

E. W. SCOWDEN.
INFLATABLE LIFE SAVING EQUIPMENT OF SOLDIERS.
APPLICATION FILED FEB. 17, 1911.

1,028,141.

Patented June 4, 1912.

2 SHEETS-SHEET 1.

Fig. 1.

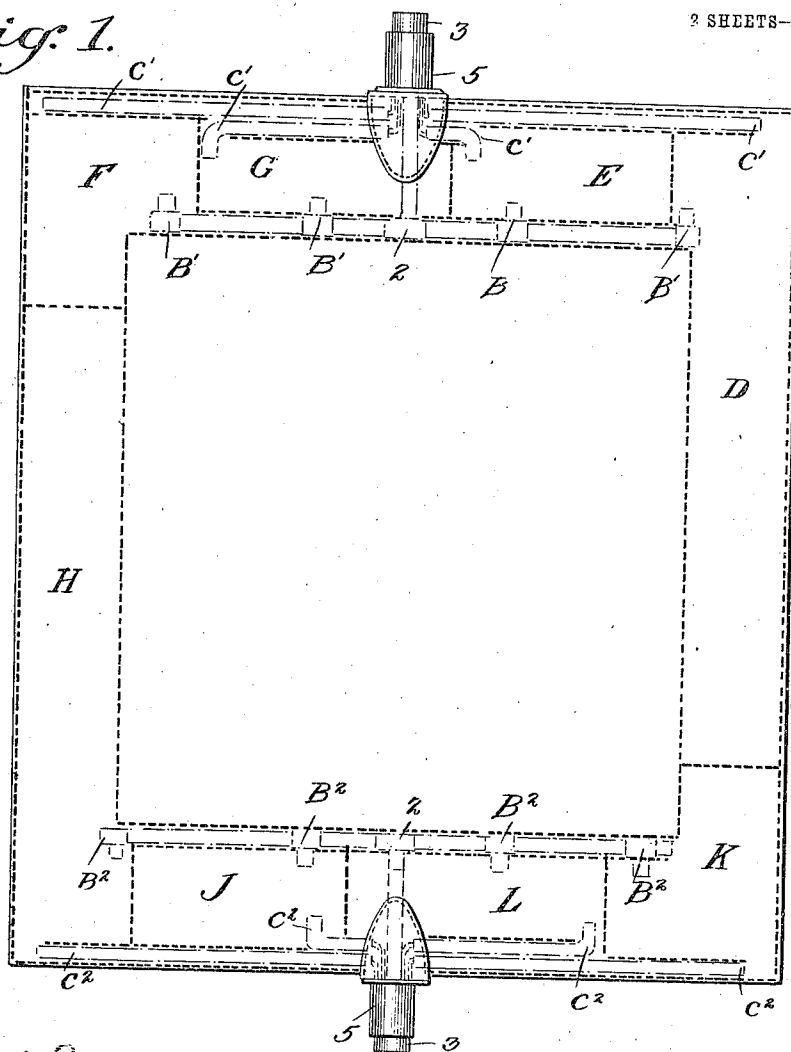


Fig. 2.

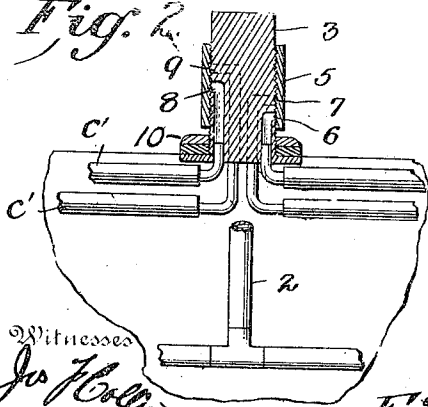


Fig. 3.

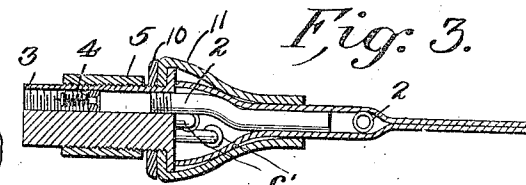
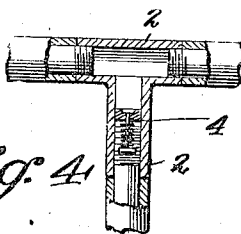


Fig. 4



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Fig. 5.

