

(19)



(11)

EP 2 014 271 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
04.08.2010 Bulletin 2010/31

(51) Int Cl.:
A61G 1/00 (2006.01)

(21) Application number: **08157902.1**

(22) Date of filing: **09.06.2008**

(54) **Backboard incorporating a pediatric backboard**

Rückenbrett mit einem pädiatrischen Rückenbrett

Panneau arrière incorporant un panneau arrière pédiatrique

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR**

(30) Priority: **11.06.2007 IT PR20070007 U**

(43) Date of publication of application:
14.01.2009 Bulletin 2009/03

(73) Proprietor: **Spencer Italia S.R.L.
43044 Collecchio (PR) (IT)**

(72) Inventor: **Pizzi Spadoni, Luigi Cesare
43044, Collecchio (Parma) (IT)**

(74) Representative: **Leone, Mario
Ing. Dallaglio S.r.l.
Via Mazzini 2
43121 Parma (IT)**

(56) References cited:
**WO-A-2004/096107 US-A- 4 979 520
US-A1- 2001 044 966 US-A1- 2003 084 511**

EP 2 014 271 B1

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

[0001] The present invention relates to a backboard for total immobilization of injured patients (children and adults) before or during ambulance transportation.

[0002] Two types of boards are known in the art:

- a backboard composed of a single body having a main rigid surface large enough to receive the body and torso of an adult patient on one side thereof;
- a smaller keyboard, large enough to receive a child.

[0003] In prior art, two backboards are required to be present in an ambulance.

[0004] Use of too large a backboard for a child would make immobilization more difficult and less accurate, wherefore two boards are generally installed in ambulances, with increased space requirements and difficulties in making the right choice. The ambulance is often parked at a certain distance from the accident and the age of the person to be rescued may be unknown, wherefore either both backboards are carried or there might be the risk of covering twice the path between the ambulance and the injured person, with considerable time losses.

[0005] The present invention has the object of obviating the above drawbacks by providing a pediatric backboard device that allows immobilization of an injured child when used alone; and partially forms and completes an adult backboard when used within a structure.

[0006] The apparent advantage of the device of the invention is that it provides a backboard large enough to receive the body and torso of an adult patient, which incorporates a pediatric backboard. When carrying a child, the pediatric backboard is lighter and easier to handle and especially more adapted, i.e. suitable to receive a child body.

[0007] A further important advantage is that improved immobilization is provided when carrying a child, because the pediatric backboard has a size that makes it suitable to receive the body and torso of a child and not an adult.

[0008] These objects and advantages are fulfilled by a backboard as described in claim 1 incorporating a pediatric backboard according to the present invention, which is characterized by the annexed claims.

[0009] This and other features will be more apparent upon reading of the following description of one preferred embodiment, which is shown by way of example and without limitation in the accompanying drawings, in which:

- Figure 1 is a top view of the full backboard;
- Figure 2 shows a profile view from the side that receives the head of an adult without the pediatric backboard;
- Figure 3 shows the pediatric backboard separate from the full backboard.

[0010] Referring to the figures, numeral 1 designates the full backboard incorporating the pediatric backboard.

[0011] 1a designates the outer structure of the backboard which has a specially shaped central hole 10 for receiving a belt housing 4.

[0012] Preferably, but without limitation, the pediatric board is composed of two surfaces: a surface 2a that is large enough to receive the body and torso of an injured child; a surface 2b below the surface 2a, for receiving the head of the child.

[0013] The pediatric backboard 2 fits within the structure of the backboard by connection of a male edge 7 with a female receptacle 8 on which it is laid.

[0014] The pediatric backboard 2 is locked, for instance, by butterfly devices 3 or flaps (see Fig. 1) in various numbers.

[0015] Numeral 5 designates the apertures arranged over the periphery of the backboard 1 for the passage of the adjustable restraint straps. Numeral 6 designates the apertures at the side of the pediatric backboard 2, which have the same purpose as the apertures 5. These apertures also act as gripping handles for transport.

[0016] The operation of the device of the present invention will be described below with reference to the numerals of the figures.

[0017] For immobilization of an adult, the backboard is used in its full configuration, i.e. including the pediatric backboard 2 and the remaining area or space, designated by numeral 12.

