

Search query (3): [SP]: 1. a modular armor system, comprising: a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face, the ballistics-grade armor panel providing ballistics protection satisfying at least one ballistics standard promulgated by national institute of justice, home office scientific development branch, nato standardization agreement, underwriters laboratory, euronorm, or vpam and a fastener coupled to the ballistics-grade armor panel, wherein the fastener is configured to detachably couple the ballistics-grade armor panel to a structure. 2. the modular armor system of claim 1, wherein the structure comprises a frame surrounding a window in a vehicle or building. 3. the modular armor system of claim 1, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 4. the modular armor system of claim 1, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, and any combinations thereof. 5. the modular armor system of claim 1, wherein the fastener comprises a hook or loop type fastening member coupled to at least one of the outer strike face and the inner surface of the ballistics-grade armor panel. 6. the modular armor system of claim 1, further comprising a step in the ballistics-grade armor panel extending inward from the outer strike face, and wherein the fastener comprises a plurality of hook or loop type fastening tabs coupled to the step and overhanging edges of the ballistics-grade armor panel. 7. the modular armor system of claim 1, wherein the ballistics-grade armor panel has a thickness of approximately inch to approximately 3 inches. 8. the modular armor system of claim 1, wherein the ballistics-grade armor panel has a ballistics rating of nij level iia. 9. the modular armor system of claim 1, wherein the fastener is coupled to the ballistics-grade armor panel by a layer of adhesive. 10. the modular armor system of claim 9, wherein the layer of adhesive comprises polyurethane. 11. an armored vehicle, comprising: a vehicle, comprising: an interior cabin at least one window having an outer surface and an inner surface facing the interior cabin of the vehicle and a frame surrounding the at least one window and a modular armor system configured to be detachably coupled to the frame of the vehicle, the modular armor system comprising a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face. 12. the armored vehicle of claim 11, further comprising: a first fastener coupled to the frame of the vehicle and a second fastener coupled to at least one of the outer strike face and the inner surface of the ballistics-grade armor panel, wherein the second fastener is configured to be detachably coupled to the first fastener. 13. the armored vehicle of claim 12, wherein the first fastener is one of a hook-type fastening member and a loop-type fastening member, and the second fastener is the other of the hook-type fastening member and the loop-type fastening member. 14. the armored vehicle of claim 12, wherein the first fastener is one of a knob bracket and a latch assembly and the second fastener is the other of the knob bracket and the latch assembly. 15. the armored vehicle of claim 11, further comprising: at least one opening extending through the ballistics-grade armor panel a bushing received in each of the at least one opening and a quick-release mechanism coupled to the frame and extending through each bushing, wherein the quick-release mechanism detachably couples the ballistics-grade armor panel to the frame of the vehicle. 16. the armored vehicle of claim 11, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 17. the armored vehicle of claim 11, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, or any combinations thereof. 18. the armored vehicle of claim 11, further comprising: a step in the ballistics-grade armor panel extending inward from the outer strike face, the step receiving at least a portion of the frame a plurality of hook or loop type fastening tabs coupled to the step and overhanging edges of the ballistics-grade armor panel and at least one loop or hook type fastening member coupled to the frame of the vehicle, wherein the plurality of hook or loop type fastening tabs are configured to be detachably coupled to the at least one loop or hook type fastening member. 19. the armored vehicle of claim 18, wherein the outer strike face of the armor panel abuts the inner surface of the window. 20. the armored vehicle of claim 18, wherein the outer strike face of the armor panel is spaced apart from the inner surface of the window. 21. a modular armor system, comprising: a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face at least one opening extending through the ballistics-grade armor panel a bushing received in each of the at least one opening and a quick-release mechanism extending through each bushing, wherein the quick-release mechanism is configured to detachably connect the modular armor system to a structure. 22. the modular armor system of claim 21, wherein the quick-release mechanism is selected from the group of quick-release mechanisms consisting of a quick-release skewer assembly and a push button pin assembly. 23. the modular armor system of claim 21, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 24. the modular armor system of claim 21, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, and any combinations thereof. 25. a method of manufacturing a modular armor system configured to be detachably coupled to a structure, the method comprising: laminating a fastener to a ballistics-grade armor panel with a layer of adhesive. 26. the method of claim 25, wherein the step of laminating the attachment mechanism to the ballistics-grade armor panel comprises subjecting the layer of adhesive to an elevated temperature and an elevated pressure in an autoclave. 27. the method of claim 26, wherein the elevated temperature is at least approximately 145 degrees fahrenheit and the elevated pressure is at least approximately 20 psi. 28. the method of claim 25, wherein: the fastener includes a hook or loop type fastening member having a base layer and the adhesive layer is infused into the base layer of the fastener during lamination of the fastener to the ballistics-grade armor panel. 29. the method of claim 25, wherein the adhesive layer comprises polyurethane. 30. the method of claim 25, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 31. the method of claim 25, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, and any combinations thereof.

Results: 17

Search history

Search PN=(WO2015147941) (Results 1)

1:

Search PN=(WO2015147941) (Results 1)

2:

Search [SP]: 1. a modular armor system, comprising: a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face, the ballistics-grade armor panel providing ballistics protection satisfying at least one ballistics standard promulgated by national institute of justice, home office scientific development branch, nato standardization agreement, underwriters laboratory, euronorm, or vpam and a fastener coupled to the ballistics-grade armor panel, wherein the fastener is configured to detachably couple the ballistics-grade armor panel to a structure. 2. the modular armor system of claim 1, wherein the structure comprises a frame surrounding a window in a vehicle or building. 3. the modular armor system of claim 1, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 4. the modular armor system of claim 1, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, and any combinations thereof. 5. the modular armor system of claim 1, wherein the fastener comprises a hook or loop type fastening member coupled to at least one of the outer strike face and the inner surface of the ballistics-grade armor panel. 6. the modular armor system of claim 1, further comprising a step in the ballistics-grade armor panel extending inward from the outer strike face, and wherein the fastener comprises a plurality of hook or loop type fastening tabs coupled to the step and overhanging edges of the ballistics-grade armor panel. 7. the modular armor system of claim 1, wherein the ballistics-grade armor panel has a thickness of approximately inch to approximately 3 inches. 8. the modular armor system of claim 1, wherein the ballistics-grade armor panel has a ballistics rating of nij level iia. 9. the modular armor system of claim 1, wherein the fastener is coupled to the ballistics-grade armor panel by a layer of adhesive. 10. the modular armor system of claim 9, wherein the layer of adhesive comprises polyurethane. 11. an armored vehicle, comprising: a vehicle, comprising: an interior cabin at least one window having an outer surface and an inner surface facing the interior cabin of the vehicle and a frame surrounding the at least one window and a modular armor system configured to be detachably coupled to the frame of the vehicle, the modular armor system comprising a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face. 12. the armored vehicle of claim 11, further comprising: a first fastener coupled to the frame of the vehicle and a second fastener coupled to at least one of the outer strike face and the inner surface of the ballistics-grade armor panel, wherein the second fastener is configured to be detachably coupled to the first fastener. 13. the armored vehicle of claim 12, wherein the first fastener is one of a hook-type fastening member and a loop-type fastening member, and the second fastener is the other of the hook-type fastening member and the loop-type fastening member. 14. the armored vehicle of claim 12, wherein the first fastener is one of a knob bracket and a latch assembly and the second fastener is the other of the knob bracket and the latch assembly. 15. the armored vehicle of claim 11, further comprising: at least one opening extending through the ballistics-grade armor panel a bushing received in each of the at least one opening and a quick-release mechanism coupled to the frame and extending through each bushing, wherein the quick-release mechanism detachably couples the ballistics-grade armor panel to the frame of the vehicle. 16. the armored vehicle of claim 11, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 17. the armored vehicle of claim 11, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, or any combinations thereof. 18. the armored vehicle of claim 11, further comprising: a step in the ballistics-grade armor panel extending inward from the outer strike face, the step receiving at least a portion of the frame a plurality of hook or loop type fastening tabs coupled to the step and overhanging edges of the ballistics-grade armor panel and at least one loop or hook type fastening member coupled to the frame of the vehicle, wherein the plurality

