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- (71) Applicant (for all designated States except US): **OZTEK TEKSTIL TERBIYE TESISLERI SANAYI VE TICARET ANONIM SIRKETI** [TR/TR]; E-5 Karazolu Misinli Kavsagi 59860, Corlu Tekirdag (TR).
- (72) Inventor; and  
(75) Inventor/Applicant (for US only): **ESREF, Akin** [TR/TR]; E-5 Karayolu Misinli Kavsagi 59860, Corlu Tekirdag (TR).
- (74) Agent: **ADRES PATENT MARKA VE FIKRI HAKLAR LTD. STI.**; Büyükdere Cad. No: 62 Lale Ismerkezi Kat:1, P.O. Box: 34387 (TR).

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(54) Title: **MILITARY PERSONNEL EXIGENCIES AND AMMUNITION CARRIER SYSTEM**

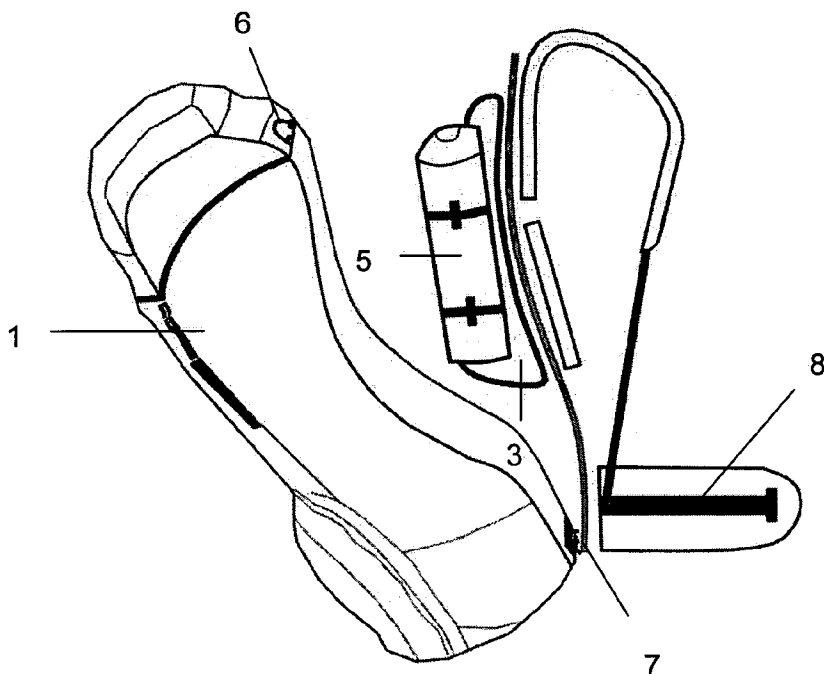


Figure 4

(57) Abstract: This invention is a modular back pack, assault pack and ammunition carrier system allowing military personnel to collectively carry the weapon ammunition, personal sheltering materials, food and clothes and to rapidly release unnecessary weight in case engaging in warfare.

WO 2009/157881 A1

## **SPECIFICATIONS**

### **5 MILITARY PERSONNEL EXIGENCIES AND AMMUNITION CARRIER SYSTEM**

#### **TECHNICAL FIELD**

10 This invention is a modular back pack, assault pack and ammunition carrier system which allows military personnel to collectively carry weapon ammunition, personal sheltering materials, food and clothes and to rapidly release such weight in case of engaging in warfare.

#### **EXISTING STATE OF ART**

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Already used system consists of a back pack and a small bag on back, and a vest with ammunition compartments in front. However such vest comes with problems. Problems of the bag are being sweaty, pulling towards back and front, piercing the nape, not allowing wearing the backpack while assault bag is full, and disturbing  
20 the user because shoulder straps of backpack coincide with ammunition included in the front of the vest.

Back pack disturbs the user for being sweaty, incapable of being released from the back during combat, not being able to be conveniently used together with  
25 ammunition vest, and due to its non ergonomic carrying system.

#### **DESCRIPTION OF INVENTION**

30 A modular back pack, assault pack and ammunition carrier system which allows military personnel to collectively carry all weapon ammunition, personal sheltering materials, food and clothes and to rapidly release all unnecessary weight in case of engaging in warfare.

The invention provides ease of use to the sector which benefits from it due to functionality. It can also be widely-preferred due to its durability and wide application area.

