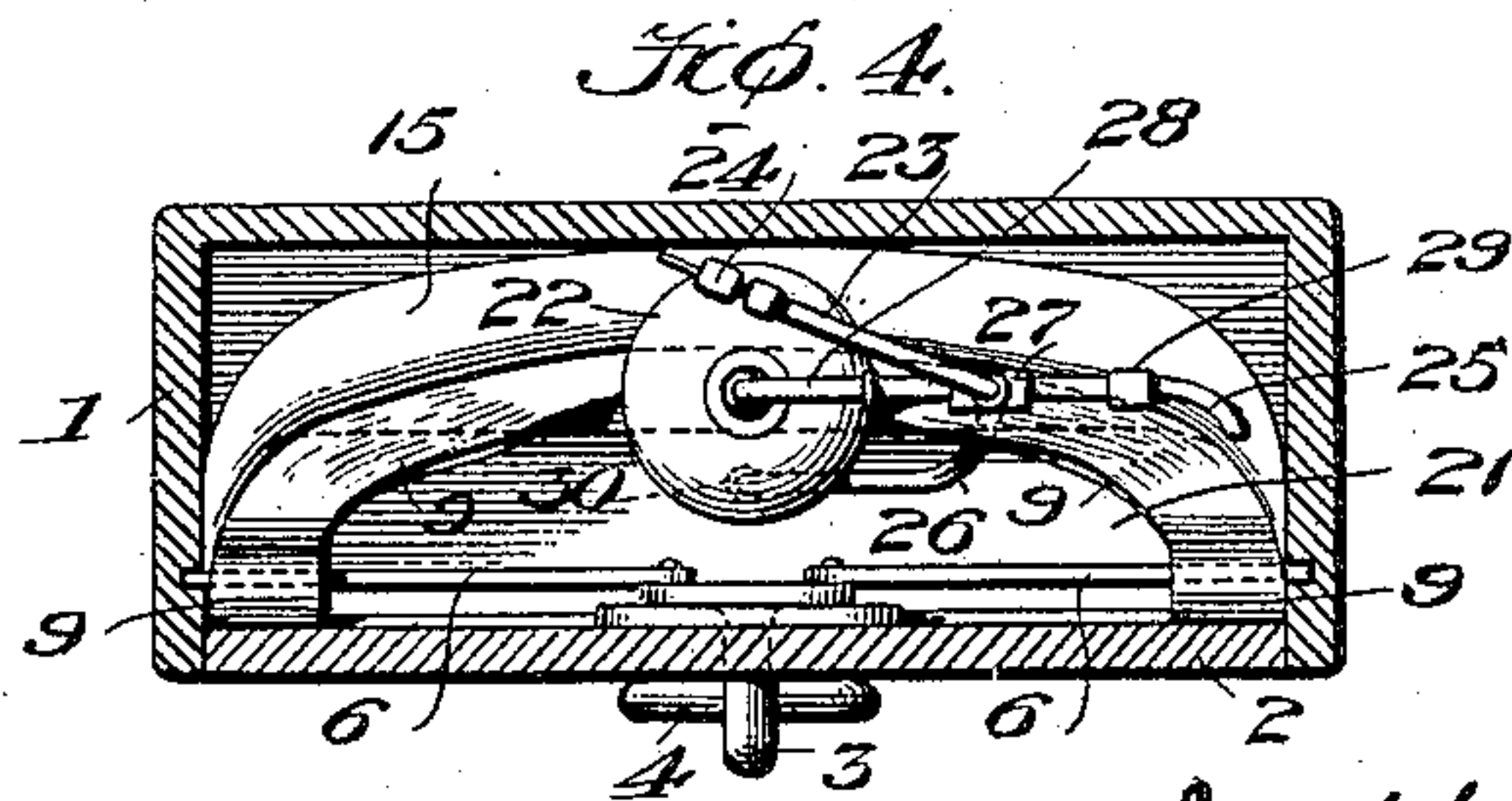