of hook or loop type fastening tabs are configured to be detachably coupled to the at least one loop or hook type fastening member. 19. the armored vehicle of claim 18, wherein the outer strike face of the armor panel abuts the inner surface of the window. 20. the armored vehicle of claim 18, wherein the outer strike face of the armor panel is spaced apart from the inner surface of the window. 21. a modular armor system, comprising: a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face at least one opening extending through the ballistics-grade armor panel a bushing received in each of the at least one opening and a quick-release mechanism extending through each bushing, wherein the quick-release mechanism is configured to detachably connect the modular armor system to a structure. 22. the modular armor system of claim 21, wherein the quick-release mechanism is selected from the group of quick-release mechanisms consisting of a quick-release skewer assembly and a push button pin assembly. 23. the modular armor system of claim 21, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 24. the modular armor system of claim 21, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, and any combinations thereof. 25. a method of manufacturing a modular armor system configured to be detachably coupled to a structure, the method comprising: laminating a fastener to a ballistics-grade armor panel with a layer of adhesive. 26. the method of claim 25, wherein the step of laminating the attachment mechanism to the ballistics-grade armor panel comprises subjecting the layer of adhesive to an elevated temperature and an elevated pressure in an autoclave. 27. the method of claim 26, wherein the elevated temperature is at least approximately 145 degrees fahrenheit and the elevated pressure is at least approximately 20 psi. 28. the method of claim 25, wherein: the fastener includes a hook or loop type fastening member having a base layer and the adhesive layer is infused into the base layer of the fastener during lamination of the fastener to the ballistics-grade armor panel. 29. the method of claim 25, wherein the adhesive layer comprises polyurethane. 30. the method of claim 25, wherein a material of the ballistics-grade armor panel is selected from the group of transparent materials consisting of glass, interlayer, acrylic, polycarbonate, plastic, transparent ceramic, ionomers, ionoplasts, and any combinations thereof. 31. the method of claim 25, wherein a material of the ballistics-grade armor panel is selected from the group of opaque materials consisting of metal, alloys, ceramic, composite, synthetic fibers, and any combinations thereof. (Results 17)

Title: ARMOR MOUNTING SYSTEM AND ARMOR INCORPORATING THE SAME

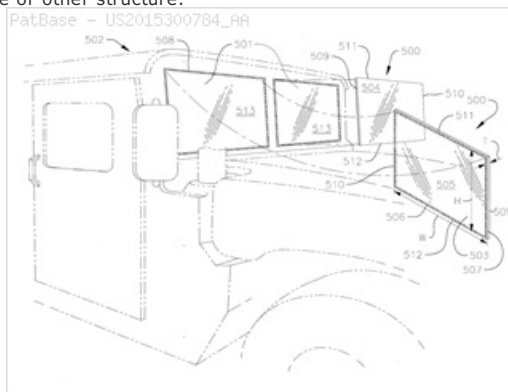
Abstract: Source: US2015300784A A modular armor system configured to be readily attached and detached from a frame surrounding a window in a vehicle or other structure, such as a building. The modular armor system may be configured to provide any desired ballistics protection rating. In one embodiment, the modular armor system includes a ballistics-grade armor panel having an outer strike face and an inner surface opposite the outer strike face. The modular armor system also includes a fastener coupled to the ballistics-grade armor panel. The fastener is configured to detachably couple the ballistics-grade armor panel to the frame surrounding the window in the vehicle or other structure.

Classifications:

International (IPC 8-9): B29C65/02 B29C65/48 F41H5/013 F41H5/04 F41H7/04 (Advanced/Invention)

CPC: F41H7/04 F41H5/0407 F41H5/0421 F41H5/0428 F41H5/0457 B29C65/48 B29C65/02 B29K2075/00 B29L2031/3005 B29L2031/768 F41H5/013

US: 156/66 89/36.02 89/36.08



Family:

Publication number	Publication date	Application number	Application date
CO20160000519 A2	20161121	CO20160000519	20160801
EP3090231 A1	20161109	EP20140879268	20141229
MX2016008537 A1	20170202	MX20160008537	20141229
US2015300784 AA	20151022	US20140585099	20141229
WO15147941 A1	20151001	WO2014US72608	20141229

Priority:

US20130922367P 20131231 US20140585099 20141229 WO2014US72608 20141229

Probable Assignee: PPG IND OHIO INC

Assignee(s): (std): PPG IND OHIO INC

Inventor(s): (std): CARLO A SCARINCI ; DAVID PALERMO ; PALERMO DAVID ; SCARINCI CARLO A

Agent(s): JOSE ANDRES RINCON USCATEGUI; DILG HAEUSLER SCHINDELMANN PATENTANWALTSGESELLSCHAFT MBH; SZAKALSKI DUSTIN R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: Removable bullet proof apparatus for vehicles

Abstract: Source: US5271311A Removable bulletproof apparatus for a vehicle includes a transparent panel which is secured to or disposed adjacent to a vehicle window and a flexible curtain is secured to a bracket to which the bottom portion of the transparent panel is secured. Both the transparent panel and the curtain are bulletproof. Both the panel and the curtain are easily installed and easily removed from their common bracket and from the vehicle. Depending on the particular design or structure of a vehicle in which the apparatus is installed, various top bracket structures may be used. The curtain is made of layers of woven cloth, preferably of an aramid fiber, such as a "Kevlar" cloth. In one embodiment, as for example, for use by law enforcement vehicles, the curtain includes a bottom flap or portion that may be pivoted down when the door is opened to provide an officer with essentially a full length bulletproof shield. The full length shield includes both the transparent panel and the curtain and its flap. A similar curtain and transparent panel may be secured to and behind the front seat to protect the occupants of the front seat from bullets fired from the rear of the vehicle or from rearwardly of the front door.