## **PARTS AND ASSEMBLIES OF THE INVENTION**

1. Back pack
- 10 2. Ammunition vest
  - 2.1. Female buckle
  - 2.2. Male buckle
3. Assault pack
4. Supporting framework
- 15 5. Flask casing
6. Lock system
7. Hinge system
8. Waist strap
9. Back and shoulder strap

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## **BRIEF DESCRIPTION OF DRAWINGS**

- Illustration 1 : Front view of carrier system
- Illustration 2 : Rear view of carrier system
- 25 Illustration 3 : Side view of carrier system
- Illustration 4 : Release of back pack by carrier system
- Illustration 5 : Sectional view of ergonomic waist, back and shoulder straps
- Illustration 6 : Sectional view of female buckle
- Illustration 7 : Sectional view of male buckle
- 30 Illustration 8 : Sectional top view of supporting framework

## DETAILED DESCRIPTION OF INVENTION

5 Invention comprises a back pack (1), ammunition vest (2), female buckle (2.1), male buckle (2.2.), assault pack (3), supporting framework (4), 1.5 l plastic flask casing with thermal insulation (5), back pack release lock system (6), back pack release hinge system (7), ergonomic waist strap (8) and ergonomic back and shoulder strap (9).

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Back pack (1) is made of high-strength fabric. It is mounted on this module system which encompasses all personal, sheltering and over night sheltering equipments, with the use of materials on it and to supporting framework (4) by the bottom hinge (7) and upper lock (6).

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Ammunition vest (2) is made of high-strength fabric. This module manufactured individually for each weapon with zips on the front side is included in the system by fastening the buckles on the main frame to shoulder buckles (2.1). Side buckles (2.2) are fastened to the back buckles of shoulder harness and adjusted.

20

When back pack (1) and waist strap (8) become unnecessary, this module is used only by being mounted on the shoulder buckle (8). Modules of the pack are joined with narrow-woven link and insert buckle/adapters (2.1, 2.2.). Female buckle (2.1) is sewn with narrow-weave on its narrow edge. Male buckle (2.2.) becomes ready when its corresponding part enters in and comes out of the perlon. Perlon male buckle (2.2) passes through the female (2.1) to be positioned facing one other, loose end of the perlon is pulled and stretched, when piece of string connected on the hole of female buckle (2.1) is removed it becomes loose, and when 2 cambers of male buckle (2.2) are pulled up by two fingers, buckles (2.1, 2.2) are separated from one another.

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Assault pack (3) is made of high-strength fabric. It is a small-sized bag with front-side zip which includes important exigencies. It is mounted on the back pack (4).

Supporting framework (4) is the main frame on which all modules will be mounted. It may be produced of aluminum, composite or plastic materials. It is flexible. Its height is 57-59 cm, width is 11 cm at its narrowest point and 20 cm in the top part, and 17 cm in the bottom part. Thickness varies between 1 to 10 mm depending on the material.

Thermo flask casings (5) (2) are mounted on the left and right side of assault pack. It is made of high-strength fabric. Water temperature can be maintained at fixed degree for a long time on account of 8 mm-thick polyethylene foam insulation material.

Lock (6) is fixed with a male key with inner hole to be assembled at the top of the main bag (1) which passes through the holes and fixed with lock bolt. When two plastic lock bolts are pulled by two hands, back pack (1) reclines due to its weight and the bottom hinge (7) is separated from the supporting framework (4) when it reaches a certain angle.

Hinge (7) consists of two plastic parts. The part with steel bar inside is assembled on the back frame (4). A hook-like part is attached to the main bag (1) module. Waist strap (8) allows the transfer of load from pelvis to legs. It reduces the pressure of load on spinal cord. It is thermoform and ergonomic. It is mounted by inserting the bottom part of supporting framework (4) into fabric envelope located at the rear of waist strap (8) and by inserting 1 velcro narrow-weave at the bottom part into the hole in the supporting framework(1).

Back and shoulder strap (9) is designed for providing easy carriage on the back and shoulders. It is thermoform and ergonomic. It is fixed with two narrow-woven hook-and-loop fasteners of 5 cm each, passing through the holes in the supporting framework (4) and overlapping. There are 3 different levels of hole system for shoulder harness for people with different heights.

