

Aug. 22, 1950

B. E. JENNINGS

2,519,376

STRETCHER FLOAT

Filed Sept. 13, 1946

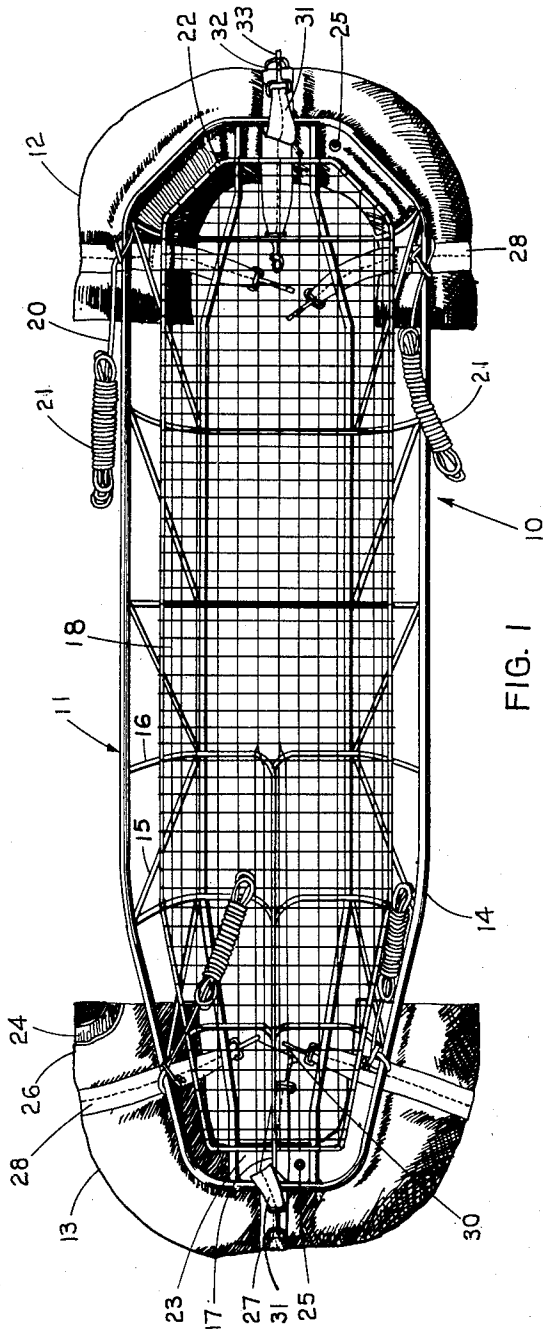


FIG. 1

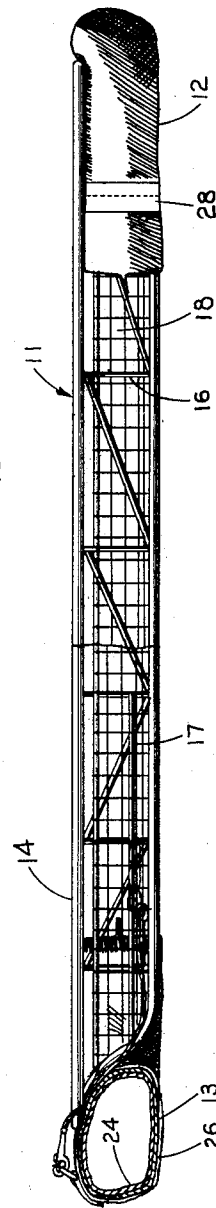


FIG. 2

334

Inventor
BELTON E. JENNINGS

McHayer

Attorney

UNITED STATES PATENT OFFICE

2,519,376

STRETCHER FLOAT

Belton Emouloous Jennings, United States Navy

Application September 13, 1946, Serial No. 696,960

2 Claims. (Cl. 9-11)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

1

This invention relates to stretcher floats and has for an object to provide quickly attachable and detachable floats for providing readily controllable flotation to stretchers for use in removing injured persons from the water, as in rescue work after a boat or ship wreck, or an airplane crash in the water.

The removal of injured personnel from the water into a rescue boat or seaplane presents varying degrees of difficulty. Even in quiet seas, the removal of seriously injured personnel is accompanied by danger of aggravating the injuries. This is particularly true in cases of back and lower limb injury. Moreover, even with the greatest possible gentleness, the handling of injured persons without inducing additional pain while they are being taken aboard cannot be accomplished.

The use of a Stokes stretcher as a seine for lifting the injured personnel has been a great aid in overcoming some of the difficulties involved. However, ordinary Stokes stretchers are difficult to handle in the water and are not entirely satisfactory. It is an object of this invention to provide quickly attachable and detachable floats to the standard Stokes stretcher so as to afford ease in handling of the stretcher in removing survivors of crashes without causing additional injuries.

A further object of this invention is to provide floats for a stretcher which not only provide flotation to the stretcher but also act as fenders and shock absorbers during the hoisting of the stretcher aboard the rescue vessel, thus minimizing the effect of jarring and bumping.

A further object of this invention is to provide stretcher floats which, in addition to being provided as standard equipment, may be improvised in the field from stock and salvage material practically always available in the field.

The foregoing and other objects and advantages will become apparent from the specification and drawings which follow, in which:

Fig. 1 is a top plan view of a Stokes stretcher with the floats of this invention attached thereto, and

Fig. 2 is a side plan view, partly broken away, of Fig. 1.

There is shown at 10 a floatable stretcher made up according to this invention. This floatable stretcher 10 includes a standard Stokes stretcher 11 to the ends of which are attached two fitted U-shaped floats 12 and 13, made up according to this invention. Although the Stokes type of stretcher 11 is here illustrated, it will be under-

2

stood that any other similar type of stretcher may be used.

