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(71) Applicant: TRIBALCO, LLC [US/US]; 4915 St. Elmo Avenue, Suite 501, Bethesda, Maryland 20814 (US).

(72) Inventor: CATRONE, Jeremy; 3518 W. El Prado Boulevard, Tampa, Florida 33629 (US).

(74) Agents: WAHL, John R. et al; Greenberg Traurig, LLP, 1200 17th Street, Suite 2400, Denver, Colorado 80202 (US).

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— as to applicant's entitlement to apply for and be granted a patent (Rule 4.1 7(H))

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(54) Title: TRAUMA MANAGEMENT KIT HAVING EXTERNAL TOURNIQUET HOLSTER

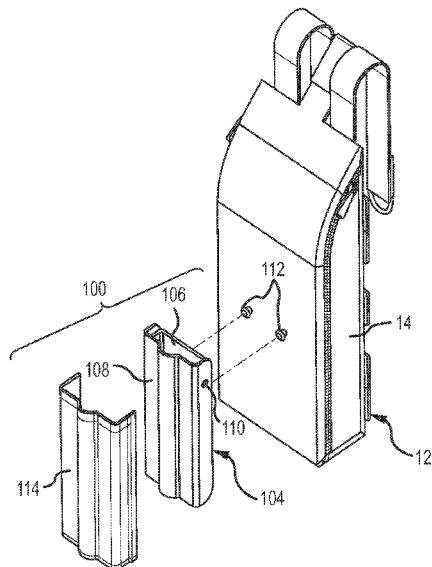


FIG. 2

(57) Abstract: A trauma management kit includes a main quick release bag for holding wound bandaging materials wherein the bag is made of a flexible nylon duck material, a rigid tourniquet holster fastened to an exterior surface of the quick release bag for receiving and holding a tourniquet therein for immediate access to the tourniquet without opening the main quick release bag. The holster preferably includes a two piece polymer case having an inner shell and an outer shell held together by rivets adjacent an upper opening of the case. A fabric holster cover made of nylon duck material is sewn to the exterior surface of the quick release bag over the holster to mitigate a near infrared signature of the polymer case.

TRAUMA MANAGEMENT KIT HAVING EXTERNAL TOURNIQUET HOLSTER

BACKGROUND OF THE DISCLOSURE

Field of the Disclosure

[0001] The present disclosure relates to tourniquet holders. In particular, it relates to a permanent adherence to a trauma management kit that is configured for quick retrieval of a tourniquet for use in battlefield environments in which efficiency of movement is critical to survivability.

State of the Art

[0002] Trauma medical kits carried by soldiers in the battle space include many items such as gauze, scissors, bandages, tourniquets, etc. However, in the vast majority of casualty situations, it is a tourniquet that is needed first to prevent life threatening blood loss. Currently there is no practical way for a soldier to co-locate his/her tourniquet within their trauma medical kit, and gain access to that tourniquet, without taking additional steps to manipulate the kit. These additional steps cost valuable time; and under stress prove difficult to complete.

SUMMARY OF THE DISCLOSURE

[0003] A holster for secure provisioning of a tourniquet such as a SOFTT, SOFFT-Wide or CAT tourniquet for instant, one handed, access from a trauma management kit is disclosed.

[0004] In one embodiment, a tourniquet holster in accordance with the present disclosure is a preformed polymer tourniquet holder that is rigidly fastened to an external surface of a quick release field trauma kit that can be worn by a soldier and instantly accessed with one hand.

[0005] In another embodiment, the tourniquet holster is encased in a fabric pocket that is sewn to the external surface of a flap of a field trauma kit. The intention of this fabric is to mitigate the Near Infrared Signature of the polymer. The holster is formed so as to securely hold the tourniquet until needed in the field.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The disclosure will be better understood and objects, other than those set forth above, will become apparent when consideration is given to the following detailed description. Such description makes reference to the accompanying drawings wherein:

[0007] Figure 1 shows a back perspective view of a soldier wearing a trauma kit incorporating an embodiment of the present disclosure.

[0008] Figure 2 is a perspective exploded view of the trauma kit case shown on the soldier in FIG. 1.

[0009] Figure 3 is an open view of the main bag of the trauma kit case shown in FIG. 2.

[001 0] Figure 4 is a separate perspective view of one embodiment of a hard polymer holster utilized in the trauma kit in accordance with the present disclosure.