Military personnel exigencies and ammunition carrier system comprises of modules mounted on a supporting framework (4). Primarily, the ergonomic waist strap (8) is assembled on the lowermost part of supporting framework (4). Back pack (1) release hinge's (7) male section is mounted on the back part. Then one of the holes located on the upper part of the supporting framework (4) is chosen according to the user's height and ergonomic back and shoulder strap (8) is attached hereinto.

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Assault pack (3) with 2 thermal insulation 1,5 l plastic flank casings (5) mounted on the sides, is attached to the other side of the supporting framework (4) with use of buckles. At this stage, the system is ready to be used when back pack is unnecessary. Back pack (1) is mounted by inserting the female hinge (7) into male hinge (7) located at the bottom of supporting framework (4) and locking the upper lock system (6). Ammunition vest (2) designed for the specific weapon is attached by buckles located on the front side of ergonomic back and shoulder strap (9). All buckles of the system are specifically designed for this product, which are light buckles that can be opened and closed and adjusted very rapidly.

20 The system is carried on the back and it can be released by pulling the personnel release lock system (6) which loses the back pack in the case of any action.

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## CLAIMS

- 5 1. This invention is a military personnel exigencies and ammunition carrier system comprising; a back pack (1), ammunition vest (2), female buckle (2.1), male buckle (2.2), assault bag (3), supporting framework (4), thermally insulated 1.5l plastic flask casing (5), back pack release lock system (6), back pack release hinge system (7), ergonomic waist strap (8) and ergonomic back and shoulder strap (9).
- 10 2. The back pack (1) mentioned in Claim 1; is a part for carrying personal, sheltering, overnight sheltering materials and fixed to the supporting framework (4) with hinge (7) and the upper lock (6).
- 15 3. The Ammunition vest (2) mentioned in Claim 1; has a female buckle (2.1) and a male buckle (2.2), where perlon male buckle (2.2) is passed through the female (2.1) to face each other, loose end of perlon is pulled and stretched and the piece of string attached to the hole of female buckle (2.1) is removed, comes loose and male buckle's (2.2) two cambers are pulled with two fingers therefore separates the buckles (2.1, 2.2.)
- 20 4. The lock (6) mentioned in Claim 1; functions by mounting male key with inner hole at the top part of main bag (1) which is fixed by passing through the holes located in the supporting framework (4).
- 25 5. The lock (6) mentioned in Claim 3; wherein two plastic key bolts which are pulled by two hands to cause the back pack (1) recline due to weight and bottom hinge (7) to separate from the supporting framework (4) when it reaches a certain angle.
- 30 6. The military personnel exigencies and ammunition carrier system mentioned in Claim 1; wherein modules are assembled on the

5 supporting framework (4), ergonomic waist strap (8) is attached to the  
bottom part of supporting framework (4) and back pack (1) release  
hinge (7) male part is attached to the back part, then shoulder and back  
strap (8) is inserted through the holes located at the upper part of  
supporting framework(4), and 2 thermally insulated flask casings with  
1.5l capacity (5) are attached on sides, and assault pack (3) is fixed to  
10 the other part of supporting framework(4) by buckles.

7. The military personnel exigencies and ammunition carrier system  
mentioned in Claim 1; wherein the back pack (1) is attached to the  
female hinge (7) located at the bottom of back part, and supporting  
15 framework (4) is attached to male hinge (7) located at its bottom part  
and parts are fastened by the locking of the upper lock system (6).

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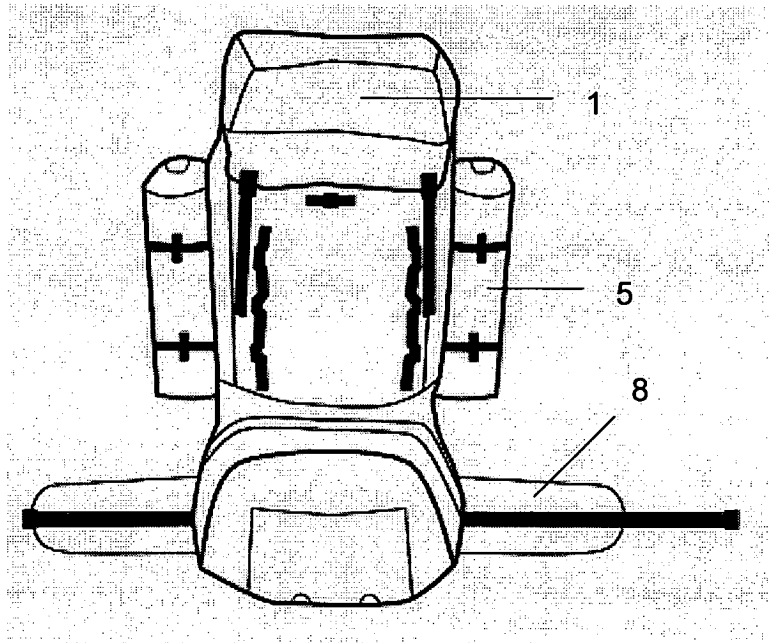


