

A MOVEABLE STRETCHER SUPPORT STRUCTURE

FIELD OF INVENTION

5 The present invention relates to a moveable stretcher support structure and in particular a stretcher support structure for the use in or of a vehicle where limited space is available and in particular although not solely in or for use in vehicles which are of a multi purpose type for both transporting of disabled and able body persons.

BACKGROUND OF THE INVENTION

10 Vehicles such as ambulances, helicopters, air craft and the like are often used to transport people who are disabled. Often such people are transported lying horizontally on a stretcher. Most commonly such stretchers, in civilian applications are of a kind which provide their own undercarriage which is able to be raised and lowered as desired to a suitable height. Such a stretcher with undercarriage is normally loaded into a vehicle such as for example an ambulance through the rear door. The carriage provides it own caster wheels. It is able to be rolled along the ground until contact is made with part of the vehicle whereupon the undercarriage will collapse thereby allowing the continued loading of the stretcher into the vehicle. Since the undercarriage is provided on wheels the stretcher is then able to be maneuvered inside the vehicle to an appropriate stowed position where it can then be fastened to the vehicle for secure transportation of the stretcher and the person on the stretcher.

25 Many stretchers however are not provided with an undercarriage which would otherwise allow it to be conveniently maneuvered within the vehicle. In military applications compactly designed stretchers are often not provided with an undercarriage. Such stretchers normally merely consist to two longitudinal profiles between which a flexible webbing is spanned. The profiles may present feet which are able to be located on a supporting surface to support the stretcher and the person on the stretcher. The maneuverability of such stretchers is hence much more limited and normally requires the lifting of the stretcher by two people at both ends to reposition it.

WO91/15178 illustrates a mechanism which is able to receive and support a stretcher and wherein the mechanism allows for the stretcher to be moved within the vehicle. The mechanism consists of a parallelogram arrangement for lowering and raising the stretcher support member and a longitudinal rail for displacing the stretcher along the longitudinal direction. Pivots are provided to also allow for the movement of the stretcher lateral to the longitudinal direction. The device however utilises a spring or hydraulic mechanism for providing vertical support to the stretcher and appears to be limited to allowing the vehicle to carry one stretcher only since only a single longitudinal rail is provided from which the stretcher support mechanism is supported.

In certain situations, and in particular with reference to military applications, more than one person will often need to be carried by the vehicle. Furthermore in military applications the vehicle is normally of an armour plated type and as a result of considerations of safety within the vehicle, accessibility to the interior of the vehicle is normally limited by a small doorway. Further more such vehicles are normally also multipurpose vehicles for not just the transportation of disabled people carried on stretchers but may alternatively or in combination be utilised for transporting able body people normally in a sedentary position. Accordingly it is desirable for a stretcher support mechanism to be provided which is movable to allow for convenient loading and unloading of stretchers through the doorway of the vehicle and where such stretcher support structures can be maneuvered to position a stretcher and the person in an efficient manner with the vehicle. It would also be an advantage where such a stretcher support mechanism can be stowed in an unused position to convert the interior of the vehicle to a mode for carrying more able body people.

Accordingly it is an object of the present invention to provide a moveable stretcher support structure which incorporates the abovementioned *desiderata* or which will at least provide the public with a useful choice.

BRIEF DESCRIPTION OF THE INVENTION

Accordingly in a first aspect the present invention consists in a movable stretcher support structure for a vehicle to be dependent from a fixed structure of and within said vehicle, said movable stretcher support structure comprising:

a stretcher support member dependent from said fixed structure by at least one support arm cantilevered from said fixed structure, said support arm movably supporting said stretcher support member relative to said fixed structure to thereby allow horizontal movement of said stretcher support member relative to said fixed structure between an extended stretcher supporting position and a retracted stretcher supporting position, said retracted stretcher support position placing said stretcher support member more proximate to said fixed structure than in the extended stretcher supporting position.

Preferably wherein at least two support arms are provided each pivotably dependent from said fixed structure about a respective vertical pivot axis said axes horizontally spaced from each other.

Preferably wherein said at least two arms are each engaged at or towards their distal ends away from said respective vertical pivots axis to said stretcher support structure to be pivotable thereto about a vertical pivot axis, said arms extending between said stretcher member structure and said side structure, parallel to each other.

Preferably wherein said at least two arms extend between said fixed structure and said stretcher support structure in a scissor like arrangement.

Preferably wherein said stretcher support member provides, in both said supporting positions, upwardly facing stretcher bearing surfaces onto which a stretcher may be placed, to thereby provide vertical support to a said stretcher.

