July 21, 1959 A. DESJARLAIS ET AL 2,895,147

LIFE PRESERVER

Filed Aug. 14, 1956

Fig. 1.

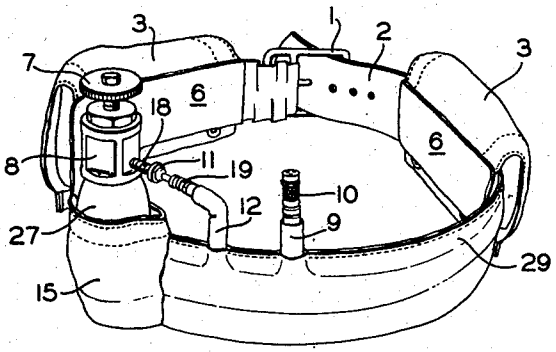


Fig. 2.

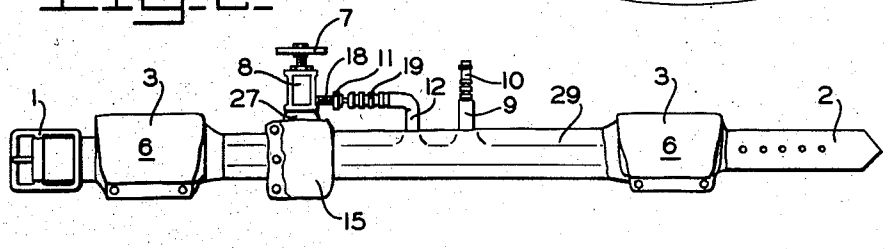


Fig. 3.

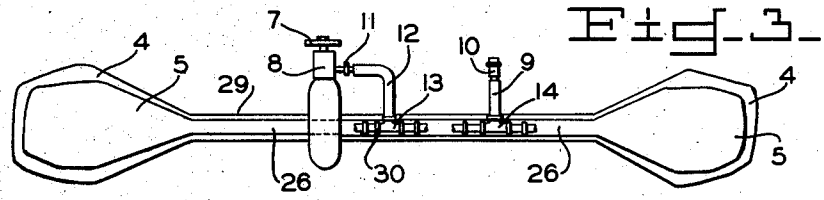
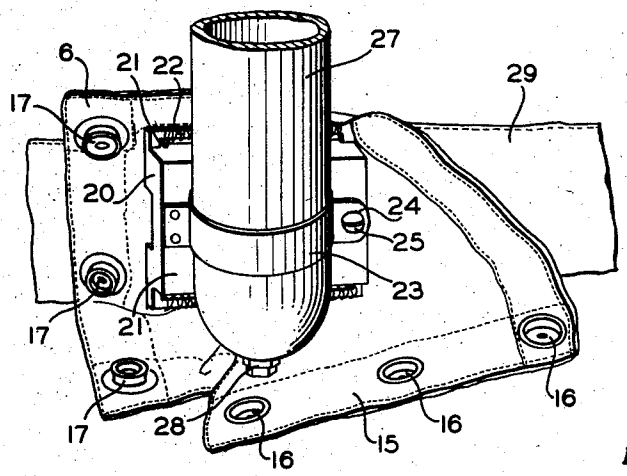


Fig. 4.



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LIFE PRESERVER

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1 Claim. (Cl. 9—19)

This invention is concerned with improvements in life preservers and has for its principal object a means for providing a person with a light weight automatic or manual type of life preserver that will keep the person afloat.

Heretofore life preservers have been found to be inefficient in certain details of construction and in the cost of manufacture.

It is a principal object of the within invention to provide a life preserver that has certain features that make for low cost production.

It is yet another object of the within invention to provide a compact life preserver which may be inflated manually.

It is still another object of the within invention to provide a life preserver that has a novel means for securing an automatic valve for releasing a cartridge of compressed gas into the inner circuit of the life preserver.

It is yet another object of the within invention to provide a manual type valve means enabling the user to blow air into the inner circuit of the life preserver.

These and other objects are attained by the use of a high pressure tank valve that is connected in parallel with a mouth valve and in circuit with a pair of water wings.

With the foregoing and other objects in view, the invention consists in the construction, combination, and arrangement of parts hereinafter described and illustrated in the drawings in which:

Figure 1 is a perspective view of the assembly with the tank valve and mouth valve in the foreground.

Figure 2 is a side elevation of the life preserver shown in perspective in Figure 1, in open position.

Figure 3 is a semi-schematic diagram of the air circuit of the life preserver.

Figure 4 is a perspective view disclosing the novel means for securing the tank valve assembly to the life preserver belt.

The buckle **1** is of the conventional type and has inserted therethrough the leather belt portion **2** of the life preserver belt. The flaps **3** conceal the water wings **4**. The water wings **4** are identical with the water wings as disclosed by our Patent #2,716,245. For this reason, explanation of the way the flaps **3** conceal the folded water wings **4** is felt to be unwarranted.

