F. A. ROBERTS.

LIFE SAVING SUIT.

APPLICATION FILED MAY 13, 1913.

1,106,728.

Patented Aug. 11, 1914.

3 SHEETS—SHEET 1.

Fig. 1.

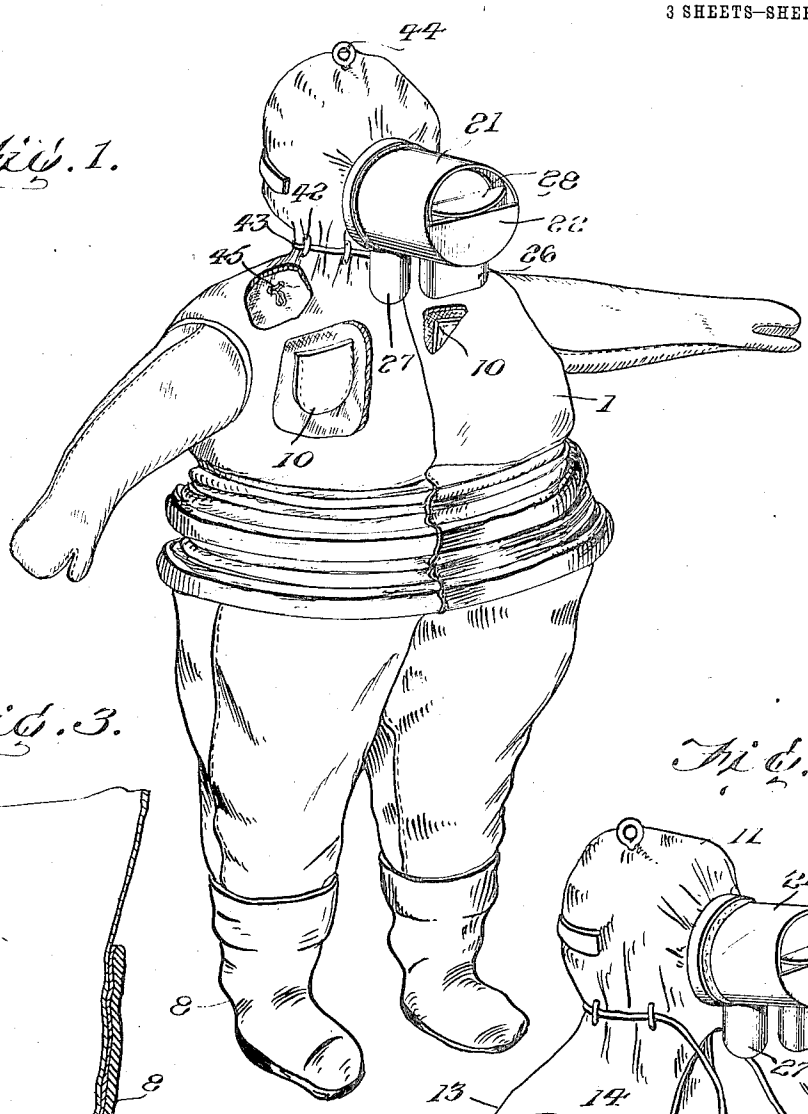


Fig. 3.

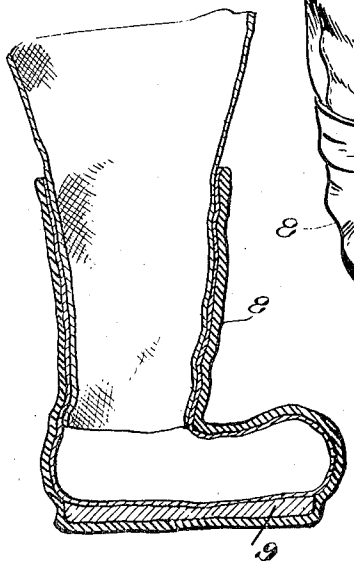
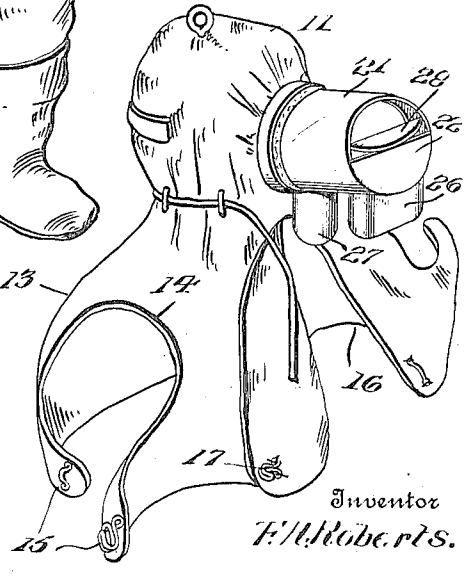


Fig. 4.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 2.

