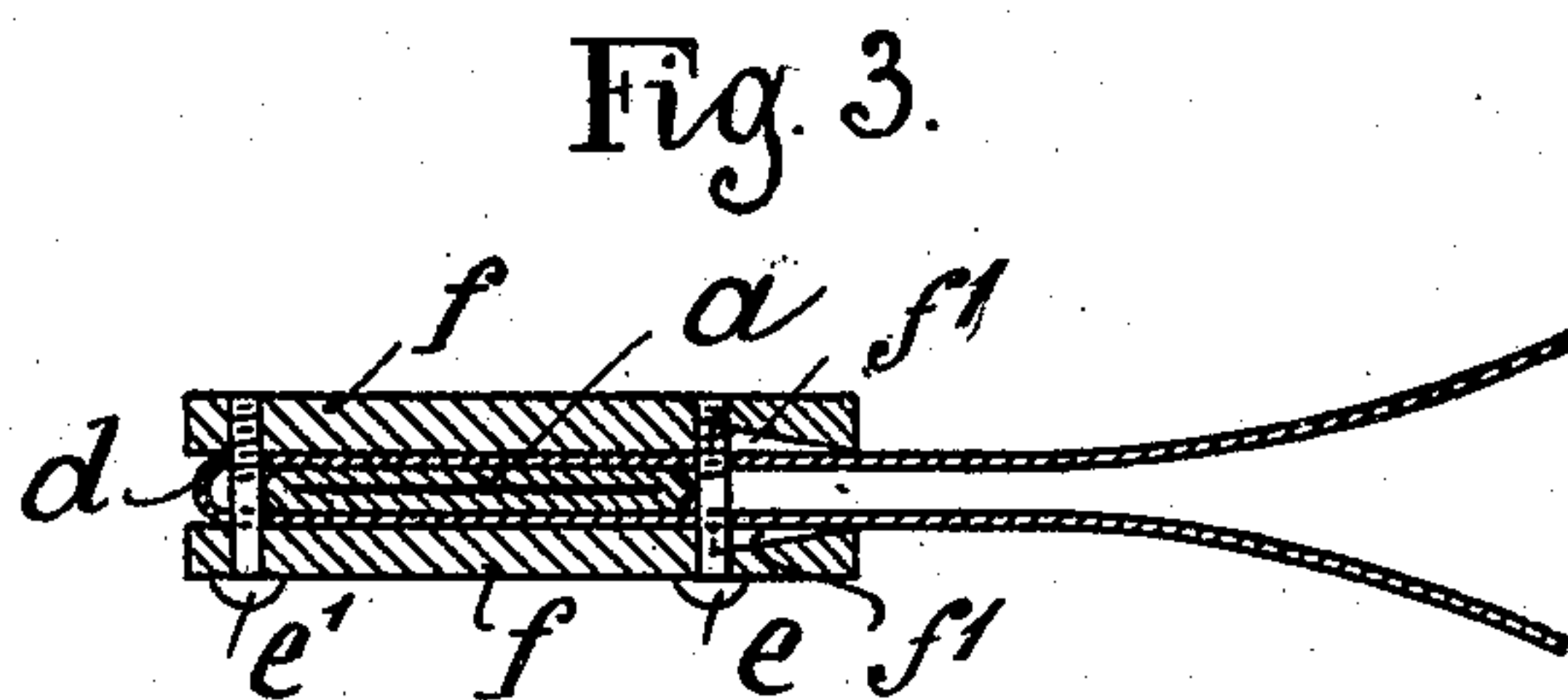
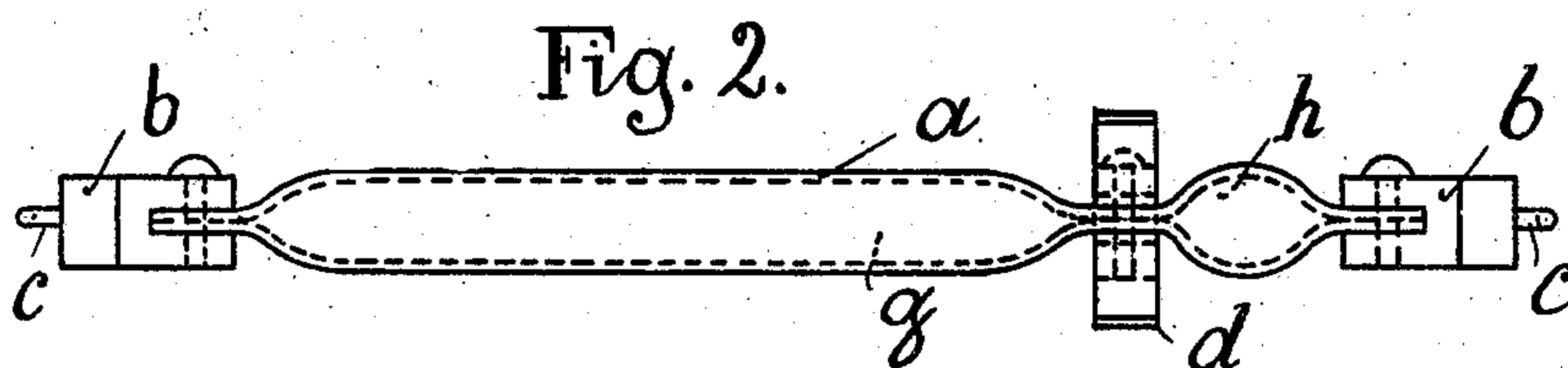