Figure 1

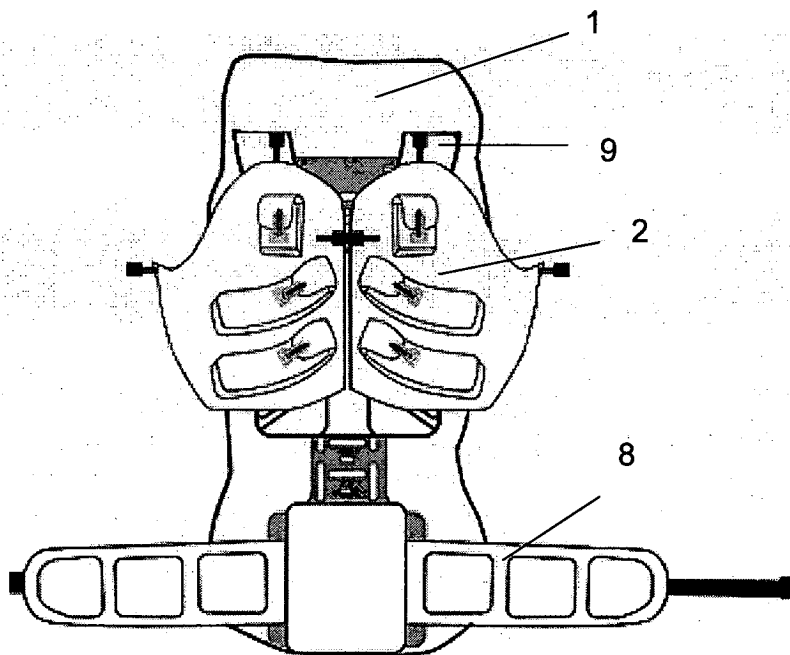


Figure 2

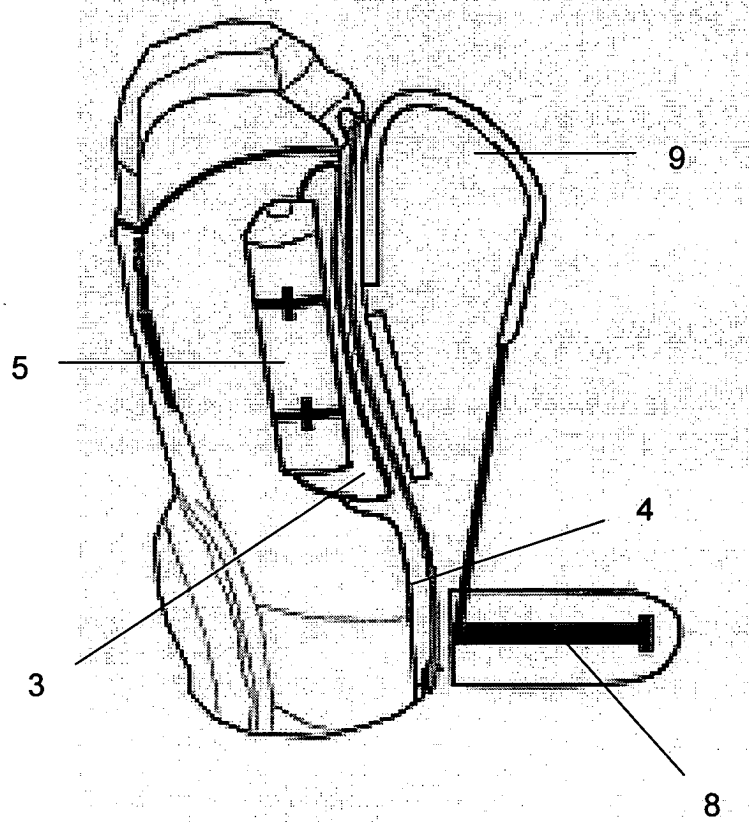


Figure 3

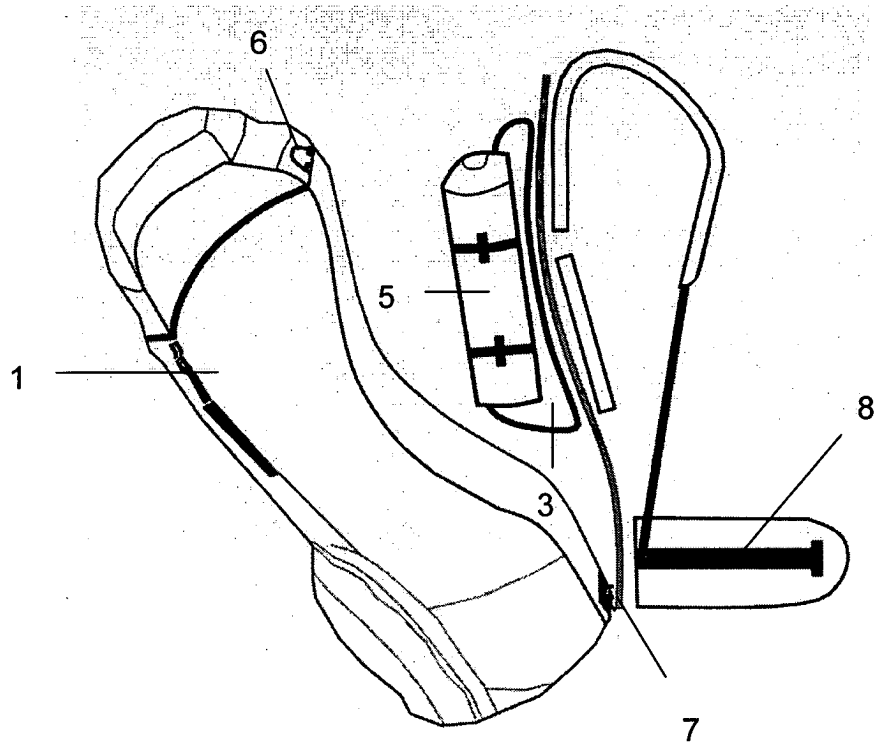


Figure 4

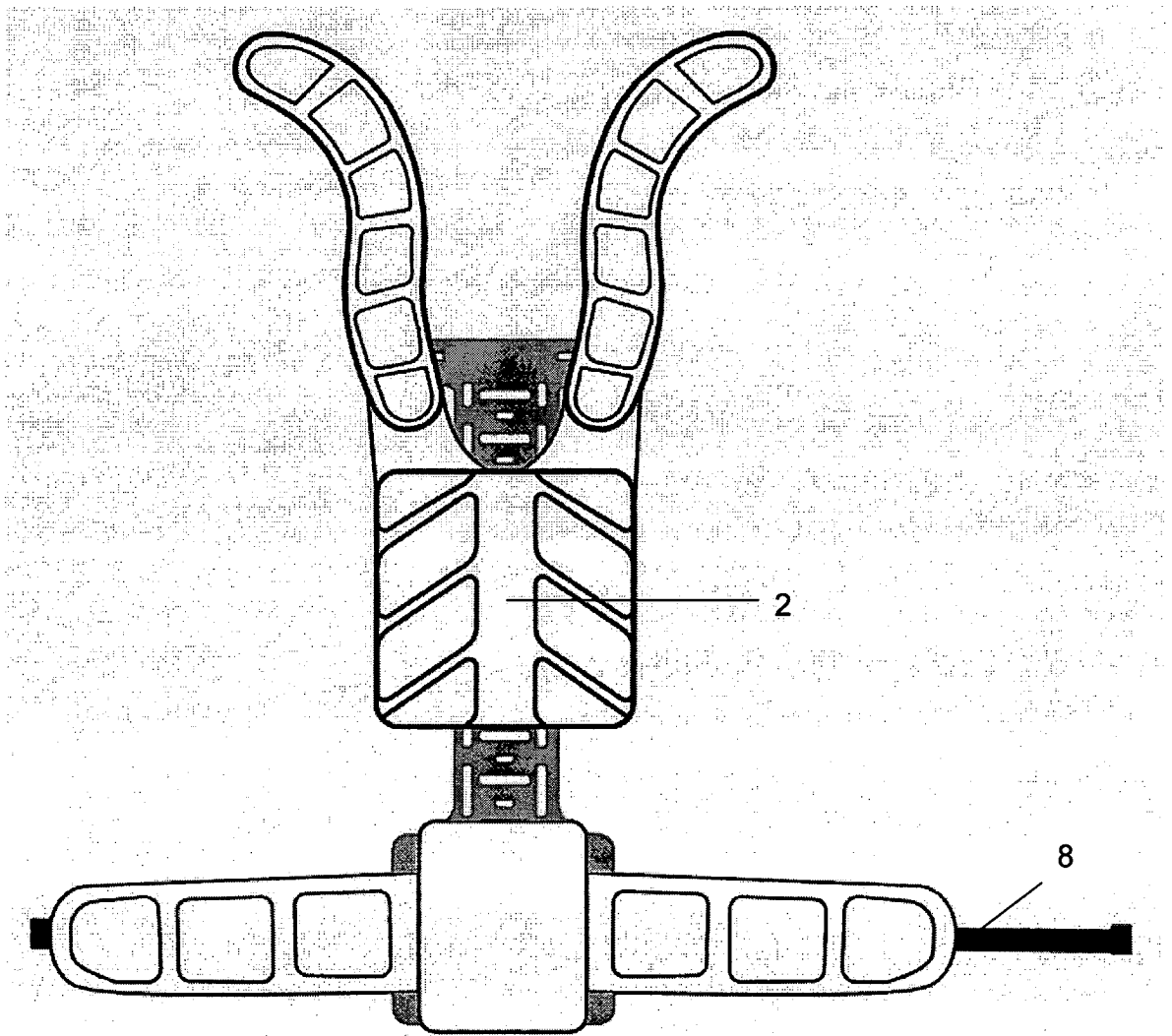


Figure 5

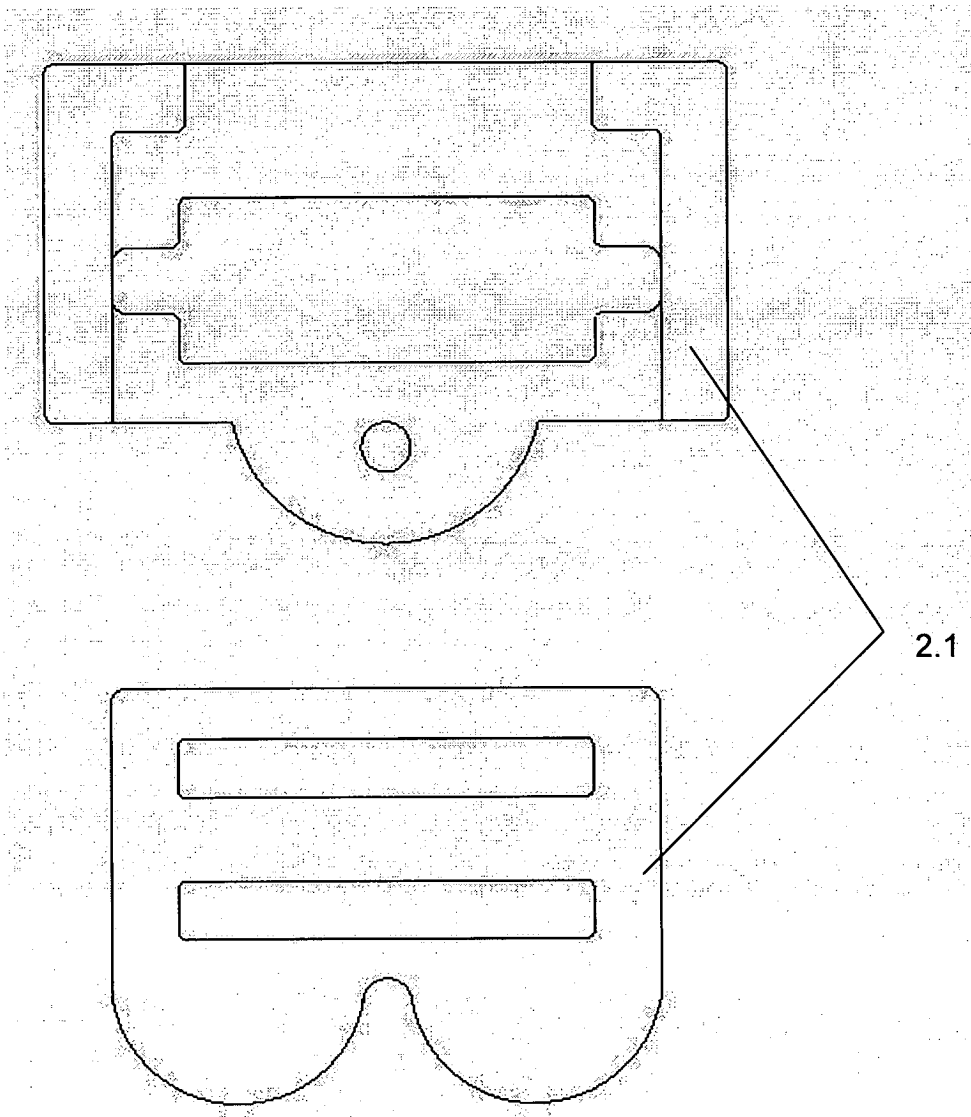


Figure 6

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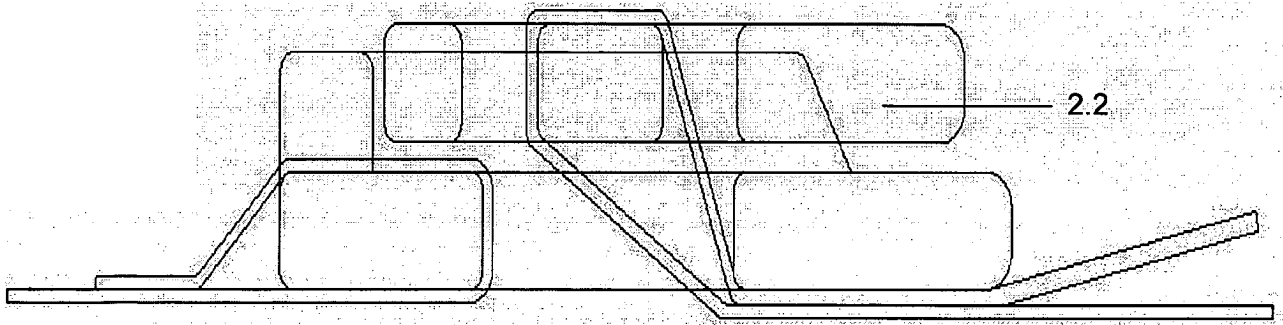


Figure 7

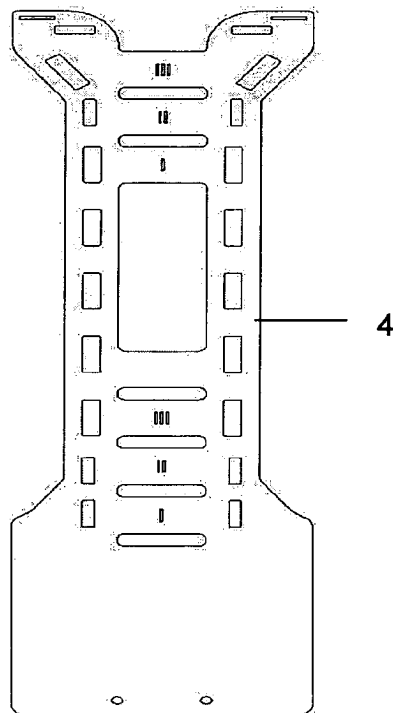


Figure 8

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/TR2008/000075

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A45F3/04 A45F3/08

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)  
A45F B64D A41D A45C F41C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006/102675 A1 (BEZAK JURICA [HR] ET AL) 18 May 2006 (2006-05-18) the whole document	1-7
A	GB 2 395 423 A (GROGZ LTD [GB]) 26 May 2004 (2004-05-26) abstract	1-7
A	FR 2 817 716 A (PROMILES [FR]) 14 June 2002 (2002-06-14) abstract	
A	WO 86/06593 A (GEARY RODNEY THOMAS) 20 November 1986 (1986-11-20) abstract	1-7
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See patent family annex.

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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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Date of the actual completion of the international search

25 November 2008

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03/12/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

Nicolás, Carlos

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/TR2008/000075

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 5 991 925 A (WU BO KUN [TW]) 30 November 1999 (1999-11-30) abstract	1-7

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No

PCT/TR2008/000075

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