

No. 748,257.

PATENTED DEC. 29, 1903.

E. BOEKENKAMP.  
OIL BURNER.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.

Fig. I.

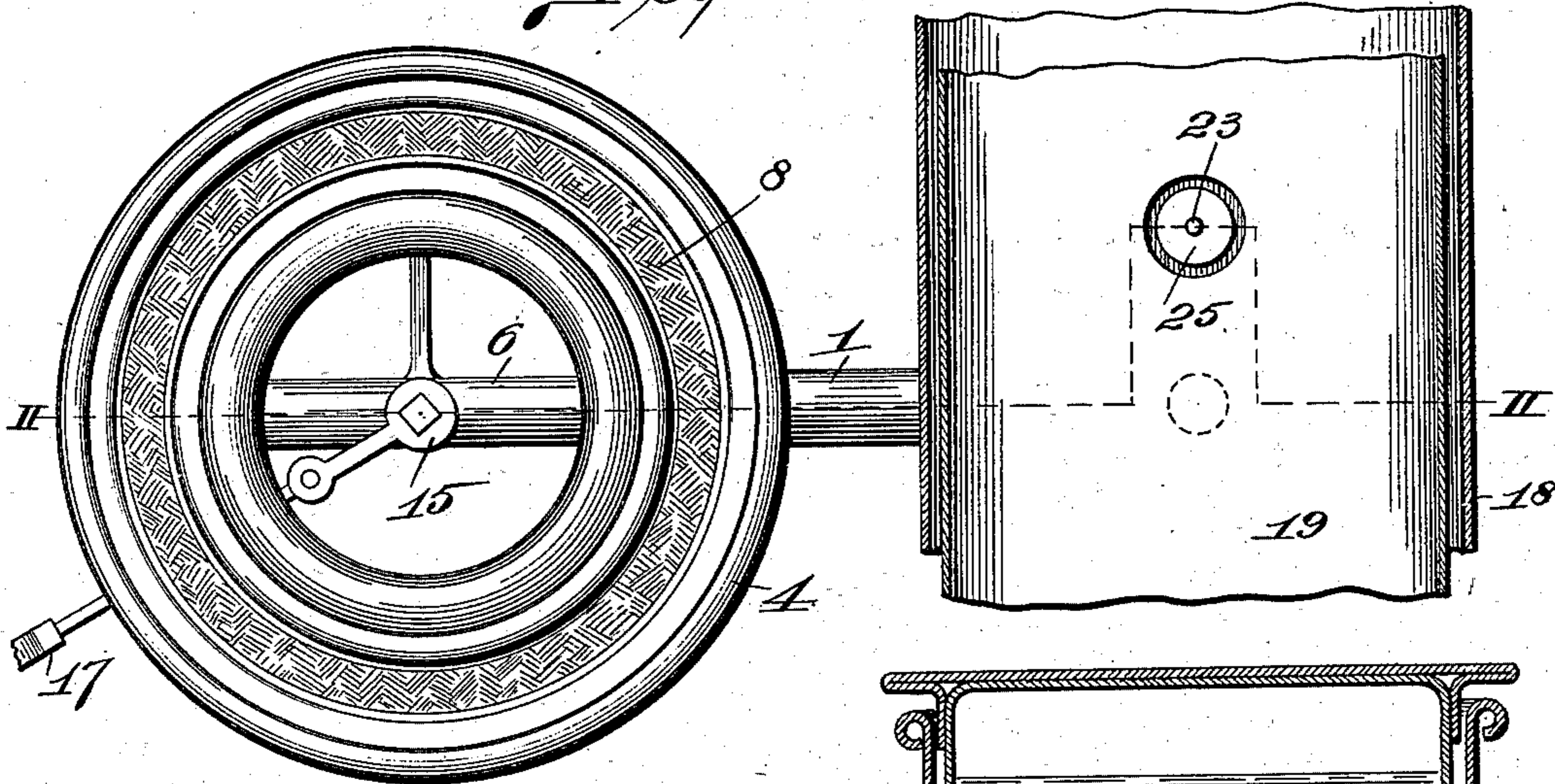


Fig. II.