Classifications:

International (IPC 8-9): B60R21/12 F41H5/013

F41H7/04 (Advanced/Invention);

B60R21/02 F41H5/00 F41H7/00 (Core/Invention)

International (IPC 1-7): B60J1/00 B60R21/12 F41H5/013 F41H5/06

F41H7/04

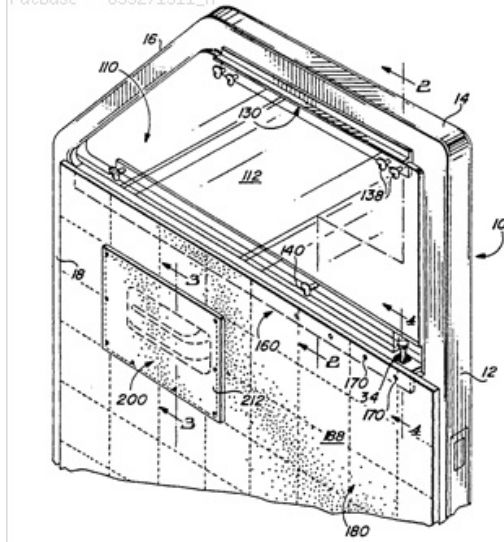
CPC: Y10S428/911 F41H5/08 B60R21/12 F41H5/013 F41H5/226

F41H5/263

European: B60R21/12 F41H5/013 F41H5/08 F41H5/22D F41H5/26B

US: 109/49.5 296/146.7 428/911 89/36.02 89/36.08

PatBase - US5271311_R



Family:

Publication number	Publication date	Application number	Application date
CA2111781 AA	19950618	CA19932111781	19931217
CA2111781 C	19990112	CA19932111781	19931217
EP0658738 A1	19950621	EP19930310268	19931217
US5271311 A	19931221	US19910792645	19911115
US5370035 A	19941206	US19930139313	19931019
US5413026 A	19950509	US19940316253	19940930
US5438908 A	19950808	US19940316250	19940930
US5811719 A	19980922	US19960690579	19960731

Priority:

CA19932111781 19931217	EP19930310268 19931217	US19940316250 19940930
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US19960690579 19960731	US19950392056 19950222	

Probable Assignee: MADDEN JR JAMES R

Assignee(s): (std): MADDEN JAMES R ; MADDEN JAMES R JR ; MADDEN JR JAMES R

Inventor(s): (std): MADDEN JAMES R JR ; MADDEN JR JAMES R

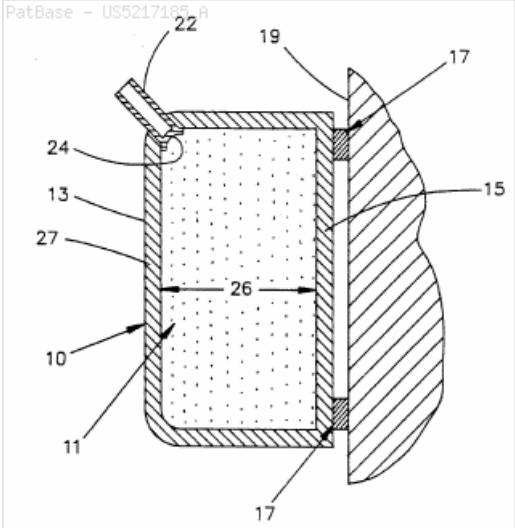
Inventor(s): MADDEN JAMES R

Designated states: CH DE ES FR GB GR IT LI NL

Title: Ablative shielding for hypervelocity projectiles

Abstract: Source: US5217185 A A hypervelocity projectile shield which includes a hollow semi-flexible housing fabricated from a plastic like, or otherwise transparent membrane which is filled with a fluid (gas or liquid). The housing has a inlet valve-similar to that on a tire or basketball, to introduce an ablating fluid into the housing. The housing is attached by a Velcro mount or double-sided adhesive tape to the outside surface of a structure to be protected. The housings are arrayed in a side-by-side relationship and may be in layers and in an over-lapping relationship for complete coverage of the surface to be protected. In use, when a hypervelocity projectile penetrates the outer wall of a housing it is broken up and then the projectile is ablated as it travels through the fluid, much like a meteorite "burns up" as it enters the earth's atmosphere, and the housing is deflated. The deflated housing can be easily spotted for replacement, even from a distance. Replacement is then accomplished by simply pulling a deflated housing off the structure and installing a new housing.

Classifications:
International (IPC 8-9): B64G1/58 (Advanced/Invention);
B64G1/22 (Core/Invention)
International (IPC 1-7): B64D7/00
CPC: B64G1/58
European: B64G1/58
US: 244/121 244/158R 244/159.1 89/36.02



Family:

Publication number	Publication date	Application number	Application date
US5217185 A	19930608	US19920887674	19920521

Priority:

US19920887674 19920521

Probable Assignee: NASA

Assignee(s): (std): NASA

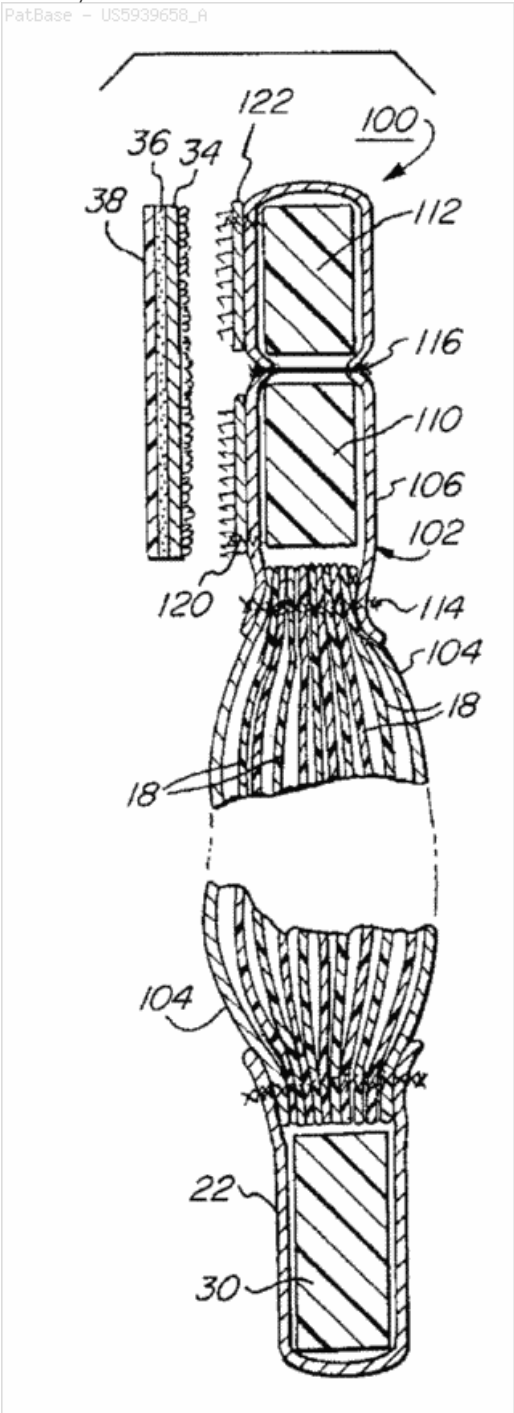
Assignee(s): THE UNITED STATES OF AMERICA AS REPRESENTED BY THE ; THE UNITED STATES OF AMERICA AS REPRESENTED BY THE ADMINISTRATOR OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ; ADMINISTRATOR OF NATIONAL AERONAUTICS AND SPACE AD

Inventor(s): (std): RUCKER MICHELLE A

Title: Portable tactical shield system

Abstract: Source: US5939658A A tactical shield system for shielding a doorway or window. The tactical shield system includes an armored curtain and a hook and loop fastening system. The curtain includes overlaid sheets of suitably lightweight and high strength armored material and a top border sewn to the top periphery of the sheets. The curtain also includes a rigid bar contained in the top border. The hook and loop fastening system includes a hook strip sewn to the rigid top border of the curtain, and a loop strip having a layer of adhesive and a removable wax sheet covering the adhesive prior to use. A method of at least partially shielding a doorway or window includes first removing the wax sheet from the adhesive, and securing the loop strip to a wall above the doorway or window using the adhesive, or directly to a door or window. The hook strip secured to the curtain is then fastened to the loop strip secured to the wall, whereby the armored curtain freely hangs in front of the doorway or window to at least partially shield the doorway or window.

