Oct. 27, 1942. W. T. KIRK 2,299,993

SKI STRETCHER

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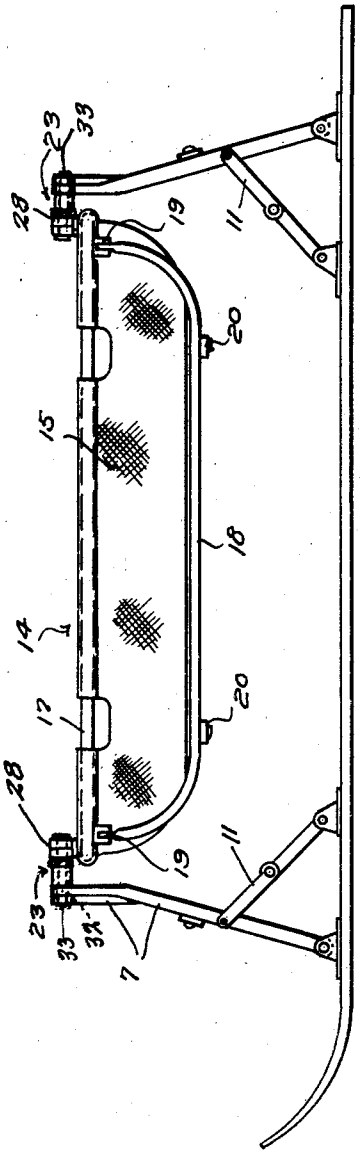


Fig. 1.

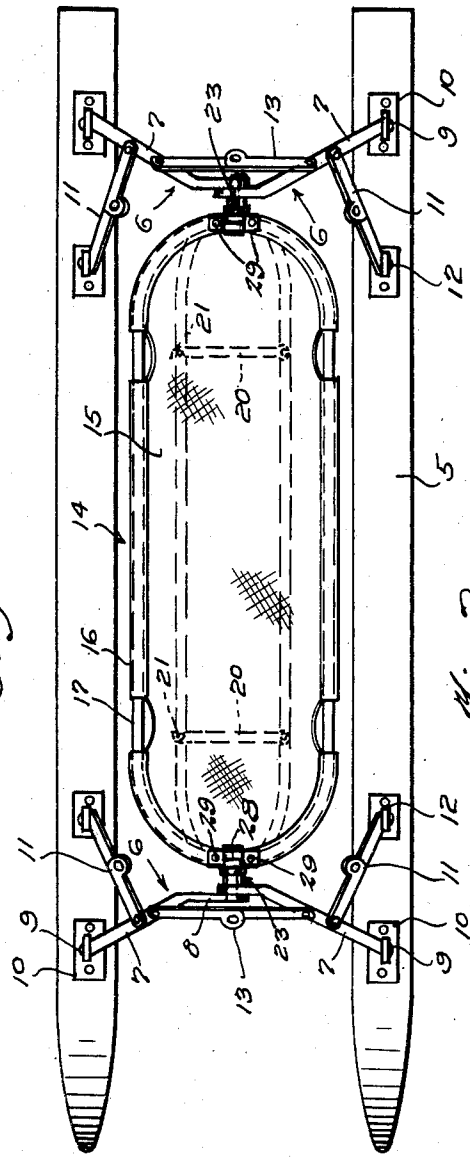


Fig. 2.

