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(54) **CLOSE QUARTER BATTLE CHAPS**

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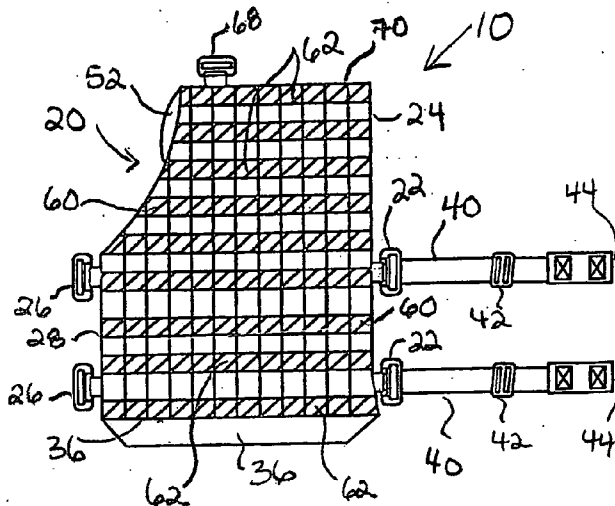
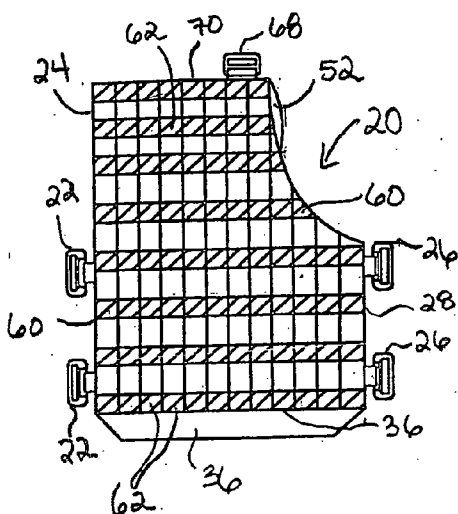
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(57) **ABSTRACT**

An article of manufacture for protecting the upper leg against injury from small arms fire that also protects against shrapnel and debris propelled from an explosive compound or device that also provides for attachment points for a myriad of combat equipment such as magazine pouches, holsters, grenade pouches, radio pouches, first aid kits, etcetera, includes a knee length set of chaps type of protective garment. The chaps provide frontal and flank protection to the upper leg and accordingly the femur and femoral artery, thus providing an over-garment that protects the wearer without impairing the wearers flexibility, and a piece of combat equipment that incorporates up to level 4 ballistic protection.

