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G. R. EDGLEY.

AMBULANCE COT OR STRETCHER.

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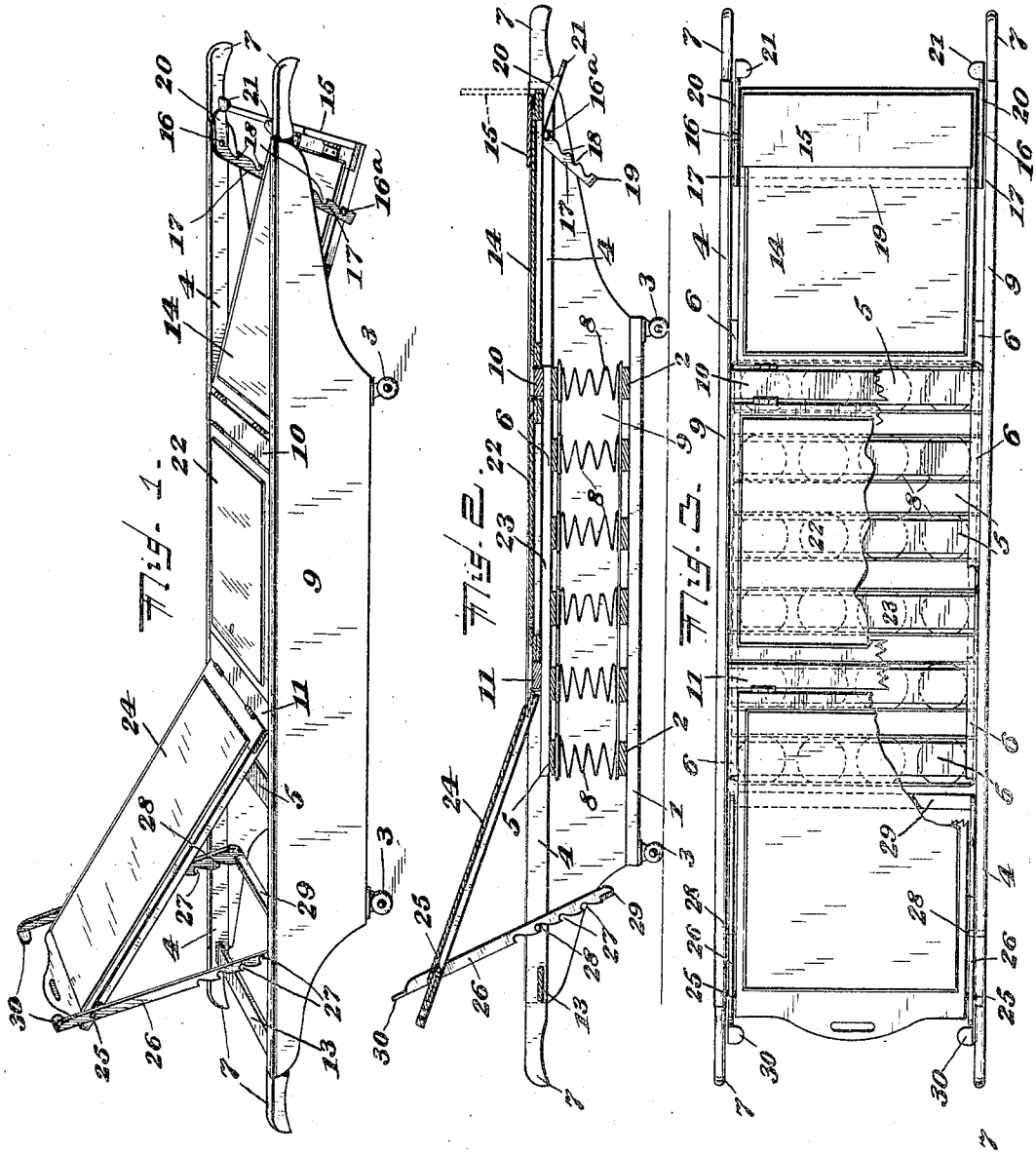

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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AMBULANCE COT OR STRETCHER.

SPECIFICATION forming part of Letters Patent No. 793,428, dated June 27, 1905.

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To all whom it may concern:

Be it known that I, GEORGE R. EDGLEY, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Ambulance Cots or Stretchers, of which the following is a specification.

This invention relates to certain improvements in cots or stretchers, such as are especially designed for ambulance and hospital service; and the object of the invention is to provide a cot or stretcher of this description of a simple, strong, and inexpensive nature and of a construction adjustable to permit accommodation to various postures of the person and adapted for convenient use for lifting and carrying the patient with a minimum of annoyance and pain from shocks or jars arising from hurried or careless handling of the cot or stretcher.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved cot or stretcher, whereby certain important advantages are attained and the device is rendered simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a perspective view showing a cot or stretcher embodying my improvements and adjusted to a reclining position of the patient to be rested thereon. Fig. 2 is a central longitudinal section taken vertically through the cot or stretcher constructed according to my invention, the parts being also shown in this view in adjusted position as in Fig. 1. Fig. 3 is a plan view of the improved cot or stretcher embodying my invention, portions at the upper part thereof being broken out for illustration of the underlying parts.