[001 1] Figure 5 is a top view of the assembled trauma kit case shown in FIG. 2.

[001 2] Figure 6 is a front plan view of a trauma kit shown in Figure 2

[001 3] Figure 7 is a side view of the kit shown in Figure 2.

DETAILED DESCRIPTION

[001 4] In the following description, numerous specific details are set forth in order to provide a more thorough disclosure. It will be apparent, however, to one skilled in the art, that the art disclosed may be practiced without these specific details. In some instances, well-known features may have not been described in detail so as not to obscure the art disclosed.

[001 5] A soldier 10 is shown in FIG. 1 wearing a vest to which a trauma management kit 12 is attached, that the soldier 10 can easily grasp and open. This trauma management kit 12 encloses a variety of tools and bandage materials (not visible) in a quick open canvas bag 14 that has a tourniquet holster 100 in accordance with the present disclosure attached to the outer surface of the quick release bag 14. This permits the tourniquet 102 to be immediately withdrawn for immediate use even before the quick release bag 14 is opened in the event of wounding to the soldier or soldier nearby.

[0016] In the event of massive trauma, instant access to the tourniquet 102 can mean the difference between life and death to an injured soldier. As can readily be seen in Figure 1, the tourniquet 102 in the holster 100 is immediately available in such an event.

[0017] Figure 2 is a separate view of the management kit 12 with the tourniquet holster 100 exploded in perspective. The holster 100 comprises a two-piece polymer case 104 into which a tourniquet 102 can be placed (not shown). The polymer case 104 is preferably made of a thermoplastic polymeric material such as Kydex and has an inner shell 106 and outer shell 108 that are held together by rivets 110 adjacent the upper opening of the case. Another set of two rivets 112 fastens the plastic case 104 to the outer surface of the main bag 14 of the kit 12. An outer fabric cover 114, preferably a nylon canvas duck fabric, may optionally then be sewn to the outer surface of the main bag 14 of the kit 12 to enclose the plastic case 104.

[0018] The rivets 112 that are used to fasten the plastic case 104 to the outer surface of the kit bag 14 are one piece rivets. Each rivet, preferably made of aluminum, is inserted through a hole in the inner shell 106 of the plastic case 104 so as to project toward the main bag 1. The rivets 112 are then inserted through corresponding holes in the outer shell of the main bag 14. A plier type tool is then used to expand the protruding end of each rivet against the inner surface of the outer shell of the main bag 14. Figure 3 shows the rivet configuration inside the main bag 14 of the kit 12.

[0019] A perspective view of the thermoplastic case 104 for one type of tourniquet is shown in Figure 4 along with top, back and side views of the case 104. A top view of the assembled kit 12 is shown in FIG. 5. A front view and side view of the assembled kit 12 is shown in Figures 6 and 7.

[0020] Currently there are three commercially available tourniquets 102. Preferably a different holster case 104 shape will be provided for each style of tourniquet to ensure that each type is securely held in the holster 100 until needed.

[0021] Finally, it will also be apparent to one skilled in the art that many variations to the kit configuration may be made. For example, a kit 12 may be provided with more than one holster 100 on its outer cover depending on the overall size of the

main bag 14 of the kit 12. Accordingly, it is intended that the art disclosed shall be limited only to the extent required by the appended claims and the rules and principles of applicable law.

WE CLAIM:

1. A trauma management kit comprising:
a main quick release bag for holding wound bandaging materials wherein the bag is made of a flexible material;
a tourniquet holster fastened to an exterior surface of the quick release bag for receiving and holding a tourniquet therein; and
a fabric holster cover sewn to the exterior surface of the quick release bag.
2. The trauma management kit of claim 1 wherein the holster includes a rigid polymer case riveted to the quick release bag.
3. The trauma management kit of claim 2 wherein the case is made of a thermoplastic polymer.
4. The trauma management kit of claim 3 wherein the fabric holster cover is effective to mitigate a Near Infrared Signature of the polymer.
5. The trauma management kit of claim 2 wherein the holster comprises a two-piece polymer case having an inner shell and an outer shell held together by at least two rivets adjacent an upper opening of the case.
6. The trauma management kit of claim 5 wherein the case is riveted to the quick release bag via one or more single piece rivets.
7. The trauma management kit of claim 6 wherein the fabric holster cover is a nylon canvas duck fabric.
8. The trauma management kit of claim 7 wherein the fabric mitigates a near infrared signature of the polymer case.
9. The trauma management kit of claim 6 wherein the rivets are aluminum.
10. The trauma management kit of claim 2 wherein the tourniquet is accessible without opening the main bag.

