

No. 648,453.

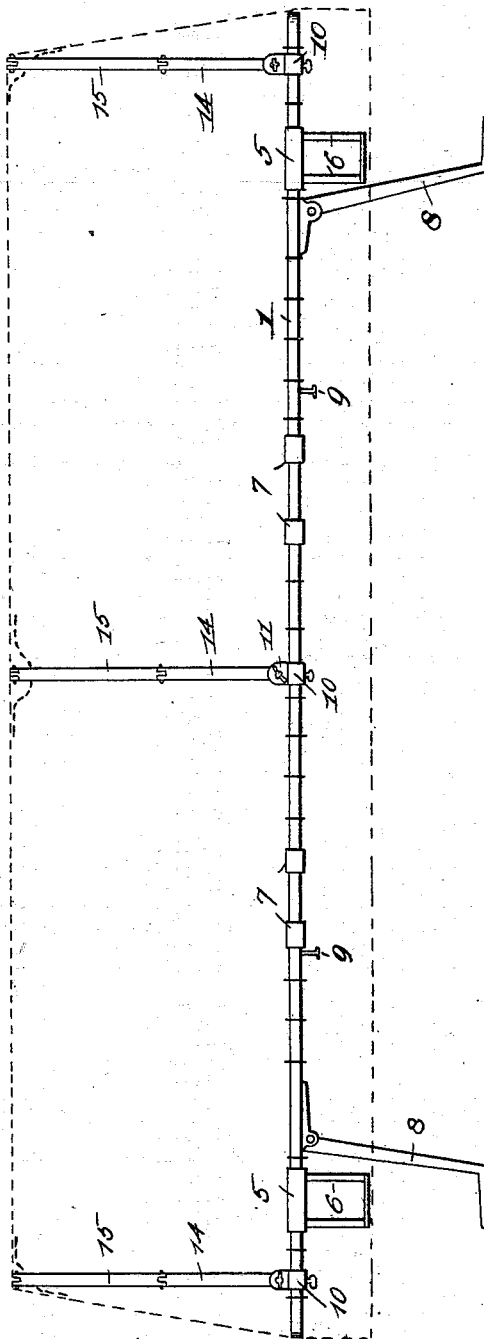
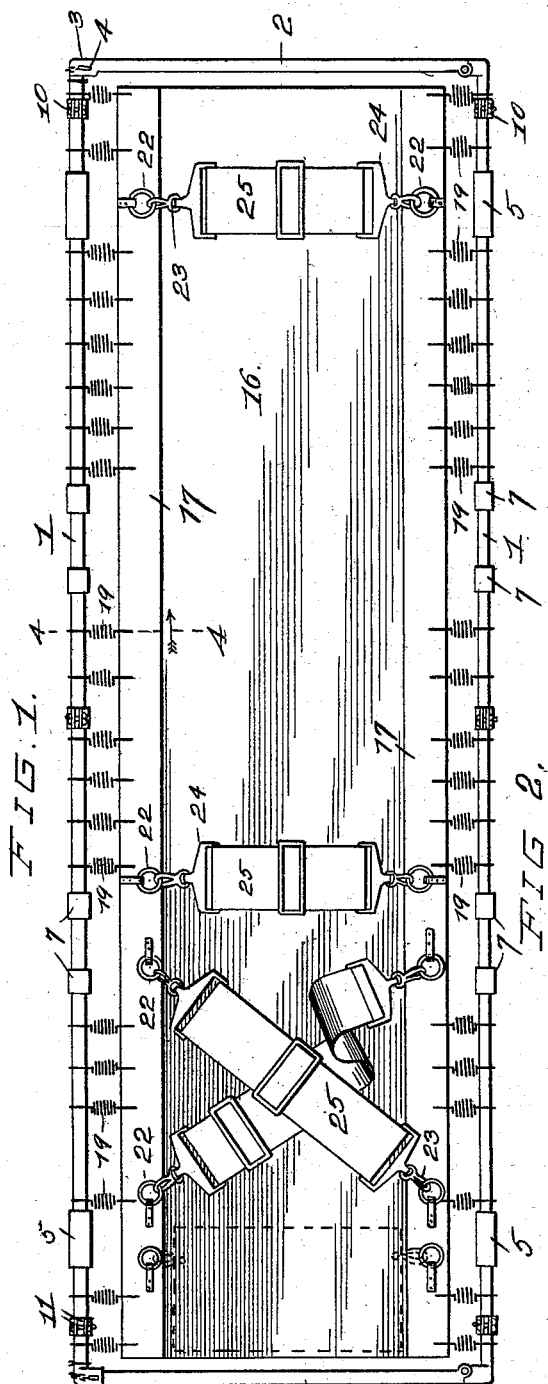
Patented May 1, 1900.

H. W. DALY.
STRETCHER.

(Application filed Aug. 7, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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STRETCHER.

(Application filed Aug. 7, 1899.)

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2 Sheets—Sheet 2.

