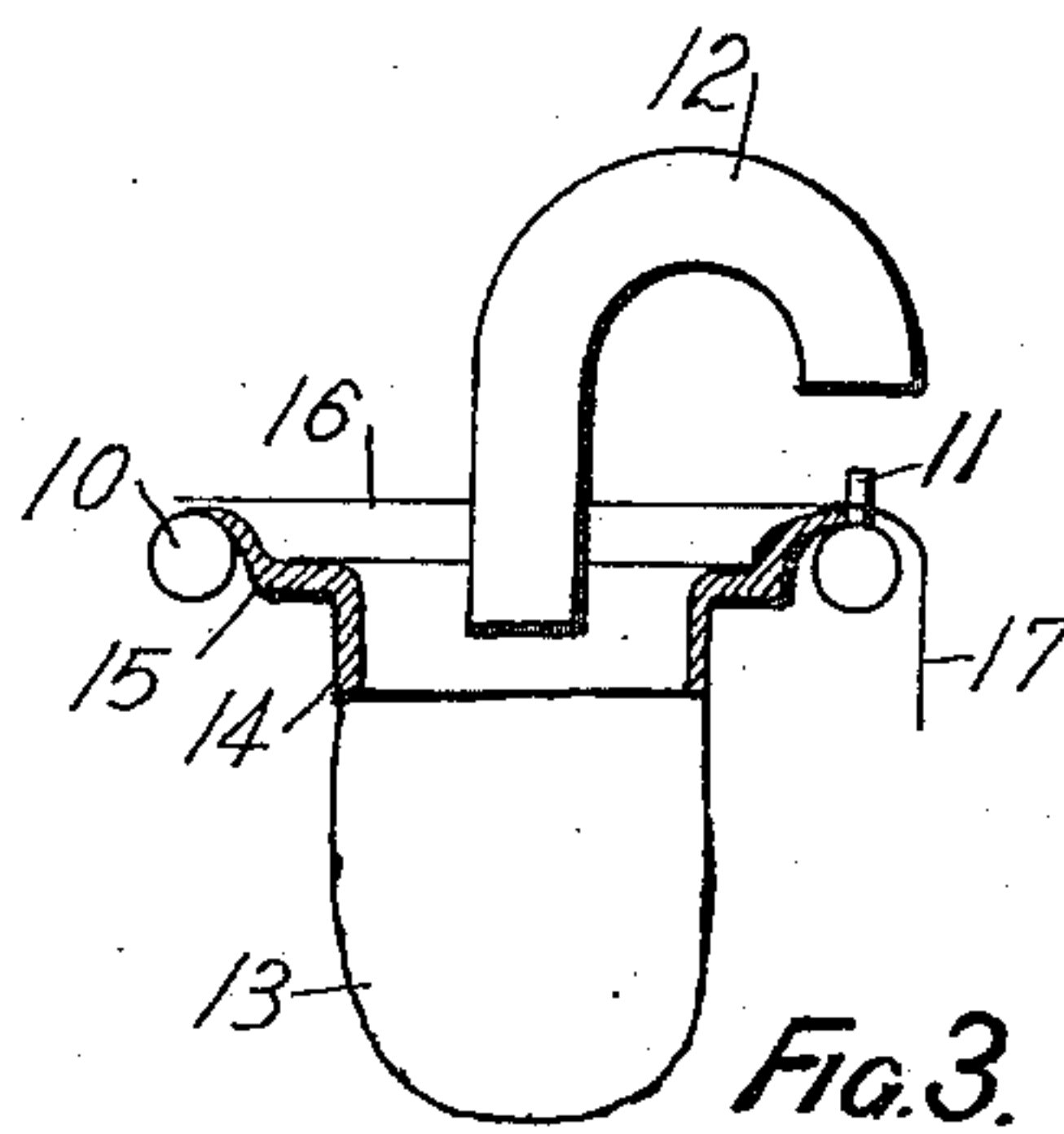