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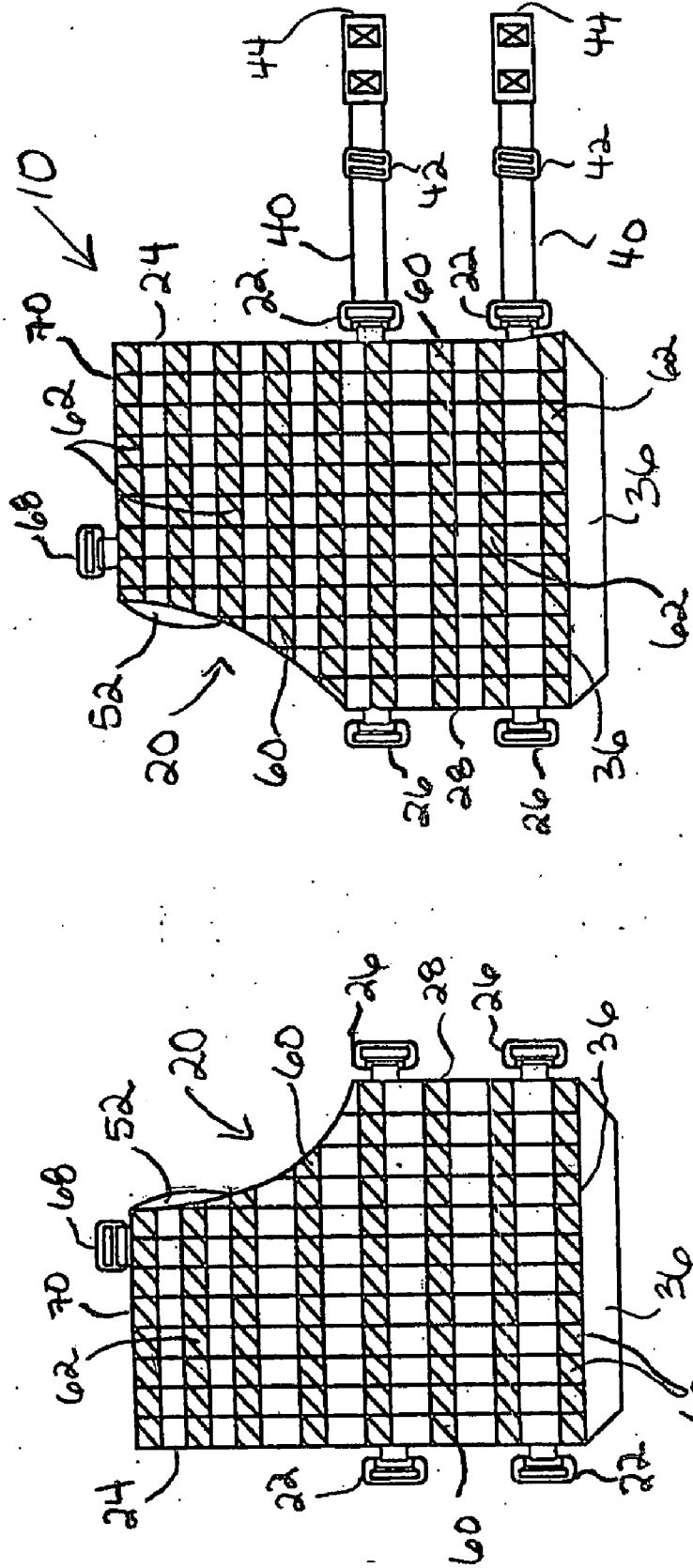