Classifications:
International (IPC 8-9): F41H5/08 (Advanced/Invention)
International (IPC 1-7): F41H5/013 F41H5/24
CPC: F41H5/08
European: F41H5/08
US: 109/49.5 89/36.02 89/36.04



Family:

Publication number	Publication date	Application number	Application date
US5939658 A	19990817	US19980048480	19980326

Priority:
US19970832939 19970403 US19980048480 19980326

Probable Assignee: MULLER ELIZABETH B
Assignee(s): MULLER ELIZABETH B
Inventor(s): (std) MULLER ELIZABETH B

Title: Ballistic shield

Abstract: Source: US5377577A A ballistic-resistant blanket comprised of a plurality of panels that have inter-engaging connection means along their peripheries so that the individual panels can be arranged in a variety of shapes and forms and these panels are equipped with a plurality of handles to enable the users to handle the panels under a wide range of circumstances.

Classifications:

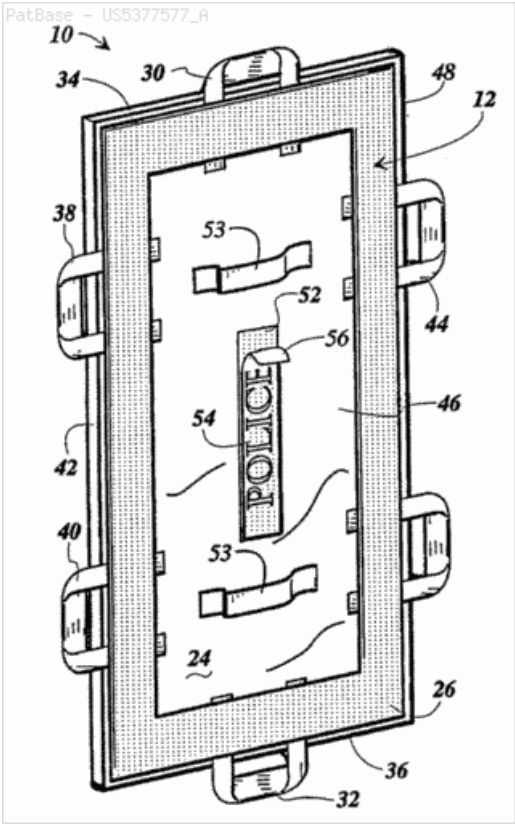
International (IPC 8-9): F41H5/08 (Advanced/Invention); F41H5/00 (Core/Invention)

International (IPC 1-7): F41H5/08 F41H7/00

CPC: F41H5/08

European: F41H5/08

US: 2/2.5 2/25 89/36.05 89/36.07 89/360.5



Family:

Publication number	Publication date	Application number	Application date
US5377577 A	19950103	US19920977015	19921116

Priority:

US19920977015 19921116

Probable Assignee: GUARDIAN TECHNOLOGIES INTERNAT

Assignee(s): (std): GUARDIAN TECHNOLOGIES INT ; GUARDIAN TECHNOLOGIES INTERNAT

Assignee(s): GUARDIAN TECHNOLOGIES INTERNATIONAL

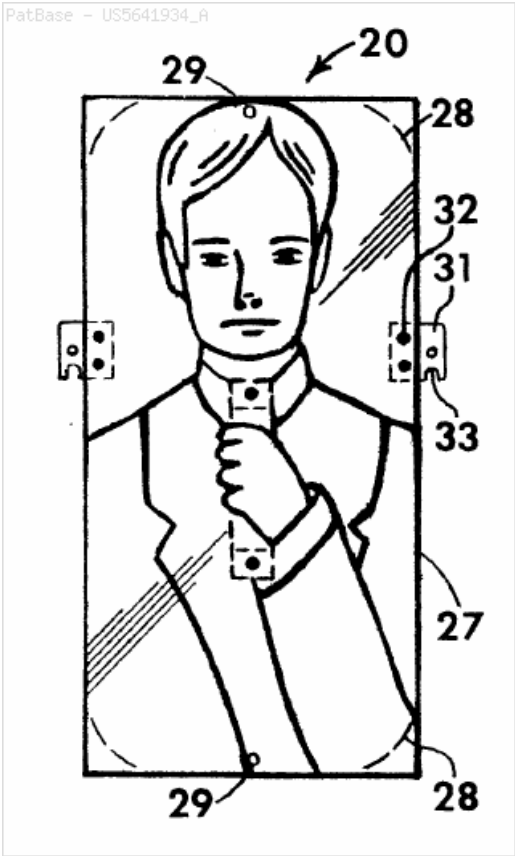
Inventor(s): (std): BOUNKONG BOUAKEO ; FERNANDEZ JOSEPH F ; NORTH OLIVER L

Title: See-through hand-held bullet-resistant shield

Abstract: Source: US5641934A See-through, hand-held, bullet-resistant shields are disclosed which provide life-saving upper body protection for a police officer, shopkeeper, bank teller or any person holding said shield, or standing or ducking behind said shield when substantially vertically mounted on the side of a counter top surface. Such shields are formed from a totally see-through or substantially transparent (no lens) bullet-resistant sheet material, capable of being vertically disposed and of a size and shape so as to provide upper body frontal protection of at least a person's face, head, neck, forearm, hand and upper chest anatomy; and has at least one hand-gripping means centrally attached to and spaced from one side of said transparent sheet.

Classifications:

International (IPC 8-9): F41H5/04 F41H5/08 (Advanced/Invention);
F41H5/00 (Core/Invention)
International (IPC 1-7): F41H5/08
CPC: F41H5/0407 F41H5/08
European: F41H5/04B F41H5/08
US: 89/36.05 89/360.5



Family:

Publication number	Publication date	Application number	Application date
US5641934 A	19970624	US19950423712	19950417

Priority:

US19950423712 19950417

Probable Assignee:

FOLLETT HAROLD EUGENE

Assignee(s):

FOLLETT HAROLD EUGENE

Inventor(s): (std):

FOLLETT HAROLD EUGENE

Title: COMPOSITE ARMOR STRUCTURE

Abstract: Source: US2004020354A A composite armor structure for ballistically protecting a gap from an impacting projectile threat and for use with at least one ballistic armor module. The gap extends along a margin of the module. The structure comprises a body having a protection portion with at least a single layer of ceramic bodies. The structure further comprises a carrier portion supporting the protection portion and being made of a material different from the ceramic bodies. The protection portion is designed to span the gap. The carrier portion is designed to extend beyond the gap to overlap with the margin when viewed from a perspective of the impacting projectile threat.