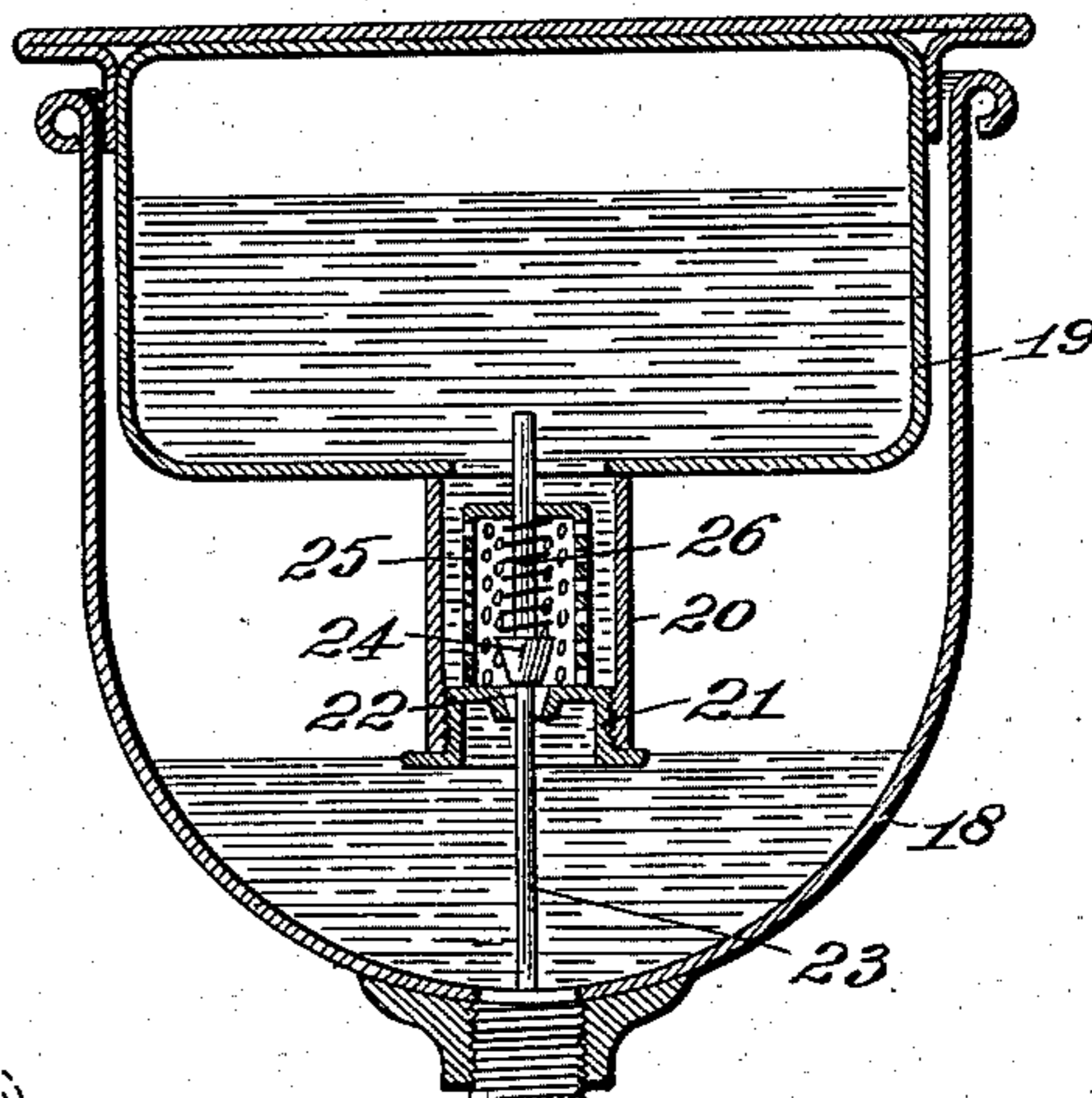