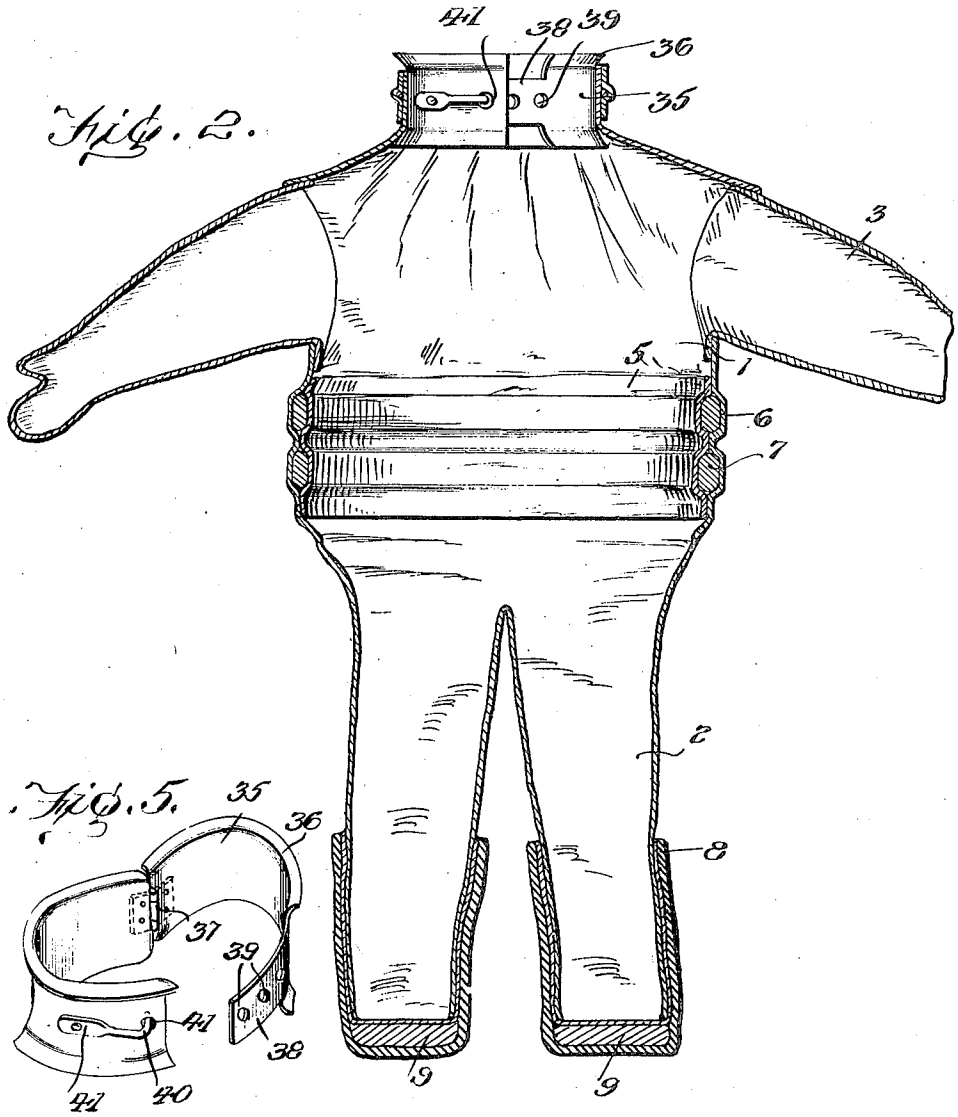


Fig. 5.

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3 SHEETS—SHEET 3.

Fig. 6.