FIG. 1

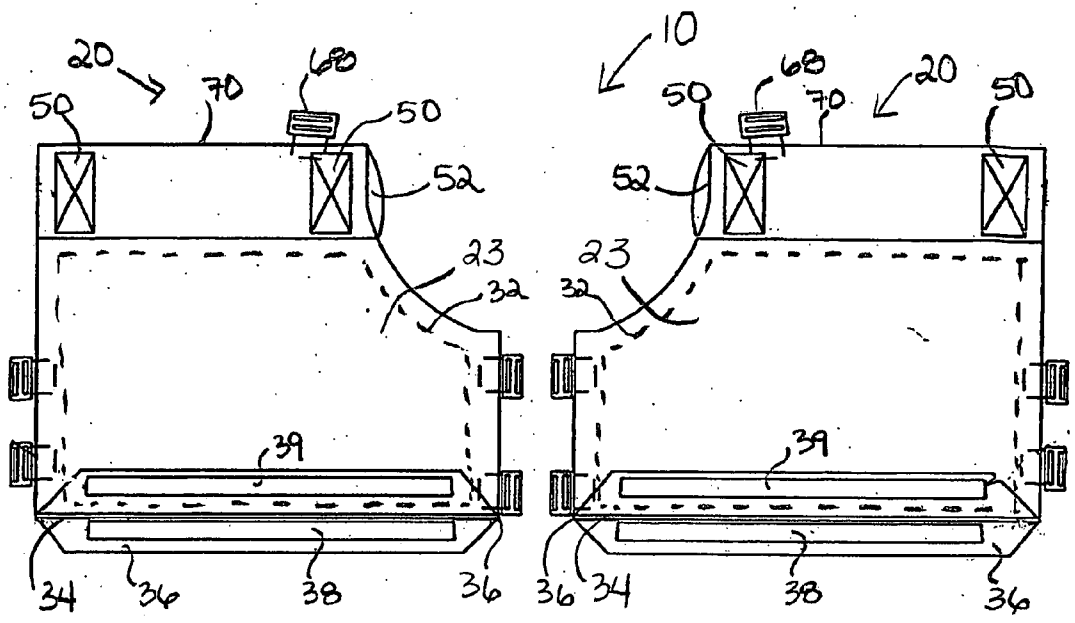


FIG. 2

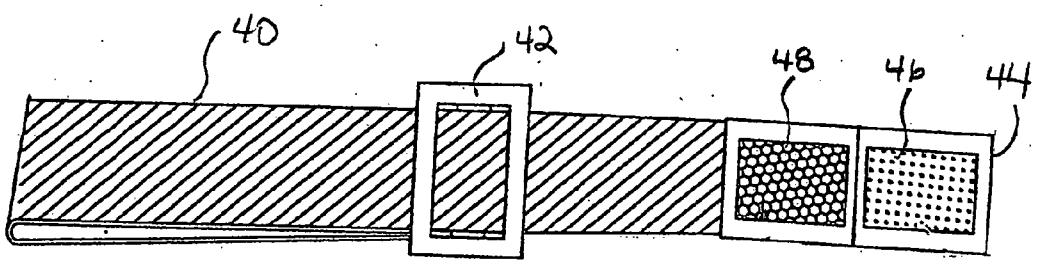


FIG. 3

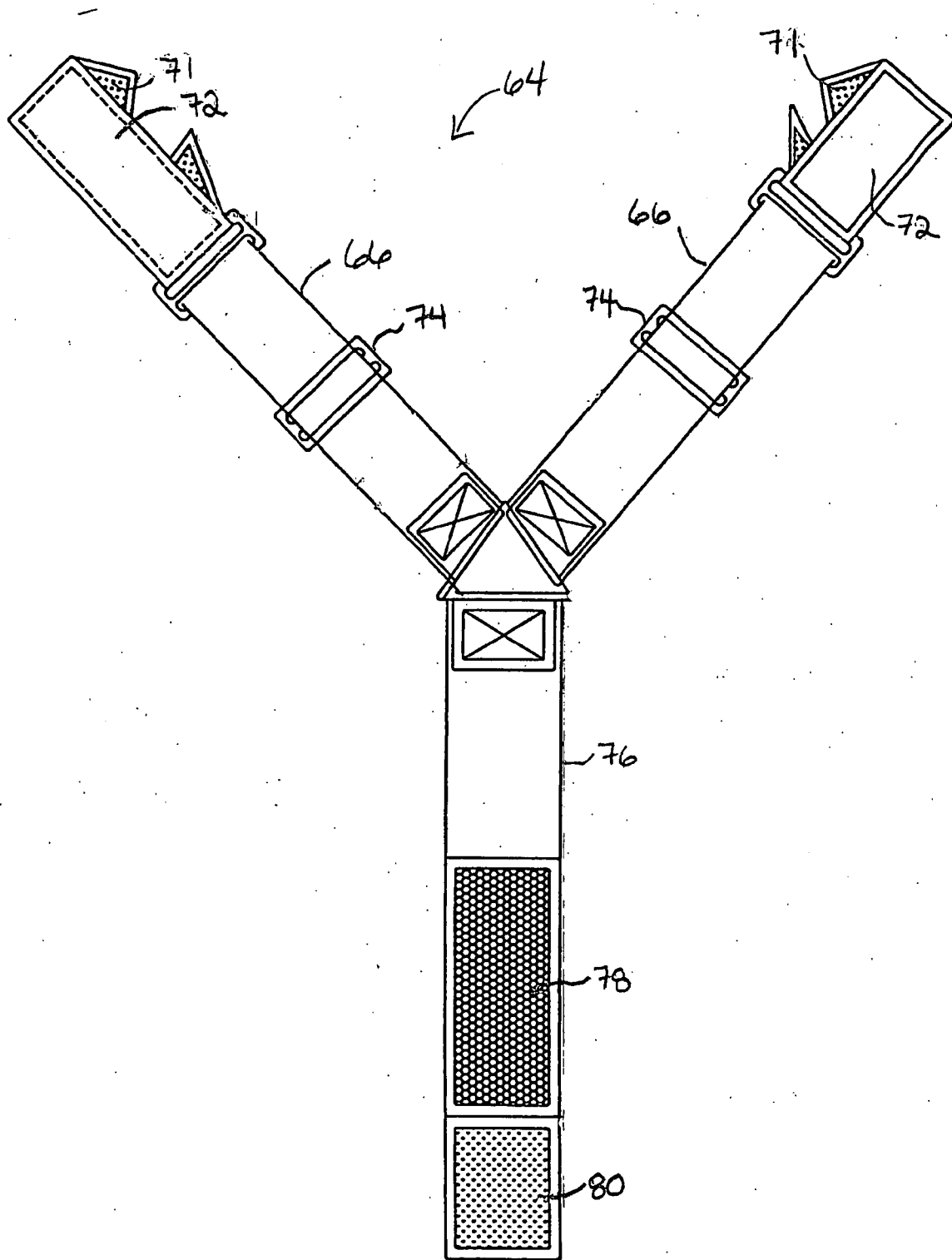


FIG. 4

CLOSE QUARTER BATTLE CHAPS

BACKGROUND OF THE INVENTION

[0001] This invention relates generally to the field of combat and more specifically to an article of manufacture for protecting the upper leg against injury from small arms fire (Leg Armor) that also protects against shrapnel and debris propelled from an explosive compound or device that also provides for attachment points for a myriad of combat equipment such as magazine pouches, holsters, grenade pouches, radio pouches, first aid kits, etcetera.

[0002] I designed the Close Quarter Battle Chap to protect the modern day combatant, soldier or law enforcement officer against gunshot wounds and shrapnel propelled by explosive devices.

[0003] Known products on the market today include what is referred to as Drop leg platforms, such as those available from Diamondback Tactical Solutions. The drop leg platforms also may incorporate armor, but they do not offer frontal protection as they extend only over the flank of the leg. There also is in existence a gunners suit that the Army uses to protect their Humvee turret gunners, but the gunner cannot operate outside of the truck as that suit greatly limits the gunners mobility and would induce heat exhaustion.

[0004] There are no other inventions on the market today that are perfectly suited for the assaulter or entry team member conducting swat type operations. House to house clearing operations are very taxing physically and require equipment specifically designed for this purpose, which the combatant needs readily accessible during the conduct of operations. Close quarter battle chaps are perfectly suited for this mission.

BRIEF SUMMARY OF THE INVENTION

[0005] The Close Quarter Battle Chaps offer frontal and flank protection to the upper leg and accordingly the femur and femoral artery.

[0006] The chaps also offer physical flexibility with protection.

[0007] The chaps further offer a mounting platform with greater surface area for combat related equipment on your body.

[0008] Still further, the chaps offer relief from lower back pain caused by wearing too much equipment load on the soldiers vest, when that load is transferred to the chaps.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 shows the front or exterior side of the leg assemblies of an exemplary embodiment of the close quarter battle chaps according to the invention.

[0010] FIG. 2 shows the rear or inner side of the leg assemblies of an exemplary embodiment of the close quarter battle chaps according to the invention.

[0011] FIG. 3 shows an exemplary embodiment of an adjustable leg strap that may be used with the leg assemblies shown in FIGS. 1 and 2.