Preferably wherein said stretcher support member is a frame comprising two parallel elongate guide rails each providing said stretcher bearing surfaces to receive and provide vertical support in both said supporting positions a longitudinal profile of a said stretcher.

Preferably wherein said two guide rails in both said stretcher supporting positions are spaced from each other by at least one linkage means interconnecting said rails and positioning such in both said supporting positions at a distance complementary to the spacing of said longitudinal profiles of said stretcher.

Preferably wherein said at least one linkage means is adapted to allow a displacement of said two guide rails relative to each other between a spaced condition where said guide rails are spaced to receive a said stretcher and a collapsed condition wherein said guide rails are more proximate to each other.

Preferably wherein said at least one linkage means is adapted such that said guide rails remain parallel to each other, in said spaced and collapsed conditions.

Preferably wherein said at least one linkage means is a linkage arm engaged at each distal end thereof to a respective guide rail to be pivotable thereto about respective vertical pivot axes.

Preferably wherein said at least one linkage arm is articulatable intermediate of its distal ends about at least one vertical pivot axis.

Preferably wherein at least two linkage arms are provided each spaced from the other towards a respective end of each said guide rail.

Preferably wherein said at least one linkage means is telescopic.

Preferably wherein said at least two linkage arms are adapted to allow displacement of said guide rails relative to each other in a parallelogram manner.

Preferably wherein said at least two linkage arms are adapted to move in a scissor like manner between said two guide rails.

Preferably wherein said stretcher support member is pivotable relative to said fixed structure about a horizontal axis to an upwardly rotated position by it pivoting upwardly and towards said side structure.

Preferably wherein said horizontal axis is parallel to the general longitudinal direction of said stretcher support member.

Preferably wherein said horizontal axis is located at a pivot means connecting said at least one arm at its first end with said fixed structure.

Preferably wherein said pivot means is a bracket engaged to said fixed structure, mounting an axle defining said pivot axis about which said stretcher support member and said at least one arm are able to pivot.

Preferably wherein a rotation limit stop dependent from said fixed structure is provided to define the limit of rotation of said at least one arm about said pivot axis, to hold the stretcher support member horizontally, at said limit of rotation.

Preferably wherein said rotation limit stop is part of said bracket located below said arm.

Preferably wherein said horizontal axis is rotated at a pivot means connecting said other end of said at least one arm, with said stretcher support member.

In a further aspect the present invention consists in a vehicle for carrying as least one stretcher and having a doorway for loading and unloading of an at least one stretcher, a movable stretcher support structure dependent from a fixed structure of and within said vehicle and to move a stretcher between two positions, said movable stretcher support structure comprising:

a stretcher support member able to slidingly receive in a longitudinal direction and provide horizontal support to a said stretcher, said stretcher support member engaged to said fixed structure by at least one arm which is dependent from said fixed structure in a cantilevered manner and engaged to said stretcher support member to allow horizontal movement of said stretcher supporting positions and an extended stretcher supporting position, said retracted position being more proximate to said fixed structure than the extended position, wherein in the extended position the stretcher support member is presented in a condition longitudinally aligned with said doorway.

Preferably wherein said stretcher support member in said extended stretcher support position is longitudinally more proximate to said doorway than when in said retracted stretcher support position.

This invention may also be said broadly to consist in the parts, elements and features referred to or indicated in the specification of the application, individually or collectively, and any or all combinations of any two or more of said parts, elements or features, and where specific integers are mentioned herein which have known equivalents in the art to which this invention relates, such known equivalents are deemed to be incorporated herein as if individually set forth.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates a side view and sectional view of a vehicle into which person supporting stretchers are able to be loaded and supported by stretcher support structures,

Figure 2 is a rear view of a vehicle which for example provides a small doorway through which the stretchers may be loaded and unloaded into and from the interior of the vehicle,

Figure 3 is a cut away perspective view of the vehicle showing two stretcher support structures the lower of which is in an extended stretcher

support position and the upper of which is in a retracted stretcher support position,

Figure 4 illustrates the stretcher support member in a condition where the two guide rails which provide the vertical support to a stretcher are intermediate of a spaced apart condition corresponding to a stretcher support position and a collapsed condition corresponding to a non use position,

Figure 5 illustrates the two guide rails having been moved to a fully collapsed condition to be more proximate to each other to thereby create more useable space within the vehicle,