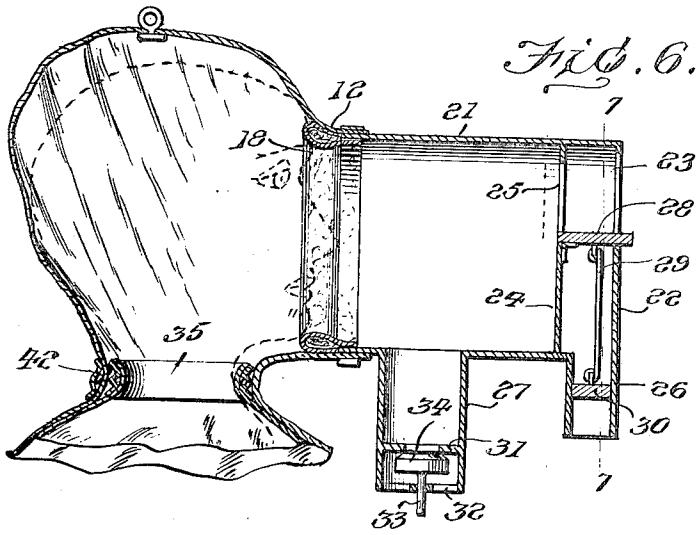


Fig. 7.

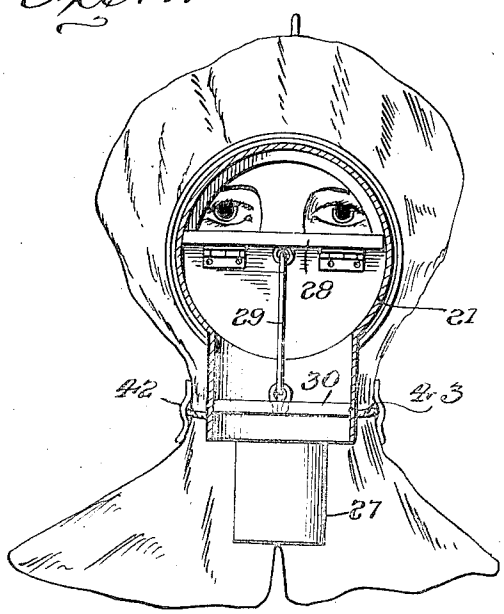
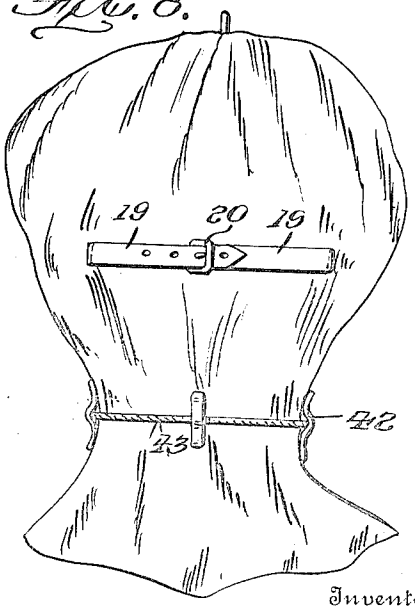


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDRICK A. ROBERTS, OF DICKEY, NORTH DAKOTA.

LIFE-SAVING SUIT.

1,106,728. Specification of Letters Patent. Patented Aug. 11, 1914.

Application filed May 13, 1913. Serial No. 767,484.

To all whom it may concern:

Be it known that I, FREDRICK A. ROBERTS, citizen of the United States, residing at Dickey, in the county of Lamoure and State of North Dakota, have invented certain new and useful Improvements in Life-Saving Suits, of which the following is a specification.

This invention relates to life saving suits and has as its primary aim to provide a suit which may be packed away in a relatively small space and consequently be conveniently carried on-board-ship and which may be readily and quickly put on when needed.

It is one aim of the invention to provide a life saving suit which will be comfortable to the wearer and will effectually protect him from the water and from the elements.

Another aim of the invention is to provide means for holding the body portion of the suit spaced from the wearer so that the pressure of the water will not discomfort the wearer and this spacing of the suit serves the further purpose of keeping the wearer warmer than if it were allowed to snugly fit the body. Furthermore by spacing the suit from the wearer at and about the waist-line the suit is rendered buoyant without the necessity of providing cumbersome cork floats or pneumatic floats.

