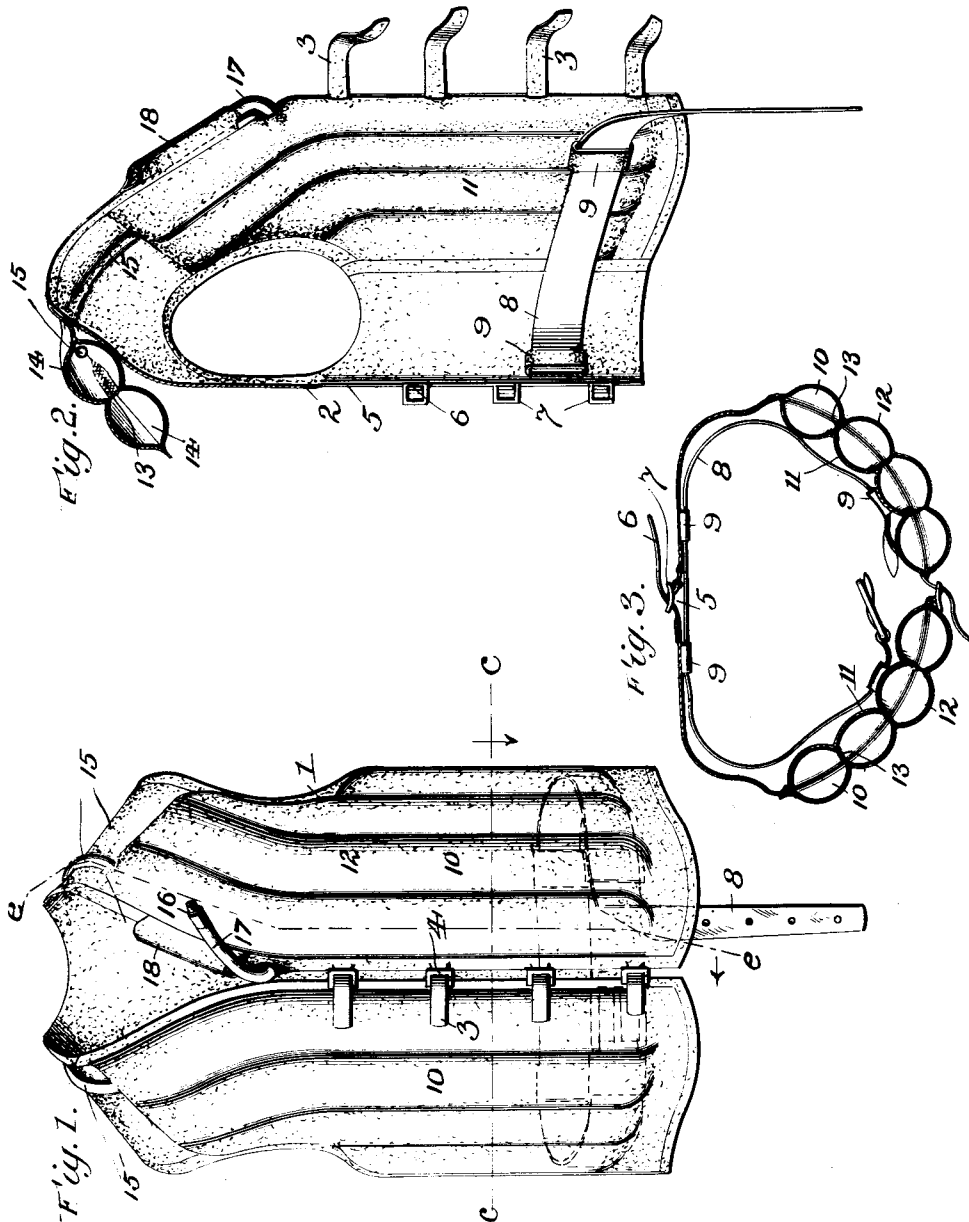


I. F. KEPLER.
LIFE PRESERVER.
APPLICATION FILED APR. 15, 1912.

1,064,743.

Patented June 17, 1913.

