

No. 817,652.

PATENTED APR. 10, 1906.

J. MELLER.
LIFE BUOY.

APPLICATION FILED MAY 19, 1905.

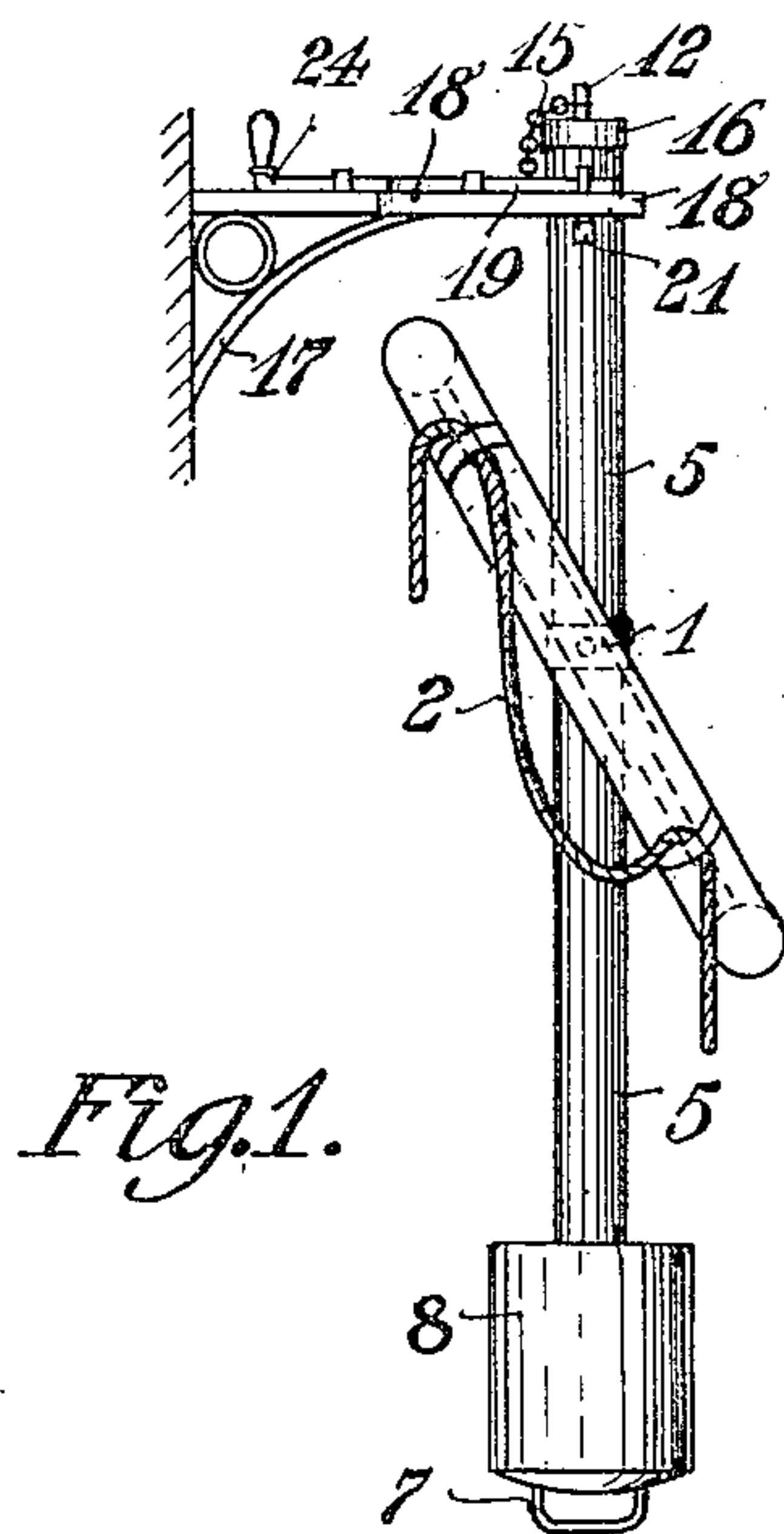


Fig. 1.

