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(54) **Health service stretcher**

(57) Health service stretcher, that has a frame (1), with a more or less rectangular shape and that is appreciably flat for the placement of the sick or injured person either in a sitting position or lying down, where said frame has some light emitting elements (4a, 4b) distributed around the periphery of said frame (1), these light emitting elements (4a, 4b) being connected to at least one independent source of electrical energy (5) with an on/off control switch, signalling the position of the stretcher in a visible manner from all around.

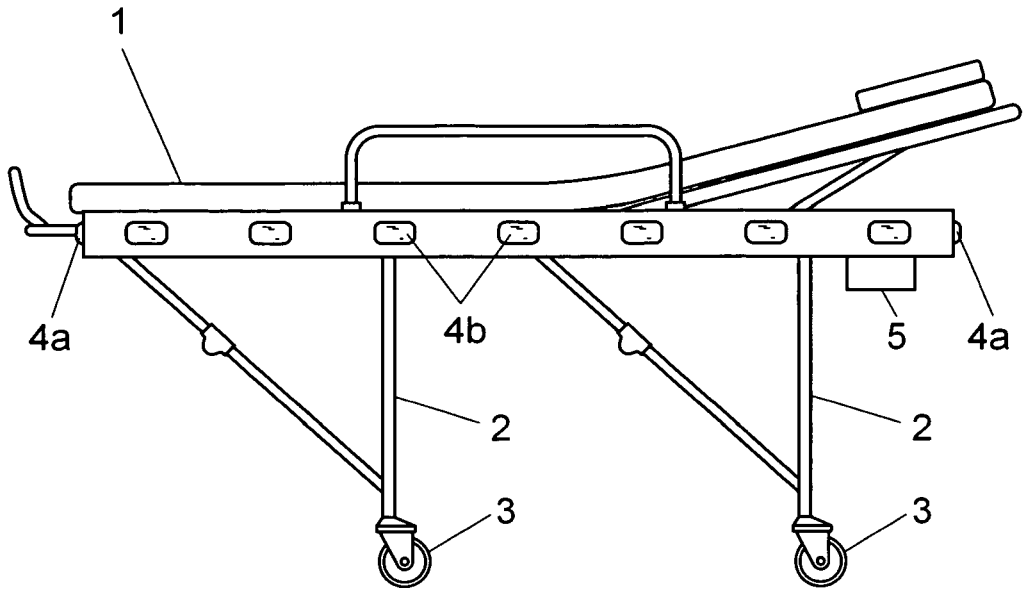


Fig. 1

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Description

Object of the invention

[0001] This present invention refers to a health service stretcher, more specifically a stretcher used in ambulances and by the emergency services for the transportation of sick people to hospitals and similar places.

Field of application of the invention.

[0002] The invention is applicable to the health hardware industry, more specifically in the sector for light stretcher transport.

Background to the invention

[0003] At the present time, the emergency medical services and ambulances are equipped with light construction stretchers, which allow for the movement of sick and injured people in a safe manner.

[0004] A stretcher is made up from an appreciably flat frame and generally has some feet or a foldable base with wheels on the lower part which allows the stretcher to be wheeled. The folding down of the base means a reduction in the total height of the stretcher so as to make its introduction and transport in ambulances easier.

[0005] The main problem posed by the use of these stretchers is that it is possible to trip with these and in so doing the sick or injured person can be hurt, this being a situation that is absolutely not advisable. For example, during the excitement of an accident it is possible that a person who is rushing does not realise that there is someone near or in the path of the stated stretcher. In other cases, such as in poorly lit areas, such as industrial buildings or poorly lit streets or roads during the hours of darkness, it may be difficult to see a stretcher, with the consequent risk of knocking it over.

[0006] This is the main problem that the characteristics of this invention solve.

Description to the invention

[0007] The health service stretcher, object of this invention, has some technical peculiarities aimed at making its visibility easier in places where there is poor lighting and low visibility, or in those in which the care being provided is affected by events such as the nerves of the people involved in accidents or unforeseen situations, where said stretcher is needed, achieving an improvement in the safety of the sick or injured person, and for those surrounding the patient.

[0008] The health service stretcher is of the type that has a frame, with a shape that is more or less rectangular, is appreciably flat, for the placement of the sick or injured person in a lying down position.

[0009] According to the invention, the stretcher has some light emitting elements distributed around the periphery of said frame, these light emitting elements being connected to at least one independent supply of electrical energy with some means of switching them on, marking the position of the stretcher.

[0010] In this way the stretcher becomes clearly visible and stands out at night or in dark or poorly lit environments from a significant distance. This advantage, for example can be seen in the case of a traffic accident, the stretcher is easily visible to the drivers of other vehicles who are approaching, such as in the case of the collecting of the sick or injured person, during the movement to the ambulance, improving the safety of the occupant. The independent electrical supply is made up of a battery and an on/off switch, and thus making sure that the stretcher does not lose freedom of movement and for the light emitting elements to work only when their use is necessary.