Classifications:

International (IPC 8-9): F41H5/013 F41H5/04 (Advanced/Invention); F41H5/00 (Core/Invention)

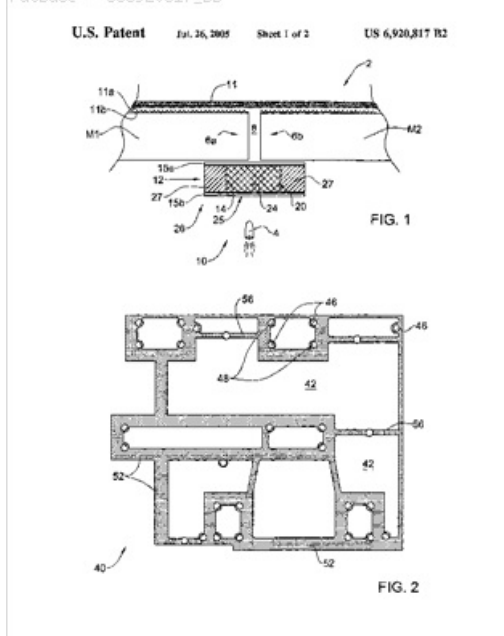
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CPC: F41H5/013 F41H5/0414

European: F41H5/013 F41H5/04C

US: 89/36.02 89/36.04 89/36.11 89/361.1

PatBase - US6920817_BB



Family:

Publication number	Publication date	Application number	Application date
AT333631 E	20060815	AT20030007392T	20030402
DE60306838 D1	20060831	DE20036006838	20030402
EP1361408 A1	20031112	EP20030007392	20030402
EP1361408 B1	20060719	EP20030007392	20030402
IL149479 A0	20040219	IL20020149479	20020506
IL149479 A1	20080120	IL20020149479	20020506
US2004020354 AA	20040205	US20030388759	20030317
US6920817 BB	20050726	US20030388759	20030317

Priority:

IL20020149479 20020506

Probable Assignee: PLASAN KIBBUTZ SASA

Assignee(s): (std): PLASAN KIBBUTZ SASA ; PLASAN KUBBUTZ SASA ; RAVID MOSHE ; PLASAN SASA ; HIRSCHBERG YOAV

Assignee(s): MOSHE RAVID ; PLA N KIBBUTZ KIBBUTZ M P MAROM HAGALIL SA ; YOAV HIRSCHBERG

Inventor(s): (std): HIRSCHBERG YOAV ; RAVID MOSCHE ; RAVID MOSHE

Inventor(s): MOSHE RAVID ; YOAV HIRSCHBERG

Agent(s): REINHOLD COHN AND PARTNERS; NATH AND ASSOCIATES PLLC; RICHMOND DEREK; KANG GREGORY B; DEREK; GREGORY B

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Title: CERAMIC ARMOUR AND METHOD OF CONSTRUCTION

Abstract: Source: US2009320676A An armor for protection against large caliber projectiles has a ceramic layer with a confinement layer on a front thereof. The ceramic layer is backed by a first metallic layer and the first metallic layer in turn is backed by a composite layer. The composite layer is backed by a second metallic layer, which in turn is backed by an anti-trauma layer. The armor is used to protect personnel, but it can also be used to protect objectives such as vehicles.

Classifications:

International (IPC 8-9): B32B15/14 B32B18/00 F41H F41H5/02
F41H5/04 F41H5/08 (Advanced/Invention);
B32B15/14 B32B18/00 F41H5/00 (Core/Invention);
F41H (Subclass/Invention)

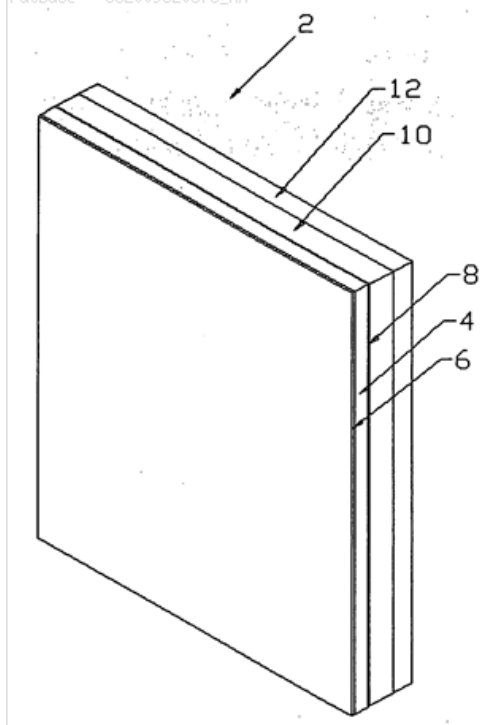
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C04B2237/403 C04B2237/52 C04B2237/704 C04B2237/706
F41H5/0421

European: B32B9/00C B32B9/04A C04B35/634D4 C04B35/645
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L32B571/02 M04B235/660H M04B237/34F M04B237/36
M04B237/36D M04B237/40H M04B237/52 M04B237/70K
M04B237/70M

US: 2/2.5 89/36.02 89/36.020P 89/36.020S 89/36.05 89/36.050P
89/36.07 89/907 89/907S 89/910 89/910S 89/914 89/914S 89/917
89/917S 89/921 89/921S

PatBase - US2009320676_AA



Family:

Publication number	Publication date	Application number	Application date
CA2542025 AA	20060407	CA20042542025	20041008
CA2542025 C	20091215	CA20042542025	20041008
EP1678461 A1	20060712	EP20040789698	20041008
EP1678461 A4	20100929	EP20040789698	20041008
IL174938 A0	20060820	IL20040174938	20041008
US2009320676 AA	20091231	US20090453059	20090428
US2012174754 AA	20120712	US20090457117	20090601
US7540228 BA	20090602	US20040960284	20041008
WO05040711 A1	20050506	WO2004CA01788	20041008

Priority:

US20030514621P 20031028 US20040960284 20041008 US20090453059 20090428
WO2004CA01788 20041008 US20090457117 20090601

Probable Assignee: CRONIN DUANE STEVEN MR

Assignee(s): (std): WORSWICK MICHAEL JAMES ; SALISBURY CHRISTOPHER PETER ; SALISBURY CHRISTOPHER ; STRIKE
FACE TECHNOLOGY INC ; CRONIN DUANE ; CRONIN DUANE S ; KAUFMANN CHRISTIAN

Assignee(s): MARS INVESTMENT ACCELERATOR FUND ; CRONIN DUANE STEVEN ; CRONIN DUANE STEVEN MR ;
STRIKE FACE TECHNOLOGY INC ; MARS INVESTMENT ACCELERATOR FUND INC ; WORSWICK MICHAEL
JAMES MR ; OF WATERLOO UNIV

Inventor(s): (std): CRONIN DUANE S ; KAUFMANN CHRISTIAN ; SALISBURY CHRISTOPHER PETER ; WORSWICK MICHAEL
JAMES ; CRONIN DUANE

Agent(s): HILL AND SCHUMACHER; DOWELL AND DOWELL PC; SCHUMACHER LYNN C; LYNN C

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ
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KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM
PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU
ZA ZM ZW

Title: VEHICLE SECURITY PARTITION

Abstract: Source: US2008190278A Disclosed is an integrated vehicle and personal ballistic protection system providing a combination of space utilization, portability and increased personal safety. Also disclosed are kits for up-fitting the shield to an existing installed partition, and a kit for the trunk. The embodiment s depicted and suggested include a vehicle partition integrated with a hand-carry, quickly deployable, self-supporting, ballistic shield including a handle, and shaped to cooperate with a vehicle security partition and is part of the partition when temporarily stowed. An additional optional design feature of the shield is a shape that cooperates with removable mounting hardware for stowing on the underside of the trunk lid, under the rear deck, or on the trunk floor. A benefit of unitary construction, is that governmental safety forces can issue the same shield for cruisers and unmarked detective vehicles.