The stretcher illustrated, as usual, consists of an oval shaped frame 14 having ends of general U-shape and the usual side bars 15 and cross bars 16 as well as the leg dividing bar 17, to which frame and bars is secured the dished or basket-shaped wire mesh 18. This stretcher 11 is of the type adapted to support an adult person at full length with his head at one end and his legs on opposite sides of the leg dividing bar 17 at the other end and is standard first aid equipment everywhere.

The invention consists in the head end U-shaped float 12 and the feet end U-shaped float 13, together with the means for securing such U-shaped floats to the stretcher 11, as well as the handling lines 20 for maneuvering the floating stretcher to the rescue vessel and for hoisting it aboard. As shown, four handling lines 20 may be provided, two at each end, tied to the frame 14 near the head end 22 and feet end 23 of the stretcher 11. When being held ready for use, the lines 20 will be kept coiled as shown at 21, and in addition, may be provided with knots spaced one foot apart for the five or six feet nearest the stretcher to aid in manually holding the wet line when lifting the stretcher aboard the rescue vessel.

Each of the floats 12 and 13 are made identically, differing only in their dimensions so that they may better fit the wider head end 22 and the narrower feet end 23 of the stretcher 11. Each of the floats is made of an inner pneumatic tube 24 having a conventional valve 25 for inflating the same. This tube may be a discarded airplane or automobile tire tube of appropriate size, either folded double if small enough, or cut and closed at its ends by vulcanizing or cold patching. The tube 24 is placed within a canvas boot 26 shaped to fit the stretcher ends 22 and 23 and extending a short distance along the sides of the stretcher 11 as shown, thus making the floats somewhat U-shaped, as shown.

Sewed about the center and adjacent the ends of the U-shaped canvas boots 26 are attaching straps 27 and 28, the straps encompassing the boot and terminating in snap buckles 30, which extend under the stretcher 11 and are snapped to the wire mesh 18 of the stretcher 11. The center strap 27 has an additional shorter strap 31 sewed thereto, having a D-ring 32 sewed close to the outer top edge of the boot 26, and a snap buckle 33 at its end, this strap 31 being folded about the frame 14 and secured to the D-ring

3

32, thus holding the float firmly in position at the head and feet ends 22 and 23 of the stretcher 11. These straps 27, 28 and 31 are made of harness or webbing similar to that used in parachute harness, and in fact, may be made of discarded parachute harness, for they do not carry any very great load when in use. The inner tubes 24 may be secured within the canvas boots 26 by leaving an opening in the end of the boots and then sewing it up after the tube is inserted.

In operation, the floats 12 and 13, either before or after inflation, may be attached to the stretcher 11 by passing the second center strap 31 about the frame 14 and snapping its buckle 33 to the D-ring 32. Then the other straps 27 and 28 are passed under the ends of the stretcher 11 and their buckles 30 are snapped to the wire mesh 18. Next, the handling lines 20 with their coils 21 are tied to the frame 14 at about the points where the end straps 28 pass thereunder, thus making the floatable stretcher 10 ready for use.

In rescuing an injured person from the water, two men, preferably wearing life jackets and with separate safety lines tied to them in case of heavy seas, maneuver the floating stretcher 10 to the vicinity of the injured person. After straightening the person in the water, they merely depress the floating stretcher 10 in the water to under the injured person, and let it gently float upward until it supports the injured person.

Then with the aid of the handling lines and the safety lines, operated by personnel aboard the rescue vessel, they make their way to the side of the rescue vessel where the stretcher is hoisted aboard manually by the handling lines, with the aid of the knots in the lines, or, if available on the rescue boat, the foot end handling lines are reeved through a pulley, to assist in getting the stretcher 10 out of the water on board the rescue vessel. When the floating stretcher 10 is being removed from the water to the deck, the floats 12 and 13 act as fenders and shock absorbers, minimizing jars and bumps. After the stretcher is on deck, if desired, the floats and handling lines may be quickly detached, especially if needed for use on additional stretchers 11, to which they can be quickly attached, for further rescue work.

The invention described herein may be manu-

4

factured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

5 What is claimed is:

1. For use in combination with a basket-shaped stretcher of the Stokes type having ends of general U-shape, a combination flotation and fender means comprising a pair of U-shaped pneumatic floats adapted to be secured about the U-shaped ends of the stretcher between the planes of the top and bottom of said stretcher, said floats each comprising an inner tube, a U-shaped canvas boot within which said inner tube is located, straps 10 secured to and encompassing said boot, and stretcher-attaching means on said straps adapted to be secured to a stretcher element from the bottom thereof.

2. For use in combination with a basket-shaped stretcher of the Stokes type having ends of general U-shape, a combination flotation and fender means comprising a pair of U-shaped floats adapted to be secured about the U-shaped ends of the stretcher between the planes of the top and bottom of said stretcher, said floats each comprising flotation means, a U-shaped canvas boot within which said flotation means is located, straps secured to and encompassing said boot, and stretcher-attaching snap buckles on said straps adapted to be snapped to a stretcher element from the bottom thereof, an additional strap at about the center of the boot, a snap buckle thereon, a buckle receiving ring on said boot for said additional strap to pass about an element of the stretcher at its upper edge and back to the buckle receiving ring on said boot to thereby properly position the float at the stretcher end.

BELTON EMOULOUS JENNINGS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,277,022	Young	Aug. 27, 1918
1,793,905	Chestnut	Feb. 24, 1931
2,355,757	Spanel	Aug. 15, 1944
50 2,391,906	Kearny	Jan. 1, 1946