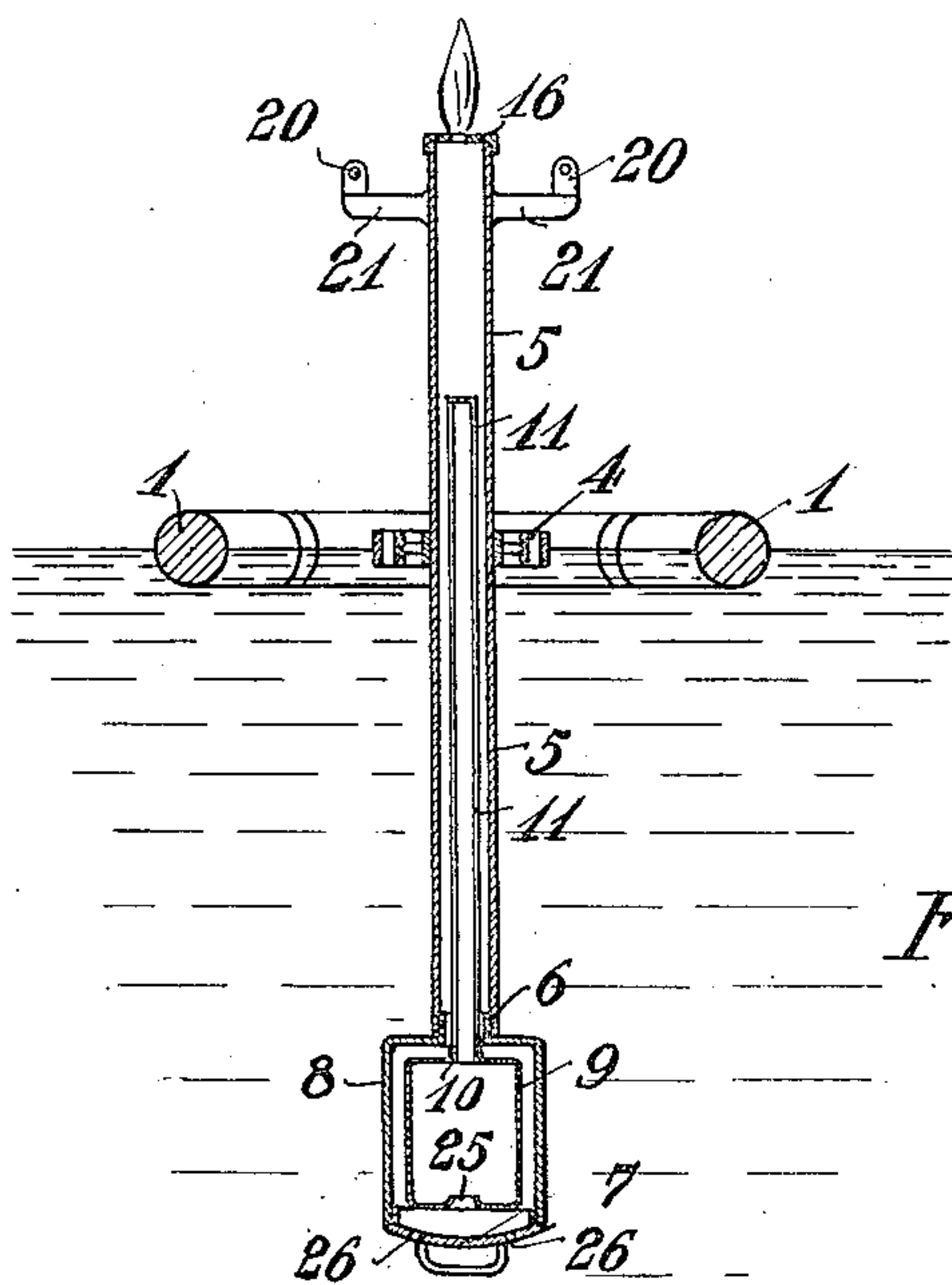


Fig. 2.

