

No. 848,615.

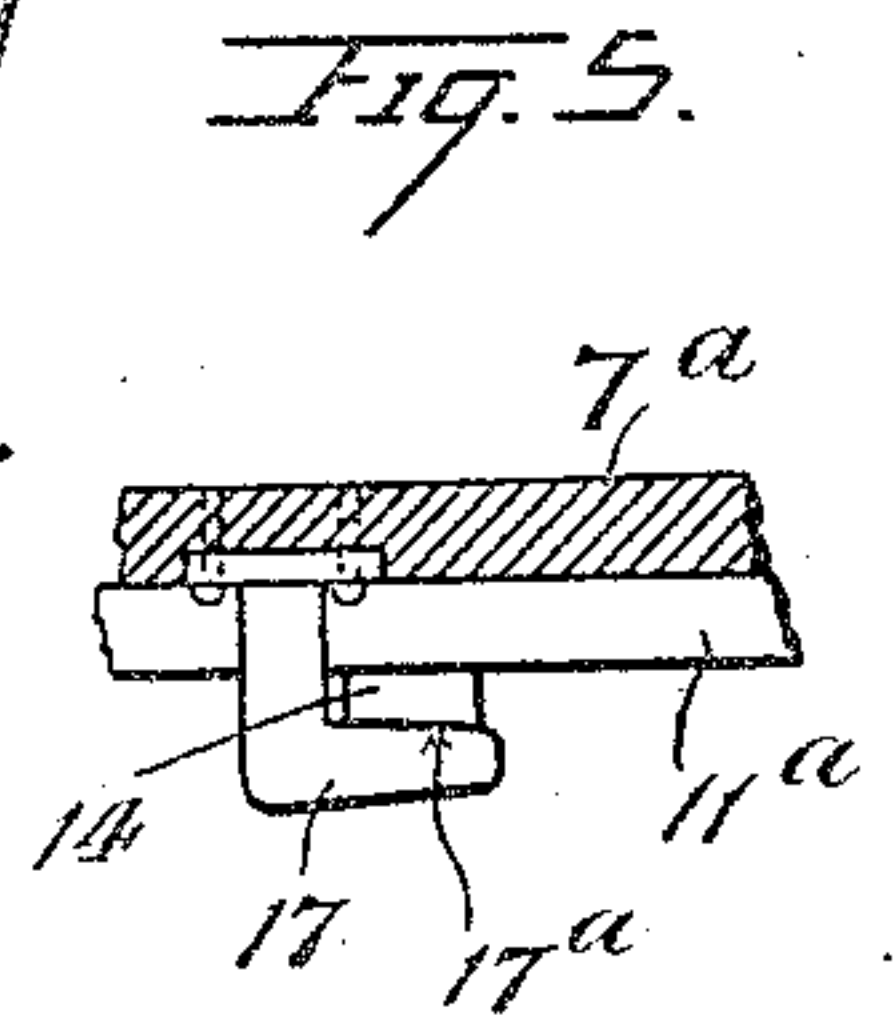
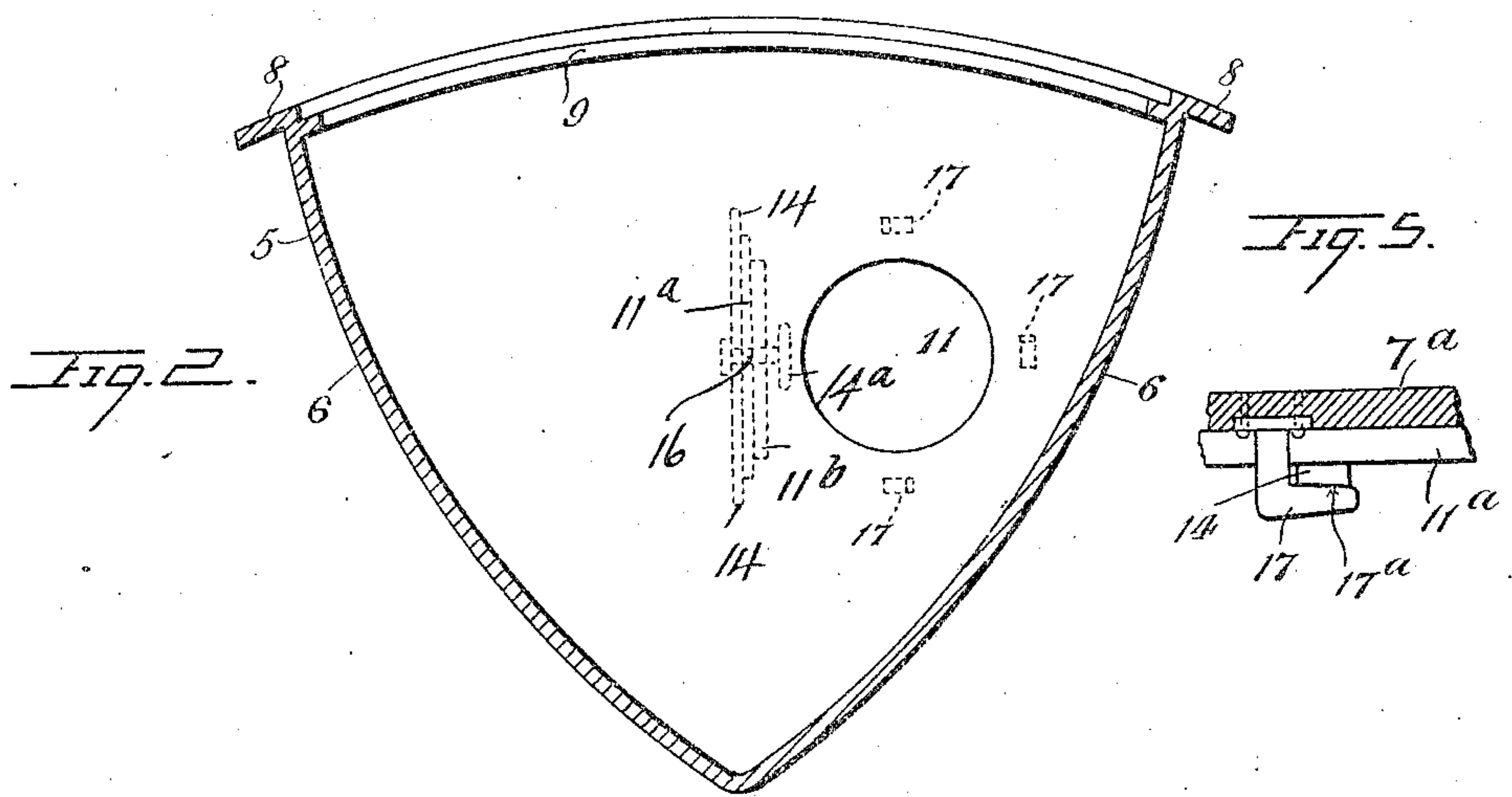