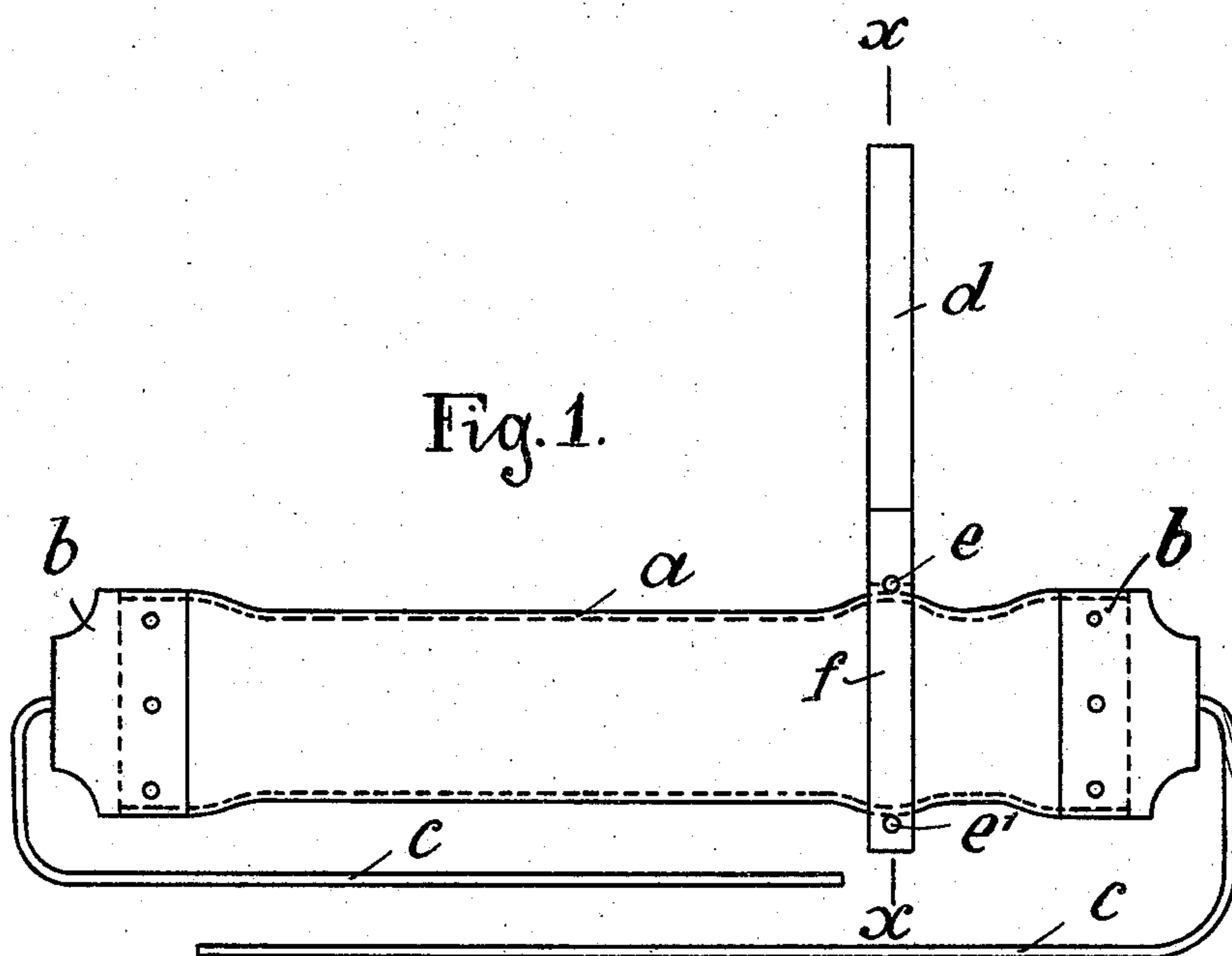