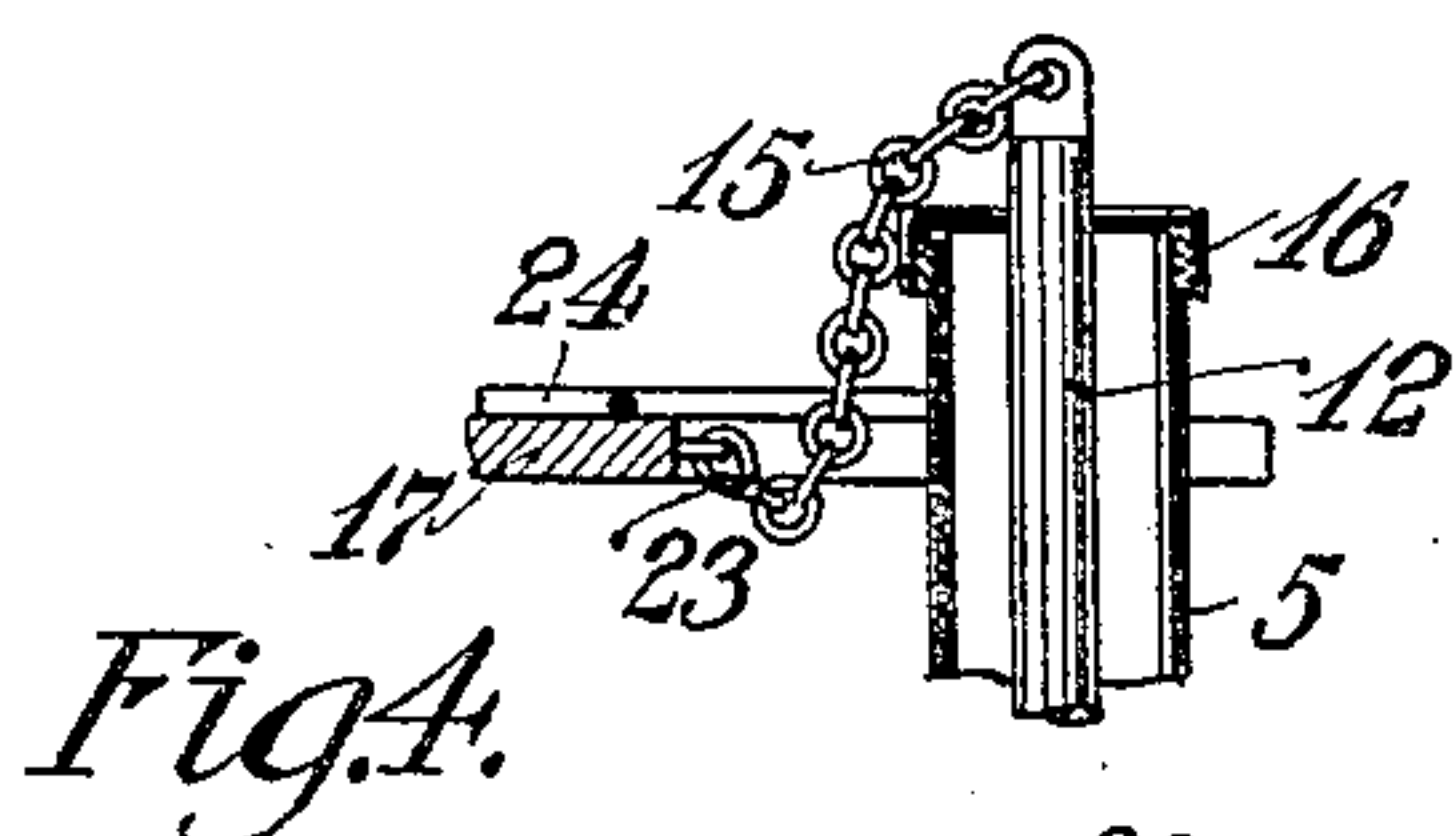


Fig. 4.

