April 11, 1933. F. B. SKINNER 1,903,536

STRETCHER

Filed Sept. 19, 1931

Fig. 1.

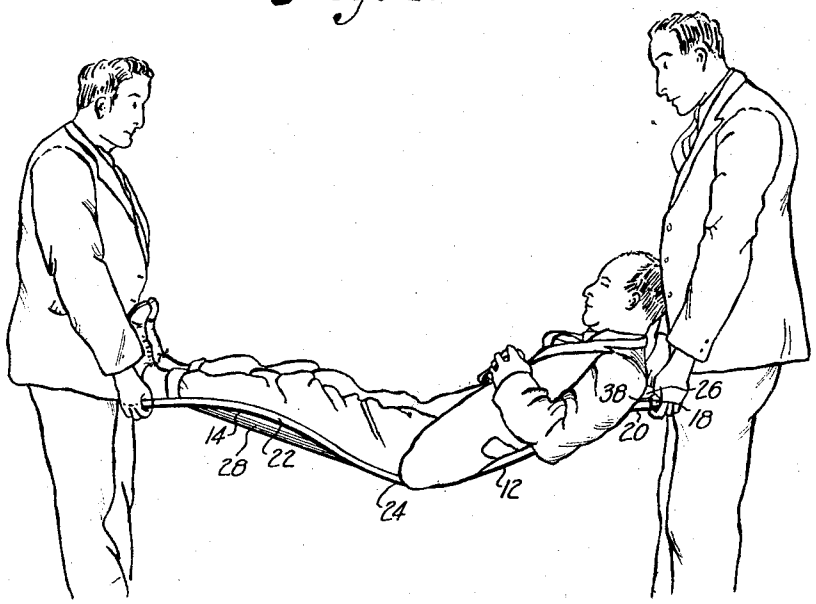


Fig. 2.

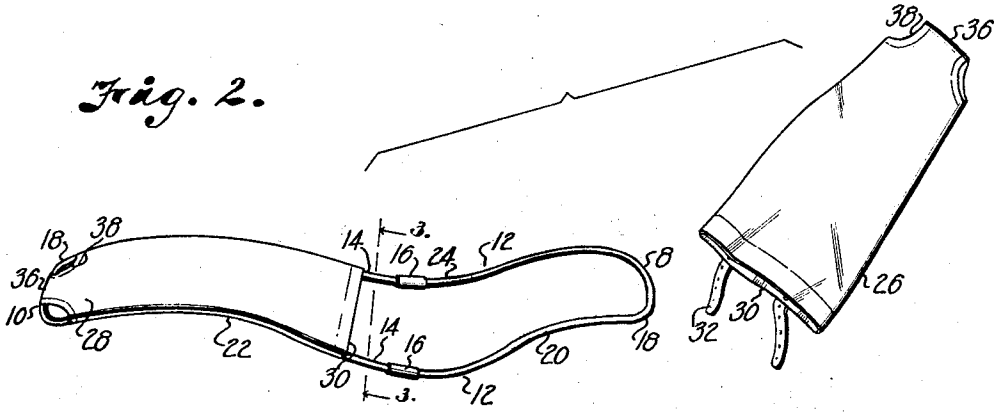


Fig. 3.

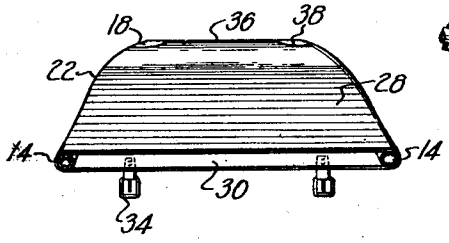
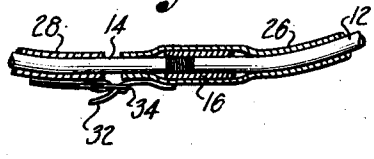


Fig. 4.



INVENTOR.
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UNITED STATES PATENT OFFICE

FRED B. SKINNER, OF COFFEYVILLE, KANSAS

STRETCHER

Application filed September 19, 1931. Serial No. 563,697.

This invention relates to cots, stretchers and like devices for supporting reclining human figures, and has for its principal objects to simplify the construction and assembly and facilitate the use of sturdy stretchers, and to promote the comfort of persons reclining on the stretchers.

In accomplishing these and other objects of the invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawing, wherein:

Fig. 1 is a perspective view of a person reclining on a stretcher embodying this invention, and illustrating the manner in which carriers hold the stretcher.

Fig. 2 is a perspective view of the stretcher frame having one cover member mounted thereon, and a complementary cover member shown spaced from the frame.

Fig. 3 is a section on the line 3—3, Fig. 2.

Fig. 4 is an enlarged fragmental view with parts in section showing the manner of assembling the frame sections.