No. 867,966.

PATENTED OCT. 15, 1907.

C. FUCHS.  
MARINE LIFE SAVING APPARATUS.  
APPLICATION FILED JUNE 18, 1906.



Witnesses  
A. J. Madden  
S. Lord

Inventor  
Caspar Fuchs  
by his Attorney R. Madden

# UNITED STATES PATENT OFFICE.

CASPAR FUCHS, OF MEIRINGEN, SWITZERLAND.

## MARINE LIFE-SAVING APPARATUS.

No. 867,966.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed June 18, 1906. Serial No. 322,218.

*To all whom it may concern:*

Be it known that I, CASPER FUCHS, a citizen of the Swiss Republic, residing at Meiringen, Canton Bern, in Switzerland, have invented certain new and useful  
5 Improvements in Marine Life-Saving Apparatus, of which the following is a specification.

This invention relates to improvements in marine life-saving apparatus comprising a gas-tight chamber or chambers adapted to be automatically inflated and  
10 made buoyant by means of gas generated in the apparatus itself. The improved apparatus is formed of a length of inflatable tube or the like open at the ends normally divided into two separate closed compartments, one for containing water and the other for car-  
15 bid, by end clamps and an easily breakable intermediate clamp.

The invention is illustrated by means of an example in the annexed drawing in which:

Figure 1 is an elevation thereof, Fig. 2 is a plan view  
20 of Fig. 1 and Fig. 3 is a cross section on the line  $x-x$  of Fig. 1.

The apparatus illustrated comprises an india-rubber tube  $a$  hermetically closed at its ends by means of clamps  $b$ . To each clamp  $b$  there is attached a cord  $c$   
25 for fastening the apparatus to the body of the user. A clamping device adapted to be easily unfastened normally compresses a portion of the tube  $a$  in such a manner as to provide the interior thereof into two compartments  $g$  and  $h$ . The larger compartment  $g$  contains  
30 water and the smaller compartment  $h$  calcium carbid, the water and carbid being introduced at the respective ends of the tube while the clamps  $b$  are unfastened. The clamping device between the compartments  $g$  and  $h$  comprises a strap  $d$  placed round the tube  $a$  and pressed  
35 against the latter by two wooden bars or cheeks  $f$  which are interconnected by means of screws  $e$  and  $e^1$ . The wooden cheeks  $f$  are weakened by means of recesses or notches  $f^1$  adjacent to the screw  $e$ , so that by pulling

the ends of the strap  $d$  in opposite directions the weakened end-portions of the cheeks can be broken off. 40  
The breaking of the cheeks in this manner causes the screw  $c$  to drop out, whereupon the clamping-device can be easily removed from the tube  $a$ . By this means the water and carbid in the tube are allowed to come into contact with each other so that acetylene-gas is 45 generated and automatically inflates the tube.

After use the gas can be allowed to escape by unfastening the clamps  $b$ , whereupon fresh clamping cheeks  $f$  can be applied to the tube  $a$  and water and carbid can be introduced into the compartments  $h$  50 and  $g$ , the ends of the tube being then hermetically closed again by means of the clamps  $b$ . The ends of the tube  $a$  may also be placed side by side and pressed together by means of a single clamp in such a manner as to hermetically close both ends, the apparatus being 55 in that case substantially annular.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. Marine life saving apparatus adapted for reception of substances adapted to generate gas on coming into contact, comprising a suitable length of flexible tubing 60 with open ends, a pair of clamps for closing the open ends by compression after insertion of the chemicals, and a readily releasable clamping device adapted to compress said tube intermediate of said ends to divide said tube 65 into separate compartments for the purpose set forth.

2. Marine life saving apparatus comprising an inflatable tube, in combination with a clamping device adapted to divide said tube into two compartments for reception of substances adapted to generate gas on coming into 70 contact, said clamping device comprising a strap inclosing the tube, readily breakable bars exteriorly of said strap and means for clamping said bars together.

In witness whereof I have signed this specification in the presence of two witnesses.

CASPAR FUCHS.

Witnesses:

I. KÜCKERKEY,  
F. MOWINGHAUNIL.