Figure 6 is a perspective view of part of the interior of the vehicle and wherein the two movable stretcher support structures have been further collapsed and are in an upwardly rotated position secured against the side structure of the vehicle,

Figure 7 is a partial sectional view through the vehicle illustrating the two stretcher support structures in an upwardly rotated position and wherein in such position more useable space is provided for, for example the erection of seats for carrying able-bodied personnel in a sedentary position,

Figure 8 illustrates an exploded view of part of the moveable stretcher support structure to illustrate the moveable nature of the stretcher support structure relative to the vehicle,

Figure 9 illustrates two alternative arrangements of a moveable stretcher support structure of the present invention wherein some of the features of the most preferred form are provided in a different form,

Figure 10 illustrates further alternatives,

Figure 11 illustrates yet further alternatives.

DETAILED DESCRIPTION OF THE INVENTION

With reference to Figure 1 there is shown a vehicle 1 which may for example be an ambulance or an armoured personnel carrier. Alternative vehicles may include helicopters, air craft water vessels, such as amphibious craft or other means of transporting people. The present invention is hence not limited to being incorporated in a land transport vehicle. Provided within the vehicle is at least one moveable stretcher support structure 2. The stretcher support structure is able to receive a stretcher and support the stretcher including the person on the stretcher in a substantially horizontal condition. In vehicles of a kind used in military applications, where the design of the vehicle

has considerations of safety and protection within the vehicle, the opening of such vehicles for loading and unloading of people is normally small. For example shown in Figure 2 which is a rear view of a vehicle the opening 3 may only be of a width slightly larger than the width of a stretcher.

5 By providing the moveable stretcher support structure from a support structure such as a side structure as the side wall 4 of a vehicle as for example shown in Figure 3, a stretcher support member 5 is able to be moved between retracted and extended stretcher support positions which are proximate to and extended away from the side structure 4 respectively. The stretcher support
10 member is presented in the extended stretcher support position to be substantially aligned with the opening of the vehicle as for example shown in Figure 2. A stretcher is able to be loaded into or removed from the vehicle and onto or from the stretcher support member 5 when the stretcher support member is in this extended stretcher support position. When the stretcher is
15 fully loaded onto the stretcher support member the stretcher support member can be moved to the retracted position which is more proximate to the side structure 4 to thereby create more useable space within the vehicle.

The stretcher support member is moveably supported from the side structure 4 by at least one arm and preferably two arms 6 which extend
20 between the stretcher support member 5 and the side structure 4. The two arms 6 are preferably pivotably engaged relative to the side wall structure about vertical pivot axes 7. Such axes may be provided by a bracket secured to the side wall structure. Alternatively a separate side structure is dependent from the side wall structure of the vehicle to which the arms 6 are secured. The arms
25 at their other distal ends are engaged to the stretcher support member 5, also preferably in a pivotable relationship about vertical pivot axes 8. With reference to Figure 3, this pivotable relationship allows for the stretcher support member to be moved from the retracted position as shown by the upper stretcher support structure, to the extended position as shown by the lower
30 stretcher support structure.

In the extended position the stretcher support member is further from the side structure than when in the retracted position. However both positions are still able to provide support to a stretcher since the guide rails remain parallel to each other. Furthermore in the preferred form the stretcher support member is
35 longitudinally more proximate to the opening 3 of the vehicle in the extended position than when in the retracted position. Where the opening 3 is at the rear

of the vehicle, in the retracted position the stretcher support member is further forward than in the extended position.

In this most preferred arrangement the arms 6 preferably remain parallel to each other during the movement of the stretcher support member. The arms are preferably of an equal length and are engaged in a spaced relationship to each other, to the stretcher support member and to the side wall structure to provide a rigid and vertically supporting arrangement for the stretcher support member. The support of the arms relative to the side structure about the vertical pivot is such as to present the arms from the side structure horizontally in a cantilevered arrangement. Whilst they are able to move in a horizontal plane, when in a stretcher supporting position the arms are unable to move in a vertical direction thereby providing vertical support to the stretcher in the conditions as shown in Figure 3. Likewise the connection between the other ends of the arms and the stretcher support member at the vertical pivots 8 is of a similar nature wherein no pivoting about the horizontal axis of the stretcher support member can occur when the stretcher support member is in a stretcher supporting position.

Whilst the stretcher support member in Figure 3 is shown in two stretcher support positions (an extended and retracted position) the stretcher support member may further be moved to a non supporting position or positions where the moveable stretcher support structure is in a non use stored condition so that the interior space of the vehicle can be utilised for other applications. With reference to Figure 6, such other applications may be for allowing the erection of seats to allow for more personnel to be transported by the vehicle.