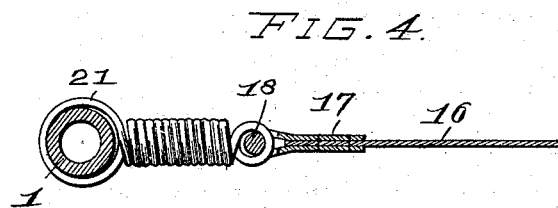
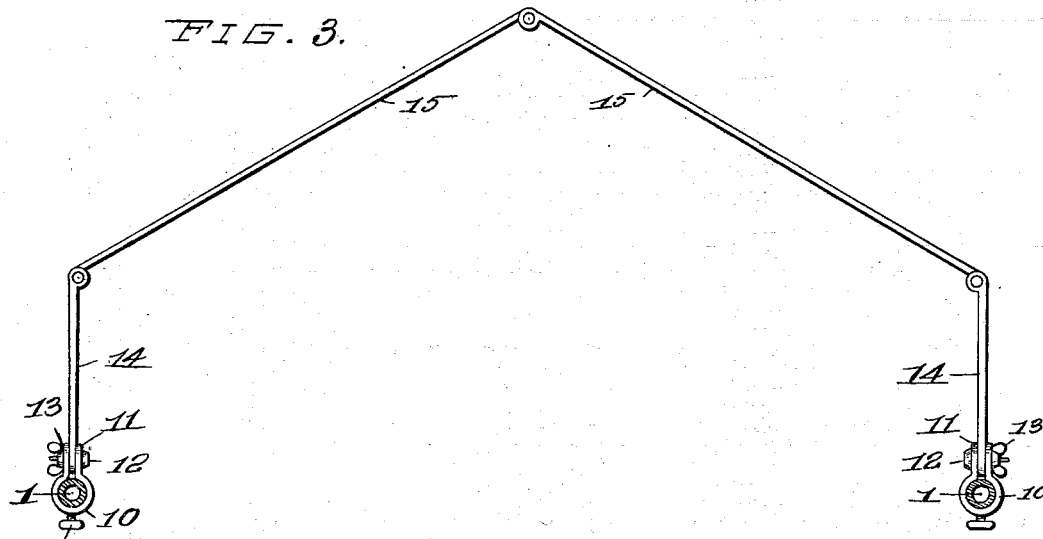


FIG. 5.

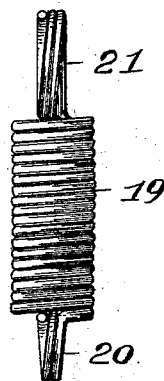
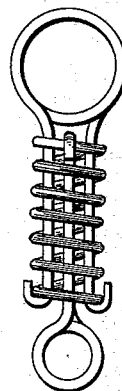


FIG. 6.



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UNITED STATES PATENT OFFICE.

HENRY W. DALY, OF THE UNITED STATES ARMY.

STRETCHER.

SPECIFICATION forming part of Letters Patent No. 648,453, dated May 1, 1900.

Application filed August 7, 1899. Serial No. 726,386. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. DALY, of the United States Army, stationed at Jefferson Barracks, Missouri, have invented certain new and useful Improvements in Stretchers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to stretchers; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a plan view of my improved stretcher. Fig. 2 is a side elevation thereof. Fig. 3 is a detail view illustrating one of the frames that support the cover of my improved stretcher. Fig. 4 is an enlarged sectional view taken approximately on the line 4-4 of Fig. 1. Figs. 5 and 6 are side elevations of the different forms of springs of which I make use between the body portions of the stretcher and the frame thereof.

In the construction of the frame of my improved stretcher I make use of a pair of side members 1, the same being preferably tubular, and hinged to each end of one of these side members 1 are the end members 2, the same being suitable lengths of tubing and provided at their free ends with slotted bearings 3, which receive the member 1 opposite from the member to which said end pieces are hinged, and pins or cotters 4 are passed downwardly through said slotted bearings to rigidly connect said end pieces 2 with said member 1.

Fixed upon the members 1 a short distance from their ends are the sleeves 5, and integral with and projecting downwardly from said sleeves 5 are the ambulance-legs 6.

Fixed upon the members 1 a short distance on each side of the centers thereof are the pairs of collars 7, between which the ends of the arms of a suitable platform engage when the stretcher is positioned upon a pack-animal.

Hinged in any suitable manner to the under sides of the members 1 just inside the sleeves 5 are the field-legs 8, the same being somewhat longer than the ambulance-legs.

When the field-legs 8 are folded up beneath the side members 1, they are caught and held

by suitable spring-catches 9, carried on the under side of said members 1.

Located adjacent the ends of the members 1 and at the centers thereof are the collars 10, with which are formed integral the upwardly-projecting ears 11, and passing through said ears are the bolts 12, on which are located the winged nuts 13. These collars 10 are arranged in pairs directly opposite each other, and engaged between the ears 11 are the lower ends of short vertically-arranged bars 14, to the upper ends of which are hinged the outer lower ends of arms 15, the same meeting at a central point above the members 1 and being hinged to each other. Thus a plurality of frames are formed which project upwardly over the stretcher and over which frames the canvas cover is arranged.

