

No. 879,934.

PATENTED FEB. 25, 1908.

A. G. R. WILLIAMS.

SAFETY LAMP.

APPLICATION FILED AUG. 6, 1906.

FIG. I.

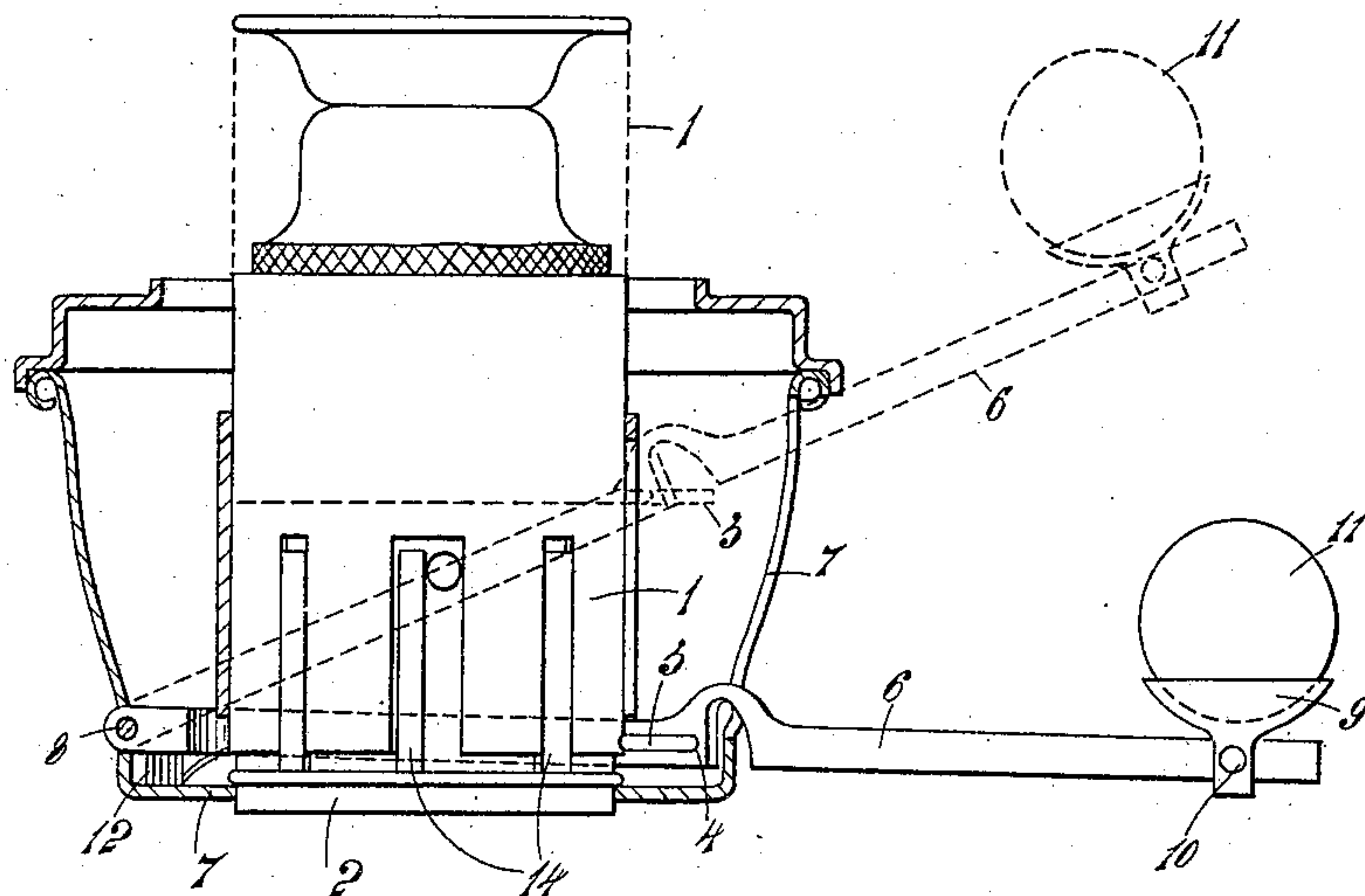


FIG. 2.