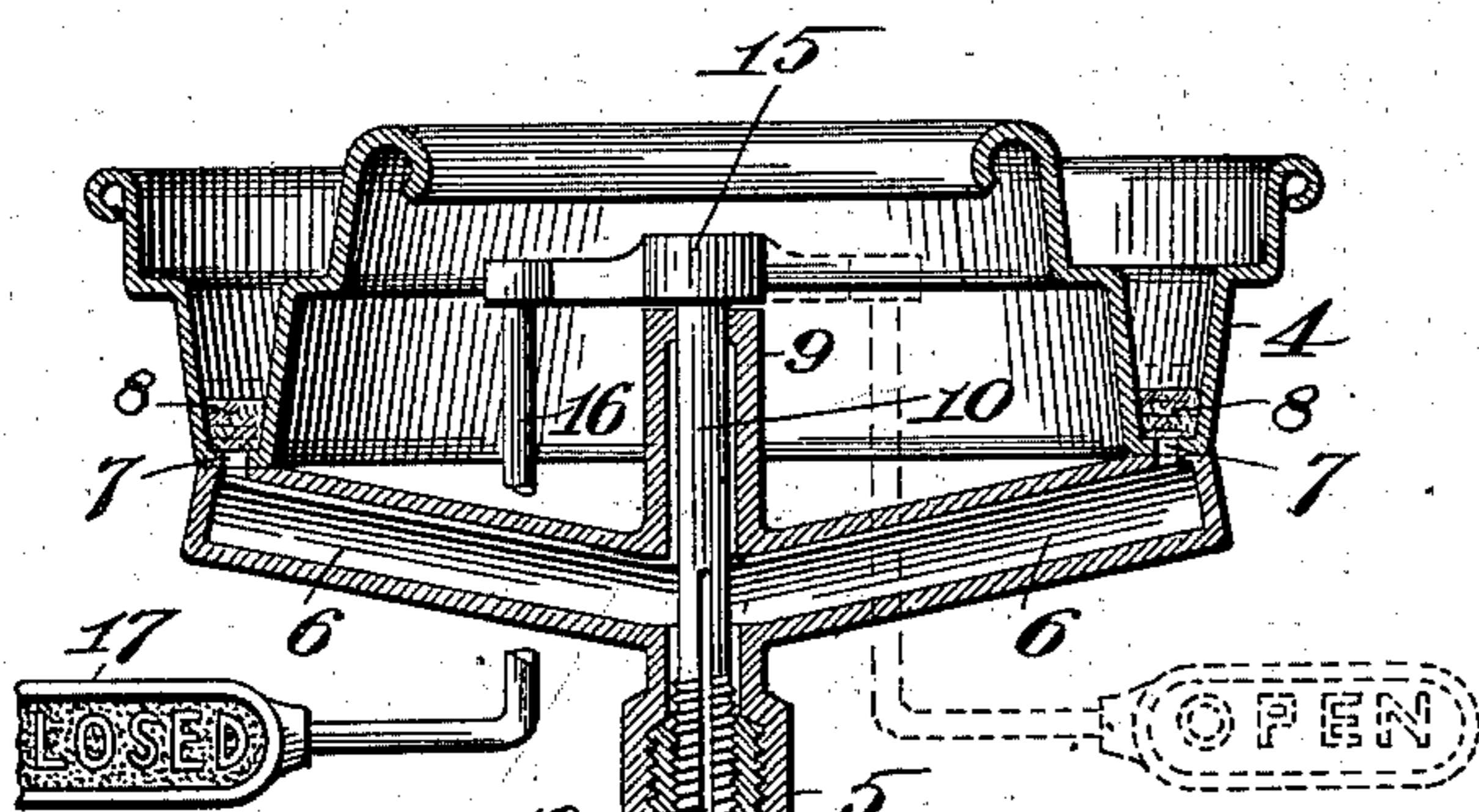