11. A trauma management kit comprising:
 - a main bag for holding wound bandaging materials wherein the bag is made of a flexible material;
 - a rigid tourniquet holster fastened to an exterior surface of the bag for receiving and holding a tourniquet therein, wherein the holster permits access to the tourniquet without opening the main bag; and
 - a fabric holster cover sewn to the exterior surface of the main bag.
12. The trauma management kit of claim 11 wherein the holster includes a rigid polymer case riveted to the quick release bag.
13. The trauma management kit of claim 12 wherein the case is made of a thermoplastic polymer.
14. The trauma management kit of claim 13 wherein the fabric holster cover is effective to mitigate a Near Infrared Signature of the polymer.
15. The trauma management kit of claim 12 wherein the holster comprises a two-piece polymer case having an inner shell and an outer shell held together by at least two rivets adjacent an upper opening of the case.
16. The trauma management kit of claim 15 wherein the case is riveted to the quick release bag via one or more single piece rivets.
17. The trauma management kit of claim 16 wherein the fabric holster cover is a nylon canvas duck fabric.
18. The trauma management kit of claim 17 wherein the fabric mitigates a near infrared signature of the polymer case.
19. The trauma management kit of claim 16 wherein the rivets are aluminum.
20. A trauma management kit comprising:
 - a main quick release bag for holding wound bandaging materials wherein the bag is made of a flexible nylon duck material;

a rigid tourniquet holster fastened to an exterior surface of the quick release bag for receiving and holding a tourniquet therein for immediate access to the tourniquet without opening the main quick release bag, the holster comprising a two piece polymer case having an inner shell and an outer shell held together by rivets adjacent an upper opening of the case; and

a fabric holster cover made of nylon duck material sewn to the exterior surface of the quick release bag over the polymer case, wherein the cover mitigates a near infrared signature of the polymer case.