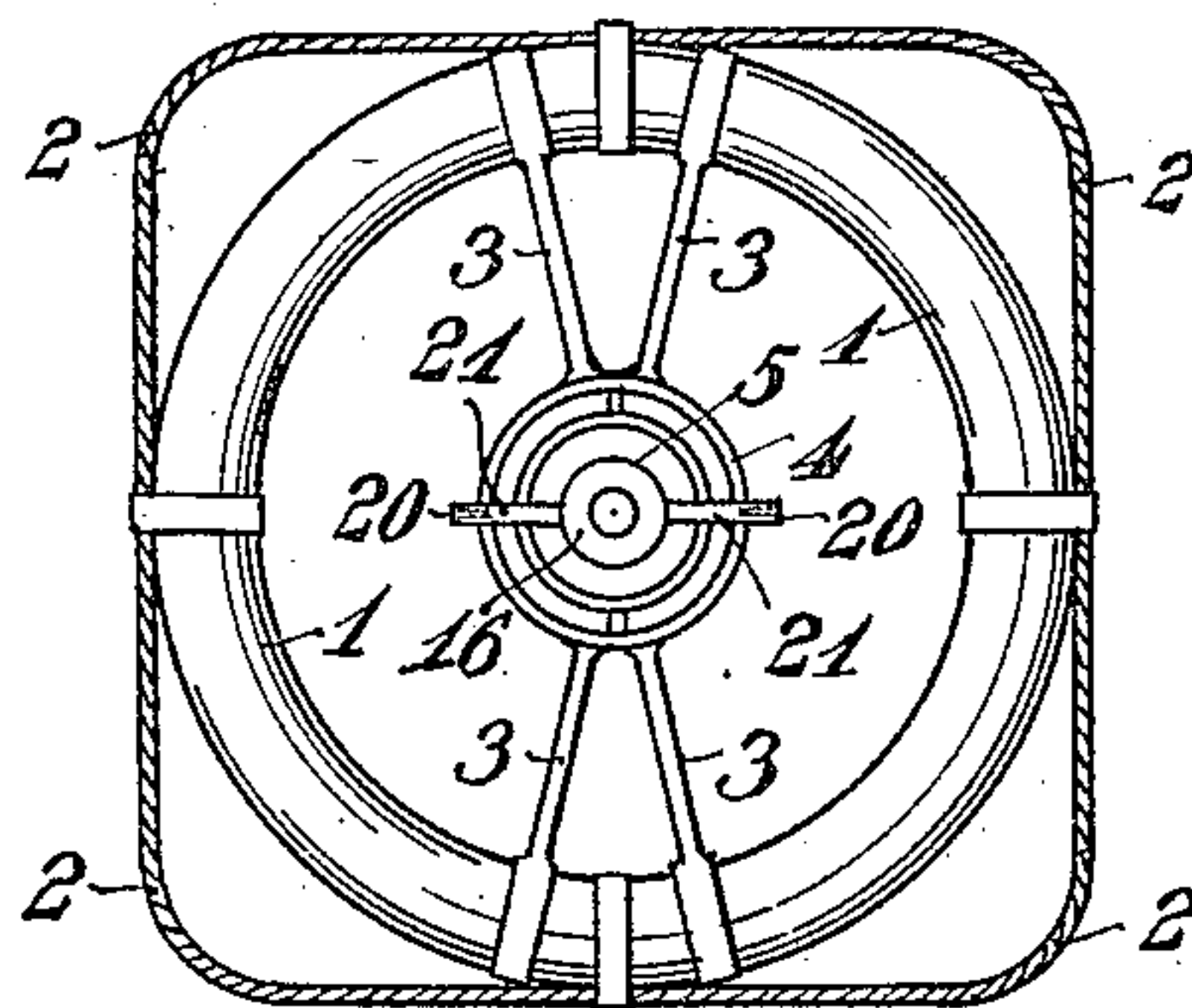


Fig. 3.