[0018] The male 7 - female 8 joint and the flaps 3 allow the pediatric backboard to be properly installed, preventing its disengagement and to properly support the weight of the patient's body.

[0019] Now, the patient is secured to the backboard 1 by introducing the adjustable belts through the apertures 5 arranged over the periphery of the board.

[0020] However, for immobilization of a child, the pediatric backboard 2 is removed from the backboard 1, by operating the butterfly devices 3 and applying a slight pressure to the bottom face of the pediatric backboard.

[0021] Now, once proper alignment is obtained between the head on the surface 2b with the spine, the child is secured to the pediatric backboard by passing the adjustable straps through the apertures 6 at the sides of the board.

[0022] It shall be noted that this type of board can be also used for proper transportation of patients receiving an infusion solution (such as saline, glucose solution).

[0023] In a possible variant embodiment, not shown, the backboard can comprise a belt housing 4.

Claims

1. A backboard incorporating a pediatric backboard, said backboard being composed of:

- a) an outer surface (2a) large enough to receive

the body of an adult patient and having a central opening (10);
b) a pediatric backboard (2) adapted to fit into the central opening (10);

SAID pediatric backboard (2) is in turn composed of a rigid surface (2a) for receiving the body and torso of a child and a surface (2b), also rigid, below the body receiving surface, which is large enough to receive the child's head;

AND characterized in that

SAID pediatric backboard (2) having apertures (6) at its sides through which restraint straps are passed and fixed for securing the body of the child to be carried.

2. A backboard incorporating a pediatric backboard as claimed in claim 1, **characterized in that** the position of the pediatric backboard (2) is secured by one or more butterfly devices (3) and a male (7) - female (8) joint.

Patentansprüche

1. Spineboard mit eingebautem Kinder-Spineboard, **dadurch gekennzeichnet, dass** es Folgendes umfasst:

- a) eine äußere Struktur (2a), welche die geeigneten Maße für den Körperbau eines erwachsenen Patienten, sowie eine in der Mitte gelegene Öffnung (10) aufweist;
- b) ein Kinder-Spineboard (2), welches dazu geeignet ist, in die in der Mitte gelegene Öffnung (10) eingefügt zu werden;

das GESAGTE Spineboard mit eingebautem Kinder-Spineboard seinerseits eine steife Auflagefläche (2a) umfasst, die dazu geeignet ist, den Körper und Brustkorb eines Kindes aufzunehmen, sowie eine ebene und ebenfalls steife Fläche (2b), welche sich unterhalb der Auflagefläche befindet und welche zur Auflage des Kopfes des Kindes genügt; und **gekennzeichnet dadurch, dass** das GESAGTE Spineboard mit eingebautem Kinder-Spineboard (2) an den Seiten der Öffnungen (6), durch die die Gurte geführt und anschließend befestigt werden, Gurte zur Fixierung des zu transportierenden Kindes aufweist.

2. Spineboard mit eingebautem Kinder-Spineboard nach Anspruch 1, **dadurch gekennzeichnet, dass** die Lage des Kinder-Spineboards (2) durch eine oder mehrere Drosselklappen (3) und durch eine Nut- (7) Feder- (8) Verbindung gewährleistet ist.

Revendications

1. Planche épinière incorporant une planche épinière pédiatrique, la dite planche épinière étant composée par :

- a) une surface extérieure (2a) assez grande pour recevoir le corps d'un patient adulte et présentant une ouverture centrale (10) ;
- b) une planche épinière pédiatrique (2) adaptée à se coupler dans l'ouverture centrale (10) ;

LA DITE planche épinière (2) est composée à son tour par une surface rigide (2a) pour recevoir le corps et le thorax d'un enfant et une surface (2b), aussi rigide, au dessous de la surface de logement du corps, qui est suffisamment grande pour recevoir la tête de l'enfant,

ET **caractérisée en ce que** LA DITE planche épinière pédiatrique (2) ayant des ouvertures (6) à ses côtés à travers desquelles sont faites passer et sont fixées des courroies pour retenir le corps de l'enfant à transporter.