Fig. V.

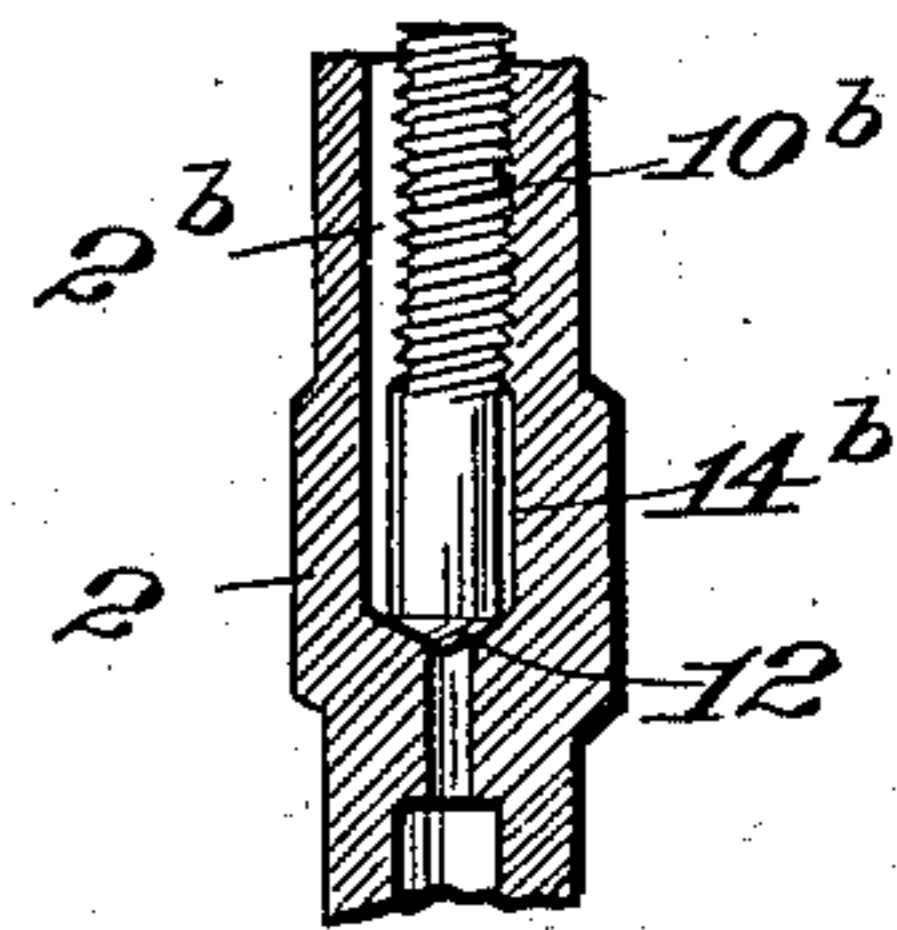


Fig. IV.