Arranged upon the interior of the frame is the body portion of the stretcher or that portion upon which the occupant of the stretcher is placed, and said body portion comprises a rectangular section 16, of canvas or analogous material, the side edges of which are bound with a double edging 17, of leather or analogous material, and passing through the extreme outer portion of this double edging is a rod 18. The body portion of the stretcher thus constructed is swung within the frame of said stretcher by means of coil-springs 19, the inner ends of said springs being formed into loops 20, which pass around the rods 18, and the outer ends of said springs are formed into the loops 21, which are passed around the side members 1 of the frame. There are a plurality of these coil-springs at each side of the body of the stretcher, they being suitably arranged and disposed between the ends of the frame of the stretcher and between the sleeves 5 and collars 7. In some instances these springs 19 are ordinary retractile coil-springs, as seen in Fig. 5, or said springs may be of the form seen in Fig. 6—that is, an expansive coil-spring—the opposite ends of which are engaged by the hooked ends of wire clips which pass through said expansive coil-spring and engage upon the rods 18 and side members 1.

Secured in any suitable manner to the double edgings 17 are the pairs of oppositely-arranged rings 22, and engaged in said rings are

ordinary snap-hooks 23, which are secured to loops 24, said loops being connected by straps of webbing 25, in which straps are arranged suitable sliding buckles, by means of which the straps are shortened or lengthened. A pair of these straps adjacent the head end of the stretcher are crossed, and a third strap is arranged adjacent the center of the stretcher, while a fourth strap is arranged adjacent the foot end of said stretcher.

The canvas cover for the stretcher is retained upon the frames by providing a plurality of small straps or keepers and sewing the same directly to the inside of the canvas cover, through which straps or keepers pass the frames comprising the arms 14 and 15.

In the use of my improved stretcher the body of the person to be carried on said stretcher is placed directly upon the canvas body 16, after which the straps 25 are passed across said body and the snap-hooks 23 engaged in the rings 22. When the stretcher is in use in the field, the field-legs 8 are lowered, so that the frame and body of said stretcher are sustained at a slight elevation from the ground. When the stretcher is lifted to be carried to an ambulance or to a hospital, the field-legs 8 are swung upwardly and engaged by the spring-catches 9, and during the transportation of said stretcher the body thereon will experience little or no jolting or vibration, owing to the spring connections between the body of the stretcher and the frame thereof.

Should it be desired to cover the body on the stretcher to shield the same from the sun or rain, the lower ends of the bars 14 are engaged between the ears 11 of the collars 10, thus positioning the frames comprising the arms 15 and bars 14 over the stretcher, after which a suitable canvas cover is placed over said frames and the stretcher, said cover being shown by dotted lines in Fig. 2.

When the stretcher is placed in an ambulance, it rests directly upon the ambulance-legs 6.

When not in use and it is desired to fold up the stretcher, the pins or cotters 4 are disengaged from the slotted bearings 3, which unlocks the outer ends of the end portions 2 from the side member 1, after which said end portions 2 are swung inwardly until they engage against the inside of the ends of the side member to which they are hinged, after which the opposite side member 1 and the canvas body of the stretcher are rolled up around the end sections 2 and the side 1 member to which they are hinged, and the stretcher thus

folded and rolled may be rolled in the canvas cover when the stretcher is stored or transported.

If desired, a canvas pillow (shown in dotted lines in Fig. 1) may be secured at its ends to a pair of the rings 22 at the head end of the stretcher.

A stretcher of my improved construction may be easily and quickly set up for use, occupies a very small space when folded for storage or transportation, may be readily carried in an ambulance or upon a pack-animal, and a wounded or injured person can be carried upon said stretcher with great ease and comfort.

I claim—

1. In a stretcher having a folding frame and a flexible body-section within said folding frame, a plurality of coil-springs connecting the edges of said flexible body-section with the sides of the folding frame, substantially as specified.

2. In a stretcher having a folding frame and a flexible body-section within said folding frame, a plurality of springs connecting the edges of the flexible section with the sides of the folding frame, and a plurality of straps passing across the top of the flexible body-section, substantially as and for the purpose specified.

3. In a stretcher, a folding frame, means whereby said frame is rigidly held when in use, a flexible body-section arranged within the folding frame, straps passing across the top of said flexible body-section, a plurality of springs uniting the sides of the folding frame with the edges of the flexible section, cover-holding frames detachably secured to the sides of the folding frame, and a cover arranged to inclose the entire stretcher and to rest upon said cover-frames, substantially as specified.

4. In a stretcher, a folding frame, fixed legs depending from the under sides of the ends of the side portions of said frame, folding legs arranged to swing downwardly from the under side of the ends of said side sections of the frame, a flexible body-section within the folding frame, and elastic connections between the edges of the flexible section and the sides of the folding frame, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY W. DALY.

Witnesses:

ALFRED A. EICKS,
M. GRIFFIN.