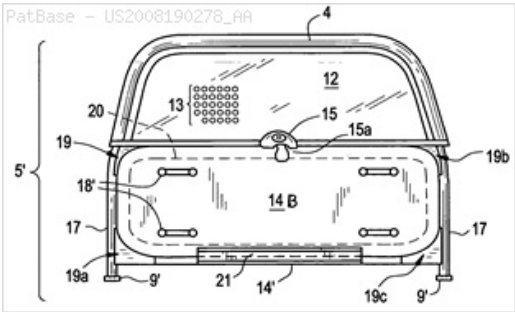
Classifications:

International (IPC 8-9): F41H5/08 (Advanced/Invention); F41H5/00 (Core/Invention)

CPC: F41H5/0407 F41H5/08 F41H7/04

European: F41H5/04B F41H5/08 F41H7/04

US: 89/36.01 89/36.07 89/36.08 89/36.09



Family:

Publication number	Publication date	Application number	Application date
US2008190278 AA	20080814	US20060494339	20060727
US7493844 BB	20090224	US20060494339	20060727

Priority:

US20060494339 20060727

Probable Assignee:

MARTIN CHAD BRIAN

Assignee(s): (std):

MARTIN CHAD BRIAN

Inventor(s): (std):

MARTIN CHAD BRIAN

Agent(s):

CHAD MARTIN

Title: BARRIER

Abstract: Source: US2008271652A A barrier that includes attack resistant pane(s) (see DEFINITIONS section). In this way, a person behind the barrier can be protected when they are outside. More specifically, the person behind the barrier is protected, at least to some extent, from both: (i) vehicular attacks; and (ii) blast (for example, bombs) and/or ballistic (for example, bullet) attacks. Also, the protected person can see what is happening across the barrier because of the attack-resistant pane(s). Also, if the barrier is unanchored then it can be moved from place to place, for example, by heavy equipment, so that the same barrier can be re-deployed at different outdoor locations (or indoor locations) on an as-needed basis. Preferably, the barrier also includes framing pieces that secure the attack-resistant pane(s) to the body of the barrier, with the framing pieces being covered on one side by an attack-resistant material (preferably, hardened steel).

Classifications:

International (IPC 8-9): E01F13/02 E01F13/12 E01F15/08 F41H11/08 F41H5/00 F41H5/24 (Advanced/Invention);

E01F13/00 E01F15/02 F41H11/00 F41H5/00 (Core/Invention)

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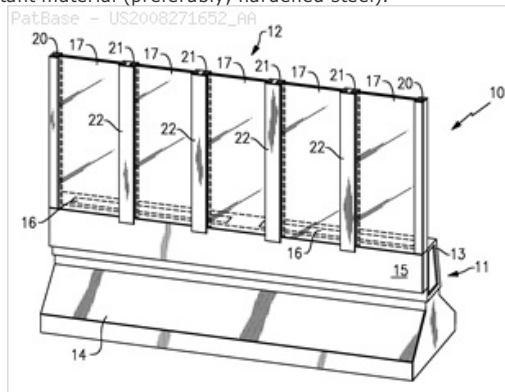
F41H5/06 F41H11/00 F41H11/08

European: E01F13/12 E01F15/08M2 F41H11/00 F41H11/08

F41H5/013 F41H5/04B F41H5/06 F41H5/24

US: 109/49.5 109/49.500P 404/6 404/6P 89/36.01 89/36.04

89/36.040S 89/920 89/920S 89/936 89/936S

**Family:**

Publication number	Publication date	Application number	Application date
EP2156137 A2	20100224	EP20080827279	20080505
US2008271652 AA	20081106	US20080115283	20080505
US2011274486 AA	20111110	US20110183880	20110715
US2013284002 AA	20131031	US20130736326	20130108
US8001880 BB	20110823	US20080115283	20080505
US8371207 BB	20130212	US20110183880	20110715
US8590439 BB	20131126	US20130736326	20130108
WO09023310 A2	20090219	WO2008US62693	20080505
WO09023310 A3	20090806	WO2008US62693	20080505

Priority:

US20070916099P 20070504 US20080115283 20080505 WO2008US62693 20080505
US20130736326 20130108 US20110183880 20110715

Probable Assignee: DEFENSHIELD INC

Assignee(s): (std): DEFENSHIELD INC ; KLENIATIS JOHN ; WHITE WILLIAM C ; WHITE WILLIAM COLLINS

Inventor(s): (std): KLENIATIS JOHN ; WHITE WILLIAM C ; WHITE WILLIAM COLLINS

Agent(s): HALLYBONE HUW GEORGE; BOND SCHOENECK AND KING PLLC; WOODCOCK WASHBURN LLP;
WOYCECHOWSKY DAVID B

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU
CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL
IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT
MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY
SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: BALLISTIC/BLAST RESISTANT WINDOW ASSEMBLY

Abstract: Source: US2012159881A An attack-resistant window assembly that can be easily maintained without requiring the use of tools. The attack-resistant window assembly includes a slidable plate for securing the attack-resistant pane into the window assembly. The window assembly also has ballistic-resistant armor around the peripheral sides of the ballistic-resistant pane to prevent bullets from exiting the peripheral sides of the ballistic-resistant pane and coming into the space on the protected side of the window assembly.

Classifications:

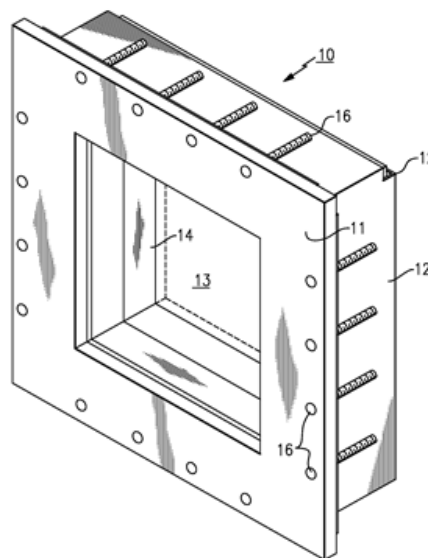
International (IPC 8-9): E06B3/00 E06B3/26 E06B3/28 E06B3/32 E06B3/54 E06B5/10 E06B5/12 E06B9/00 (Advanced/Invention); E06B3/54 E06B5/10 (Core/Invention)

CPC: E06B5/106 E06B5/12 E06B2003/5472

European: E06B5/10C E06B5/12 P06B3/54F4

US: 109/49.5 109/64 109/64S 109/75 109/77 49/463 49/504 52/204.62 52/204.620S 52/208 52/208P 52/656.5 89/36.02 89/36.04 89/905 89/937

PatBase - US2012159881_AA



Family:

Publication number	Publication date	Application number	Application date
US2012159881 AA	20120628	US20080115225	20080505
US8291657 BB	20121023	US20080115225	20080505
WO09020681 A2	20090212	WO2008US62690	20080505
WO09020681 A3	20090423	WO2008US62690	20080505
WO09020681 A8	20100225	WO2008US62690	20080505

Priority:

US20070916076P 20070504 US20080115225 20080505

Probable Assignee: DEFENSHIELD INC

Assignee(s): (std): DEFENSHIELD INC ; WHITE WILLIAM C ; WHITE WILLIAM COLLINS

Inventor(s): (std): WHITE WILLIAM C ; WHITE WILLIAM COLLINS

Agent(s): WOODCOCK WASHBURN LLP; WOYCECHOWSKY DAVID B

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: VEHICLE EMERGENCY EGRESS SYSTEM

Abstract: Source: US2011084521A A vehicle emergency egress system. In one embodiment, an emergency egress system for providing an opening for egress from a vehicle includes a frame configured to be directly attached to the vehicle, the frame having a cavity formed therein and defined on a first side by a back surface facing an exterior of the vehicle, the back surface having an opening fanned therethrough; a panel removably received in the cavity for covering the opening, the back surface retaining the panel in a first direction; and at least a bracket removably attached to the frame on the exterior of the vehicle and retaining the panel in a second direction opposite the first direction, wherein the bracket is detachable from the frame by an occupant inside the vehicle for removal of the panel to the exterior of the vehicle in the second direction.