FIG.1

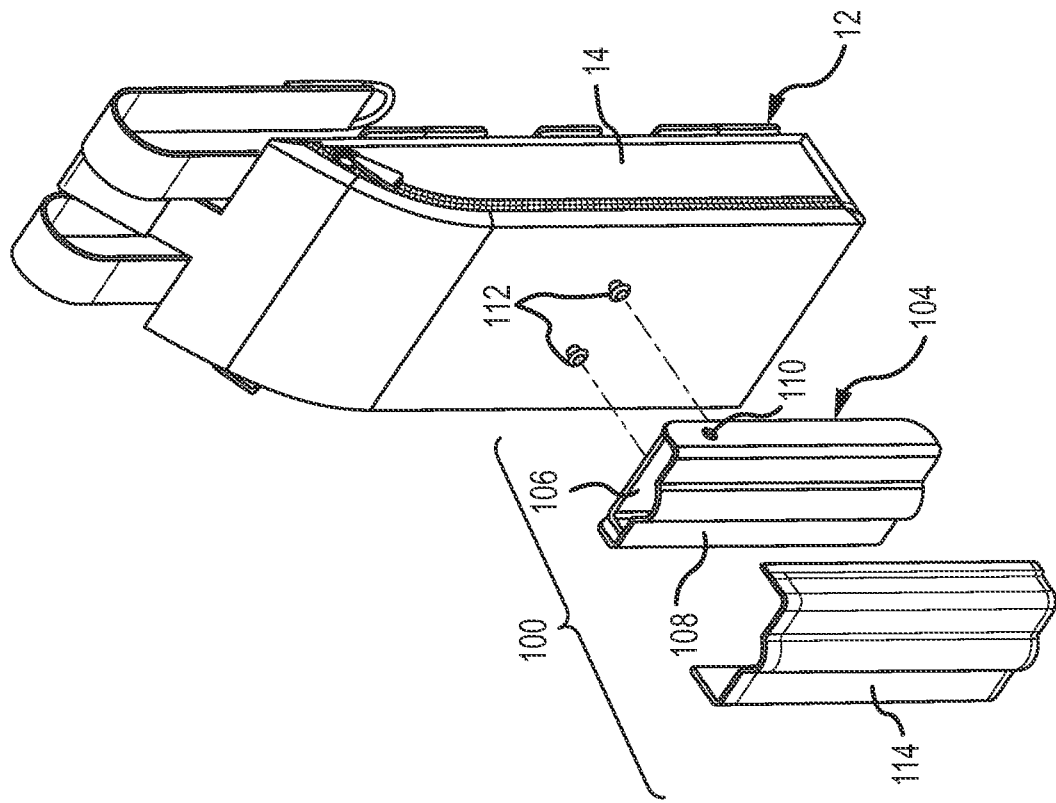


FIG. 2

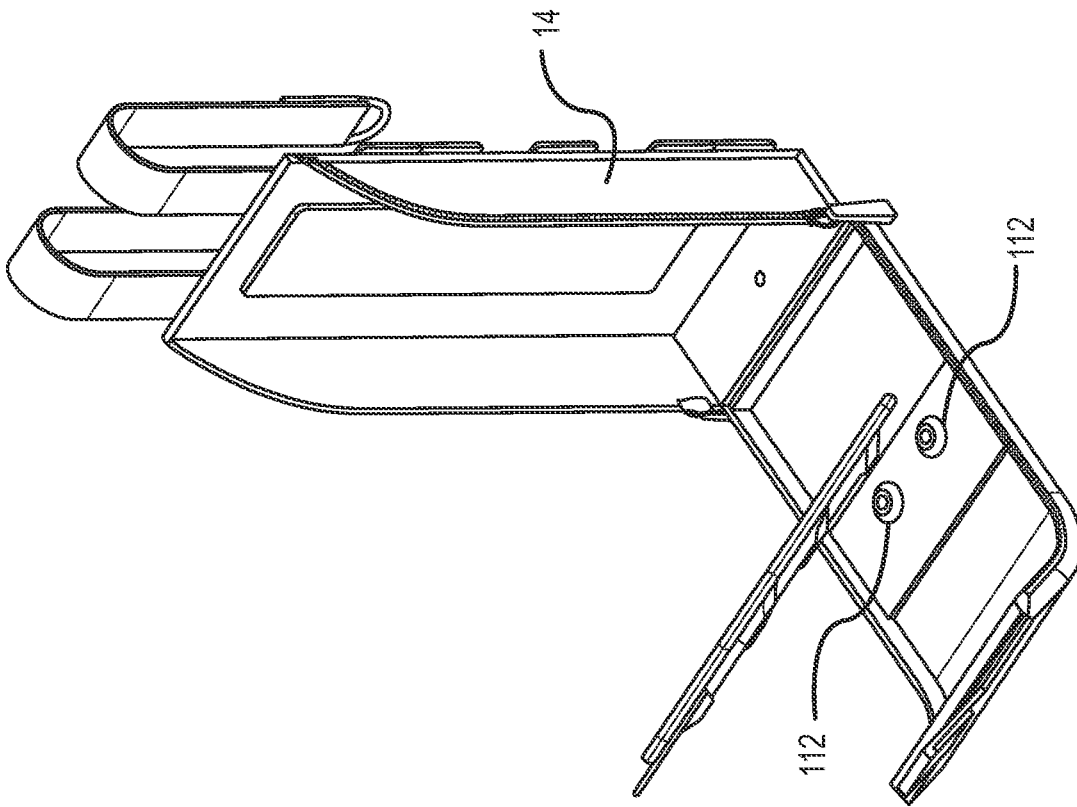


