lower end. Rear pocket 42 is preferably configured in a similar manner.

[0024] Undershorts 10 are preferably configured similarly to conventional compression shorts, dimensioned and contoured to be form-fitting when worn about the wearer’s waist and mid or lower thigh. Undershorts 10 may be formed from spandex or the like. Undershirt 12 is preferably formed from a similar material and is also dimensioned and configured to be form fitting, similar to a conventional bicycling shirt.

[0025] As noted above, any suitable type of ballistic shielding may be used. The National Institute of Justice (NIJ) grades levels of body armor. The ballistic shields may be one of the classification types of the National Institute of Justice, which consist of Type I, Type Ia, Type II, Type IIIa, Type III, and Type IV. Preferably, graded level IIIa, utilizing eighteen layers of ballistic material, is used. Grade II uses fifteen layers of ballistic material and is capable of stopping a bullet fired by a .357 Magnum at a velocity of 1,395 feet per second. The same grade level stops a 9-mm bullet fired at a velocity of 1,175 feet per second. The level III protection stops a 7.63 NATO round of bullets traveling at a velocity of 2,750 feet per second.

[0026] It is to be understood that the present invention is not limited to the embodiments described above, but encompasses any and all embodiments within the scope of the following claims.

I claim:

1. A ballistic shield support undergarment, comprising:
   a pair of undershorts having a waist portion and a pair of leg portions;
   a pair of pockets, each of the pockets being attached to a respective one of the leg portions; and
   a pair of ballistic shields, each of the ballistic shields being removably received within a respective one of the pockets, each of the pockets being positioned on the respective leg portion so that the respective ballistic shield received therein covers a wearer’s femoral artery when the undergarment is worn.

2. The ballistic shield support undergarment as recited in claim 1, wherein each said pocket has a closed lower end and an open upper end.

3. The ballistic shield support undergarment as recited in claim 2, wherein each said shield is a small arms protective insert.

4. The ballistic shield support undergarment as recited in claim 2, wherein each said ballistic shield is a level IIIa ballistic cover.

5. A ballistic shield support undergarment, comprising:
   an undershirt having a main body portion, a pair of sleeves and a neck portion;
   a pair of sleeve pockets, each of the sleeve pockets being attached to a respective one of the sleeves;
   a front pocket attached to a front panel of the main body portion;
   a pair of sleeve ballistic shields, each of the sleeve ballistic shields being removably received within a respective one of the sleeve pockets; and
   a front ballistic shield removably received within the front pocket.

6. The ballistic shield support undergarment as recited in claim 5, wherein the main body portion has a rear panel, the undergarment further comprising:
   a rear pocket attached to the rear panel of the main body portion; and
   a rear ballistic shield removably received within the rear pocket.

7. The ballistic shield support undergarment as recited in claim 6, wherein each of said sleeve, front and rear pockets has a closed lower end and an open upper end.

8. The ballistic shield support undergarment as recited in claim 7, wherein each of said sleeve ballistic shields, said front ballistic shield and said rear ballistic shield comprises a small arms protective insert.

9. The ballistic shield support undergarment as recited in claim 7, wherein each of said sleeve ballistic shields, said front ballistic shield and said rear ballistic shield comprises a level IIIa ballistic cover.

10. A set of ballistic shield support undergarments, comprising:
    a pair of undershorts having a waist portion and a pair of leg portions;
    a pair of leg pockets, each of the leg pockets being attached to a respective one of the leg portions;
    a pair of leg ballistic shields, each of the leg ballistic shields being removably received within a respective one of the leg pockets, each of the leg pockets being positioned on the respective leg portion so that the respective leg ballistic shield received therein covers a wearer’s femoral artery when the undershorts are worn;
    an undershirt having a main body portion, a pair of sleeves and a neck portion, the main body portion having a front panel;
    a pair of sleeve pockets, each of the sleeve pockets being attached to a respective one of the sleeves;
    a front pocket attached to the front panel of the main body portion;
a pair of sleeve ballistic shields, each of the sleeve ballistic shields being removably received within a respective one of the sleeve pockets; and a front ballistic shield removably received within the front pocket.

11. The set of ballistic shield support undergarments as recited in claim 10, wherein the main body portion of said undershirt has a rear panel, said undershirt further comprising: a rear pocket attached to the rear panel of the main body portion; and a rear ballistic shield removably received within the rear pocket.

12. The set of ballistic shield support undergarments as recited in claim 11, wherein each of said leg, sleeve, front and rear pockets has a closed lower end and an open upper end.

13. The set of ballistic shield support undergarments as recited in claim 12, wherein each of said leg ballistic shields, said sleeve ballistic shields, said front ballistic shield and said rear ballistic shield comprises a small arms protective insert.

14. The set of ballistic shield support undergarments as recited in claim 12, wherein each of said front ballistic shields, said sleeve ballistic shields, said front ballistic shield and said rear ballistic shield comprises a level IIIa ballistic cover.

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