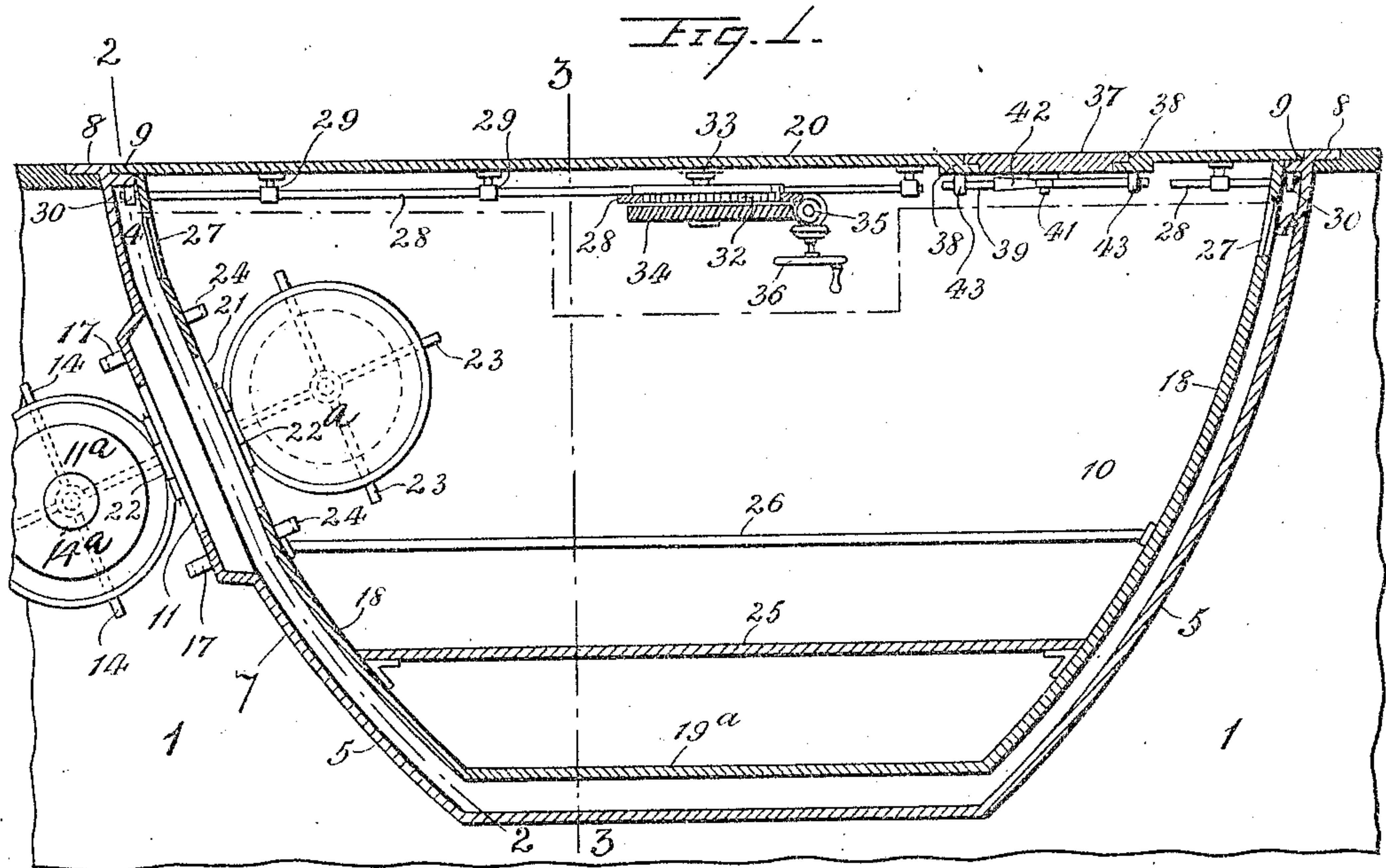
PATENTED MAR. 26, 1907.