Several different stored conditions may be adopted by the stretcher support structure. Such different conditions may be adopted on their own or in combination. In a first stored condition, the stretcher support member itself may be moved to a collapsed condition. In this form, the stretcher support member may for example consist of two longitudinal guide rails 9. These guide rails provide a channel into which the two forward and aft legs 35, 36 of a stretcher (see for example Figure 1) can locate and slide therealong. The two guide rails are spaced apart by at least one and preferably two linkage arms 10 which hold the two guide rails 9 in substantially the same plane (which is horizontal, when in the stretcher supporting positions).

The two linkage arms 10 are spaced apart from each other at or towards the distal ends of each of the longitudinal guide rails 9. The linkage arms 10 are preferably pivotably engaged to each of the guide rails so that the guide rails may be moved from a spaced condition as shown in Figure 3 to a collapsed condition as shown in Figure 5. The linkage arms 10 are pivotable relative to the guide rails about a substantially vertical pivot axis (in the orientation where the stretcher support member is in the stretcher supporting positions).

In the most preferred form the linkage arms 10 are articulated intermediate of their pivots with the guide rails and such articulation is for example shown in Figure 4. The articulation axis 36 of each of the linkage arms is parallel to the linkage arm pivots of the guide rails. Such articulation of the linkage arms allows for the guide rails to move between the spaced condition and collapsed condition. Most preferably in the spaced condition the linkage arms can be made rigid by for example a pin extending between the two portions of each of the linkage arms to thereby prevent articulation occurring. Likewise in the collapsed condition the guide rails may be locked from moving to the spaced condition by an appropriate locking or tying means. In the collapsed condition, the guide rails take up less space and with the arms 6 moved to the retracted position, the moveable stretcher support structure increases the useable space within the vehicle.

In addition or as a separate stowed condition, the stretcher support member 5 may further be rotated to an upwardly rotated position as for example shown in Figure 6. In having moved from the extended position to the retracted position, the stretcher support member (whether in the spaced condition or collapsed condition) may further be rotated about a substantially horizontal axis 11 as shown in Figure 7. The nature of the stretcher support structure is such that when the components of the stretcher support structure are in the retracted and collapsed condition the width of the components is greater than their height. Accordingly a pivoting of the arms 6 and the stretcher support member 5 about the horizontal axis 11 reduces the extent to which the stretcher support structure of the present invention extends from the side structure into the interior of the vehicle. In this upwardly rotated position as shown in Figure 7, less obstruction within the interior of the vehicle is created by the moveable stretcher support structure of the present invention. With the option of the highly preferred ability of the stretcher support member to move

between a spaced condition and a collapsed condition, the overall height of the moveable stretcher support structure in the collapsed condition as shown in Figure 7 is also reduced. This more compact design may allow for a plurality of vertically spaced moveable stretcher support structures to be provided within the vehicle.

The axis 11 is preferably substantially parallel to the longitudinal direction of the guide rails 9. However the stretcher support structure of the present invention may provide the stretcher support member 5 at the distal end of the arm 6 where the arm 6 are of an unequal length. Perhaps the side wall of the vehicle is curved and different length arms 6 may be utilised to present the stretcher support member in the extended stretcher supporting position in alignment with the door by the use of unequal length arms 6.

With reference to Figure 8 there is shown the guide rails 9 are each bolted to the linkage arm 10. The linkage arm 10 consists of two guide rail receiving portions 20 and an articulated portion 21 which are pivotable about the vertical axis 22. The linkage arms and guide rails go to making up the stretcher support member which is itself engaged to the arm 6 via a bracket 23 to the end 24 of the arm 6. A bolt and nut with washer arrangement extending through the substantially U shaped bracket 23 can locate the stretcher support member to the arm 6. At the end 25 of the arm 6, the arm is engaged to the side structure via a bracket 26 which presents a U shaped portion through which a bolt can extend and through the end 25 of the arm 6. Bushes 27 are preferably provided to define bearing surfaces for the pivots. The bracket 26 is itself preferably engaged to the side structure by a hinge defining member 27 through which a bolt 28 can extend substantially horizontally to define the horizontal pivot axis 11. A quick release security pin 29 may be provided to extend through the bracket 26 and through the aperture 30 of the arm 6 to lock the arm 6 in the retracted position. Similarly locking pins may be provided to lock the linkage arm in the collapsed and/or spaced conditions. With the provision of the horizontal pivot axis by the bolt 28, and the nature of the bracket 26 providing the complimentary pivot point at an upper region thereof, movement of the arms and stretcher support member to the downwardly rotated position (i.e. presenting the stretcher support member in a horizontal position) is prevented beyond the point where the stretcher support member is horizontal. The lower portions of the bracket 26 become engaged against for example a

vertical surface of the hinge defining member 27 and further rotation is thereby prevented.