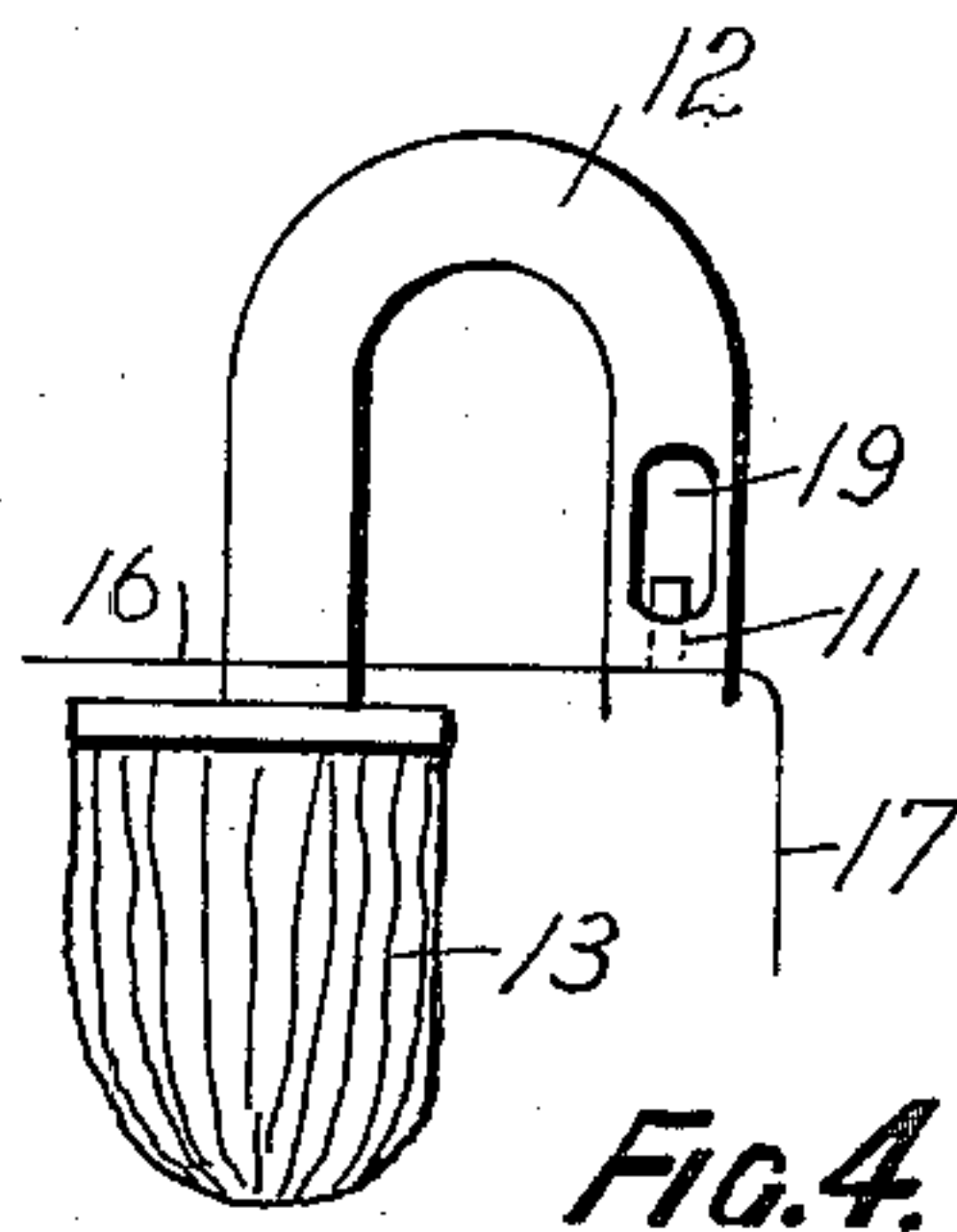