Classifications:

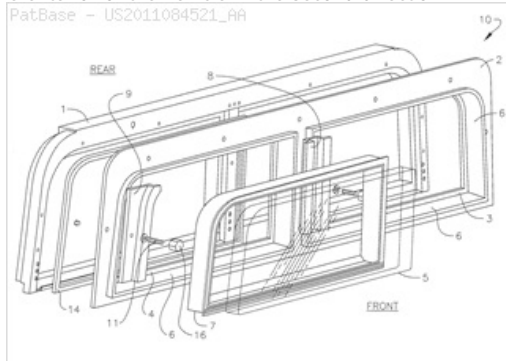
International (IPC 8-9): B60J B60J1/00 B60J1/02 B60J1/06 B60J5/00 B60N3/00 B60R21/00 B60R99/00 E05B65/10 (Advanced/Invention); B60J (Subclass/Invention)

CPC: Y10T292/0909 B60J1/007 B60J1/06

European: B60J1/00F4 B60J1/06

US: 292/93 292/93S 296/146.16 296/193.08 296/193.080P 296/201 296/84.1

PatBase - US2011084521_AA

**Family:**

Publication number	Publication date	Application number	Application date
CA2773869 AA	20110421	CA20102773869	20100809
CN102574443 A	20120711	CN201080046373	20100809
CO6551671 A2	20121031	CO20120070156	20120430
EP2488376 A1	20120822	EP20100745071	20100809
IL218600 A0	20120531	IL20100218600	20100809
KR20120099430 A	20120910	KR20127012189	20100809
MX2012003646 A1	20120717	MX20120003646	20100809
US2011084521 AA	20110414	US20100853257	20100809
US8449023 BB	20130528	US20100853257	20100809
WO11046668 A1	20110421	WO2010US44928	20100809

Priority:

US20090251184P 20091013 US20100853257 20100809 WO2010US44928 20100809

Probable Assignee: PPG IND OHIO INC

Assignee(s): (std): AVITIA DAVID R ; PPG IND OHIO INC ; SCARINCI CARLO A ; SHELLENBERGER RUSSELL W

Assignee(s): PPG INDUSTRIES OHIO INC

Inventor(s): (std): AVITIA DAVID R ; SCARINCI CARLO A ; SHELLENBERGER RUSSELL W ; AITIA DAVID R

Inventor(s): CARLO A SCARINCI ; DAVID R AITIA ; DAVID R AVITIA ; RUSSELL W SHELLENBERGER

Agent(s): FETHERSTONHAUGH AND CO; LUZ CLEMENCIA DE PAEZ; MUELLER WOLFRAM HUBERTUS; CHRISTIE PARKER AND HALE LLP; MARTONE JASON C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: POSITIONIER- UND BEFESTIGUNGSVORRICHTUNG FUER BALLISTISCHES SCHUTZGITTER POSITIONING AND ATTACHMENT DEVICE FOR A BALLISTIC PROTECTION SCREEN

Abstract: The device (1) has a retaining arm (102) carrying an attachment unit on an end and comprising a support surface (4) for supporting a ballistic protection screen (103). A wedge is secured to the surface, and a rapid clamping unit (2) clamps the wedge on the screen. The screen is pinched between the surface and the wedge after clamping. The surface includes width greater than distance between successive rigid bars (103a, 103b) of the screen. The wedge includes sufficient length to be applied on the bars. The wedge pivots with respect to the surface while having width less than the distance.

Classifications:

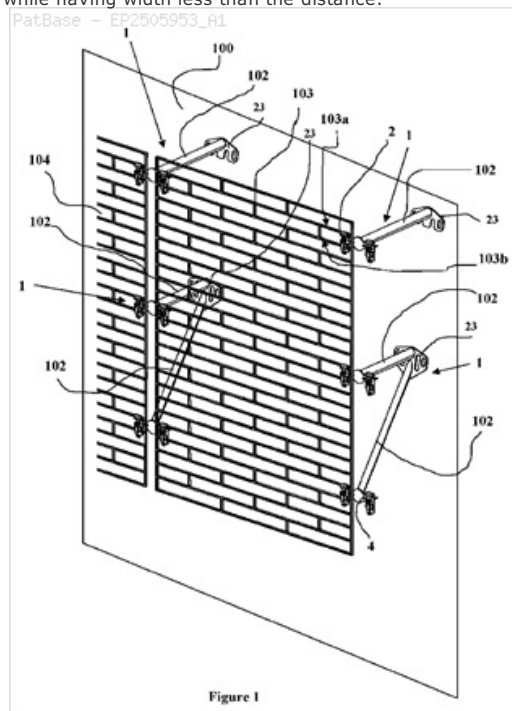
International (IPC 8-9): F41H5/013 F41H5/02

F41H7/00 (Advanced/Invention);

F41H5/02 (Advanced/Non-invention)

CPC: F41H5/013 F41H5/023 F41H5/026

European: F41H5/013 F41H5/02B F41H5/02B2



Family:

Publication number	Publication date	Application number	Application date
DE602012007084 D1	20150618	DE201260007084T	20120305
DK2505953 T3	20150803	DK20120158034T	20120305
EP2505953 A1	20121003	EP20120158034	20120305
EP2505953 B1	20150506	EP20120158034	20120305
ES2542640 T3	20150807	ES20120158034T	20120305
FR2973497 A1	20121005	FR20110000977	20110331
FR2973497 B1	20140228	FR20110000977	20110331
TR201509651 T4	20150821	TR20150009651T	20120305

Priority:

EP20120158034 20120305 FR20110000977 20110331

Probable Assignee: NEXTER SYSTEMS

Assignee(s): (std): NEXTER SYSTEMS

Inventor(s): (std): DADOLLE AURELIEN ; HUBSCH ALAIN

Inventor(s): ALAIN HUBSCH ; AURELIEN DADOLLE

Agent(s): CABINET CHAILLOT; CHAILLOT DENIS VINCENT; TOMAS TESIFONTE ENRIQUE; NEXTER SYSTEMS; ZEHRA YILDIRIM

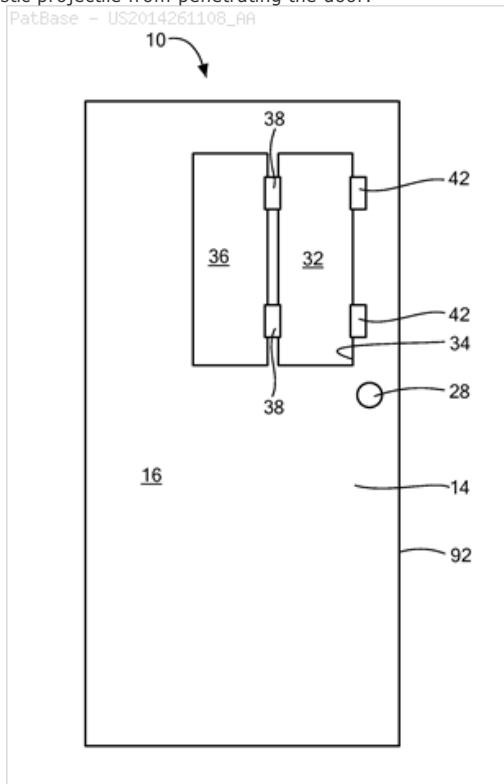
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PL PT RO RS SE SI SK SM TR

Title: ARMORED DOOR PANEL

Abstract: Source: US2014261108A An armored door panel includes a planar device having a layered arrangement including a protection layer comprised of a ballistic material and an outer surface layer arranged on the outer side of the protection layer. The planar device is affixed to an existing door to prevent ballistic projectile from penetrating the door.