2 SHEETS—SHEET 1.



WITNESSES
E. J. Ruedy
H. C. Montague

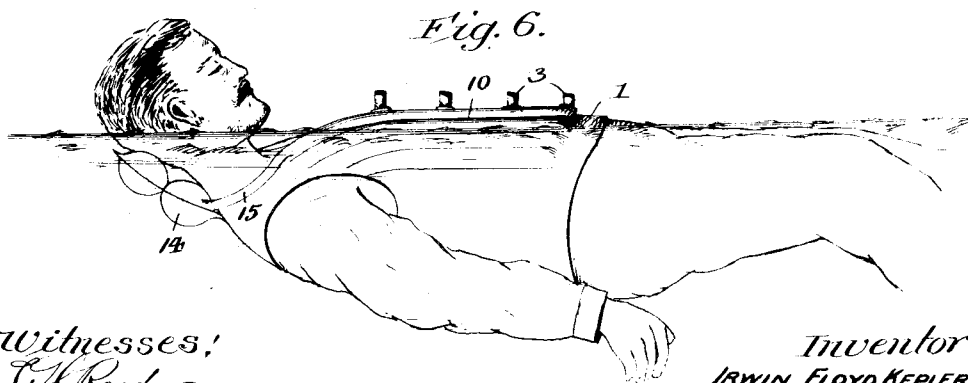
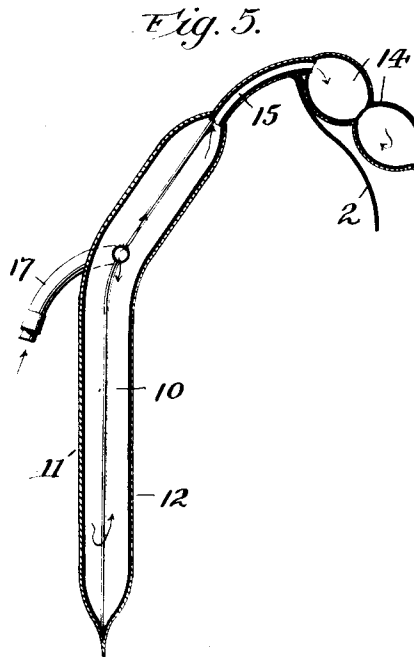
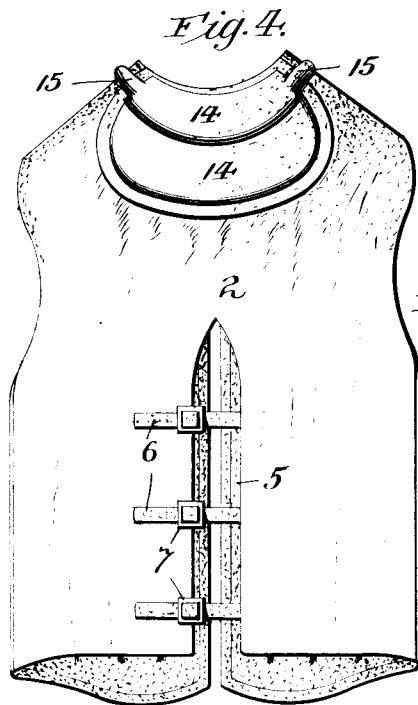
INVENTOR
IRWIN FLOYD KEPLER
BY *Dodge & Sons* Attorneys.

I. F. KEPLER.
LIFE PRESERVER.
APPLICATION FILED APR. 15, 1912.

1,064,743.

Patented June 17, 1913.

2 SHEETS—SHEET 2.



Witnesses:
E. A. Rader
H. C. Montague

Inventor:
IRWIN FLOYD KEPLER

BY *Dodge & Sons*
Attorneys.

UNITED STATES PATENT OFFICE.

IRWIN FLOYD KEPLER, OF AKRON, OHIO, ASSIGNOR TO THE R. F. GOODRICH COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

LIFE-PRESERVER.

1,064,743.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed April 15, 1912. Serial No. 690,868.

To all whom it may concern:

Be it known that I, IRWIN FLOYD KEPLER, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Life-Preservers, of which the following is a specification.

This invention relates to life preservers, and particularly to a device of this class designed for the use of aviators and others likely to be precipitated into the water in a stunned or otherwise helpless condition.