[0011] In one embodiment, the independent electrical supply has an operating control unit for the light emitting elements to be flashing, for example by means of an intermittent unit. This control unit provides the light emitting elements with an action so that they are even more visible and the people can pay greater attention to the position of the stretcher.

[0012] In one embodiment the independent electrical supply is housed in the lower part of the frame, being away from the part where the patient is housed and out of reach, preventing possible accidents.

[0013] In one embodiment the light emitting elements are placed at the ends of the frame, and in so doing achieve better visibility in situations in which a person approaching the stretcher in a passage or something similar will still see the stretcher from either of the two ends. It is even envisaged that these light emitting elements can be different colours, such as white at the front end and red at the rear end, showing the orientation of the stretcher and its possible direction of movement when it is handled by nurses who are moving the patient.

[0014] In another embodiment, which does not rule out that it can be simultaneous, the light emitting elements are placed on the longitudinal sides of the frame allow it to achieve the improvement in the signalling and location of the stretcher from the sides. In this case the light emitting elements could be yellow, for example.

Description of the figures.

[0015] In order to complete the description that is being made and for the purpose of providing a better understanding of its characteristics, a set of drawings is attached to this present description in which the figures being by way of illustration and are not by way of limitation on the invention, in which the following is shown:

- Figure 1 shows a lateral view of a stretcher of the invention.
- Figure 2 shows a block diagram of the electrical circuit for the supply and control of the light emitting elements.

Preferred embodiment of the invention

[0016] As and how can be seen in the referenced figures the stretcher has a frame (1) that is more or less rectangular in a top view and which is essentially flat for the placement of the sick or injured person who is either sat or lying down on said frame. On the lower part of the frame (1) of the stretcher there are some foldable feet (2), with their corresponding wheels (3) to make the wheeling of said stretcher easier and its introduction into the inside of the ambulance or health vehicle.

[0017] There are some light emitting elements (4a, 4b) assembled onto the perimeter of the frame (1) of the stretcher, which are connected to an independent electrical supply (5) with on/off controls for its use, signalling the situation of said stretcher in a clearly visible manner to all those around.

[0018] Light emitting elements (4a) are placed at the front and rear ends of the frame (1), made in a distinctive colour so as to identify said ends and the possible movement that the stretcher is making. Other light emitting elements (4b) are placed along the longer sides of the frame (1) to facilitate its lateral visibility.

[0019] The independent electrical supply (5) is housed under the frame (1), being made up of a rechargeable battery (6), an on/off switch (7) and a control unit (8) for the flashing action of the light emitting elements (4a, 4b).

[0020] Once having sufficiently described the nature of the invention, likewise having given a preferred embodiment it is placed on record that the materials, shape, size and arrangement of the elements described can be modified provided that they do not mean an alteration of the basic essentials of the invention that are claimed below.

Claims

1. Health service stretcher, of the type that has a frame (1), with a more or less rectangular shape and that is appreciably flat for the placement of the sick or injured person either in a sitting position or lying down, **characterised in that** it has some light emitting elements (4a, 4b) distributed around the periphery of said frame (1), said light emitting elements (4a, 4b) being connected to at least one independent source of electrical energy (5) with an on/off control switch, signalling the position of the stretcher in a visible manner from all around.

2. A stretcher, according to claim 1, **characterised in that** the independent electrical supply (5) has a control unit (8) to make the light emitting elements (4a, 4b) work in a flashing manner.

3. A stretcher, according to any of the previous claims, **characterised in that** the independent electrical supply (5) is housed in the lower part of the frame (1).

4. A stretcher, according to any of the previous claims, **characterised in that** the light emitting elements (4a) are fitted to the ends of the frame (1).

5. A stretcher, according to any of the previous claims, **characterised in that** the light emitting elements (4b) are fitted to the longitudinal sides of the frame (1).