The moveable stretcher support structure of the present invention is conveniently retrofittable to existing vehicles whether the hinge defining member 27 is bolted to an existing structure of the vehicle or whether an additional specifically designated side structure 38 is provided to the vehicle.

Reference will now be made to alternative configurations which although less preferred, are within the scope of the invention.

With reference to Figure 9, there is shown in a lower stretcher support structure wherein a single arm is provided extending between the side structure and the stretcher support member. In this alternative the arm is pivotable at its distal ends about vertical pivot axis to allow for the stretcher support member to move between the extended and retracted positions similar to the most preferred arrangement.

The upper stretcher support structure shown in Figure 9 illustrates that the stretcher support member may be defined by two guide rails which are interconnected by a single linkage arm.

With reference to Figure 10, the upper support structure is shown to provide the linkage arms between the two guide rails in a form where they are moved parallel to each other when the guide rails are moved between the spaced and collapsed conditions. Here the two arms are merely pivotable about vertical pivot axis at the guide rails at each respective end. The arrangement is similar to the way in which the arms 6 pivot between the side structure and the stretcher support member.

The lower support structure in Figure 10 illustrates an alternative arrangement of the arms 6 wherein they are of a telescoping kind where the stretcher support member is moved between the retracted and extended positions in a linear manner. The arms in this arrangement are not provided to pivot relative to the side structure however such pivoting may be an optional addition to this configuration.

Similarly the upper support structure as shown in Figure 11 provides two linkage arms which are telescopic to move the two guide rails between the spaced and collapsed conditions. The lower support structure shown in Figure 11 illustrates how the two arms 6 may themselves be articulated intermediate of their distal ends to allow the arm to pivot to thereby move the stretcher support member between the extended and retracted positions.

As a further alternative in terms of the moving structure of the present invention, the horizontal pivot axis 11 whilst preferably provided between the first distal end of the arms 6 and the side structure, may alternatively be provided between the other distal end of the arm and the stretcher support member. However the most preferred form is as shown in Figure 7.

The present invention allows for injured persons being carried on a stretcher to be loaded and unloaded from a vehicle particularly where the vehicle provides a narrow opening for example at the rear of the vehicle. In particular the stretcher support structure of the present invention can be employed in vehicles where there is no wall to wall rear door aperture. The stretchers are able to be arranged against the side walls of the vehicle and such unloading and loading of stretchers is able to be achieved by sliding on the guide rails. When not in use, the moveable stretcher support structures are able to be stowed away in an condition to allow for seating to be erected within the vehicle for carrying sedentary people.

Also, at least two vertically spaced stretcher support structures may be provided extending from each side wall of the vehicle which, where a stretcher of a kind providing an undercarriage which may provide maneuverability of the stretcher within the vehicle, could not be provided.



CLAIMS

1. A movable stretcher support structure for a vehicle to be dependent from a fixed structure of and within said vehicle, said movable stretcher support structure comprising:

5 a stretcher support member dependent from said fixed structure by at least one support arm cantilevered from said fixed structure, said support arm movably supporting said stretcher support member relative to said fixed structure to thereby allow horizontal movement of said stretcher support member relative to said fixed structure between an extended stretcher supporting position and a retracted stretcher supporting position, said retracted
10 stretcher support position placing said stretcher support member more proximate to said fixed structure than in the extended stretcher supporting position.

2. A movable stretcher support structure as claimed in claim 1 wherein at
15 least two support arms are provided each pivotably dependent from said fixed structure about a respective vertical pivot axis said axes horizontally spaced from each other.

3. A movable stretcher support structure as claimed in claims 1 or 2 wherein said at least two arms are each engaged at or towards their distal ends
20 away from said respective vertical pivots axis to said stretcher support structure to be pivotable thereto about a vertical pivot axis, said arms extending between said stretcher member structure and said side structure, parallel to each other.

4. A movable stretcher support structure as claimed in claims 2 or 3 wherein said at least two arms extend between said fixed structure and said
25 stretcher support structure in a scissor like arrangement.