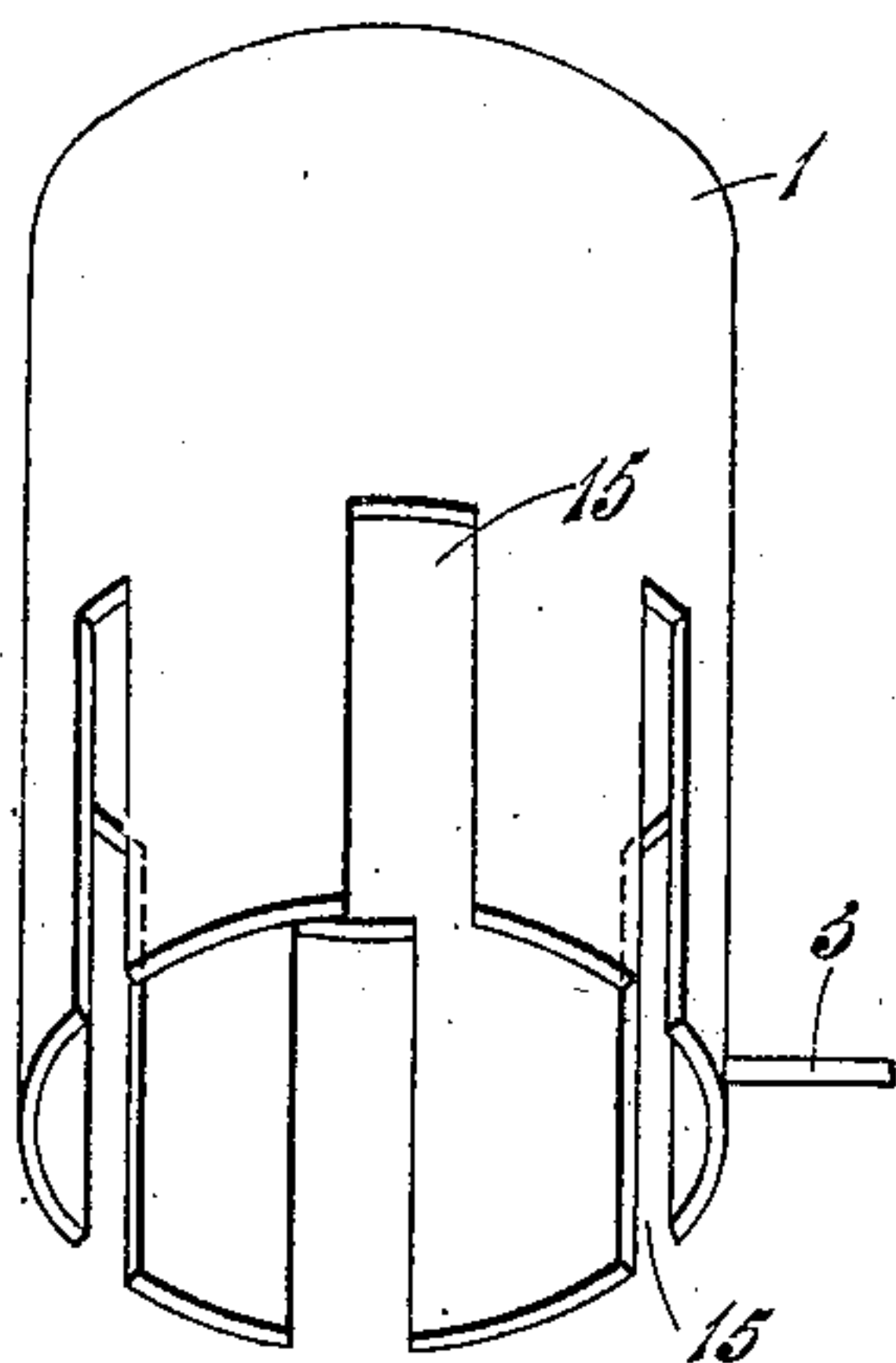