The device is particularly designed to permit a maximum freedom of movement and to support the wearer face up in the water, with the mouth and nose well above the surface, so that the wearer even if unconscious will not drown. These results are secured by the proper proportioning and arrangement of the buoyant portions of the device in the general manner shown in the accompanying drawings, in which:—

Figure 1 is a front elevation of the complete device; Fig. 2 is a central vertical section of the same; Fig. 3 is a horizontal section on the line *c—c* of Fig. 1; Fig. 4 is a rear elevation; Fig. 5 is a section on the line *e—e* of Fig. 1; and Fig. 6 is a view showing the position assumed by the life preserver when supporting a man on the water.

The life preserver consists of a vest 1 of the general form shown in the drawings, made preferably of a laminated fabric consisting of cloth and rubber, though any other fabric impervious to air and water may be used. The back 2 and the other portions which are not inflated are not necessarily made of such fabric but in practice it is found simpler so to make them. The vest fastens down the front with straps 3 and buckles 4 and is provided with a vent 5 in the back having take-up straps 6 and buckles 7. A belt 8 is attached inside the preserver by loops 9 and serves to fasten the same securely at the waist to prevent its riding up unduly. The front portions of the vest consist of a series of substantially vertical intercommunicating cells or lobes 10 which are formed by providing an inner wall 11 and an outer wall 12 connected together at intervals by stays 13 which are so constructed as to permit the passage of air through or around them from one cell to the next adjoining. This effect may be secured

by making the stays 13 of cloth or the like, or in any other way known in the art. A pair of cells 14 constructed in the same general manner as those heretofore described, and of considerable size and thickness, extend across the back of the vest and are connected thereto only at their upper extremities, so that the cells 14 may swing up back of the wearer's head, as indicated in Fig. 6 when the wearer is in the water, but may lie across his shoulders, as shown in Fig. 2, when he is in an upright position. It will be observed that the cells 14 are of considerable size, and are large enough to support the wearer's head well above the surface, as will later be more fully pointed out. The cells 14 are connected through tubes 15 to the two sets of cells at the front of the vest and the entire preserver may therefore be inflated through a single valve 16. This valve 16 is mounted on a tube 17 which when not in use is tucked into a loop 18 provided to receive it.

By constructing the vest with the stays described it becomes possible to very tightly inflate the vest without distorting its form and consequently the preserver gives a very stable and unvarying support to the wearer. This point is of the utmost importance for in many cases the wearer will be thrown into the water stunned and unable to control his position. The main air chambers of the life preserver being located at the front, the wearer will inevitably be supported face up and the buoyant action of the cells 14 will lift his head clear of the water as shown in Fig. 6.

It is to be noted that the life preserver is not clumsy or unwieldy, and therefore does not impede the movements of the aviator, while controlling his machine.

I have also constructed vests of this general character in which instead of inflating the cells I fill them with granulated cork or similar buoyant material. This method makes a vest which is practically as light as that constructed with air cells, and by some may be preferred. Both methods are contemplated in my invention. The primary feature of the same is the form and location of the buoyant masses which support the wearer.

Having thus described the invention, what I claim is:—

1. In a life preserver, the combination of

a vest-like garment; a buoyant mass of limited thickness mounted in the front thereof; and a second flat buoyant mass flexibly attached by one edge across the shoulders of
5 said garment, and adapted normally to lie flat upon the back of the wearer's shoulders but to swing up and support the wearer's head when he is in the water.

2. In a life preserver, the combination of
10 a vest-like garment; air chambers formed in the front portion thereof, one at each side, and each consisting of a plurality of intercommunicating cells; another air chamber
15 hingedly attached across the shoulders of said garment and adapted both to lie in contact with the shoulders and to swing to a position back of the wearer's head to support the same; and means for inflating said
air chambers.

20 3. In a life preserver, the combination of

a vest-like garment; air chambers formed in the front portion thereof, one at each side, and each consisting of a plurality of intercommunicating cells; another air chamber
hingedly attached across the shoulders of
25 said garment and adapted both to lie in contact with the shoulders and to swing to a position back of the wearer's head to support the same; means for inflating said air
30 chambers; and a belt connected to said garment and adapted to hold the lower portion thereof in position upon the wearer.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

IRWIN FLOYD KEPLER.

Witnesses:

WALTER K. MEANS,

ILLA N. KIRN.