5. A movable stretcher support structure as claimed in any one of claims 1 to 4 wherein said stretcher support member provides, in both said supporting positions, upwardly facing stretcher bearing surfaces onto which a stretcher
30 may be placed, to thereby provide vertical support to a said stretcher.

6. A movable stretcher support structure as claimed in any one of claims 1 to 5 wherein said stretcher support member is a frame comprising two parallel elongate guide rails each providing said stretcher bearing surfaces to receive
35 and provide vertical support in both said supporting positions a longitudinal profile of a said stretcher.

7. A movable stretcher support structure as claimed in claim 6 wherein said two guide rails in both said stretcher supporting positions are spaced from



each other by at least one linkage means interconnecting said rails and positioning such in both said supporting positions at a distance complementary to the spacing of said longitudinal profiles of said stretcher.

8. A movable stretcher support structure as claimed in claim 7 wherein said at least one linkage means is adapted to allow a displacement of said two guide rails relative to each other between a spaced condition where said guide rails are spaced to receive a said stretcher and a collapsed condition wherein said guide rails are more proximate to each other.

9. A movable stretcher support structure as claimed in claims 7 or 8 wherein said at least one linkage means is adapted such that said guide rails remain parallel to each other, in said spaced and collapsed conditions.

10. A movable stretcher support structure as claimed in any one of claims 7 to 9 wherein said at least one linkage means is a linkage arm engaged at each distal end thereof to a respective guide rail to be pivotable thereto about respective vertical pivot axes.

11. A movable stretcher support structure as claimed in claim 10 wherein said at least one linkage arm is articulatable intermediate of its distal ends about at least one vertical pivot axis.

12. A movable stretcher support structure as claimed in claims 10 or 11 wherein at least two linkage arms are provided each spaced from the other towards a respective end of each said guide rail.

13. A movable stretcher support structure as claimed in claims 8 or 9 wherein said at least one linkage means is telescopic.

14. A movable stretcher support structure as claimed in claim 10 wherein said at least two linkage arms are adapted to allow displacement of said guide rails relative to each other in a parallelogram manner.

15. A movable stretcher support structure as claimed in claim 10 wherein said at least two linkage arms are adapted to move in a scissor like manner between said two guide rails.

16. A movable stretcher support structure as claimed in any one of claims 1 to 15 wherein said stretcher support member is pivotable relative to said fixed structure about a horizontal axis to an upwardly rotated position by it pivoting upwardly and towards said side structure.

17. A movable stretcher support structure as claimed in claim 16 wherein said horizontal axis is parallel to the general longitudinal direction of said stretcher support member.



18. A movable stretcher support structure as claimed in claims 16 or 17 wherein said horizontal axis is located at a pivot means connecting said at least one arm at its first end with said fixed structure.

19. A movable stretcher support structure as claimed in claim 18 wherein said pivot means is a bracket engaged to said fixed structure, mounting an axle defining said pivot axis about which said stretcher support member and said at least one arm are able to pivot.

20. A movable stretcher support structure as claimed in claim 19 wherein a rotation limit stop dependent from said fixed structure is provided to define the limit of rotation of said at least one arm about said pivot axis, to hold the stretcher support member horizontally, at said limit of rotation.

21. A movable stretcher support structure as claimed in claim 20 wherein said rotation limit stop is part of said bracket located below said arm.

22. A movable stretcher support structure as claimed in claim 16 wherein said horizontal axis is rotated at a pivot means connecting said other end of said at least one arm, with said stretcher support member.

23. In a vehicle for carrying as least one stretcher and having a doorway for loading and unloading of an at least one stretcher, a movable stretcher support structure dependent from a fixed structure of and within said vehicle and to move a stretcher between two positions, said movable stretcher support structure comprising:

a stretcher support member able to slidingly receive in a longitudinal direction and provide horizontal support to a said stretcher, said stretcher support member engaged to said fixed structure by at least one arm which is dependent from said fixed structure in a cantilevered manner and engaged to said stretcher support member to allow horizontal movement of said stretcher support member relative to said fixed structure between a retracted stretcher supporting positions and an extended stretcher supporting position, said retracted position being more proximate to said fixed structure than the extended position, wherein in the extended position the stretcher support member is presented in a condition longitudinally aligned with said doorway.

24. A movable stretcher support structure as claimed in claim 23 wherein said stretcher support member in said extended stretcher support position is longitudinally more proximate to said doorway than when in said retracted stretcher support position.

25. A movable stretcher support structure as herein described with reference to any one or more of the accompanying drawings.