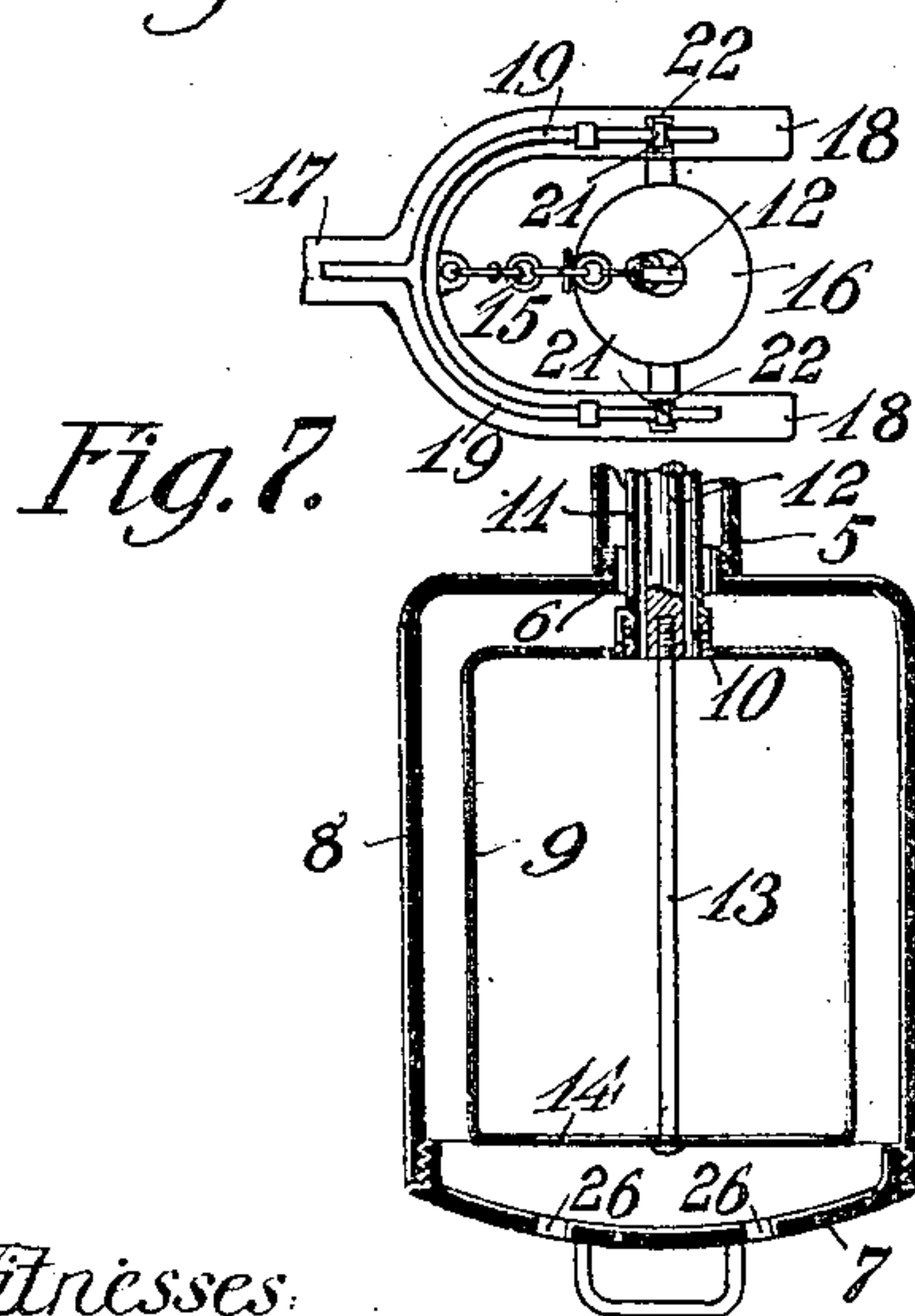


Fig. 7.