[0012] FIG. 4 shows an exemplary embodiment of suspenders that may be used with the leg assemblies of FIGS. 1 and 2.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0013] Detailed descriptions of the preferred embodiment are provided herein. It is to be understood, however, that the

present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system, structure or manner.

[0014] Close Quarter Battle Chaps (CQB Chaps) **10** closely resemble in shape the traditional outline and cut of western wear “cowboy chaps”, but as shown in FIGS. **1** and **2**, the leg assemblies **20** are knee length and cover only the upper leg, thereby providing frontal and flank protection to the upper leg and accordingly the femur and femoral artery. The leg assemblies **20** of CQB Chaps are made of cordura fabric or other fabric that meets military specifications, and include a front panel **21** (FIG. **1**) and a rear panel **23** (FIG. **2**).

[0015] As can be seen in FIG. **2**, the CQB Chaps **10** have a full dimension pocket **30** on the back (i.e., between the front panel **21** and rear panel **23**) that holds protective body armor **32**. The armor **32**, which may be Kevlar and/or armored plates that may provide up to level 4 ballistic protection, may be inserted into pocket **30** through opening **34**, which, in the embodiment shown, is provided proximate the bottom edge **36** of each leg assembly **20**. The opening **34** into the pocket **30** may be covered by a flap **36** which may be held in the closed position by a hook and loop type closure system **38** and **39**. To hold the armor **32** in the appropriate position within pocket **30**, the CQB Chaps **10** secure their armor via hook and loop tape on the interior of the pocket **30**.

[0016] As shown in FIGS. **1** and **3**, CQB Chaps **10** incorporate two adjustable leg straps **40** per leg **20** and they are made of elastic, such as an elastic nylon strap, and adjust via an M-buckle **42**. Each leg strap **40** couples to a leg assembly **20** by routing a free end **44** of strap **40** through an M-buckle **22** which is attached proximate a side edge **24** of leg **20**. The free end **44** routes back through buckle **42** on strap **40** and is terminated by a hook and loop type closure system **46**, **48**. When securing the leg strap **40** about a leg of a wearer of the CQB chaps **10**, free end **44** is routed through an M-buckle **26** which is attached to leg **20** proximate a side edge **28**. The strap **40** may then be secured about the leg using hook and loop closure **46** and **48**.

[0017] CQB Chaps secure to a belt via hook and loop tape **50** and have a belt channel **52** across the top of each leg assembly **20**. In the embodiment shown in FIG. **2**, hook and loop tape portions **50** are sewn to the interior of the belt channel **52** and are arranged to bond to a belt covered in Velcro when the belt is routed through belt channel **52**, thereby securing the leg assembly **20** to the belt.

[0018] CQB Chaps are covered on the exterior in strapping that serves as attachment points for all sorts of combat equipment. In the embodiment shown in FIG. **1**, the strapping is a plurality of flat nylon web straps **60** that extend horizontally across the exterior surface of leg assemblies **20** in a plurality of vertically spaced apart rows. The plurality of straps **60** are secured to the exterior surface of legs **20** at spaced apart intervals along the length of each strap **60** to provide attachment points **62**. In the embodiment shown in FIG. **1**, the attachment points **62** are provided by stitching each strap **60** in a vertical direction on one inch centers.

[0019] CQB Chaps are supported not only by a belt but are also intended to be supported by suspenders, such as suspenders **64** shown in FIG. **4**. In the embodiment shown in FIG. **4**, the suspenders **64** include adjustable shoulder straps **66**, which couple to leg assemblies **20** via an M-buckle **68**

attached to each leg assembly 20 proximate a top edge 70. Shoulder straps 66 are then secured in place via hook and loop type closure systems 70 and 72. M-buckles 74 on shoulder straps 66 provide for adjustment of the length of straps 66. Suspenders 64 also include a back strap 76 which secures the suspenders to a belt that is routed through the belt channel 52. Back strap 76 is secured about the belt via hook and loop type closures 78 and 80.