I. FRIPP.

MEANS FOR EFFECTING ESCAPE OF OCCUPANTS FROM SUNKEN VESSELS.

APPLICATION FILED OCT. 13, 1905.

2 SHEETS—SHEET 1.



Witnesses
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Inventor
Isaac Fripp
by his Attorney *[Signature]*

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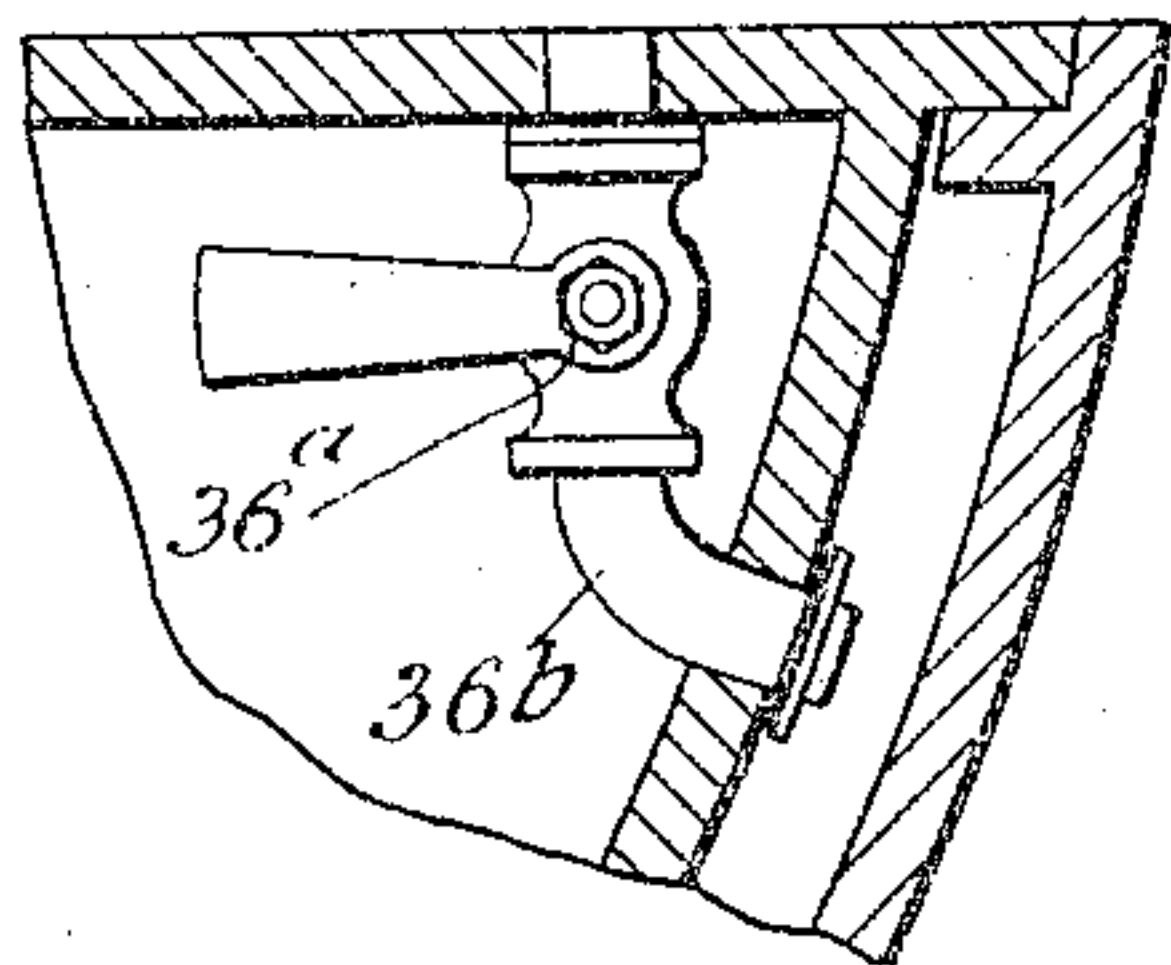
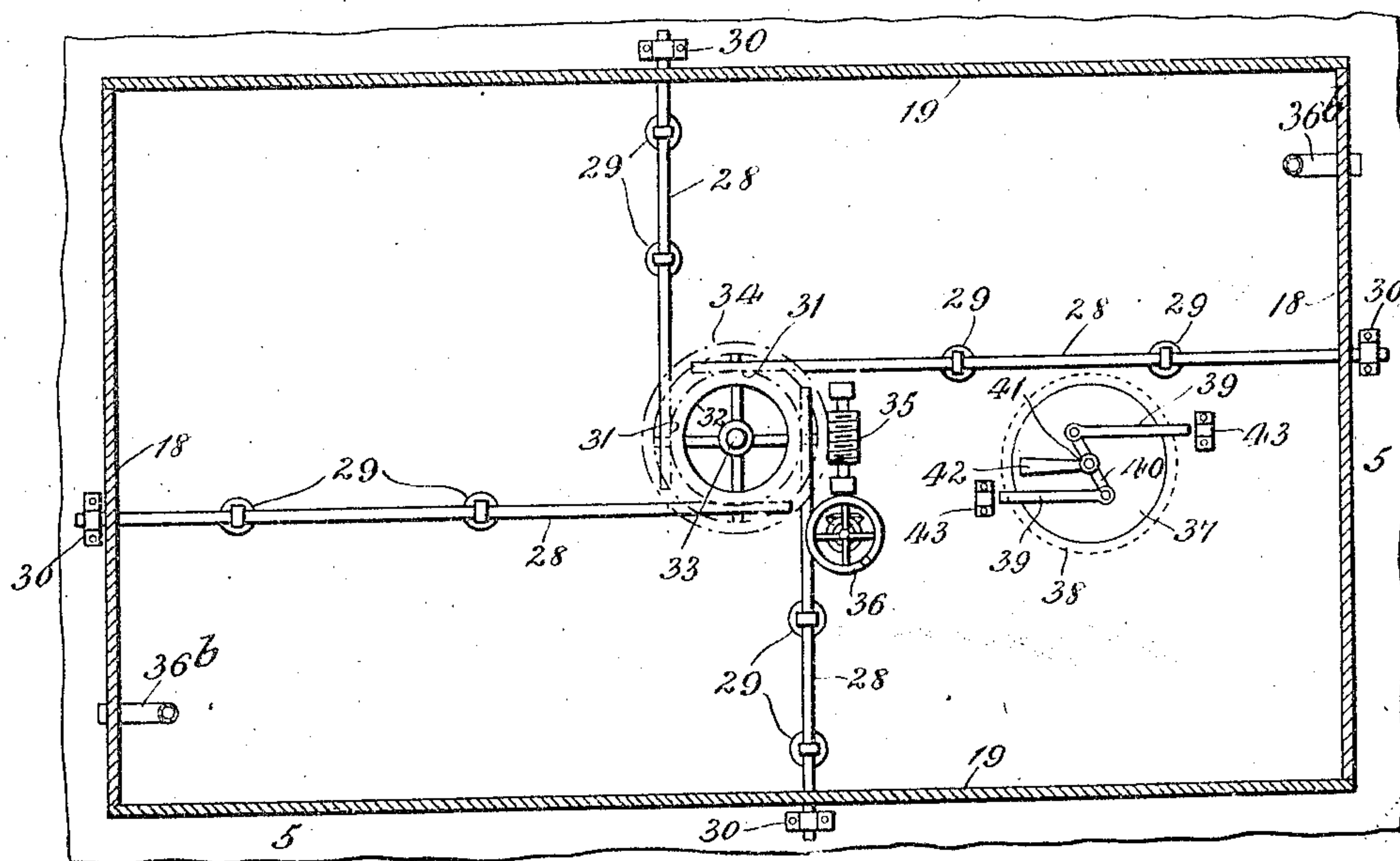