As seen in the views, the improved cot or stretcher is constructed with a rectangular lower frame comprising longitudinal side rails 1 1, connected together by means of transversely-extended slats or strips 2 2, the ends of which are secured upon said side rails 1 1. The rectangular lower frame of the device is supported upon wheels or casters 3 3, arranged at the ends of the side rails 1 1, so that when the cot or stretcher is rested upon the floor it may be conveniently and easily pushed or rolled about from place to place. Above the lower frame, constructed as above described, is arranged an upper frame, also of elongated rectangular form and comprising longitudinally-extended side rails 4 4, parallel with and located above the side rails 1 1 of the lower frame, said upper side rails 4 4 being tied or connected together by means of transversely-extended slats or strips 5 5, arranged above the slats or strips 2 2 of the lower frame and positioned at the central part of said upper frame. For affording a secure connection of the strips or slats 5 5 with the upper side rails 4 4 and for other purposes to be hereinafter explained cleats 6 6 are extended along the inner sides of said upper side rails near the lower parts thereof and are securely fastened to said side rails in any preferred way.

Between the lower and upper frames, constructed as above described, is arranged a spring structure comprising connected spiral springs 8 8, the precise construction of which is immaterial to my invention, and this spring structure serves to support the upper frame elastically upon the lower frame and to relieve jars and shocks caused by hasty or careless setting of the cot or stretcher upon the floor or by the rolling of the same upon casters 3 over an uneven surface. Upon the outer opposite sides of the improved cot or stretcher are extended sheets of flexible material, as shown at 9, their upper edges being lapped over and secured upon the side rails 4 4 of the upper frame and their lower edge portions being lapped beneath and similarly secured to the side rails 1 1 of the lower frame. These covering sheets 9 9 may be formed from any suitable material and serve to cover the spaces at the sides of the cot or stretcher between the upper and lower frames and to prevent undue

distention of springs 8 and also to cover and obscure the spring structure between the frames.

The side rails 4 4 of the upper frame of the improved cot or stretcher are of considerably greater length than the side rails 1 1 of the lower frame, whereby the end portions of said upper side rails are caused to project beyond the lower frame at opposite ends of the cot or stretcher, and the extremities of said upper side rails 4 4 are formed into handles, as indicated at 7 7 on the drawings, so that the improved cot or stretcher may be lifted and borne by two or more attendants in a well-known way.

Adjacent to the foot end of the improved cot or stretcher is arranged a transverse brace or strip 10, located above but parallel to the slats 5, and adjacent to the opposite or head end of the cot or stretcher a similar transverse brace or strip 13 is extended across the space between the upper side rails 4 4, and about midway between these braces or strips 10 and 13 a third transverse brace or strip 11 is extended between the upper side rails, as clearly shown on the drawings, the construction being such that said braces or strips act to brace and strengthen the upper frame of the device.

At the foot end of the cot or stretcher is located a foot-section 14, formed, as herein shown, of a rectangular frame, hinged upon the transverse brace or strip 10, so as to play vertically within the space between the upper side rails 4 4, said rectangular frame being surfaced over with any desired material, as perforated wood veneering, for example, although, as will be obvious, the detailed construction of this and the other similar sections to be hereinafter described is immaterial to my present invention.

That end of the foot-section 14 which is adjacent to the foot end of the cot or stretcher is adapted for adjustment when said section is swung pivotally upon its hinge connection with the brace 10 in order that the said section may be made to stand in a more or less inclined position—as, for example, that shown in Fig. 1—or in a position parallel with the upper side rails 4 4, as seen in Fig. 2, to suit the requirements and comfort of the patient rested upon the cot or stretcher and in order to hold the free end portion of the foot-section in adjusted position I provide means comprising a yoke formed of a metal strip having a central portion 19 transversely extended between the side rails 4 4 and integral upturned arms 17 17 at the ends of said central portion, the upper parts of said arms being lapped inside the side rails 4 4 and pivotally held thereto, as seen at 16. The said arms 17 17 of the yoke have notches or seats 18 18 produced in them and adapted for engagement with pins or projections 16^a 16^a at opposite edges of the section 14, the construction being such that the yoke may be swung pivotally upon its connections with rails 4 4 to engage or disengage the pins 16^a from the notches 18, whereby it will be seen that the foot-section 14 may be held in adjusted position. To permit more ready manipulation of the adjustable holding means or yoke, I provide the arms 17 17 thereof with portions 20 20, directed rearward from the pivotal points 16 and inside the side rails 4 4, the extremities of said rear extensions 20 having thumb-pieces 21, located closely adjacent to the handles 7 7 at the foot end of the cot or stretcher, so that an attendant while grasping the handles 7 7 or at the instant of releasing said handles may depress the thumb-pieces 21 to swing the yoke pivotally far enough to disengage the pins 16^a from notches 18, so that the foot-section may be allowed to fall by gravity. The weight of the part of said yoke comprising arms 17 17 and central portion 19 is great enough to overbalance the rear extensions 20, so that when pressure upon the thumb-pieces 21 is relaxed the arms 17 will be swung automatically rearward to engage notches 18 with pins 16^a.