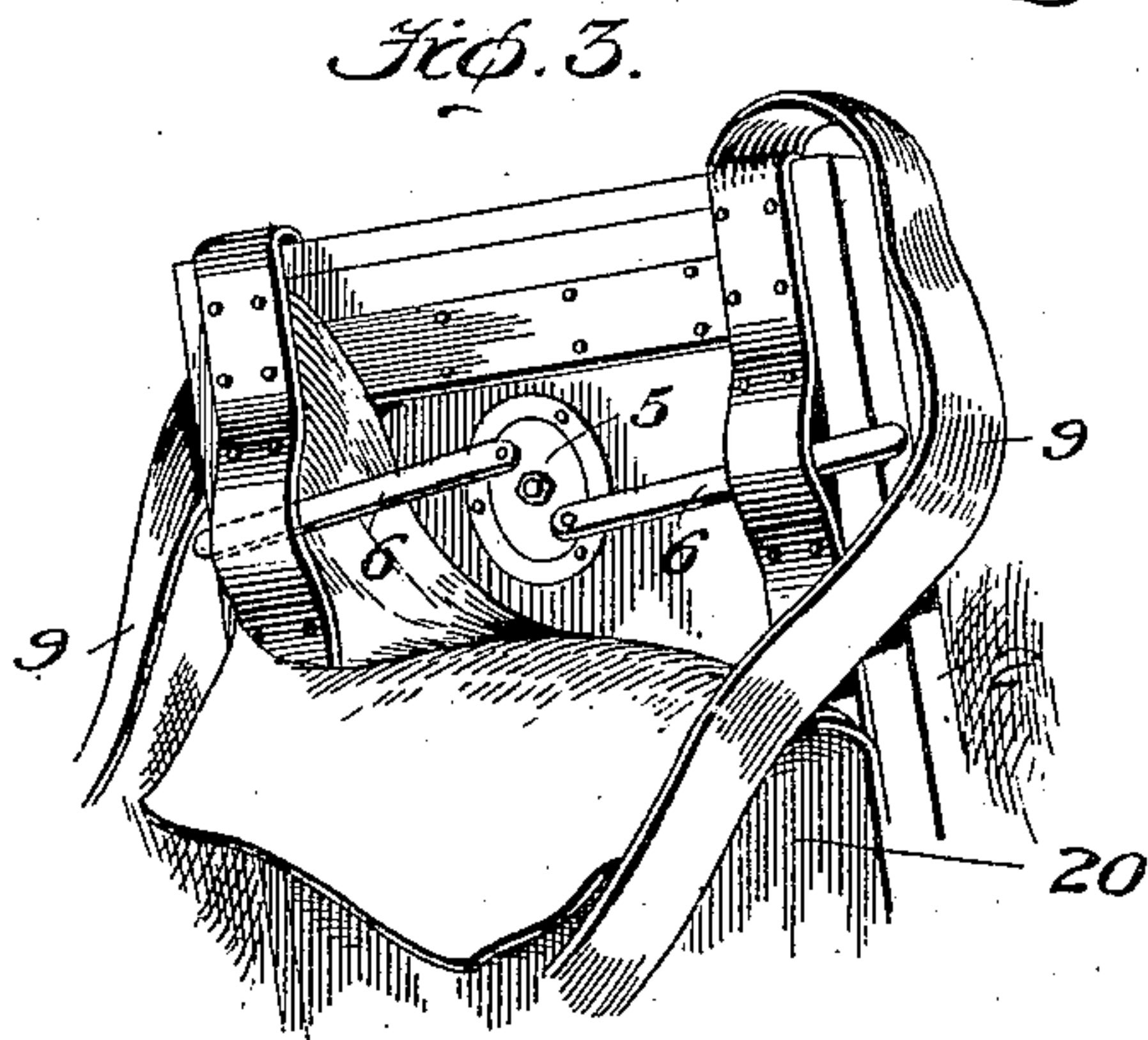
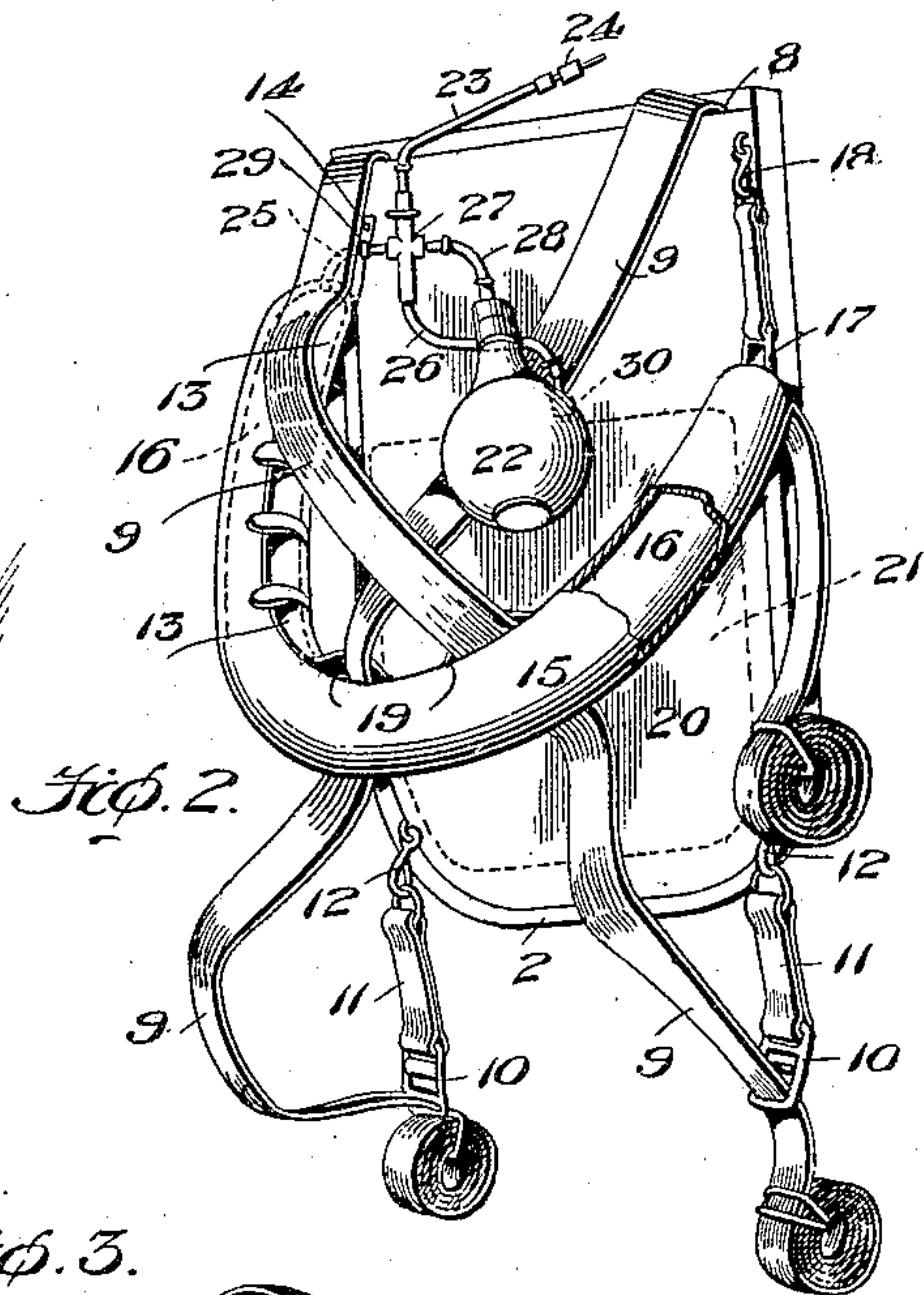