Fig. 4 -



Inventor

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by his Attorney W. Hadden

UNITED STATES PATENT OFFICE.

ISAAC FRIPP, OF CATFORD, ENGLAND, ASSIGNOR TO JAMES WATT, OF CATFORD, ENGLAND.

MEANS FOR EFFECTING ESCAPE OF OCCUPANTS FROM SUNKEN VESSELS.

No. 848,615.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed October 13, 1905. Serial No. 282,653.

To all whom it may concern:

Be it known that I, ISAAC FRIPP, a subject of the King of England, residing at 72 Ravensbourne road, Catford, in the county of Kent, England, have invented certain new and useful Means for Effecting Escape of Occupants from Sunken Vessels, of which the following is a specification.

This invention relates to a new or improved means for effecting the escape of occupants from sunken submarine boats and other vessels, and essentially consists in providing an auxiliary chamber or chambers so constructed as to form a vessel or boat structure to which access can be had from the sunken submarine boat or other vessel on the necessity arising and which is capable of being released from its containing-chamber or holder and righting itself by the action of the inrushing water to the containing-chamber or holder.

To this end I form a well or recess of suitable size and shape in the upper part of the submarine boat or, in the case of a vessel, on the deck portion and secure therein a chamber of sufficient size and shape to contain the vessel or boat structure, the latter being so formed as to float and right itself on being released from the containing-chamber or holder and clearing itself from the sunken submarine or other vessel.