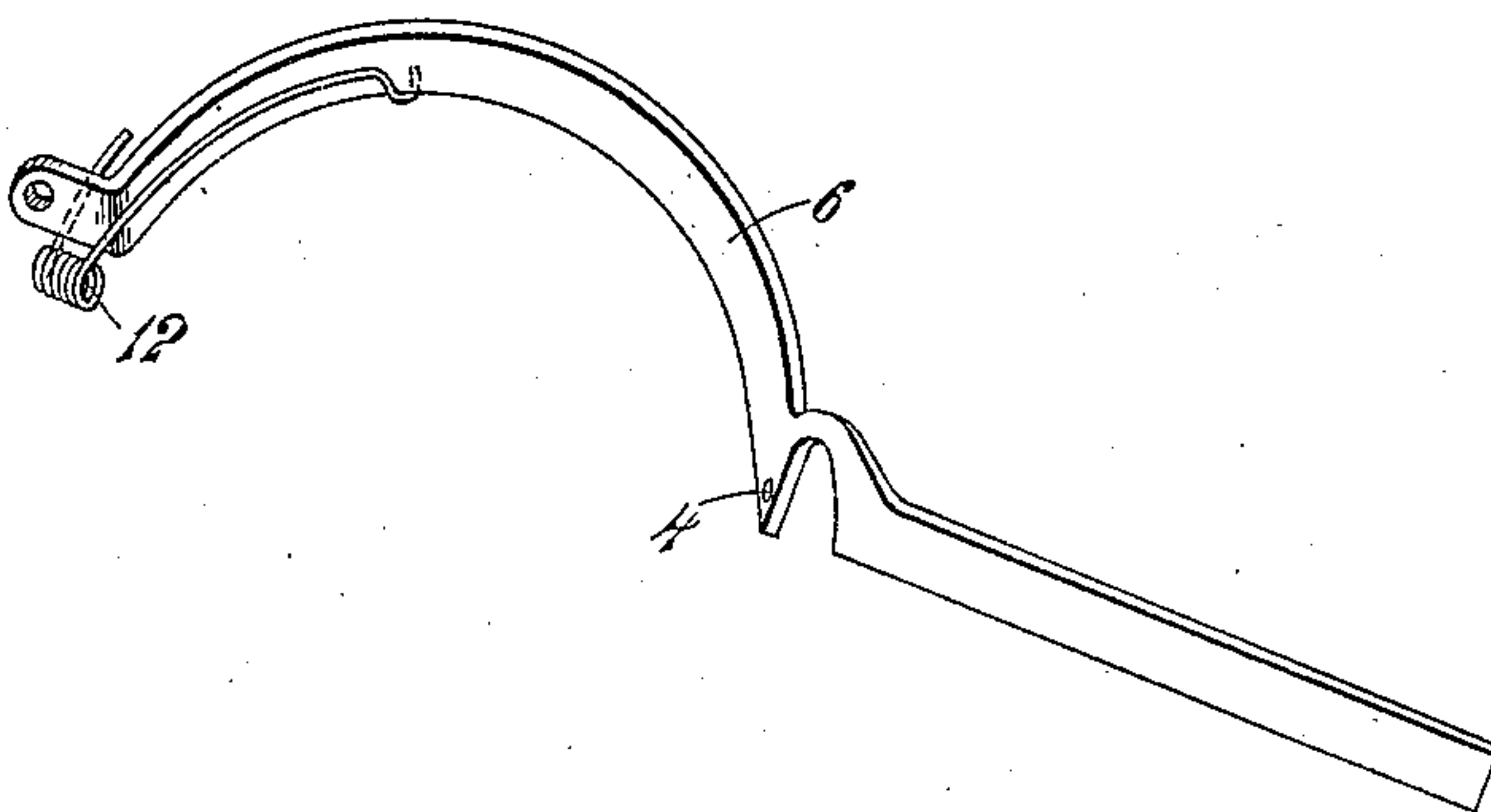