Mounted also in the belt is a tank valve assembly **8** which is disclosed in detail in the patent of Arthur Desjarlais, one of the inventors herein, Patent #2,749,079. Because this valve assembly **8** is so well taught in the said patent disclosure, it is also felt that any detailed description of the valve assembly **8** is unwarranted in this instance.

A valve **10** which is of the manual type is mounted also in the belt. It is mounted in the cloth section of the belt which is referred to as the numeral **29**. This valve **10** is also disclosed in our Patent #2,716,245 in Figures 14, 15, 16, and 17 and for this reason it is felt that a detailed description is unwarranted.

Reference is made particularly now to the air circuit shown in Figure 3. As can be seen the automatic valve assembly **8** with its automatic valve knob **7** is secured to an L-shaped tubing **12** to the valve outlet coupling **11**. The L-shaped tube **12** is secured to a T connection **13**. The T connection **13** has the conventional flanges **30** secured thereon to prevent slipping and to make a better connection to the inner hose **26** of the air circuit.

The hose or tubing **26** connects from one side of the T connection **13** directly to one of the bladders **5**. The other side of the T connection **13** is connected by the tubing **26** to a T connection designated as **14**. At the top of the T connection **14** is a vertical hose or tubing member **9** which interconnects the T member **14** with the manual valve **10**. At the far side, opposite from the automatic valve assembly **8**, is another section of the tubing **26** which interconnects the T connection **14** with the other bladder **5**. The bladders **5** are of course covered with the cloth material **4** similarly as discussed and disclosed in our Patent Number 2,716,245. The air circuit or tubing **26** is covered by the cloth material **29**.

One of the problems that had to be overcome in arranging the life preserver of this invention was the mounting of the valve assembly **8** in the cloth structure **29** of the life preserver. It is to be understood that the valve assembly **8** utilizes compressed gas which is stored in a small tank **27**. The tank **27** can be unscrewed of course and replaced by a full tank when used. With these problems in mind, it became necessary to make an arrangement that adapted the device to be easily replaced as shown in the view of Figure 4.

Secured to the belt material **29** is an aluminum fastening block **20** which has a concave surface to receive the cylindrical shape of the tank **27**. In the embodiment disclosed, the block **20** was sewn by thread **22** to the belting material **29**. The block **20** was therefore designed with an elongated slot **21** through which the thread **22** could be secured to the belting material **29**. However, it is contemplated that in mass production circular openings may be used in place of the elongated slots **21** and that a riveting machine could easily be employed to rivet the block **20** to the cloth material **29**. Connected to the block **20** is a holding clip **23** which circumscribes the circular portion of the tank **27** and it locks into the block at its far end by the screw **25** in the opening **24**. The block **20** has beneath the screw **25** a threaded opening, which is not shown but which is conventional. This threaded opening receives the screw **25**. At the bottom of the tank **27** is the conventional safety valve **28**. In placing the tank into position, foresight for the possible blow off of the valve **28** had to be planned. Therefore the design of the flap **15** was devised. The flap **15** is a piece of cloth that has the female snaps **16** along with the male snaps **17** and when placed over the tank **27** conceals same but leaves a small opening between the flap **15** and the fixed portion **6** which is behind the block **20** and is also sewn or riveted to the belt material **29**.

Reference is again made to the view of Figure 1 in which the valve assembly **8** is disclosed. It is to be noted that extending from the valve assembly **8** is the valve stem **18**, which interconnects the coupling **11**. A clamp **19** securely fastens the L-shaped tube **12** to the automatic valve assembly **8**.

The user who desires to release the gas from the tank **27** merely opens the tank valve knob **7** until the gas from the tank **27** is released and passes into the air circuit as disclosed in Figure 3, whereupon the bladders **5** are inflated. It is to be noted of course that the mouth valve **10** must be secured and closed so that the air will not be released.

To inflate the bladders **5** by mouth it is best to close

back tank valve knob 7 after the gas has been released from the tank 27. It is however not necessary.

The dimensions in the drawings may be varied without departing from the spirit and scope of the invention.

Having thus described our invention, we claim:

A life preserver having a pair of folded type water wings, a hollow air tube, a first T-connection, an L-shaped air tube having one end connected to one end of the T-connection, a tank valve assembly, a source of air in said tank valve assembly, an outlet from said source of air, said outlet connected to the other end of the L-shaped tube, one segment of said hollow tube connected to a second end of said T-connection and to a water wing, a second segment of said hollow tube connected to said third end of said T-connection, a second T-connection, a mouth valve connected to one end of said second T-connection, said second segment of said hollow tube connected to the second end of said second T-connection, a third segment of said hollow tube connected to the third end of said second T-connection and

to the other water wing, said water wings being mounted on a belt, said hollow tube segments being within the belt, a mounting block attached to the outside of said belt, a clamping means for securing said tank valve assembly to the block, the contacting surface of said block complementing the contour of the contacting surface of said tank valve assembly, and a flap means for covering the said tank assembly.

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