The vessel or boat structure is so shaped that when laying broadside on the inrushing water to its holder or containing-chamber will cause it to swing outward and to finally right itself and on being released from the containing-chamber will readily float. On the other hand, if the submarine or other vessel is in a substantially horizontal plane the water led to the containing-chamber will lift the boat structure in a vertical direction.

The boat structure is provided with a suitable hatchway and has an inner deck portion with hand-rails or other suitable arrangement for the purpose of the occupants holding themselves in position during the righting of the boat.

Suitable steering and propelling arrangements may be provided for working and controlling the boat, and means are provided for holding the boat in position in the containing-chamber and releasing same therefrom.

The containing-chamber is adapted to be flooded to a suitable height by allowing an

ingress of water by means of pipe and cock arrangements, whereupon by the release of the holding means the boat structure is free to clear itself from the submarine or other sunken vessel.

A water-tight door or doors is or are provided in the containing-chamber to permit of access from the submarine boat or other vessel, said means of access being preferably coincident with access by a water-tight door or doors carried by vessel or boat structure.

Means for lighting the interior of the boat structure may be provided in the form of windows and by means of electric lamps.

The invention is represented in the accompanying drawings, wherein—

Figure 1 is a longitudinal vertical section of the containing-chambers with releasable vessel therein. Fig. 2 is a cross-section through the containing-chamber on the line 2 2 of Fig. 1. Fig. 3 is a cross-section through the containing-chamber and vessel therein on the line 3 3 of Fig. 1. Fig. 4 is a plan view from below of the one deck of the vessel in section on the line 4 4 of Fig. 1. Fig. 5 is a detail view of a chock for use in securing the water-tight doors, and Fig. 6 is a sectional detail view illustrating a method of flooding the containing-chamber.

Referring to the drawings, 1 represents a broken-away portion of the submarine or other vessel, and 5 the containing-chamber suitably built into same and flush with the deck thereof. This chamber has convex inwardly-inclined side and end walls 6 and 7, respectively, as shown in Figs. 2 and 3, preferably following the contour of the walls of the interior releasable chamber 10, hereinafter described, and a flange 8, the greater portion of which, however, is cut away and shouldered, as at 9, for reception of said interior vessel 10. The said containing-chamber 5 is provided with an entrance-aperture 11 to afford access from the submarine or other vessel, and this aperture may be closed by any suitable kind of water-tight door 11^a, that represented in the drawings being hinged at 22 to one of the end bulkheads 7^a to open inward into the submarine and adapted to be rotated on said hinge to open or close the aperture aforesaid, having a projecting portion 11^b for this purpose to open or close the aperture 11 aforesaid.

Rubber or other packing may be inserted

between the door and bulkhead to form a tight joint, and the door is held closed by means of rotatable bars 14, pivoted to the door at 16 and adapted to engage chocks or catches 17. The bars 14 may be operated from within the vessel 10 by means of a hand-wheel 14^a. Said chocks may have a slightly-inclined surface 17^a to produce a wedge action when the bars 14 are forcibly engaged therein and prevent unintentional displacement of the latter.

The releasable vessel 10 rests upon the shoulders 9 of the containing-chamber 5, said shoulders extending entirely around the aforesaid opening in the containing-chamber. The shape of this vessel in longitudinal and cross section is clearly shown in Figs. 1 and 3—viz., both the end walls or bulkheads 18 and the side walls 19 are convex and directed toward each other, the side walls, however, meeting at the line 19^a in the central plane of the vessel, so that the vessel itself has no actual floor or deck. The overdeck 20 is shaped to conform to the deck of the vessel to which the invention is applied, and with regard to a submarine vessel would usually be curved, as shown in Fig. 3. This overdeck 20 should also be flush with the deck of the vessel and with that of the containing-chamber. By giving the releasable vessel the shape described the same may be released from the sinking or sunken vessel in any position of the latter—that is to say, whether she founders by the head or stern or has a heavy list to port or starboard or is on her beam ends—the curved and narrowing walls of the releasable vessel allowing the latter to clear the opening in the containing-chamber and to float in a vertical position. The space existing between the walls of the inner vessel and containing-chamber should be so small as consistent with safe action to permit said containing-chamber to be quickly flooded. The vessel 10 is also furnished with an inlet-aperture 21, preferably coincident with the aperture 11 of the containing-chamber and adapted to be closed by any convenient form of water-tight door, that shown in the drawings being hinged to the bulkhead 18 at 22^a and adapted to be held closed by means of rotatable bars 23 and chocks 24 similarly to the door 11^a, before described. A narrow deck 25 at a convenient distance above the bottom and hand-rails 26 are also provided within the vessel, and in the end walls or other suitable part thereof lookout-windows 27 are furnished.