FIG.3

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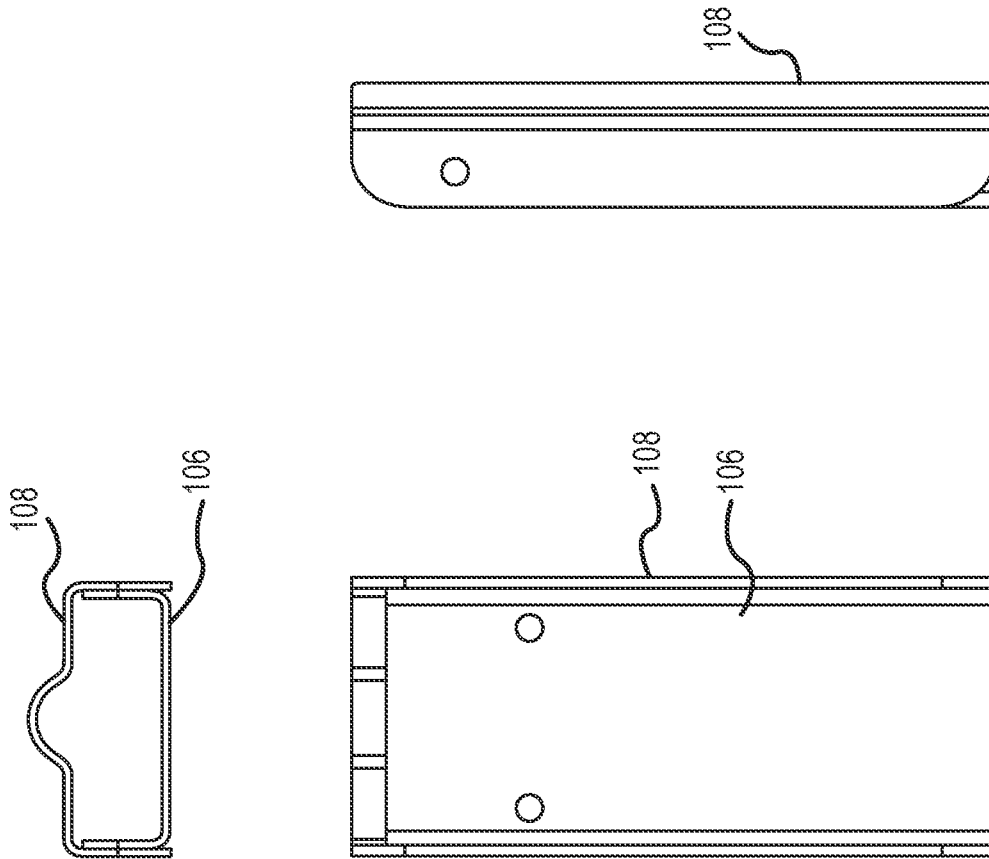