*Inventor*

WILLIAM T. KIRK,

*By* Clarence A. O'Brien

*Attorney*

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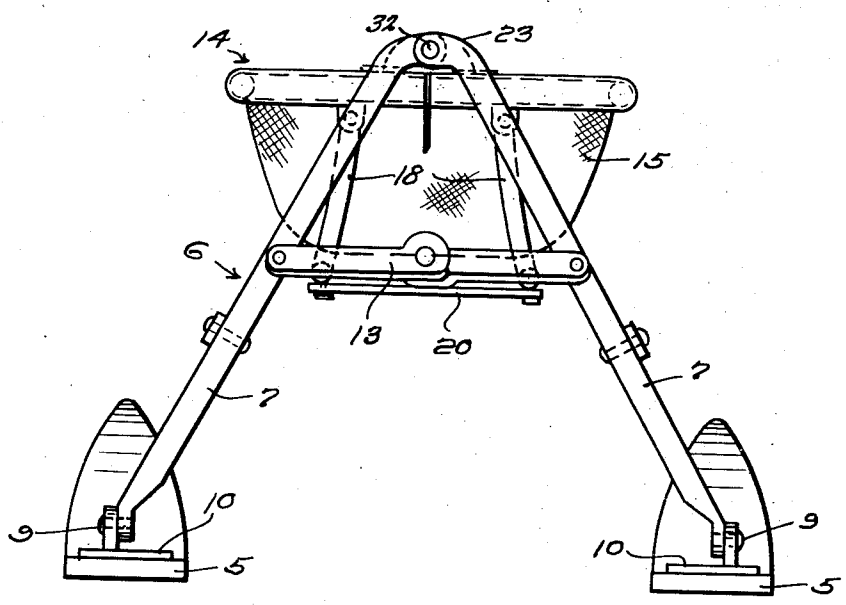
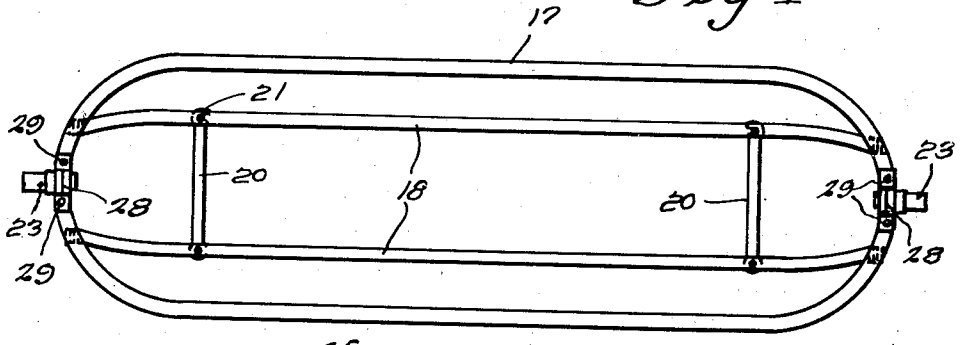



Fig. 3.

Fig 4



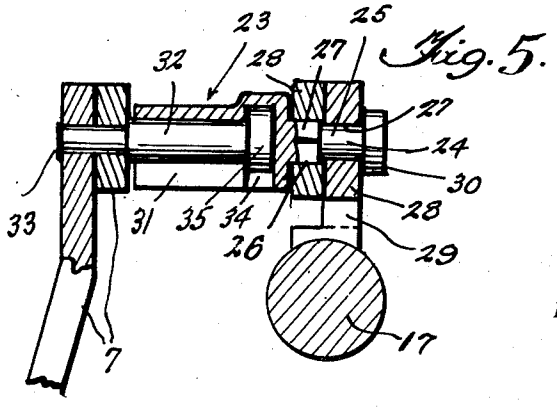




Fig. 5.

Inventor

WILLIAM T. KIRK,

By Clarence A. O'Brien

Attorney

Patented Oct. 27, 1942 2,299,993

# UNITED STATES PATENT OFFICE

2,299,993

## SKI STRETCHER

William T. Kirk, El Portal, Calif.

Application September 16, 1941, Serial No. 411,063

4 Claims. (Cl. 280—12)

This invention relates broadly to stretchers, and an object of the invention is to provide an improved form of stretcher for the purpose of transporting injured persons over snow-covered countries.

A further object of the invention is to provide a stretcher of this character which will permit the use of conventional skis as runners therefor; and further to provide a stretcher of this character which, when not in use, can be collapsed to a relatively small compass, permitting the same to be easily transported as well as to be stored within a relatively small space.

A further object of the invention is to provide a stretcher of the character above mentioned which will afford maximum comfort to the injured occupant thereof.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a side elevational view of a stretcher embodying the features of the present invention.

Figure 2 is a top plan view thereof.

Figure 3 is a rear end elevational view of the stretcher.

Figure 4 is a plan view of the frame for the body rest forming part of the stretcher, and

Figure 5 is a detail of one of the hangers, with parts in section.

Referring more in detail to the drawings, it will be seen that the stretcher, in accordance with the present invention, is provided with runners 5—5 that are preferably in the nature of skis of substantially ordinary constructure.

The runners or skis 5—5 are connected together at the forward and rear ends thereof through the medium of foldable arches or bridge members 6—6.

Each arch or bridge member 6 embodies a pair of complemental legs 7—7 that at the upper ends thereof are formed with apertured tongues 8 that overlap as best shown in Figure 1, and the lower or bottom ends thereof are pivoted as at 9 to bracket members 10 secured to the skis or runners 5 as shown.

Also each leg 7 is braced with respect to its associated runner 5 through the medium of foldable brace 11 that is pivoted at one end thereof to a leg 7 and at an opposite end is pivoted to a bracket 12 mounted on the ski or runner 5.

Also the legs 7—7 of each bridge or arch member 6 are braced with respect to one another through the medium of foldable braces 13 as shown.

A hammock indicated generally by the reference numeral 14 is adapted to be suspended from the arches or bridge members 6.

The hammock 14 embodies a body rest 15 in the form of a flexible sheet of canvas or other suitable material that is provided with a marginal hem 16 in which is accommodated an elongated stiffening frame 17.

At suitable intervals the rest 15 at the hem 16 thereof has portions removed to expose parts of the frame 17 permitting such exposed parts of the frame to be used as hand-holds and thereby facilitate the handling of the hammock 14 bodily.