Classifications:

International (IPC 8-9): B29C65/48 B29C65/50 B29C70/46 B32B37/26 B32B38/10 B43L1/00 E04H9/06 E05G1/024 E05G1/026 E05G1/10 E06B3/26 F41H5/013 F41H5/04 F41H5/08 F41H5/22 F41H5/24 F41H7/04 (Advanced/Invention); B29K105/08 B29K67/00 B29L31/00 B29L31/30 B32B37/12 B32B38/10 (Advanced/Non-invention)
CPC: E05G1/10 B29K2067/003 B29K2105/08 B29L2031/3005 B29L2031/768 Y10T29/49716 Y10T156/10 B32B37/26 B32B2037/268 B29C70/465 F41H5/0428 B32B37/12 B32B38/10 B32B2305/076 B32B2305/34 B32B2307/208 B32B2311/00 B32B2419/00 B32B2571/02 B32B2605/08 B43L1/00 B43L1/008 E05G1/024 E05G1/026 F41H5/013 F41H5/0471 F41H5/226 F41H7/048 B29C65/48 B29C65/5057 B29L2031/724
US: 1/1 109/38 109/58.5 109/64 156/245 156/249 156/308.6 156/327 156/60 29/401.1 434/408 52/202 52/203 89/36.02 89/36.07 89/36.08



Family:

Publication number	Publication date	Application number	Application date
US2014261108 AA	20140918	US20140208092	20140313
US2015143986 AA	20150528	US20150589076	20150105
US2015268009 AA	20150924	US20140252094	20140414
US8991118 BB	20150331	US20140208092	20140313
US9316467 BB	20160419	US20150589076	20150105
US9333714 BB	20160510	US20140252094	20140414

Priority:

US20130446050F 20130220	US20130446070F 20130220	US20140208092 20140313
US20130787495P 20130315	US20130753177P 20130116	US20130446073F 20130220
US20150589076 20150105	US20140252094 20140414	

Probable Assignee: HARDWIRE LLC

Assignee(s): (std): HARDWIRE LLC ; TUNIS III GEORGE C

Inventor(s): (std): GORDON JUSTIN TUCKER ; HEINAUER EMILY ; KENDALL SCOTT ; TUNIS III GEORGE C

Agent(s): MCLANE GRAF RAULERSON AND MIDDLETON PA; POSTERNAK BLANKSTEIN AND LUND LLP

Title: LIGHT WEIGHT BODY ARMOR PLATE CARRIER SYSTEM

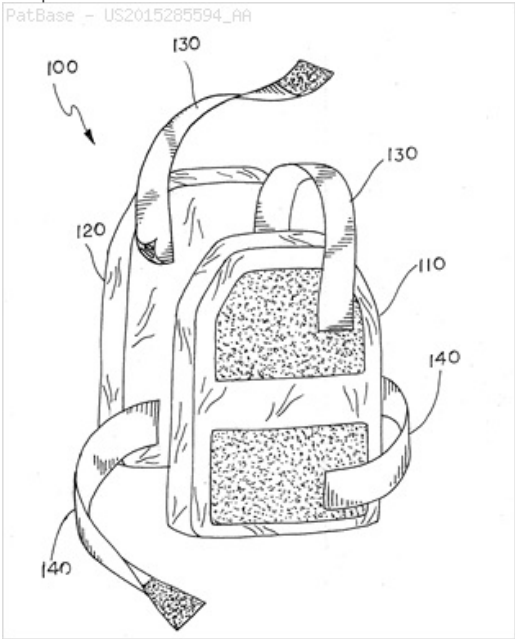
Abstract: Source: US2015285594A A body armor plate carrier constructed from sections of spunbonded olefin fabric bonded together with adhesives and interconnected using patches of hook and loop fastener material.

Classifications:

International (IPC 8-9): F41H1/02 F41H5/08 (Advanced/Invention)

CPC: F41H1/02

US: 1/1 2/2.5 89/36.05



Family:

Publication number	Publication date	Application number	Application date
US2015285594 AA	20151008	US20140481824	20140909
US2015323289 AA	20151112	US20140481836	20140909
US9441916 BB	20160913	US20140481836	20140909

Priority:

US20130875466P 20130909	US20140481824 20140909	US20140481836 20140909
US20140980431P 20140416		

Probable Assignee:

SEUK JO WON

Assignee(s): (std):

SEUK JO WON

Inventor(s): (std):

SEUK JO WON

Agent(s):

R TRACY

Title: REDUCED WEIGHT ARMOR SYSTEMS AND METHODS OF MANUFACTURING THE SAME

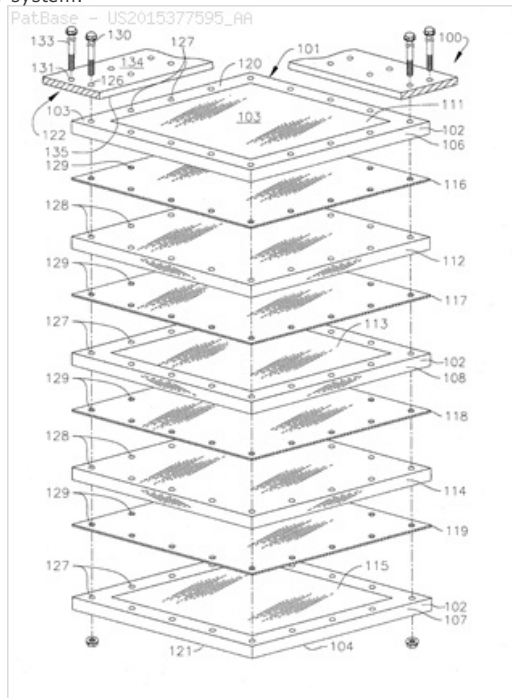
Abstract: Source: US2015377595A An armor system configured to be coupled to a frame surrounding a window in a vehicle or other structure, such as a building. The armor system may be configured to provide any desired ballistics protection rating. The armor system includes a ballistics-grade armor panel and at least one insert embedded in the ballistics-grade armor panel. The insert extends around at least a portion of a periphery of the ballistics-grade armor panel. The one or more inserts may be configured to reduce the parasitic weight of the armor system.

Classifications:

International (IPC 8-9): B32B17/10 B32B37/06 B32B37/10
F41H5/013 F41H5/04 F41H5/26 F41H7/04 (Advanced/Invention);
B32B37/04 (Advanced/Non-invention)

CPC: F41H5/0407 B32B2307/546 B32B2307/558 B32B2311/00
B32B2323/04 B32B2369/00 B32B2323/10 B32B2375/00
B32B2329/06 B32B2331/04 B32B2367/00 B32B2571/02 F41H5/0428
B32B17/10045 B32B17/10293 B32B17/10761 B32B17/1077
B32B17/10788 B32B37/04 B32B2309/02 B32B2315/08 F41H5/013
F41H5/263

US: 156/285 156/89.11 156/89.28 89/36.02



Family:

Publication number	Publication date	Application number	Application date
US2015377595 AA	20151231	US20140318195	20140627
US9803959 BB	20171031	US20140318195	20140627

Priority:

US20140318195 20140627

Probable Assignee: PPG IND OHIO INC

Assignee(s): (std): PPG IND OHIO INC

Inventor(s): (std): PALERMO DAVID ; SCARINCI CARLO

Agent(s): LEWIS ROCA ROTHGERBER CHRISTIE LLP