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2,512,931

COMBINED BASKET AND FIELD STRETCHER

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2 Sheets-Sheet 2

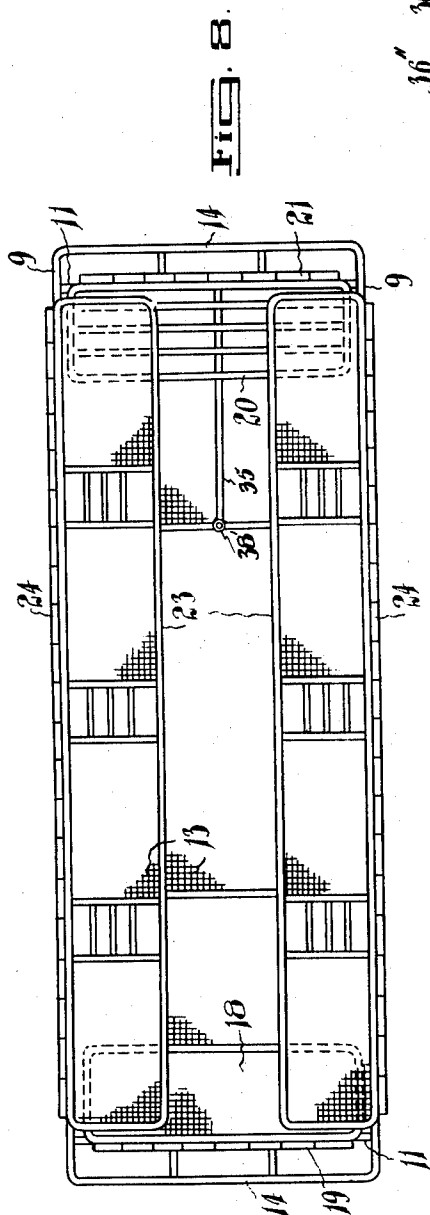


FIG. 8.

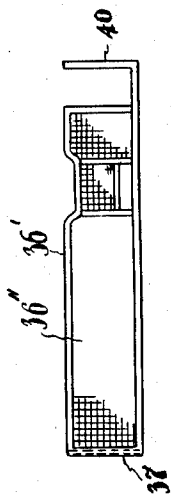


FIG. 5.

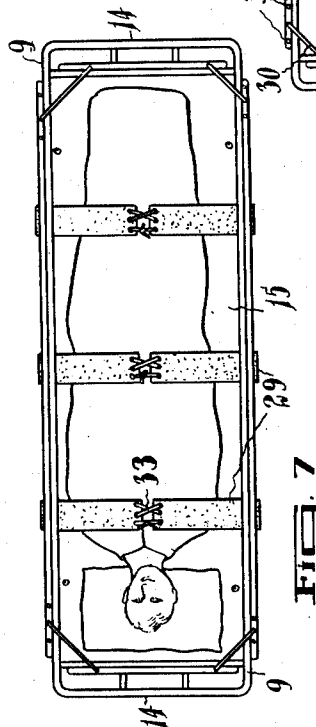


FIG. 7.

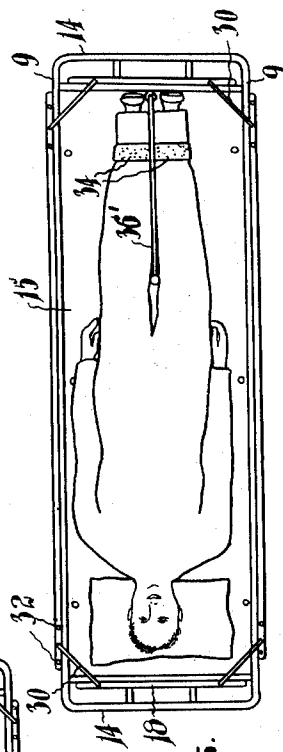


FIG. 6.

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UNITED STATES PATENT OFFICE

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COMBINED BASKET AND FIELD STRETCHER

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2 Claims. (Cl. 5—82)

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My invention relates to stretchers for transportation of sick or injured persons, and provides a combined basket and field stretcher which may also be used as a cot in an emergency.