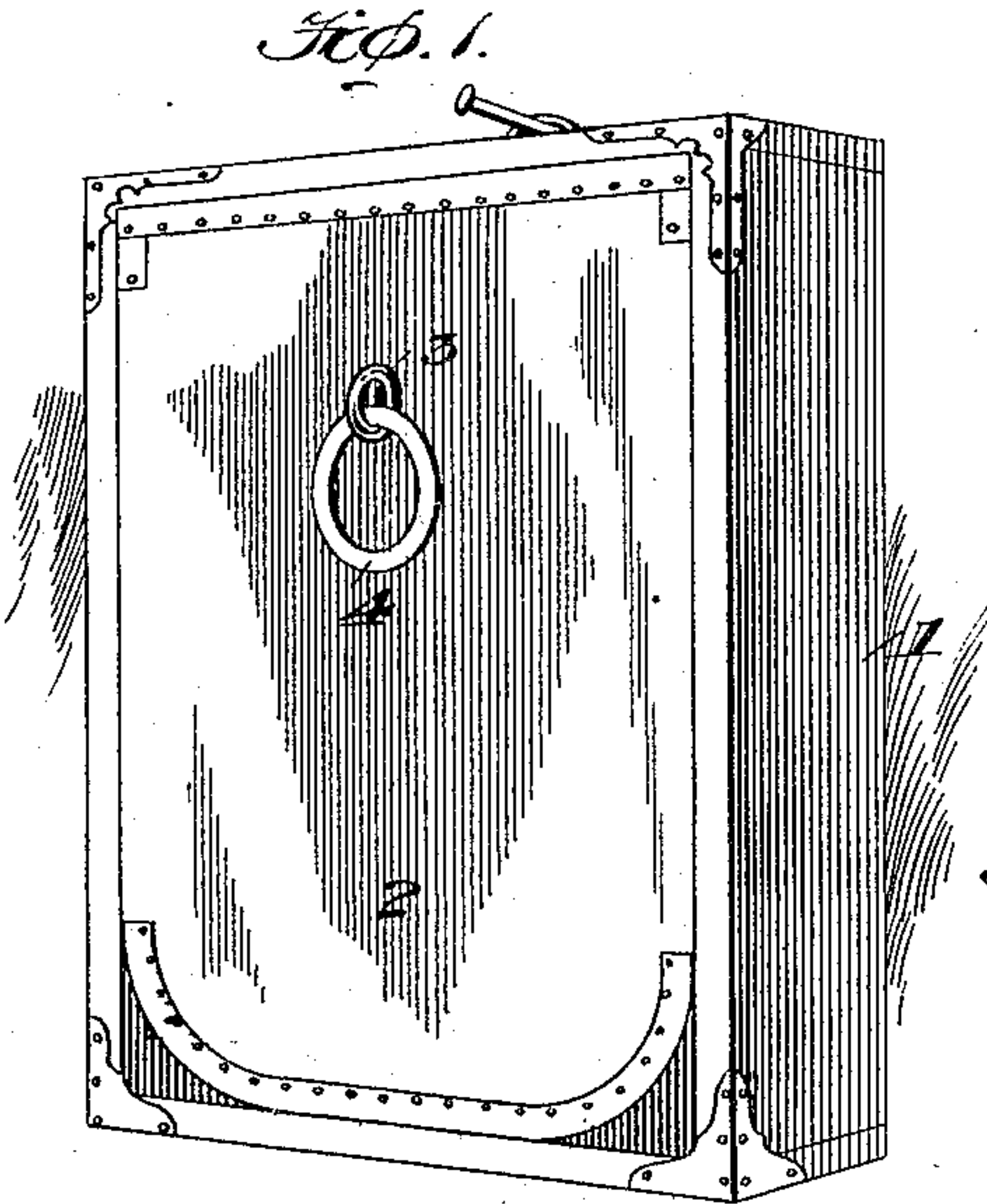