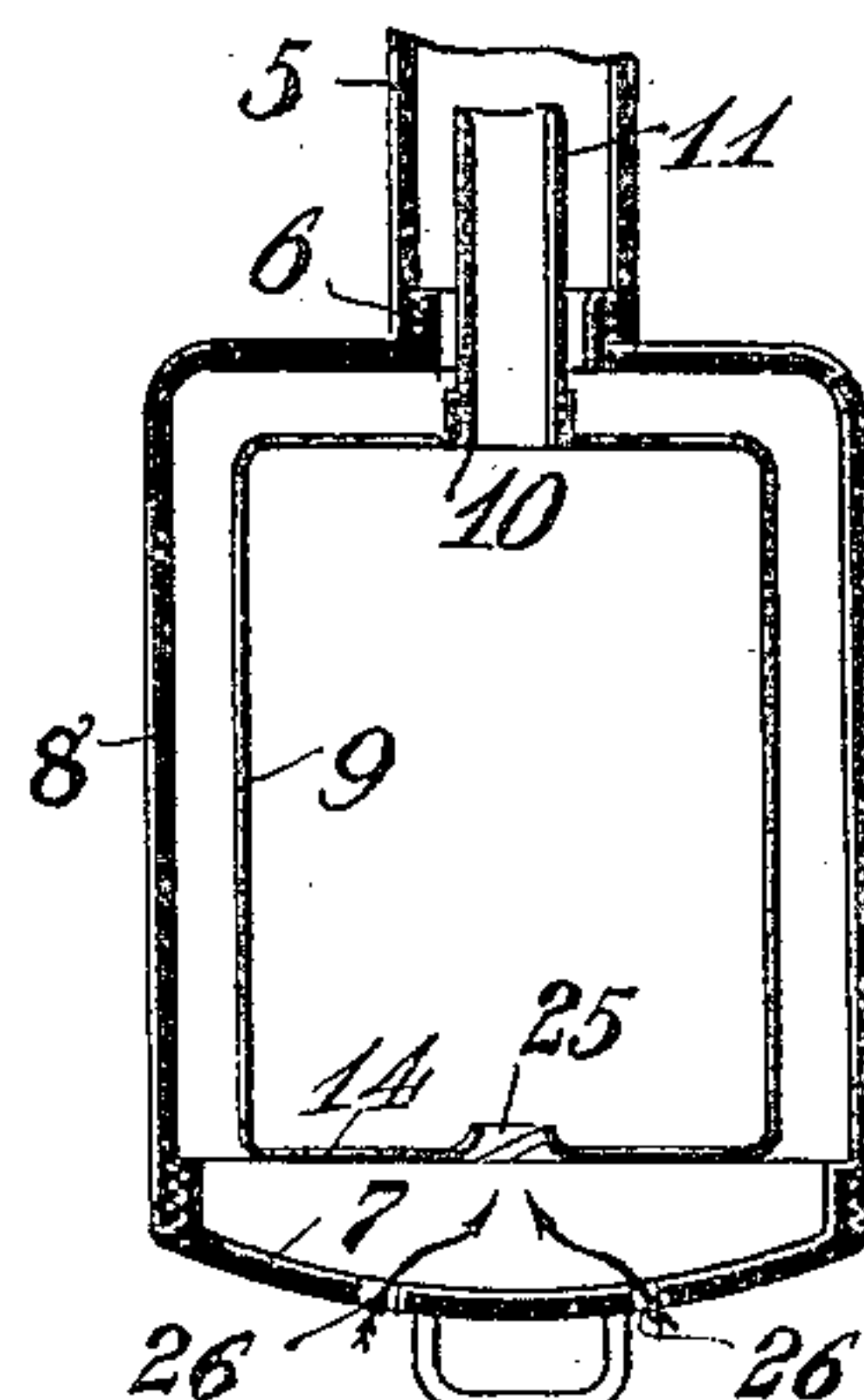


Fig. 6.