The invention comprises a frame or base for supporting an incapacitated person, and having end and side members swingable between inner and outer positions. The frame is a flat rectangular member composed of bars with a surface of reticulate material for carrying a mattress having securing means by which it may be detached as required for the purpose of being cleaned and disinfected from time to time. The frame is furnished with a handle at each end. It is also arranged with runners to enable it to be dragged over the ground. One of the end members is an adjustable head rest and the other is a swingable foot rest. The side members form wings which are disposed in outstretched position in the use of the device as a field stretcher, and are folded to an upright position along with the end members to convert the device into a basket stretcher, which upon being inverted is adapted to serve as a cot.

A distinctive feature of construction is that the end and side members are provided with securing means to retain them in folded relation for use of the device as a basket stretcher. The securing means are adjustable so that the end and side members may be retained in a vertical position and also at an angle thereto in order to best accommodate the patient.

A further feature is that the side members are furnished with a series of longitudinally disposed hand-grip portions for raising and carrying the stretcher when the end handles cannot be conveniently used.

A further feature is that the side members also have portions supplied with a transverse series of elements around which a belt may be looped for extending over the patient to strap him to the stretcher when the same is used as a basket.

A still further feature is that the device is equipped with a detachable splint divider which virtually provides a double box-splint. An ankle strap keeps the patient's legs together and adds to his security. This splint divider is highly advantageous in that when a patient is prepared, splinted, et cetera, for removal, the end and the side members may be raised to a vertical position and locked. The patient can then be strapped in and the stretcher conveyed manually or by an ambulance. In placing a patient on the stretcher, a minimum of lift is required which reduces the possibility of his developing a compound from a simple fracture.

An important feature of the stretcher construction is that the head rest and side members may be disposed horizontally outwardly of the base or frame; or one side member may be

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raised where space is limited, which still permits of the stretcher being pushed lengthwise under the patient.

Another important feature is that the stretcher is light in weight and so adapted to be compactly folded into a complete unit for storage when not in use. Furthermore, it is simple to operate and may be manufactured at reasonable cost.

While the major features and advantages of the device have been recounted, others will appear as the device is described in greater detail.

In the drawings:

Fig. 1 is a plan view of the stretcher spread out flat as employed for field operation. In this view the mattress and the splint divider are omitted.

Fig. 2 is a transverse section on line 2—2, but depicting the sides and the head member raised as used for a basket stretcher. This view also illustrates one of the belts for securing the patient.

Fig. 3 is a fragmentary longitudinal section of the stretcher taken on line 3—3 of Fig. 1, showing its use as a basket with the splint divider in place, but omitting the mattress.

Fig. 4 is a perspective view of the mattress.

Fig. 5 is a detail of the splint divider.

Fig. 6 is an elevational plan of the stretcher depicting a patient with his legs strapped against the splint divider.

Fig. 7 is a similar view illustrating a patient strapped in the stretcher as used as a basket.

Fig. 8 is a plan view of the stretcher with its ends and sides folded inwardly upon the base or frame in its collapsed condition.

Like numerals of reference denote similar parts in each figure of the drawings.

The frame is an elongated rectangular member comprising the marginal side bars 9, the parallel intermediate bars 10, the marginal end bars 11 and the series of spaced transverse bars 12. Said component bars are rigidly united one to another as by welding and are of tubular material, such as steel, aluminum or a suitable alloy, whereby adequate strength and lightness in weight is obtained. The frame is covered preferably by a suitable wire mesh cloth, indicated at 13, to present a continuous supporting surface. The reticulate material is permanently applied to the frame in well known manner.

The side bars 9 and the intermediate bars 10 are prolonged beyond each end bar 11 and united to a transverse bar 14 to compose a handle at each end of the frame for raising and carrying the stretcher, as will be best seen from an inspection of Figs. 6, 7 and 8.

A mattress 15 is applied to the frame proper and secured in place as by dome fasteners, the female parts 16 of which are carried by the mattress and the male parts 17 of which are affixed

to some of the transverse bars 12. Both sides of the frame are equipped with the male parts 17 so that the mattress can be applied to either side thereof according to which side is to be used as circumstances dictate. The mattress is a comparatively flat member of suitable material, preferably of the rubber type which can be easily washed and disinfected.