Upon the edge of brace or strip 10, opposite to the hinge connection of the foot-section 14, is hinged a central or intermediate section 22 of a construction similar to said foot-section 14 and adapted to be raised and lowered to a horizontal position between the upper side rails 4 4, flush with the top surfaces of said rails, as seen in the drawings, the edges of said section being adapted to rest when the section is in lowered position upon the projecting ledges afforded inside the side rails 4 4 by the cleats 6 6, above referred to, and which afford a solid and secure support for said section when lowered. The said intermediate section is also adapted to be raised upon its hinge connection with strip or brace 10, so as to afford access to a chamber or space 23 provided beneath said section and above the cross-slats 5 5 of the upper frame, in which space or chamber may be held the sheets, cloths, and other articles necessary for use in connection with the cot or stretcher and which may be readily removed from the chamber or space 23 when desired for use by merely lifting section 22, which forms a cover or lid for said chamber.

The free edge of the section 22 is adapted to fit down, when lowered, into a position closely adjacent to the intermediate brace 11 of the upper frame, and upon said intermediate brace and at the side thereof opposite to the section 22 is hinged the head-section 24 of the cot or stretcher, which is also adapted to be raised and lowered and has means for holding it in adjusted position in a more or less raised and inclined position, as seen in Figs. 1 and 2. The said head-section 24 is adapted when lowered to rest and be supported on the ledges afforded by the cleats 6 6 above referred to and also on the brace or

strip 13 at the head end of the upper frame, and the supporting means for holding said section when adjusted in a raised inclined position comprises a yoke formed from a metal strip, with a central portion 29 extended between the side rails 4 4 of the upper frame and integral upturned arms 26 26 at the ends of said central portion and having notches or serrations 27 to receive pins or projections 28 upon the inner surfaces of the upper side rails 4 4, the upper ends of said arms being pivotally secured, as seen at 25, upon opposite edges of the section 24, near the head end thereof. The arms 26 may thus be swung pivotally upon their connections 25 with the free end of the head-section to engage or disengage the pins with or from the notches or serrations 27, so that the section may be held in any desired position, and in order that the yoke may be conveniently operated by the attendant either while the hands are grasping the handles 7 at the head end of the cot or stretcher or immediately upon releasing said handles the arms 26 26 are extended beyond the pivot-pins 25 and are provided with thumb-pieces 30, similar to the thumb-pieces 21, and arranged adjacent to said handles 7 at the head end of the cot or stretcher in position for convenient pressure by the operator, the greater weight of the downwardly-extended portions of the arms 26 being sufficient to normally engage the notches or serrations 27 with the pins 28 on rails 4 4.

From the above description it will be seen that the improved cot or stretcher is readily adjustable to accommodate different postures in which it may be desired to rest the patient upon the sections 24, 22, and 14, and in connection with the device, as above described, a mattress or pad may be used, which will of course be protected by a waterproof sheet, so that the mattress may not be soiled from use. At the foot of the cot or stretcher the free end of the foot-section 14 is also preferably formed with a hinged foot board or rest 15, which may be folded flat upon said section or elevated at right angles thereto and against which the patient's feet may rest.

The device constructed according to my invention is of an extremely simple and inexpensive nature and is especially well adapted for use by reason of its ready adjustability and also of the fact that the lower frame and spring connection of the upper frame therewith affords a cushion to reduce shocks and jars incident to careless or hasty action of the attendants in placing the patient upon the cot or in lowering the cot or stretcher upon the floor. The wheels or casters also permit ready movement of the cot or stretcher along the floor without requiring it to be lifted by the attendants. It will also be obvious from the above description that the device constructed according to my invention is capable of considerable change without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts of the device herein set forth in carrying out my invention in practice.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A cot or stretcher comprising a wheeled lower frame adapted to be rested upon a floor or the like, an upper frame of greater length than the lower frame with ends extended beyond the ends of the lower frame and provided with handles, supporting means upon the upper frame and a cushion interposed between the lower and upper frames.

2. A cot or stretcher comprising a lower frame adapted to be rested upon a floor or the like and having side rails, an upper frame having supporting means and also provided with side rails, flexible sheets extended upon the sides of the cot or stretcher with opposite edges secured to the side rails of the respective lower and upper frames and an elastic connection between the lower and upper frames.

3. A cot or stretcher having side rails provided with handles at opposite ends, supporting means extended between the side rails and comprising a section adapted to be raised and lowered and a device for holding said section in adjusted position and comprising a part having a thumb-piece extended adjacent to one of said handles.

4. A cot or stretcher having side rails provided with handles at opposite ends, supporting means comprising adjustable sections extended between the side rails at the ends of the cot or stretcher and devices at the ends of the cot or stretcher for holding the said sections in adjusted position and comprising yokes having thumb-pieces adjacent to the handles at opposite ends of the side rails.

Signed at Cincinnati, Ohio, this 20th day of March, 1905.

GEORGE R. EDGLEY.

Witnesses:
HARRY DE RUITER,
JOHN ELIAS JONES.