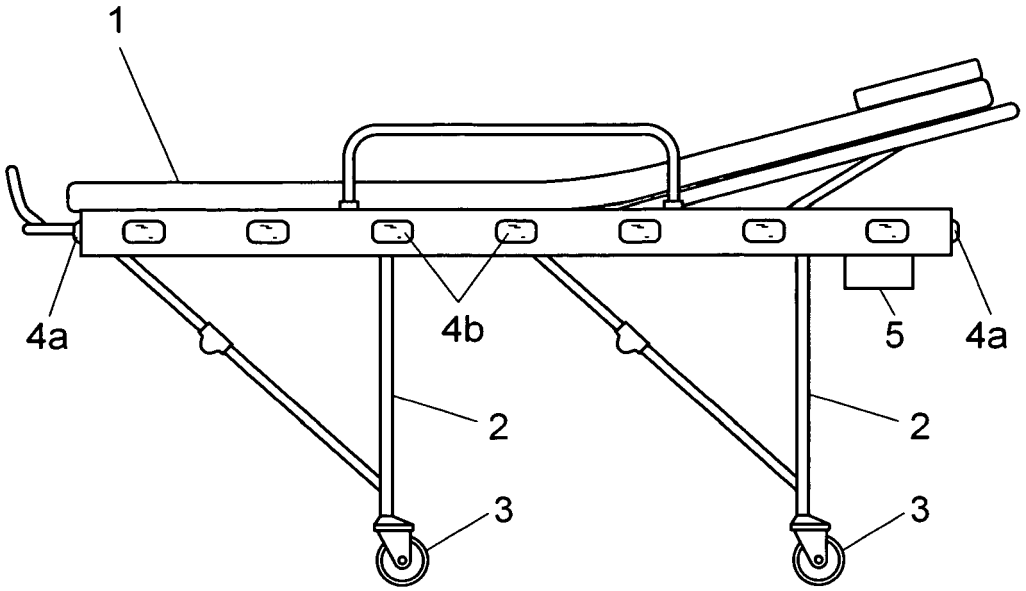


Fig. 1

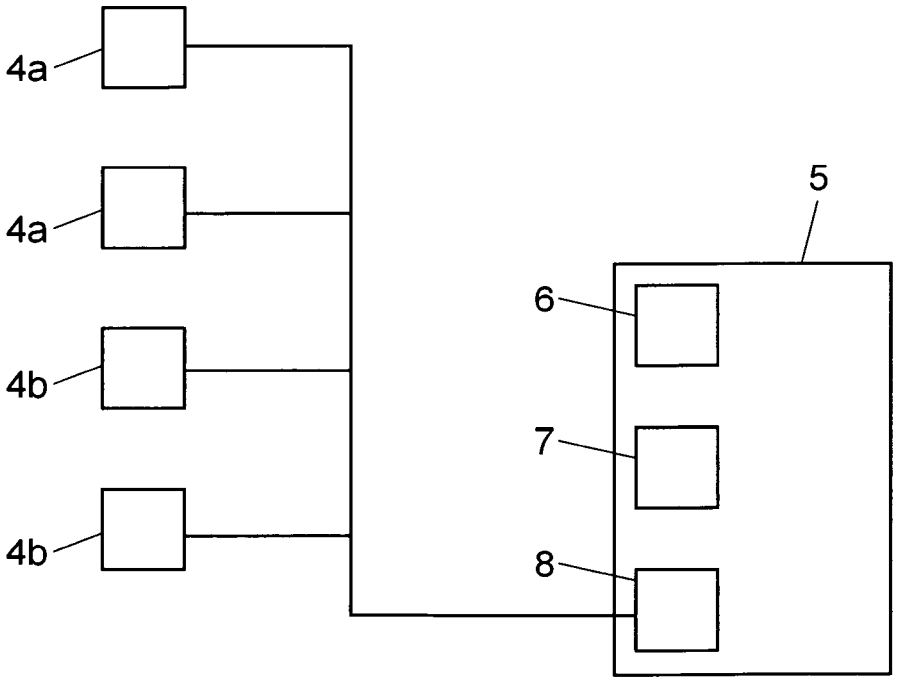


Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 10 00 7948

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 351 439 A (FERNO [GB]) 3 January 2001 (2001-01-03) * page 2 - page 3 * * page 9 * * page 12 * * page 15 * * claim 16; figures * -----	1,2,4,5	INV. A61G1/04 A61G1/02 A61G1/056
X	US 5 494 051 A (SCHNEIDER SR CHARLES W [US]) 27 February 1996 (1996-02-27) * paragraph [0003] * * paragraph [0005] * * figures * -----	1,3-5	
X	US 5 913 559 A (SEXTON GREGORY J [US] ET AL) 22 June 1999 (1999-06-22) * paragraph [0005] * * paragraph [0009] - paragraph [0013] * * claims 12-14 * * figures * -----	1,5	
X	US 2 498 287 A (MCLELLAN PAUL W) 21 February 1950 (1950-02-21) * the whole document * -----	1,4,5	TECHNICAL FIELDS SEARCHED (IPC) A61G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	10 December 2010	Edlauer, Martin

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
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T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 00 7948

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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10-12-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2351439 A	03-01-2001	AU 5547400 A	22-01-2001
		WO 0101913 A1	11-01-2001
US 5494051 A	27-02-1996	AU 3552195 A	29-03-1996
		WO 9608218 A1	21-03-1996
		US 5749374 A	12-05-1998
US 5913559 A	22-06-1999	NONE	
US 2498287 A	21-02-1950	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82