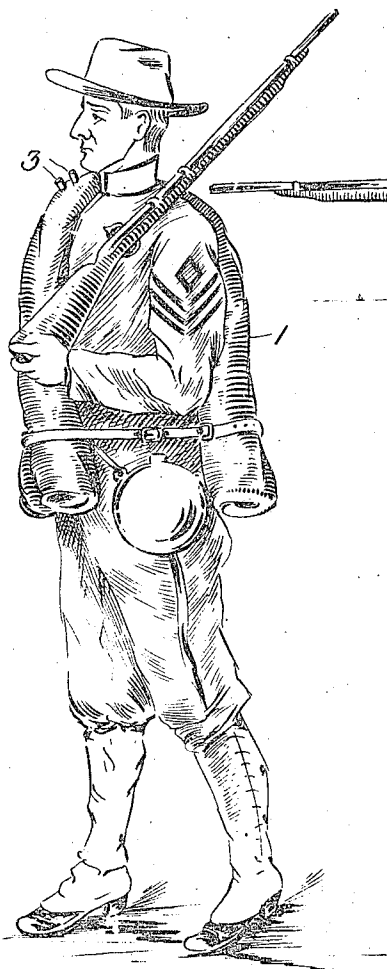
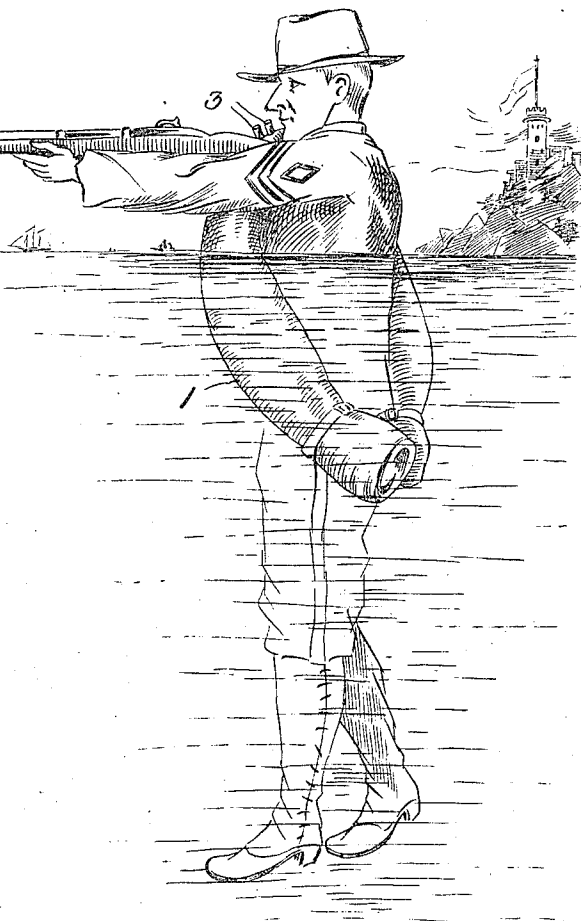


Fig. 6.



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UNITED STATES PATENT OFFICE

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INFLATABLE LIFE-SAVING EQUIPMENT OF SOLDIERS

1,028,141.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed February 17, 1911. Serial No. 609,147.

To all whom it may concern:

Be it known that I, EDWARD W. SCOWDEN, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Inflatable Life-Saving Equipment of Soldiers, of which the following is a specification.