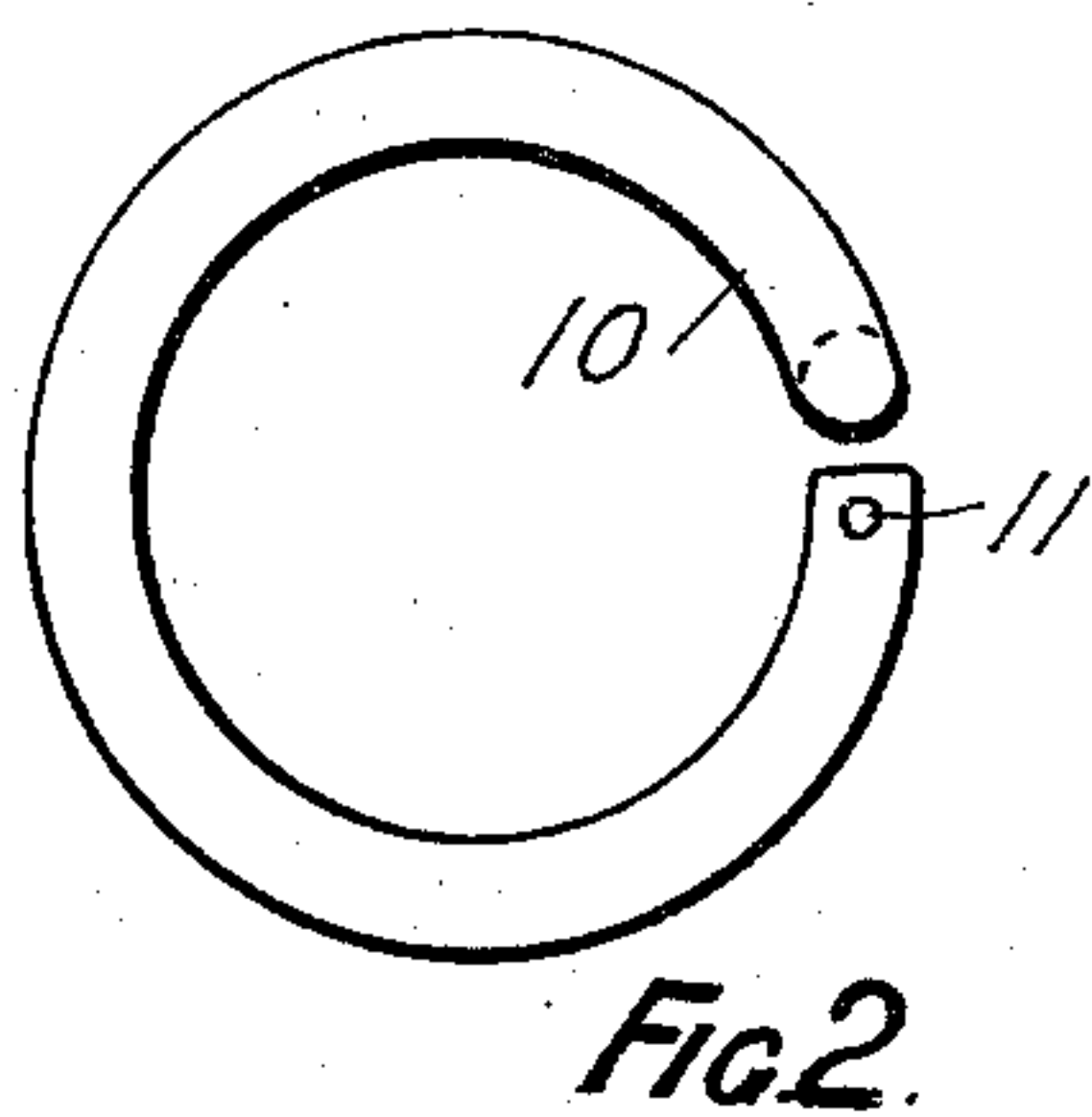