The head rest generally denoted at 18 is similar in construction to the frame aforesaid and is hinged to the adjacent end bar 11 thereof as at 19 so as to swing from the flat outstretched position shown in Fig. 1 to the inwardly folded position shown in Fig. 8. The head rest may be adjustable to various inclinations when unfolded, and known means may be resorted to for retaining it when so adjusted.

The foot rest generally indicated at 20 is similar in shape and size to the head rest and is hinged to the adjacent end bar 11 as at 21 and is adapted for a corresponding swinging movement. In place of the reticulate surface of the head rest, the foot rest may simply have a series of transverse bars 22. When unfolded to an outstretched position, the head rest and the foot rest are supported by the respective handles 14.

The side members, designated at 23, extend the full length of the frame proper and correspond in width to the end members 18 and 20. Said side members constitute wings which are hinged at 24 to the side bars 9 and have a wall portion 25 of wire cloth material interrupted at intervals along the length by transverse openings 26 constituting hand grips 27. Each of these openings has arranged within it a plurality of spaced bars 28 for selective attachment of a belt 29. The hinges are arranged to enable the wings to be swung to an outstretched position so as to be substantially co-planar with the base or frame. A continuous hinge of the piano type is desirably employed for the wings and the end members; however this is not essential but has the advantage of enhancing the strength and rigidity of the structure.

The wings are disposed in outstretched manner in the use as a field stretcher, and may be inclined upwardly to eliminate the possibility of the patient rolling. To convert the stretcher into a basket, the wings and end members 18 and 20 are raised at right angles or substantially at right angles to the base, and there secured by locking means located at the top of the corners. The locking means comprise U-shaped devices 30, each of which is disposed angularly at a corner with its legs 31 inserted in holes in the top portions of the wings and the end members. The side members have a group of holes, as at 32, to provide for angular adjustment of the wings and end members. Other securing means could be substituted for the detachable device 30 if so desired.

In preparing a patient, he is covered by a blanket and strapped securely in the basket, as illustrated in Fig. 7, by the belts 29 extended between the wings and looped around corresponding bars 28 thereof that afford the most secure fastening for the individual. The ends of each belt are connected by lacing them together as at 33.

The basket stretcher may be raised, lowered, pulled or carried, with the patient comfortably secured therein. The longitudinal bars of the base function as runners for dragging the device over the ground.

The patient's legs may be secured to the base by a strap 34, for which purpose a medial bar 35 is furnished on the frame of the base and supplied with a loop-forming piece 36 which upstands and projects through an aperture 37 in the mattress so as to be accessible for threading the strap through the loop portion. When the splint divider is employed the strap secures the patient's legs at each side thereof. The splint divider is a member adapted to be attached over the bar 35 to upstand from the mattress at the foot end. It comprises a frame 36' of tubular rod material having a wall portion 36'' of reticulate material. The frame is adapted to furnish a tubular post 37 at its inner end, in which a thru-bolt 38 is inserted and passed through an apertured element 38' of the base. The bolt is secured by a nut or like fastening device, as indicated at 39 in Fig. 3. The outer end of the splint divider is supplied with a downwardly extending prong 40 which is lodged in a socket 41 carried by the foot rest. The wall portion 36'' is apertured to enable the strap to be passed therethrough. It will be evident that this structure enables the splint divider to be attached and removed at will.

The invention produces a practical and serviceable device which combines in its structure a field and a basket stretcher so devised that it may also serve as an emergency cot.

While one embodiment of the stretcher has been disclosed, it will be understood that such changes and modifications may be resorted to as come within the spirit and scope of the appended claims.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:

1. In a stretcher, a base, a foot rest hinged thereto, a socket carried by said foot rest, a splint divider having a prong for engagement in the socket in the elevated position of the foot rest, a hollow post carried by the inner end of the splint divider, and a bolt inserted therein for attachment to the base.

2. In a stretcher, a base, a foot rest hinged to said base for swinging upwardly, a socket on said foot rest, said socket being disposed to extend upwardly in the upswung position of said foot rest, a splint divider having an inner end and an outer end, means for detachably securing said inner end to said base, and a prong rigid with said outer end, said prong being bent downwardly to engage in said socket in the upswung position of said foot rest.

WILLIAM GLOVER.

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