J. H. V. CRANE.
LIFE PRESERVER.
APPLICATION FILED JAN. 16, 1908.

917,416.

Patented Apr. 6, 1909.



Witnesses

Wm. H. H. H. H. H.
Geo. H. H. H. H.

By

Inventor
Joseph Howard V. Crane

Henry W. Coff
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH HOWARD V. CRANE, OF SEATTLE, WASHINGTON.

LIFE-PRESERVER.

No. 917,416.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed January 16, 1908. Serial No. 411,149.

To all whom it may concern:

Be it known that I, JOSEPH HOWARD V. CRANE, a citizen of the United States, residing at Seattle, county of King, and State of Washington, have invented certain new and useful Improvements in Life-Preservers, of which the following is a specification.

My invention relates to life preservers.

The ordinary life preserver is subject to several defects; it is stored in over-head racks or under mattresses on board vessels in a more or less inaccessible manner; is not easy to adjust to the person, and affords no safety against injury to the person by floating wreckage or when the user is thrown against rocks, and is not adaptable for the attachment of a life line or engagement of a boat-hook.

The present invention has for its object the overcoming of the defects incident to the ordinary life preserver by the provision of a novel life preserver of such construction that it is adapted to be readily stored in an improved case which may be suitably disposed on the vessel and secured therein ready for instant removal for use; also, to provide a life preserver to which a life line, boat-hook, or other rescuing device can be readily attached so that the user may carry a line ashore or be lifted into or lowered from a boat; and, further, one which will protect the wearer from injury by floating wreckage or by being dashed upon rocks, as well as affording a closure for the case in which the preserver will be stored; and, in addition, to provide a novel life preserver of the pneumatic type having self-contained means for air-filling of its buoyant devices and carrying buoyant devices which are disposed in a novel fashion, whereby the body is balanced in the water and maintained in an upright position.

The invention is carried out by the construction set forth hereinafter, the novel features of which are recited in the appended claims.

In the accompanying drawings:—Figure 1 represents the complete preserver in its containing case suspended from a wall; Fig. 2, a rear perspective view, partly in section, of the preserver removed from its containing case; Fig. 3, a detail view showing the bag containing the large air container laid back from the breast-plate or shield to illustrate the construction of the locking device; and Fig. 4, a horizontal section through the shield

or breast-plate and the containing case as when the preserver is stored, the parts of the preserver being shown in full lines.