FIG. 3.



Witnesses.

Spencer Biggs.
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UNITED STATES PATENT OFFICE.

ARTHUR GEORGE RICH WILLIAMS, OF PETONE, WELLINGTON, NEW ZEALAND.

SAFETY-LAMP.

No. 879,934.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed August 6, 1906. Serial No. 329,366.

To all whom it may concern:

Be it known that I, ARTHUR GEORGE RICH WILLIAMS, a subject of His Majesty the King of Great Britain and Ireland, residing at Petone, Wellington, in the Provincial District of Wellington, in the Colony of New Zealand, have invented certain new and useful Improvements in Safety-Lamps, of which the following is a specification.

This invention relates to apparatus designed to prevent explosion and fire being caused through the overturning of a lamp in which kerosene or the like oil is used as the illuminant.

According to my invention the flame of the lamp is extinguished immediately the lamp is tilted beyond a predetermined angle.

I adapt to the wick tube of the lamp a sliding shield which, when the said shield is at the top of the wick tube, extinguishes the flame of the wick. The shield is operated by a lever, which is hinged at one end upon the lamp frame, and actuated by a spring which tends to raise it and the shield.

A balance weight in the form of a ball is carried in a shallow cup at the end of the lever, and has weight sufficient to counteract the upward pressure of the spring. The tilting of the lamp causes the ball to fall from the cup whereby the lever is free to rise, carrying with it the shield which extinguishes the flame.

My invention is illustrated on the accompanying drawing.

Figure 1 is a side elevation partly in section showing circular wick with the invention applied thereto. Fig. 2 is a perspective elevation of a circular shield, and Fig. 3 is a perspective view of a lever.

The shield 1 is made cylindrical and adapted to fit upon the wick tube 2. A pin 3 projecting from the shield 1 engages a hole 4 provided in a kink 5 of a lever 6, which is pivoted to the lamp frame 7 by a pin 8 and passing around the outside of the shield 1 is provided at its outer end with a cup 9, which is

adjustable upon the lever by a screw 10 and adapted to hold a ball 11. A coil spring 12 has one end bearing upon the frame 7 of the lamp, and has its other end extended to pass beneath the lever 6. The weight of the ball 11 is sufficient to overcome the resistance of the spring 12 and keep the shield in its lowered position, that is with the top of the wick tube projecting above the shield. By providing a kink in the lever as just described, I am enabled to have the pin 3, the kink 5 and the outer end of the lever in the same straight line, and thereby insure the proper working of the lever.

The wick tube is provided with a plurality of projecting vertical guides 14 and the shield 1 has corresponding slots 15 into which the guides pass, whereby the shield is maintained vertical when raised by the lever 6.

If the lamp is accidentally or otherwise overthrown or inclined at a predetermined angle, the ball rolls out of its cup, thus allowing the spring to raise the lever and the shield to the position shown by dotted lines and extinguish the lamp.

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

In a lamp, in combination with a wick tube, of a lever pivoted at one end to the lamp frame and having a kink at its middle part, a spring adapted to raise the lever, a cup upon the other end of the lever, a ball, a circular shield surrounding the wick tube, a pin projecting from the shield and passing into a hole in the kink of the lever, and projecting vertical guides upon the wick tube passing into slots in the shield, substantially as set forth.

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

ARTHUR GEORGE RICH WILLIAMS.

Witnesses:

E. S. BALDWIN,
SYDNEY H. HIGGS.