Referring more in detail to the drawing:

The device includes an open frame formed of bar-like metal material, and preferably consisting of tubes bent to form U-shaped frame members 8 and 10 having side arms 12 and 14, and covered as later described. The section 10 has sleeves 16 secured to the ends of the arms 14 which are adapted to receive the ends of the arms 12 and thus complete the frame assembly.

The ends of the arms 12 and 14 at the curved portion of the members 8 and 10 form convenient handholds 18 for carriers.

The side members diverge from the opposite outer ends of the frame toward the middle thereof, so that an intermediate portion of the frame has greater width than the ends.

The side members are bent alike and symmetrically upwardly and then downwardly from opposite ends of the frame to form convex frame portions 20 and 22 and a concave portion 24. The concave portion is relatively deep and when covered provides a depression adapted to conform to the body and thighs of a person slightly bent at the hips and reclining on the stretcher as later described. The convex portion 22 at the foot end of the frame conforms to the bend of the knees of the figure on the stretcher for comfortably supporting the legs below the knees in substantially horizontal position when the stretcher is horizontal.

Attention is called to the location of the depression nearer to the head end of the frame than to the foot end, the portions 20 of the arms being shorter and bent on shorter radii than the portions 22 so that the torso of the person reclining on the stretcher will be inclined at a more acute angle than the legs.

The cover above referred to consists preferably of a pair of sack-like jacket members 26 and 28 formed of canvas or the like having open inner ends 30 whereby the members may be mounted over the outer ends of the frame and thus be sleeved on the frame. The inner end edges of the cover members are adapted to abut at the middle of the frame in an offset position from the bottom of the seat portion as suggested in Fig. 2. Straps 32 on one member may be engaged with buckles 34 on the inner end of the other member for securing the cover members together, and also for preventing the ends of the arms 12 from slipping out of the sleeves 16.

Attention is called to the double ply character of the covers, whereby one layer or web overlies the frame and the other web extends on the lower side of the frame, and to the fact that the straps and buckles are affixed to the outer surfaces of the end edge portions of the lower webs. The upper surface of the covered frame is thus left smooth and unobstructed, and the upper web may sag into engagement with the lower web, and the lower web itself may support part of the weight of the person, without causing the fastening means to be felt.

The side edges of the cover members diverge from the outer ends correspondingly to the divergence of the side arms of the frame, as shown in Fig. 2, the point of greatest divergence of the side arms is adjacent the middle of the frame, and the cover member 26 is sufficiently long to extend beyond said middle point, and over the inner end of the frame member 10.

The outer ends of the cover members are closed to provide stop walls or folds 36 to engage the end members of the frame, and the corners of the members are cut out arcuately to form apertures 38 through which the portions or handholds 18 of the frame members may protrude.

The covers thus fit snugly on the frame, with side and outer end edge portions engaging the side and end arms of the frame, and the corners are accessible to the handholds 18 for carriers.

A cover may easily be installed on or removed from the frame, and the stretcher when assembled forms a comfortable support for a person. The tubular skeleton character of the frame renders it light in weight and yet strong and relatively rigid when assembled, and bending of the tube arms forms handholds, thus avoiding the necessity for attaching any supplementary handles to a stretcher, or requiring the carriers to support a stretcher from webbing.

The device is particularly well adapted for use as an ambulance stretcher, for moving sick persons through narrow spaces such as halls and up and down stairs, and for safely moving persons to and from berths of sleeping cars.

The frame can readily be taken apart after disengaging the straps from the buckles, without removing the covers, thereby making it easy to transport when not in use. In other words my device is composed of separable sections which can be assembled and taken apart without the aid of tools.

The stretcher has further particular value in that it may be tipped vertically longitudinally, and sidewise, in carrying a person up and down stairways and in close quarters where it could not be retained in a horizontal position, without incurring risk that the person on the stretcher may slip or be disturbed. When the head end of the stretcher is elevated by longitudinal tilting, the supported person will be in a sitting posture on the seat portion formed by the concave bends of the frame, and the stretcher will have substantially the effect of a chair. When the stretcher is tilted substantially longitudinally in the other direction, the body of the person carried will be horizontal, and the major portion of the stretcher may be substantially vertical without causing the body and head of the person to be inclined excessively downwardly.

What I claim and desire to secure by Letters Patent is:

A stretcher including a tubular frame comprising a pair of U-shaped separable members, each having arms bent upwardly and then downwardly from each end of the frame, one of said members having sleeves on the ends of its arms and adapted to slidably receive the ends of the arms of the remaining member, a pair of sack-like covers having open inner ends whereby the covers may be sleeved over opposite ends of the frame to bring the inner end edges of said covers into abutment at the middle of the frame, and closed outer ends to engage the end members of the frame, each of said covers having corner portions at the outer ends of said covers cut away to permit a portion of the frame members to protrude from the covers, and cooperating means at the inner end edges of the covers for securing said covers together on the frame, said means also preventing the separation of the frame members.

In testimony whereof I affix my signature.

FRED B. SKINNER.