The invention further aims to provide, in a suit of this class, a helmet so constructed that the wearer of the suit may view his surroundings and may supply himself with food and breath freely although the helmet will be automatically closed in a water-tight manner should the wearer's head become submerged.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a perspective view of the suit applied. Fig. 2 is a vertical transverse sectional view through the suit. Fig. 3 is a vertical sectional view through one of the legs and its boot. Fig. 4 is a perspective view of the helmet. Fig. 5 is a perspective view of the collar of the suit. Fig. 6 is a vertical front to rear sectional view through the helmet. Fig. 7 is a vertical transverse sectional view on the line 7—7 of Fig. 6. Fig. 8 is a rear view of the helmet.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

In the drawings the body of the suit is indicated by the numeral 1 and is made of rubber, rubber cloth, or any suitable water proof fabric, and it is preferable that the suit be seamless, or rather that such seams as are necessary in its manufacture be permanently closed. The legs of the suit are indicated at 2 and arms at 3, the arm terminating in mittens or gloves 4. A sheet of lining material 5 is cemented or otherwise secured to the inner surface of the body portion 1 of the suit along parallel lines so as to form a number of pockets 6 which extend about the waist-line of the said body portion and arranged within each of these pockets is a body encircling ring 7, which rings serve to hold the body portion distended at the waist-line and consequently spaced from the wearer.

By reference to Figs. 2 and 3 of the drawings it will be observed that the legs 2 are closed at their lower ends and permanently fitted to the lower portion of each leg 2 is a boot 8 having an inner wall 9 of lead or other suitable material of sufficient bulk to maintain the wearer of the suit in upright position in the water. The body portion of the suit is preferably provided at each side with a pocket 10 in which may be placed containers for food and drink, and as will be presently made apparent these pockets are normally covered and protected although access may be readily had thereto.

The helmet mentioned above includes a flexible hood 11 which is preferably of the same material as the body of the suit and this hood is so formed as to completely cover the head of the wearer of the suit except for the face, the hood being open at its front, as indicated at 12. Below its neck portion the hood is provided with a cape 13 having shoulder portions provided with arm holes 14. The arm holes 14 may be closed about the arms by a hook and eye, or similar fastening 15. The cape 13 is open at its front as indicated at 16 but is adapted to be closed by a hook and eye fastening, or the like, indicated at 17. Arranged within the open front 12 of the hood of the helmet is a face-pad 18 designed to rest firmly against the face of the wearer of the suit and to be held in such engagement by means of straps 19 upon the back of the hood which straps are

connected by an ordinary buckle 20 and may be tightened for the purpose stated.

Fitted within the open front of the hood is one end of a casing 21 which contains an arrangement of valves designed, as will now be made apparent to prevent the entrance of any considerable quantity of water into the hood. The casing 21 is partly closed at its front as indicated at 22, the upper portion of the front being, however, open as at 23. The casing is further provided with a partition 24 located in spaced relation to the front 22 and having an opening 25 located opposite and of approximately the same size as the opening 23. Between the front 22 and partition 24 the casing is provided upon its under side with a depending tubular portion 26 and is also provided with a similar portion 27 located rearwardly of the partition 24. It will be observed that the portion 27 has its lower end located below the lower end of the portion 26.

Hinged at the lower side of the opening 25 in the partition 24 is a flap-valve 28 to which is pivoted the upper end of a rod 29. This rod at its lower end is pivotally connected to a float 30 which is arranged within the tubular extension 26 and is adapted to rise and fall therein. It will be observed that the valve 28 is normally held in open position by the weight of the float 30, in which position it rests upon the lower wall of the opening 23. It will be understood, however, that should the helmet be submerged the water entering the extension 26 will cause the float 30 to rise, thereby closing the flap-valve 28 so as to prevent the entrance of water into the casing 21.