For assisting the body rest 15 in supporting the weight of the occupant there are provided substantially U-shaped frame members 18 that at the ends thereof are pivoted to the frame 17 adjacent the ends of the frame 17 as at 19.

Adjacent the ends thereof the members 18 are detachably connected together through the medium of cross-members 20.

The cross-members 20 serve to hold the members 18 substantially in spaced parallelism, and these members 20 at one end thereof are pivoted to one of the members 18, and at the free ends thereof are formed with integral hooks to engage keeper lugs as indicated generally at 21 and as shown to advantage in Figures 3 and 4 of the drawings.

The ends of the frame 17 are provided with outwardly extending hanger studs 23, the studs including a pin 24 having a round portion 25 in cross-section and a polygonal portion 26 in cross section, said portions being positioned in aligned openings 27—27 of overlapping ears 28—28 of brackets 29—29 secured to the respective ends of the frame 17. The inner end of the pin is formed with a flange 30 and the outer end of the pins is provided with an inverted U-shaped saddle 31 supported on a pin 32 projecting inwardly from the upper ends of the legs 7. The outer end of the pin 32 is welded to one leg as at 33, while the other leg is pivoted on the pin. The inner end of the saddle 31 is formed with an internal groove 34 and the inner end of the pin 32 is formed with a flange 35 seated in said groove to secure the parts against longitudinal movement, and providing for the free pivoted movement of the frame 17.

An advantage of the present stretcher is that the hammock 14 and frame 17 may be readily bodily removed from the remainder of the structure, thus rendering it unnecessary to remove

the patient from the hammock in order to transfer him into an ambulance or other vehicle.

It will also be appreciated that a structure such as herein illustrated and described is such that the parts thereof may be readily separated and the entire structure reduced to a relatively small, neat compass for transportation and storage purposes.

The above and numerous other advantages will readily present themselves to the user.

While I have herein illustrated and described what is considered the preferred embodiment of the invention, I am well aware that in the practical application thereof changes either from desire or expediency may be resorted to, and consequently I do not wish to limit myself to the precise details of construction, combination and arrangement of elements herein illustrated and described, but claim all such forms of the invention to which I am entitled.

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

1. In a stretcher of the character described, a pair of runners, arch members connecting said runners together adjacent the front and rear ends of said runners, each arch embodying leg members pivoted at one end to the runners and having free apertured overlapping ends, a hammock suspended between the arches and embodying a frame provided at the respective opposite ends thereof with longitudinally extending saddles and pins carried by the respective arches for pivotally supporting said saddles.

2. In a stretcher of the character described, a pair of runners, arch members connecting said runners together adjacent the front and rear ends of said runners, each arch embodying leg members pivoted at one end to the runners and having free apertured overlapping ends, a hammock suspended between the arches and embodying a frame provided at the respective opposite ends thereof with longitudinally extending saddles and pins carried by the respective arches for pivotally supporting said saddles, foldable braces connected with the runners and the associated legs of the respective arches for bracing said legs with respect to said runners, and foldable braces connected with the legs of the respective arches for bracing said legs with respect to one another.

3. In a stretcher of the character described, a pair of runners, arch members connecting said runners together adjacent the front and rear ends of said runners, each arch embodying leg members pivoted at one end to the runners and having free apertured overlapping ends, a hammock suspended between the arches and embodying a frame provided at the respective opposite ends thereof with longitudinally extending saddles and pins carried by the respective arches for pivotally supporting said saddles, a flexible body rest suspended from said frame, longitudinal frame members pivotally connected at the ends thereof to the ends of the first-named frame and extending beneath said body rest to assist the latter in supporting the weight of the occupant of the hammock, and bridge members associated with said frame members for securing the latter in substantially spaced parallelism.

4. In a stretcher of the character described, a pair of runners, arch members connecting said runners together adjacent the front and rear ends of said runners, each arch embodying leg members pivoted at one end to the runners and having free apertured overlapping ends, a hammock suspended between the arches and embodying a frame provided at the respective opposite ends thereof with longitudinally extending saddles and pins carried by the respective arches for pivotally supporting said sadles, foldable braces connected with the runners and the associated legs of the respective arches for bracing said legs with respect to said runners, and foldable braces connected with the legs of the respective arches for bracing said legs with respect to one another; said hammock also embodying a flexible body rest suspended from the aforementioned frame, and reinforcing members for said body rest extending longitudinally of said frame and pivoted at the ends thereof to the ends of the frame to fold relative to said frame, and bridge members for said reinforcing members, said bridge members being pivoted at one end thereof to one of said reinforcing members, with said bridge members and the other of said reinforcing members being complementarily provided for detachably connecting the free ends of said bridge members with the second-named reinforcing member to hold said reinforcing members in spaced parallelism when the structure is set up for use.

WILLIAM T. KIRK.