My invention relates to certain new and useful improvements in the application of air cells or compartments placed along the outer edges of a poncho, shelter half, or other similar parts of the equipment of a soldier, and has for its object the facility of being quickly inflated so as to support the individual soldier and his regulation marching equipment, while crossing any body of water, required to be crossed in an emergency. When a soldier is under heavy marching order, his blanket, poncho, and shelter half, to be most conveniently carried, are rolled so as to form the shape of a sling which is placed over the one shoulder, and the two extremities of the roll extend diagonally across the body, and are attached at their two ends by suitable straps shown in Figure 5, to the belt of the soldier, at a point near the waist line, forming a U shaped pack as shown in Fig. 5, and Fig. 6 of the drawings. In the form shown, and while thus suspended over the shoulder of the soldier, and attached as shown, the air compartments in the poncho or the shelter half, disposed within the blanket roll, may be filled with air through the mouth pieces protruding therefrom as shown in Figs. 5 and 6, and thus create of the blanket roll a life saving belt or buoy, of sufficient displacement, to support the soldier in an upright position in the water. The soldier being able thereby to sustain himself for a long time in the water, or when floating or swimming across a stream, the inflation has sufficient buoyancy to enable a soldier to operate and fire any service arm, either a musket or pistol should emergency require it.

To provide against accidents or punctures of the air compartments, and thus destroying its buoyancy, I provide a plurality of compartments which may be simultaneously inflated, by being severally connected to one center artery of inflation, and arranged to be deflated singly and in *seriatim* by the

operation of a valve of novel construction adapted for use in connection with my apparatus. The construction thus attained will permit of a part of the compartments being punctured or destroyed, without the whole device being rendered useless.

Another object of my invention is to provide sufficient buoyancy to a poncho or shelter half, to facilitate its being used as an emergency lighter or conveyance, for the transportation of supplies and equipments of the soldier in crossing a stream, thus permitting the entire equipment of clothing of the soldier as worn on the march, to be placed in the center of the shelter half and supported thereby while being towed across the stream. In this manner troops so equipped may cross a stream, without creating the discomforts and draw back of marching in a uniform that has been immersed in water.

My invention consists in the novel construction and arrangement of the several parts, and their application in the manner shown by incorporating into a poncho or shelter half, one or more compartments capable of holding air under pressure, a less number than a whole of which will have a sustaining power sufficient to be effective in event that a portion of the compartments become punctured or lose their air holding properties from any cause, so that a puncture in one of the compartments, will not render the entire roll useless as a sustaining means, as the remaining compartment or compartments will be sufficient to retain its buoyancy and life saving properties.

These objects and other objects in view will be set forth in the specification, and more particularly pointed out in the claims.

In order to more fully describe my said invention reference will be had to the accompanying drawings in which:

Fig. 1, is a plan view of a poncho equipped with my invention complete. Fig. 2, is an enlarged view showing in side elevation, the inflating and deflating devices. Fig. 3, is an enlarged detail view, in end elevation corresponding to Fig. 2. Fig. 4, is an enlarged cross section view of the inflating tube showing check valve therein. Fig. 5, illustrates its manner of application and Fig. 6, shows its application and use.

In the accompanying drawings, 1 represents a poncho or a shelter half, composed of any suitable fabric, preferably in rectangular form. Around the outer edges thereof are placed air cells or compartments, "D", "E", "F", "G", and "H", "J", "K", "L", to be inflated in a manner hereinafter more fully described.

In Figs. 2, and 3, are shown an inflating and deflating valve mechanism of novel construction, consisting as shown of a nipple 3, having its outer surface screw threaded to engage the sleeve 5, which is screw threaded on its inner surface to register with the threads on nipple 3, and adapted to be screwed over the nipple 3, down against, and compress gasket 10, placed against the shoulder 11, of the nipple socket. Passing through the nipple 3, is an air passage provided with a check valve 4, and communicating with inflating tube 2. The check valve 4, is so placed as to allow air to be injected through the nipple 3, and into the air tube 2, but prevents the air from escaping through the same orifice by which it is introduced.

In Fig. 2, are shown air ports 6, 7, 8, and 9, leading from the exhaust air tubes C¹, by means of which the air may be exhausted by unscrewing sleeve 5, to a point where the inner end thereof uncovers the aperture of port 6, communicating with the exhaust tube C¹, leading from one of the air compartments. As the air port 6, is uncovered, the air is allowed to escape, and if no further compartments are to be emptied the sleeve 5, is screwed down to engage and compress gasket 10, retaining the air in the remaining compartments communicating with ports 7, 8, and 9.