Witnesses:

Edward P. [Signature]
Robert B. [Signature]

Inventor

John M. Meller

UNITED STATES PATENT OFFICE.

JOHANNES MELLER, OF WANDSBEK, GERMANY.

LIFE-BUOY.

No. 817,652.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed May 19, 1905. Serial No. 261,250.

To all whom it may concern:

Be it known that I, JOHANNES MELLER, retired captain of the Imperial German Navy, a subject of the King of Prussia, German Emperor, and a resident of No. 59 Bärenallee, Wandsbek, in the Empire of Germany, have invented new and useful Improvements in Life-Buoys, of which the following is a specification.

The present invention relates to life-buoys.

Special objects of the invention are to simplify and cheapen the construction and to render more efficient, serviceable, and durable in operation devices of the kind referred to.

With these ends in view the invention consists in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically set out in the appended claims.

In order to make this specification more easily intelligible, reference is had to the drawings forming part of the same, and in which similar numerals denote similar parts throughout the several views.

Figure 1 is an elevation of the buoy and its means of support at the ship's side. Fig. 2 shows the buoy in use. Fig. 3 is a plan view of the buoy. Figs. 4 and 5 show vertical sections through the buoy according to Fig. 1. Fig. 6 is a vertical section through the illuminating device in connection with the buoy. Fig. 7 shows in detail the means of supporting the buoy at the ship's side.

The buoy, consisting in the usual manner of an annular casing 1 of a material impermeable to water and holding a filling of cork or other like buoyant substances, can be provided with peripheral rope loops 2, arranged at suitable intervals around the ring 1 to facilitate reaching the buoy and saving any persons who may be in the water near the said buoy. In the center of the ring 1 and attached thereto by ties 3 is a ring having pivotally mounted within it a second ring. Within this second ring and pivoted to it at right angles to the pivots between the external ring and the concentric second ring is a hollow mast 5. In view of the Cardanic support 4 just described or of a universal joint of known construction the said mast 5 or the ring 1, respectively, can be moved in any direction. The tube constituting the mast 5 receives at its lower screw-threaded end 6 the receptacle 8, which can be closed by the bottom lid 7.

A cartridge 9, holding the chemical agent or agents for the emission of light, is adapted to be stored in the receptacle 8. Said cartridge carries on its top, by means of the tubular open socket 10, a tube 11, which enters into the hollow mast 5 and terminates above the water-line of the buoy. The mast 5, the tube 11, and the cartridge 9 are penetrated by a rod 12, preferably consisting of a plurality of parts, the lower end 13 of which rod is soldered or otherwise secured to the bottom 14 of the cartridge 9. It has to be pointed out here that the connection between the bottom 14 and the rod 13 must leave the cartridge 9 impermeable to water. The upper end of the rod 12 terminates above the mast 5 and is connected to a chain 15, a screw-cap 16, covering the top end of the mast 5 suitably, serving for the rectilinear guidance of the rod inside the mast.

The aforescribed life-buoy is supported at the ship's side by means of the bracket 17, having bifurcated horizontal arms 18 and carrying on said arms bolts 19, which enter holes 20 in lateral arms 21 of the mast 5. As shown in the drawings, the external upturned ends of the lateral arms 21 penetrate through apertures 22 of the bifurcated arms 18, whereupon the bolts 19 pass through their holes 20. The bolts 19, which are movable in suitable guides on the arms 18, can be pushed forward and retracted by a common rod 24. Any well-known suitable means must be provided to prevent the bolts 19 from inadvertently moving and to prevent the buoy from swinging when the ship lurches. The chain 15 hereinbefore mentioned is attached to the bracket 17 by means of the snap-hook 23.