The tubular extension 27 is provided interiorly with a valve-seat 31 and with a bracket 32 which is located beneath the seat and slidably receives the stem 33 of a valve 34. The body of the valve 34 is of some material which will float and while it normally rests in open position, it will be understood that should the helmet be submerged, it would be immediately closed. This valve is provided for the purpose of automatically draining the casing 21 should any water by chance enter the casing through the openings 23 and 25. It will now be apparent that the wearer of the suit may view his surroundings through the openings 23 and 25 and that even should he be submerged for a few minutes at a time he would suffer no discomfort, for the reason that the valve 28 is arranged so as to automatically close and exclude the water as soon as the tubular extension 26 passes below the water level. In order that the hood of the helmet may be secured around the neck of the wearer, without causing discomfort, there is provided in connection with the suit a collar which is preferably of light material and which consists of two sections 35 each formed to fit one side of the neck and these sections are overturned or flared at their upper and lower edges as indicated at 36 so as not to be liable to injure the neck or the clothing. The sections are hingedly connected as at 37 and one of the sections is provided with a relatively narrow tongue 38 having a number of openings 39 therein designed to receive the end of a resilient latch-finger 40 which is secured as at 41 to the other section of the collar. The said end of the latch-finger projects through the opening 41 in the last mentioned section and may be engaged detachably in the openings 39 whereby to adjust the collar to the neck of the wearer.

It will be observed by reference to Figs. 2 and 6 of the drawings that the collar is to be applied about the neck and that the neck portion of the body of the suit is to be gathered about the collar and above the lower flared edge portion thereof. It will also be observed by reference to Figs. 1 and 6 of the drawings that the neck portion of the helmet is provided at intervals with loops 42 through which is threaded a cord 43 which may be tightened and tied for the purpose of holding the neck portion of the hood about the collar.

From the foregoing description of the invention it will be seen that there is provided a life saving suit which may be readily and quickly put on and which will effectually protect the wearer from the elements and from the water and which is in itself buoyant due to the fact that its waist or body portion is spaced from the wearer. It will also be seen that the helmet is so constructed that it will automatically close in a water-tight manner when submerged so that water cannot reach the wearer's face.

While naturally the chief use of the suit will be in stormy or rough weather, rendering it necessary to wear the helmet, the use of the helmet is unnecessary in calm weather and under such conditions it may be detached or removed and a ring 44 which is attached at the top of the hood 11 may be engaged with a snap hook 45 secured upon one of the shoulders of the body portion of the suit.

Having thus described the invention what is claimed as new is:—

1. In a life saving suit including a body portion and a neck portion, a rigid adjustable collar adapted for disposal within the neck opening and having a concave peripheral surface into which the material of the neck of the suit is adapted to be drawn.

2. In a life saving suit including a body having a neck opening and a neck portion surrounding the same, a collar comprising adjustably connected sections having a concave peripheral surface into which the neck portion is adapted to be drawn.

3. In life saving suit, including a body portion having a neck opening, and a neck portion surrounding the opening, a collar disposed within the neck opening and comprising hingedly connected sections, and means adjustably connecting the sections at their free ends, the said sections having concaved peripheries receiving the said neck portion.

4. In life saving apparatus, a helmet comprising a hood open at the front, a casing extending from the open front of the hood, the casing being provided with an opening, a valve movable to position to close the said opening, and a float connected with the valve and extending below the opening and arranged upon upward movement to close the valve.

5. In life saving apparatus, a helmet including a hood, a casing extending from the hood and having an opening, a tubular extension from the under side of the hood, a valve movable into and out of position to close the opening in the casing, and a float connected with the valve and located in said extension and arranged to close the valve when lifted.

6. In life saving apparatus, a helmet including a hood, a casing extending from the hood, the casing having an opening, a valve arranged within the casing and movable to position closing or exposing the opening, a float connected with the valve and arranged to move the same to closed position when elevated, and a drain valve within the casing having a normal tendency toward movement to open position.

7. In life saving apparatus, a suit including a body portion having a neck opening, a rigid adjustable collar disposed within the neck opening, the said neck opening being adapted to contract about the collar, and a helmet including a hood having a cape, and a connecting portion, the said neck portion being provided at intervals with loops, and a draw-string fitted through the loops and adapted to contract the neck portion about the said collar.

8. In life saving apparatus, a helmet comprising a hood open at the front, a casing having an end secured in the said open front of the hood, a padded lining surrounding the opening in the hood, the casing having an inlet, a valve movable to close the inlet, and a float connected with the valve.

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

FREDRICK A. ROBERTS. [L. S.]

Witnesses:
FRED A. MAY,
J. A. MAY.