It will be observed that the arrangement and placing of the air ports, have been so located in the side walls of the nipple 3, that the uncovering and opening of the same are governed by the distance which the sleeve 5, is unscrewed.

For the purpose of inflating the several compartments, I provide for inflating one moiety thereof through one independent inflating valved nipple placed in the center of one end of the poncho or shelter half, and for inflating the other moiety of the air compartments, through another independent valved nipple placed opposite at the other end. By this novel arrangement I am enabled to inflate one half, or all of the compartments as desired, as well as avoiding and lessening the danger of the apparatus being incapacitated by the destruction through puncture or otherwise disabling the working parts of one of the independent inflating means.

Leading to each of the several air compartments "D", "E", "F", "G", and "H", "J", "K", "L", are inflating ducts B¹ and

B², which connect with the main inflating tube 2, which passes into and connects with mouth piece or inflating nipple 3.

For the purpose of retaining the air in each individual air compartment, I provide a suitable valve 4, in the main inflating tube and a similar valve in each one of the inflating ducts B¹, and B², which permit of the passage of air into each separate compartment, but prevents the escape of the air through the same duct by which the compartments are inflated.

In the inflation of the poncho or shelter half the operation is as follows: If in the form shown in Fig. 5, the soldier places the nipple 3, in his mouth, and by blowing therethrough the air thus expelled from his lungs passes through the inflating tube 2, into the various compartments by the air ducts B¹, and B². The valve 4, in the air inflating tube 2, prevents the air from escaping after it has passed through said valve, and through the corresponding valves placed in each of the independent inflating ducts B¹, and B². In inflating the several compartments of the poncho or shelter half, when not in the form of the blanket roll, it is obvious that inflation is accomplished in a similar manner.

When it is desired to deflate one or more of the compartments the sleeve 5, threaded upon the nipple 3, is unscrewed until the first port 6, of the exhaust tube C¹, is uncovered thus allowing the air in compartment "D" to be fully exhausted. If an other compartment is desired to be emptied, the sleeve 5, is further unscrewed until port 7, of the exhaust tube C¹, allowing the air in compartment "E," to be fully exhausted. Should it be desired to still further exhaust another air compartment the sleeve 5, is unscrewed until port 8, is uncovered allowing the air from compartment "F," to escape until fully exhausted. In like manner the sleeve 5, may be further unscrewed until port 9, of the exhaust tubes C¹, has been uncovered thus allowing the air in compartment "G" to become fully exhausted. In this manner the air in one half of all of the compartments thus leading into the one independent inflating and deflating nipple may be exhausted. In a like manner the air compartment communicating with the other independent inflating or deflating nipple may likewise be exhausted.

The air compartments and the manner of inflating and deflating the same by the novel arrangement shown may be applied to, and used in connection with articles of equipment of a soldier, other than the form which I herein show, so that I do not desire to be limited to their use in the manner shown.

What I do claim as my invention is:

1. The combination with an army blanket of a plurality of air chambers integral there-

to, means for simultaneously inflating said air chambers, and independent means for deflating singly each air chamber, the said inflating and deflating ducts passing through a combination valve piece common to all.

2. An army blanket of the character described, comprising a sheet of fabric provided with air chambers integral thereto, inflating tubes communicating with said air chambers, and deflating tubes leading therefrom, the said inflating and deflating tubes leading through a combination valve piece common to all.

3. The combination with a blanket roll of a soldier of a plurality of inflatable air receivers attached to the equipment within said roll, means for simultaneously inflating said air receivers through a plurality of inflating tubes leading from a common inflating duct, and means for reflatting each air receiver through an independent deflating tube, the said inflating and deflating tubes leading through a combination valve piece common to all.

4. The combination with the blanket roll of a soldier, of a plurality of air chambers attached to a poncho placed within said roll, means for inflating said air chambers while within said blanket roll, and independent means for deflating each of the air chambers substantially as described.