The vessel 10 is normally locked within the containing-chamber by suitable means, and in order to quickly release said vessel the means may preferably or conveniently consist of apparatus, as shown in Figs. 1 and 4. This comprises a number of bolts 28, guided in hangers 29, secured to the overdeck and pass-

ing through the end and side walls to engage straps or equivalents 30, secured to the containing-chamber 5. The said bolts are toothed at their inner ends at 31 to engage a toothed wheel 32, rigidly mounted on a shaft 33, to which is also keyed a worm-wheel 34, adapted to be operated by worm 35 and hand-wheel 36 in such a manner that all the bolts may be simultaneously withdrawn by rotating said toothed wheel 32 to simultaneously withdraw all the bolts for the purpose of releasing the vessel 10 from the chamber 5. Means for flooding the latter to enable the vessel 10 to rise are provided, and these may be as represented in Figs. 4 and 6, consisting simply of pipes 36^b, extending at one end through the overdeck 8 and open to the atmosphere and at the other end through the end walls of the inner vessel 10 into the space between the wall of the latter and the wall of the outer chamber 5. The pipes may be provided with cocks 36^a, adapted to be opened from the interior of the vessel 10. I preferably provide two of said pipes at diametrically opposite parts of the vessel and chamber, so that in whatever position the vessel founders one of these pipes will be always submerged, while air can escape through the other when the cocks are open.

A hatchway or manhole 37 is provided in the overdeck of the vessel 10 to enable the occupants to leave same on being rescued or on coming to the surface. This hatchway may simply rest on a flange 38 around the aperture and be held closed by rods 39, pivoted to a cross-bar 40, pivoted to the hatchway at 41 and operated by a lever 42 to cause said rods to engage straps or the like 43, secured to the overdeck. Any other suitable form of hatch and means for closing same may be used in lieu of that described.

I claim as my invention—

1. In means for the purpose set forth the combination with a ship of a containing-chamber built therein means for flooding said chamber in any position thereof, a releasable vessel located within said chamber and having convex inwardly-directed side and end walls the former meeting in the central plane of the vessel and closable means for giving access from the ship to the interior of said vessel substantially as described.

2. In means for the purpose set forth the combination with a ship, of a containing-chamber built therein, means for flooding said chamber in any position thereof, a releasable vessel located within said chamber and having convex inwardly-directed side and end walls the former meeting in the central plane of the vessel and means for locking the latter in and releasing same from the chamber aforesaid substantially as described.

3. In means for the purpose set forth the combination with a ship, of a containing-chamber built therein, means for flooding

said chamber in any position thereof, a releasable vessel located within said chamber and having convex inwardly-directed side and end walls, the former meeting in the central plane of the vessel, closable means for giving access from the ship to the interior of the vessel, means for locking the latter in and releasing same from the chamber aforesaid and means for permitting egress from the vessel substantially as described.

4. In means for the purpose set forth the combination with a ship, of a containing-chamber built therein, means for flooding said chamber in any position thereof, a releasable vessel located within said chamber and having convex inwardly-directed side and end walls, the former meeting in the cen-

tral plane of the vessel, an overdeck to said vessel flush with the deck of the ship, closable means for giving access from the ship to the interior of the vessel, means for locking the latter in and releasing same from the chamber aforesaid, a closable hatchway in the overdeck of the vessel, lookouts in the walls thereof, a deck portion within same and hand-rails adjacent said deck portion substantially as described.

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

ISAAC FRIPP.

Witnesses:

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T. L. RAND