[0020] While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

What is claimed is:

1. An article of manufacture for protecting the upper leg against injury from small arms fire (Leg Armor) that also protects against shrapnel and debris propelled from an explosive compound or device that also provides for attachment points for a myriad of combat equipment such as magazine pouches and holsters and grenade pouches and radio pouches and first aid kits etcetera comprising:

- A protective garment that covers more surface area than any other on the drop leg platform on the market today;
- An over-garment that protects the wearer without impairing the wearers flexibility; and
- A piece of combat equipment that incorporates up to level 4 ballistic protection.

2. A ballistic over-garment, comprising:
ballistic armor;

- a pair of knee-length leg assemblies, each leg assembly configured to cover a front portion and a flank portion of a wearer's upper leg, each leg assembly having a pocket to retain the ballistic armor and a belt channel for mounting the leg assembly to a belt; and
- a plurality of leg straps, at least one leg strap coupled to each leg assembly and configured to releasably secure each leg assembly about the wearer's upper leg such that the ballistic armor substantially covers the front portion and the flank portion of the upper leg.

3. The ballistic over-garment as recited in claim 2, wherein each leg assembly includes a front panel and a rear panel that define the pocket therebetween.

4. The ballistic over-garment as recited in claim 2, wherein each leg assembly includes an outer peripheral edge extending about a perimeter of the leg assembly, and wherein the outer peripheral edge substantially defines the size of the pocket.

5. The ballistic over-garment as recited in claim 2, wherein each leg assembly includes an opening through which the ballistic armor is removably received into the pocket.

6. The ballistic over-garment as recited in claim 5, wherein each leg assembly includes a flap movable between open and closed positions, and, when in the closed position, the flap covers the opening to retain the ballistic armor in the pocket.

7. The ballistic over-garment as recited in claim 2, comprising a plurality of attachment regions coupled to a front surface of each leg assembly, the attachment regions configured to retain peripheral equipment when attached thereto.

8. The ballistic over-garment as recited in claim 7, wherein the attachment regions comprise a plurality of straps, each strap coupled to the front surface of each leg assembly at spaced apart intervals along the length of the strap.

9. Ballistic chaps, comprising:

- ballistic armor;
- a pair of knee-length leg assemblies, each leg assembly having a front side edge, a rear side edge, and a pocket to retain the ballistic armor, each leg assembly configured to cover a front portion and a flank portion of a wearer's upper leg;
- a plurality of leg straps, at least one leg strap coupled to each leg assembly proximate the front side edge and the rear side edge and configured to releasably secure each leg assembly about the wearer's upper leg such that the ballistic armor substantially covers the front portion and the flank portion of the upper leg; and
- a plurality of straps coupled to an outer surface of each leg assembly in a plurality of spaced apart rows that extend between the front side edge and the rear side edge, each strap coupled to the outer surface at spaced apart intervals along the length of the strap to form a plurality of attachment regions to retain peripheral equipment when attached thereto.

10. The ballistic chaps as recited in claim 9, wherein each leg assembly includes a belt channel for mounting the leg assembly to a belt.

11. The ballistic chaps as recited in claim 9, wherein each leg assembly includes a front panel and a rear panel that define the pocket therebetween.

12. The ballistic chaps as recited in claim 9, wherein each leg assembly includes an outer peripheral edge extending about a perimeter of the leg assembly, and wherein the outer peripheral edge substantially defines the size of the pocket.

13. The ballistic chaps as recited in claim 9, wherein each leg assembly includes an opening through which the ballistic armor is removably received into the pocket.

14. The ballistic chaps as recited in claim 13, wherein each leg assembly includes a flap movable between open and closed positions, and, when in the closed position, the flap covers the opening to retain the ballistic armor in the pocket.

15. The ballistic chaps as recited in claim 9, wherein the ballistic armor is made of Kevlar.

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