5. An inflatable army poncho of the character described, comprising a sheet of fabric, air compartments placed along the edges thereof, means for inflating said compartments, retaining means to maintain the air within said compartments, and independent means for deflating said compartments in *seriatim*.

6. The combination with a soldier's blanket roll of a sheet of fabric placed therein comprising a life buoy, consisting of a plurality of air compartments attached to the sheet of fabric within said roll, means for simultaneously inflating said air receivers through a plurality of inflating tubes leading to a common inflating duct, and means for deflating each air receiver through an independent deflating tube, the said inflating and deflating tubes leading through a conduit located outside of said roll common to all.

7. The combination with a blanket roll of a soldier of a plurality of air compartments placed therein, with inflating tubes connected therewith, inflating valves in said tubes and a mouth piece attached to said tubing provided with similar valves, and graduated means for exhausting each compartment singly.

8. The combination with the blanket roll of a soldier, of a sheet of fabric contained therein provided with a plurality inflatable air receivers, an inflating tube leading from said air receivers, a mouth piece, a

check valve to hold the air within said air receivers and an independent exhaust tube provided with a graduating valve for exhausting said air receivers singly comprising a nipple 3, a sleeve 5, adapted to cover and uncover exhaust ports 6, 7, 8, and 9, substantially as described.

9. In combination with a blanket roll of a soldier, of an inflatable float placed within said roll consisting of a fabric sheet provided with air compartments, inflating tubes leading therefrom, a valve consisting of a body 3, having a sleeve encircling said body adapted to screw down on gasket 10 and to cover ports 6, 7, 8, and 9, substantially as described.

10. An inflatable army poncho of the character described, comprising a sheet of fabric, air compartments placed along the edges thereof, means for inflating said compartments, retaining means to maintain the air within each independent compartment, and independent means for deflating said compartments in *seriatim*.

11. The combination with the blanket roll of a soldier, of a plurality of air chambers attached to a sheet of fabric placed within said roll, means for inflating said air chambers while within said blanket roll, and independent means for deflating each of the air chambers comprising a valve 3, having open ports 6, 7, 8, and 9, therein, a sleeve 5, adapted to encircle stem 3, and to cover and uncover said ports in *seriatim*, substantially as described.

12. The combination with an army poncho of a plurality of air compartments, a plurality of inflating tubes communicating with one inflating duct, means for retaining air under compression in each of said compartments, and deflating means independently connected with each compartment leading to one deflating valve substantially as described.

13. The combination with the blanket roll of a soldier, of an air chamber attached to a sheet of fabric contained within said roll, means for inflating said air chamber independent means for deflating said air chamber, said inflating and deflating means passing through a combination valve piece common to both.

14. The combination with the blanket roll of a soldier, of an air compartment placed therein, an inflating tube connected therein, a check valve in said tube, a mouth piece attached to said tube and graduated means for exhausting said air compartment through a combination valve piece common to said inflating tube.

15. The combination with the blanket roll of a soldier, of a sheet of fabric contained therein, an air cell attached to said sheet, an inflating tube leading from said air cell, a mouth piece, a check valve to hold the

air within said air cell, and an independent exhaust tube for exhausting said air cell, through a combination valve piece common to said inflating tube.

- 5 16. In combination with the blanket roll of a soldier, of an inflatable float placed within said roll comprising a sheet of fabric provided with an air compartment an inflating tube leading therefrom, a valve consisting of a body 3 having a sleeve encircling said body adapted to screw down on gasket 10, and to cover an exhaust port substantially as described.

- 15 17. The combination with a blanket roll of a soldier of an air compartment attached to the equipment within said roll, means for inflating and deflating said compart-

ment by independent tubes leading through a combination valve piece common to both located outside of said roll. 20

18. The combination with a blanket roll of a soldier, of an air compartment attached to the equipment within said roll, inflating and deflating tubes leading from said air compartment to a combination valve 25 piece located outside of said roll common to said inflating and deflating tubes.

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

EDWARD W. SCOWDEN.

Witnesses:

SAMUEL B. CRANDALL,
H. THORNETT.