FIG.4

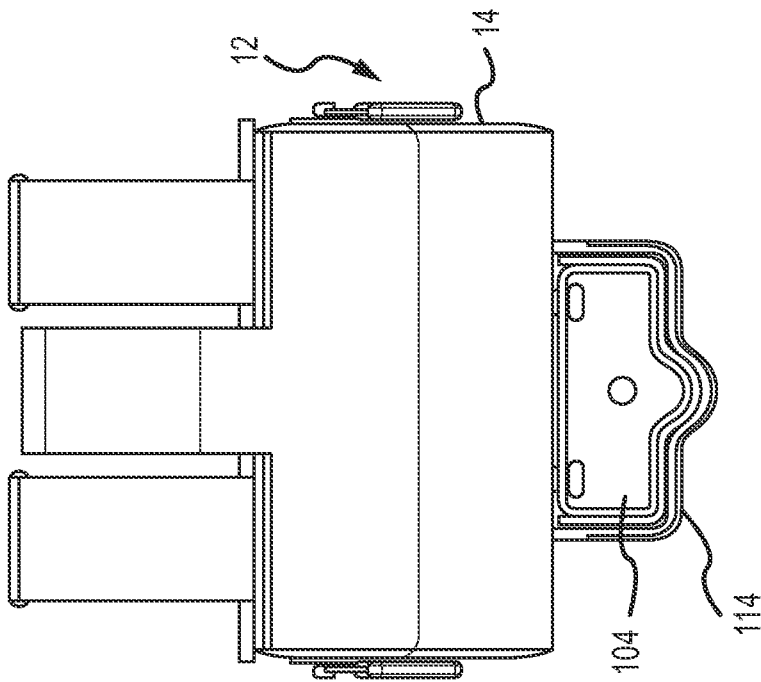


FIG.5

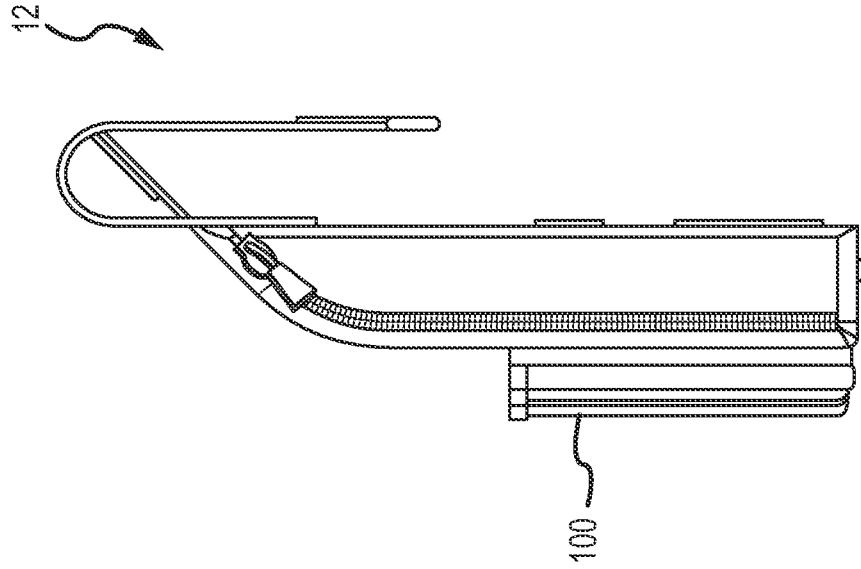


FIG. 6

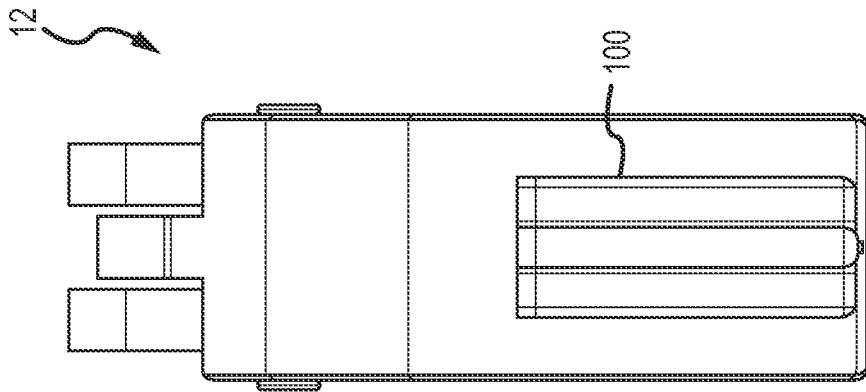


FIG. 7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2014/030378**A. CLASSIFICATION OF SUBJECT MATTER****A61B 17/132(2006.01)i, A61F 17/00(2006.01)i, A61B 19/02(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61B 17/132; A45F 3/06; A45F 5/02; A45F 3/14; A61F 17/00; A61B 19/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: trauma kit, quick release, tourniquet holster, flexible, fabric, nylon, NIR signature, rivets**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	w0 2011-100074 AI (NORTH AMERICAN RESCUE, LLC) 18 August 2011 See abstract ; claims 1-31 ; paragraphs [0009H0010] , [0020] , [0039]- [0042] ; and figures 1, 7A-7E .	1-20
Y	Police Press Releases , Eleven 10 Launches the Kydex TTH (Tactical Tourniquet Holder) for the SOFT-T, 26 July 2012 See lines 1-12 and the picture .	1-20
A	Soldier Systems-An Industry Daily, New Holster Option for MRD Equipped Clocks , 24 August 2011 See lines 8-18 and the picture .	1-20
A	SafariLand News in Tasco Hunting and Outdoors and Optical Australia Wide , SafariLand Launches New Series of Holsters with Cordura Nylon Finish That Provide a Low Signature to Infrared Lighting, 15 January 2013 See the whole document .	1-20
A	US 2010-0200627 AI (SHEN) 12 August 2010 See abstract ; claims 1-20; and figures 1-2 .	1-20
A	US 6516981 B2 (PEREZ et al.) 11 February 2003 See abstract ; claims 1-6 ; and figures 1-6.	1-20

I Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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Name and mailing address of the ISA/KR

International Application Division
Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan City, 302-701,
Republic of Korea

Facsimile No. +82-42-472-7140

Authorized officer

CHANG, Bong Ho

Telephone No. +82-42-481-3353



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2014/030378

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
wo 2011-100074 AI	18/08/2011	us 2011-204114 AI	25/08/2011
us 2010-0200627 AI	12/08/2010	None	
us 6516981 B2	11/02/2003	us 2001-0052532 AI us 5893370 A us 6279580 BI	20/12/2001 13/04/1999 28/08/2001