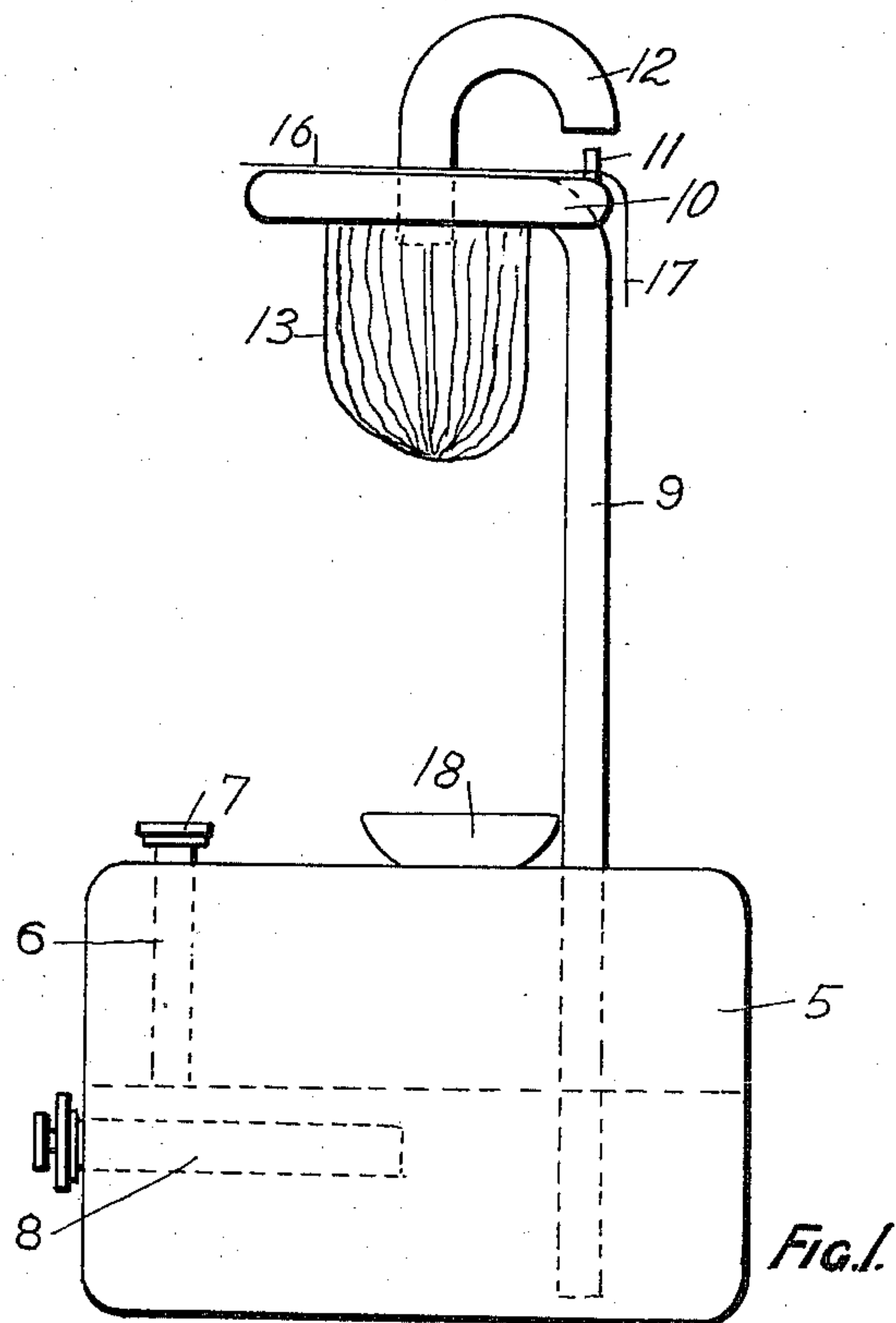