By pulling the rod 24 the bolts 19 are withdrawn from the lateral arms of the mast 5, and in consequence the buoy is easily and quickly slipped. Owing to the separation of the buoy from its support at the ship's side and in view of the comparatively heavy weight of the buoy and its attached parts, the lower end 13 of the rod 12 (which latter remains attached to the bracket 17 and is allowed a short fall by the chain 15) is torn from the bottom 14 of the cartridge 9, thereby ripping the latter open at 25. The water circulating through openings 26 in the bottom lid 7 enters the cartridge and by coming into contact with the chemical agent or agents contained therein causes a flame to spring up and to be maintained for a considerable time at the top end of the mast 5, said hollow mast

communicating with the cartridge through the tube 11 and the hollow tubular socket 10.

The vertical position of the mast 5, maintained by the employment of the Cardanic connection or of a universal joint, respectively, with the floating buoy 1, insures a steady flame free from danger of being extinguished by the pressure of air which would occur by violent rocking of the mast.

The life-buoy can be used during the daytime without the emission of light by detaching the chain 15 from the bracket 17.

The life-buoy can be repeatedly used by inserting a fresh cartridge 9 and screwing the rod 13, secured to its bottom 14, to the rod 12.

I wish it to be clearly understood that I do not confine myself to the details of construction hereinbefore described, reserving to myself the right of modifying the same in any manner which may appear advantageous.

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a life-buoy, comprising a buoyant ring, a hollow mast in the center of said ring and means for maintaining the vertical position of said mast, of a cartridge holding the chemical agent or agents for the emission of light, when brought in contact with water, interchangeably secured to the lower end of the mast, said cartridge simultaneously steadying the vertical position of the mast and communicating with the latter above the water-line and of means for automatically ripping the cartridge open for the ingress of water when the life-buoy is slipped from its support at the ship's side, substantially as described and shown.

2. The combination with a life-buoy comprising a buoyant ring, a hollow mast in the center of said ring and means for maintaining the vertical position of said mast, of a cartridge holding the chemical agent or agents for the emission of light, when brought in contact with water, a receptacle at the lower end of the mast for housing the aforesaid cartridge, a bottom lid with openings for the circulation of water closing the said receptacle and means for automatically ripping the cartridge open for the ingress of water when the life-buoy is slipped from its support at the

ship's side, substantially as described and shown.

3. A life-buoy comprising in combination a buoyant ring 1, a hollow mast 5 in the center of said ring, means for maintaining the vertical position of said mast, a receptacle 8 at the lower end of the mast, a bottom lid 7 with openings 26 for the circulation of water closing the said receptacle, a cartridge 9 holding the chemical agent or agents for the emission of light when brought in contact with water, an open tube 11 secured to and communicating with the interior of the cartridge entering the hollow mast 5 and terminating above the water-line of the buoy, and means for automatically ripping the cartridge open for the ingress of water, when the life-buoy is slipped from its support at the ship's side substantially as described and shown.

4. A life-buoy comprising in combination a buoyant ring 1, a hollow mast 5 in the center of said ring, means for maintaining the vertical position of said mast, a receptacle 8 at the lower end of the mast, a bottom lid 7 with openings 26 for the circulation of water closing the said receptacle, a cartridge 9 holding the chemical agent or agents for the emission of light when brought in contact with water, an open tube 11 secured to and communicating with the interior of the cartridge entering the hollow mast 5 and terminating above the water-line of the buoy, a rod 12 attached to a bracket 17 independently of the buoy and allowed a short fall by a chain 15, said rod 12 running through the hollow mast 5 and the tube 11 and having its detachable lower end 13 secured to the bottom 14 of the cartridge 9, so that by slipping the life-buoy from its point of support at the ship's side the cartridge 9 is automatically ripped open by the severing of the rod 13 from said bottom 14 under the weight of the falling buoy, substantially as described and shown.

In witness thereof I have hereunto signed my name, this 3d day of May, 1905, in the presence of two subscribing witnesses.

JOHANNES MELLER.

Witnesses:

ERNEST H. L. MUMMENHOFF,
HUGH PITCAIRN.