2. Planche épinière incorporant une planche épinière pédiatrique selon la revendication 1, **caractérisée en ce que** la position de la planche épinière pédiatrique (2) est assurée par un ou plusieurs dispositifs à papillon (3) et par un encoche mâle (7) - femelle (8).

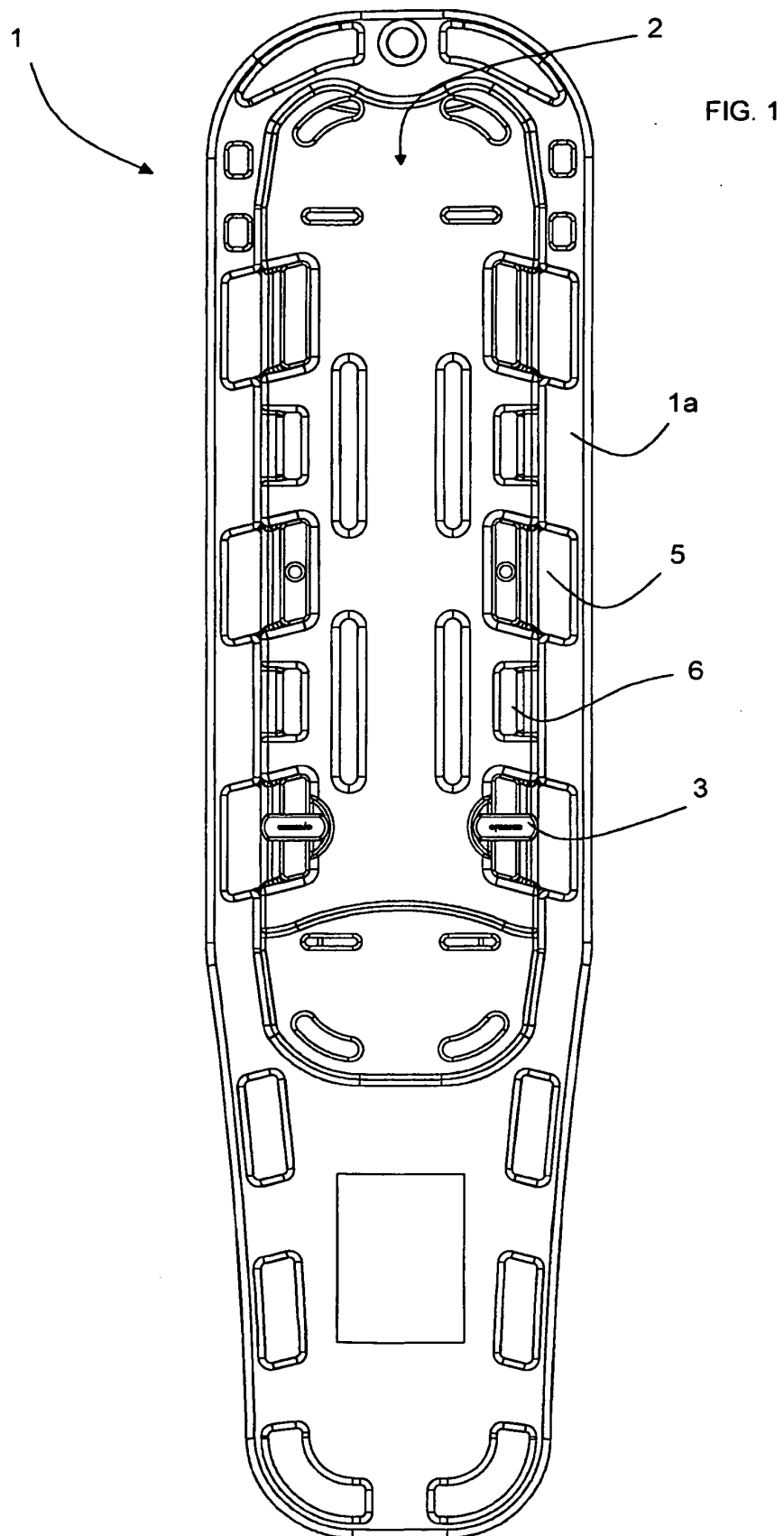


FIG. 2