J. C. PRESTON.
INCANDESCENT OIL LAMP.
APPLICATION FILED AUG. 4, 1909.

966,358.

Patented Aug. 2, 1910.



Witnesses.
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B. M. Summers

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UNITED STATES PATENT OFFICE.

JOHN CHARLES PRESTON, OF SYDNEY, NEW SOUTH WALES, AUSTRALIA.

INCANDESCENT OIL-LAMP.

966,358.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed August 4, 1909. Serial No. 511,210.

To all whom it may concern:

Be it known that I, JOHN CHARLES PRESTON, a subject of the King of Great Britain, residing at No. 255 Sussex street, Sydney, in the State of New South Wales and Commonwealth of Australia, civil engineer, have invented a new and useful Improved Incandescent Oil-Lamp, of which the following is a specification.

This invention relates to that class of oil lamps in which oil while in course of supply to the burner is vaporized mixed with air and consumed in connection with an incandescent mantle and it has been devised in order to provide such an oil lamp specially for the use of light hydro carbon oil or a spirit and particularly adapted for household use. But in order that the invention may be readily understood the same will now be described with reference to the drawings accompanying and forming part of this complete specification and in which—

Figure 1 is a side elevation of the complete lamp. Fig. 2 a plan of the vaporizing tube and Fig. 3 a vertical central section of the mixing tube hood and mantle while Fig. 4 is a side elevation of a modified construction of the mixing tube.

The oil container 5 forms the body or base of the lamp and has a filling tube 6 (with cap 7) extending within it to about half way down so that when sufficient oil to say half fill the container is poured through said tube its backing up will warn the attendant. In said container 5 is an air compressing pump 8 of any ordinary construction but preferably of the "Primus" oil stove make. Extending from near the bottom of this chamber 5 is the pillar tube 9 whose upper end is coiled to form a vaporizing tube 10 from whose closed end a nozzle or a nipple 11 is directed into one end of a mixing tube 12 say of inverted U-shape whose other end leads into a depending mantle 13. The mantle which is of ordinary make and is incandescible is tied around a ferrule 14 preferably having a flange 15 or lugs to sustain it fitting over the tube 10. Upon the tube 10 is a hood 16 fitting over the nipple 11 and surrounding the tube 12 and to prevent burned gases passing into the tube 12 and the ignition of gas at the nipple 11 there is a guard flange 17. Around or near the pillar tube 9 and on the container 5 is a cup 18 for the reception of spirits to be burned for the purpose of heat-

ing the tubes to start the vaporizing of the oil before lighting the lamp. To obtain satisfactory results the bore of the nipple should be in proportion one hundredth part of an inch or thereabout in diameter to each cubic inch of the space inclosed by the mantle. For this proportion the diameter of the mixing tube should be say thirty times that of the nipple. In a modification of the mixing tube one end fits over the nipple 11 and has orifices 19 for the entrance of air.

In use the container 5 being half filled with oil a little spirits in the cup 18 is ignited and the flame thereof will heat the tubes 9 and 10. Pressure being created and maintained in the container by means of pump 8 a certain quantity of oil passing in said tubes will be vaporized and issues from the nipple 11. This vapor entering the mixing tube 12 will draw in with it and mix with it a certain quantity of air and the mixture will discharge in the mantle 13 where it is ignited and heats the said mantle to incandescence.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is;—

1. An incandescent oil lamp comprising an oil container, an air compressing device therein, a vertical oil pipe communicating with the container and terminating in a horizontal circular vaporizing portion closed at its end, an upward directed nozzle in the vaporizer near said closed end, a mantle support having a flange resting on said circular portion, a hood through which the nozzle projects supported on the circular portion and provided with a depending guard for the nozzle, and a U-shaped mixing tube having one arm projecting centrally through the guard and its other arm communicating with the nozzle.

2. An incandescent oil lamp comprising an oil container, means to compress air therein, a vertical oil pipe extending from near the bottom of the container and terminating in a horizontal circular vaporizing portion closed at its end, an upward directed nozzle in the vaporizer near said end, a detachable ring having a vertical portion to which a mantle is secured and provided with a flange resting on top of the vaporizer, a hood covering said ring having an aperture through which the nozzle projects and a depending portion forming a guard for the

latter, and a U-shaped mixing tube having one arm projecting centrally through and supported by the hood and its other arm terminating above the nozzle to form an air
5 space between the last named arm and nozzle.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

JOHN CHARLES PRESTON.

Witnesses:

PERCY NEWELL,
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