The present life preserver is particularly designed to be stored on a vessel or other place in a case 1 of box-like form. The shield or breast-plate 2 constituting part of the preserver, is adapted to fit in the open face of the case 1 so that the life preserver is housed within the case and protected from damage, the shield or breast-plate 2 being held by any suitable locking device operated by the eye 3, which in turn, is provided with a ring 4. The shank of the eye 3, in the present instance, is provided with a plate 5 to which sliding bolts 6 are pivoted, the latter being adapted to engage the case 1 and hold the breast-plate 2 in position. On turning the eye 3, the bolts 6 are retracted or locked, as the case may be. The case or breast-plate will be suitably inscribed indicating that the device is a life preserver and the preservers will be hung, nailed, screwed, or otherwise fastened upon the walls or sides of the vessel or be set into the same or under the cabin seats or in any other suitable position, thereby obviating the defects incident to the ordinary life preserver on account of the manner in which it is carried by the vessel.

Secured at 8 to the back of the shield or breast-plate 2 at the upper part thereof are the shoulder straps 9 which are adjustably connected by buckles 10 to short straps 11 which are attached by snap-hooks 12 to the lower part of the breast-plate 2, thus affording means whereby these shoulder straps can be taken up or let out to fit the user and whereby they may be readily attached after such adjustment by means of the snap-hooks 12.

There is a back strap 13 which is securely fastened at 14 to the breast-plate 2, the same being attached thereto by a sheath 15, a tube 16 serving as a cushion and also as a balancing device to keep the person using the preserver in an upright position in the water. The back strap 13 is adjustable by means of a buckle 17 and may be readily detached or connected to the breast-plate 2 by a snap-hook 18, permitting this back strap to be taken up or let out to fit the user. The back strap 13 carries keepers in the form of loops 19, through which the shoulder straps 9 loosely pass, whereby the back strap is held against dropping.

Contained within the flexible protecting

case 20, which is secured to the back of the breast-plate 2, is an air container 21.

The numeral 22 designates an air bulb for pumping up air pressure in the tube 16 and container 21, there being provided an air intake tube 23 carrying a check valve 24, and supply tubes 25 and 26 leading to the air tube 16 and container 21 from a union 27 to which the bulb 22 is connected by a tube 28. Check valves are provided at 29 and 30 for the air tube and container, respectively. The check valves prevent the air from escaping from the air tube and container and the check valve 24 prevents any water from having access to the bulb or air tube or air container.

Assuming that the life preserver is stored ready for use, as shown in Fig. 1, the person desiring to use the preserver gives the ring 4 and eye 3 a turn, thereby retracting the locking bolts and releasing the shield or breast-plate 2, which can then be removed from case 1, carrying with it all of the parts of the life preserver. The shoulder and back straps having been adjusted to the proper lengths, they are held in position by engagement of the snap-hooks. The air pressure can be pumped up in the air tube and container before the preserver is put on or afterward, and by having the air bulb carried by the preserver, the user is enabled to replenish the air pressure in the tube and container whenever necessary. The breast-plate 2 constitutes a shield which prevents injury to the user by floating wrecks or on account of being dashed against a rock. The air tube 16, by its buoyant effect, more or less neutralizes the buoyant effect of the container 21 so that the user is maintained in a more or less upright position in the water instead of being thrown on his back and thus the air tube also constitutes a cushion. The ring 4 affords ready attachment for a line if the person using the preserver is to carry a line to any point or if he is to be rescued by such a line or by a boat-hook or other object.

The air tube 16 and container 21 may be

made of rubber, metal or other suitable substance, it not being necessary that these devices be distendable or inflatable, as they do not have to be made of elastic material.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A life preserver comprising a breast-plate or shield, an inflatable air container located at the back of the breast-plate or shield and adapted to lie in front of the user, and independent means for attaching said shield or breast-plate and air container to the user.

2. A life preserver comprising a breast-plate or shield, an inflatable device adapted to be positioned across the back of the user, and independent straps for attaching said shield and device to the chest and back of the user.

3. A life preserver comprising a breast-plate or shield, an air container carried at the rear end thereof, shoulder straps connected to the shield, a back strap connected to the shield, and an inflatable tube carried by the back strap adapted to be positioned at the back of the user.

4. The combination with an open case, of a life preserver adapted for reception in said case, and a rigid shield or breast-plate carried by said life preserver adapted to removably fit the open part of the case and constituting a closure for said case.

5. The combination with an open case, of a life preserver adapted for reception in said case, a rigid shield or breast-plate carried by said life preserver adapted to removably fit the open part of the case and constituting a closure for said case, and releasable means for securing said closure to the case.

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

JOSEPH HOWARD V. CRANE.

Witnesses:

EDWIN C. EWING,

WALTER A. McCLURE.