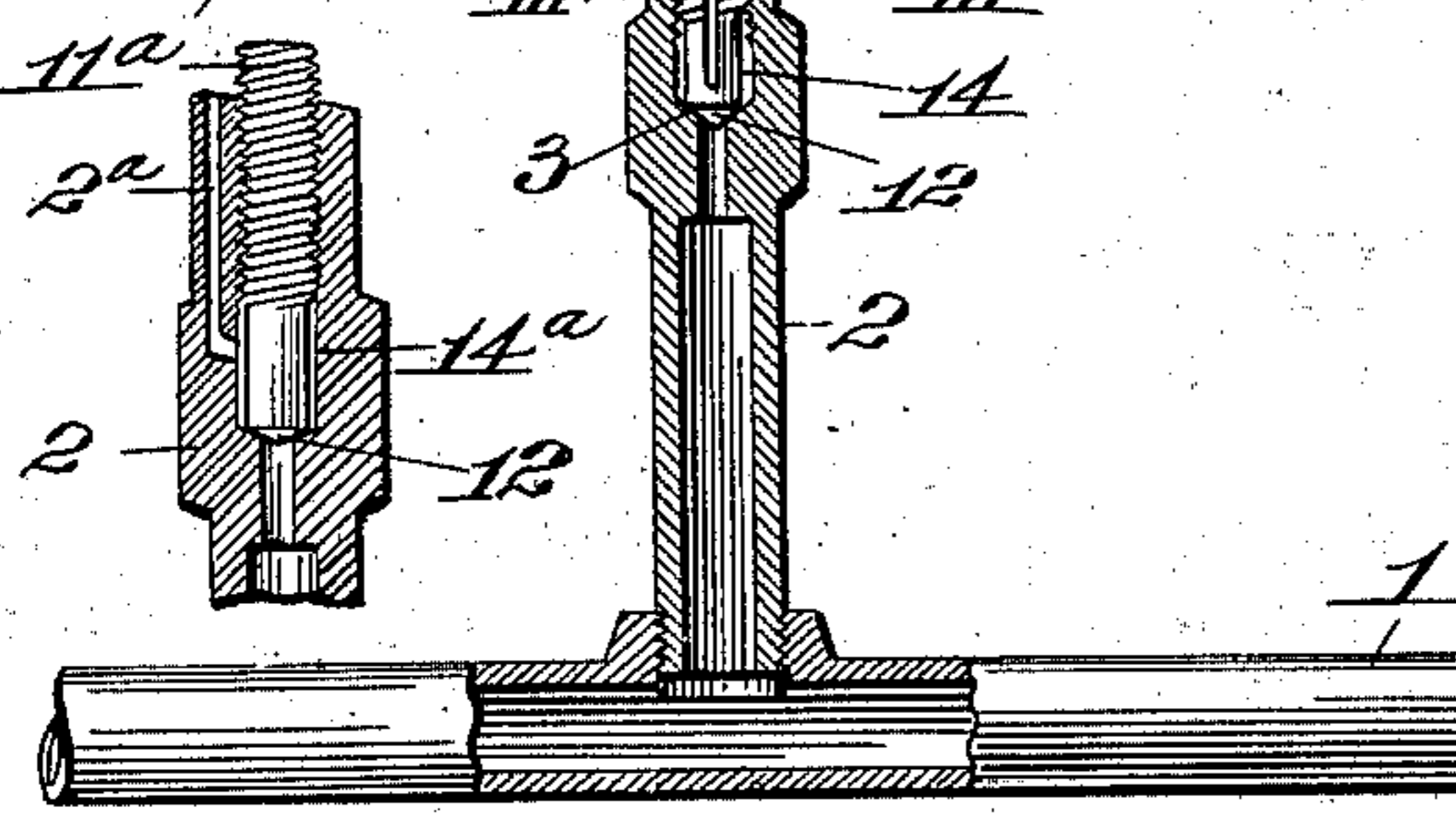
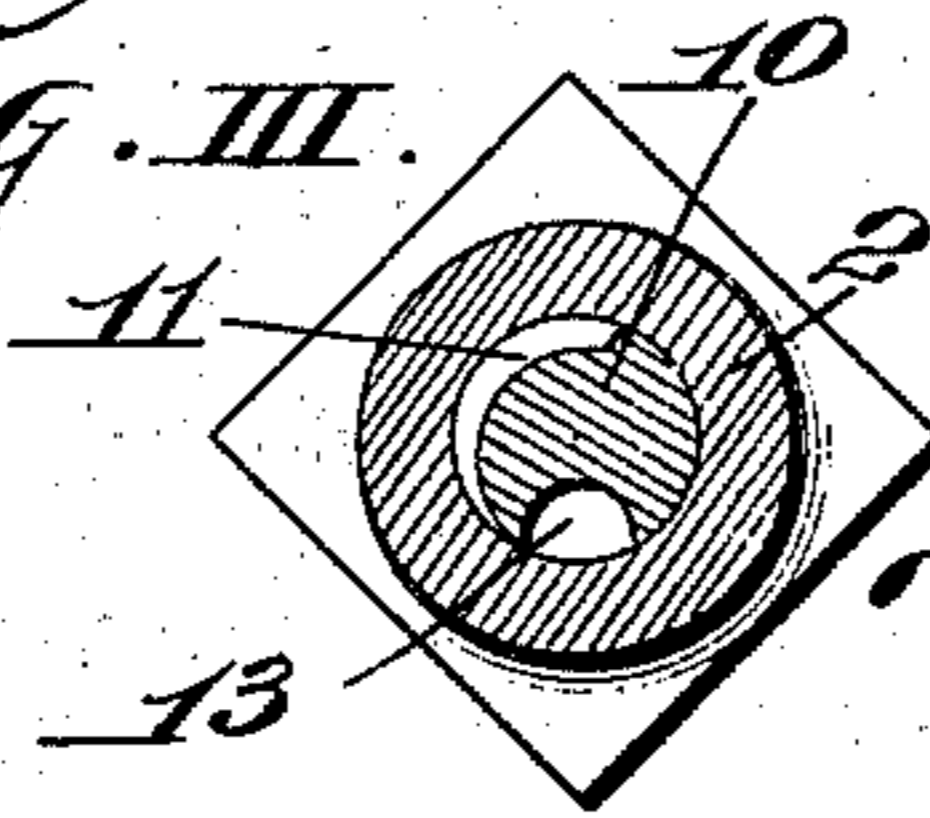


Fig. III.



attest:—  
M. A. Smith  
E. S. Knight

Inventor:—  
E. Boekenkamp:  
By *Wingfield*  
attys.

# UNITED STATES PATENT OFFICE.

EDWARD BOEKENKAMP, OF ST. LOUIS, MISSOURI, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

## OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 748,257, dated December 29, 1903.

Application filed February 24, 1903. Serial No. 144,659. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD BOEKENKAMP, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have  
 5 invented certain new and useful Improvements in Oil-Burners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 My invention relates to a burner for use in burning hydrocarbon oils and is of the nature usually utilized in oil cooking-stoves.

The invention consists in features of novelty hereinafter fully described, and pointed  
 15 out in the claim.

Figure I is a top or plan view of my burner, the supply-reservoir being shown in horizontal section. Fig. II is a vertical section taken on line II II, Fig. I, with the oil-conducting  
 20 pipe leading to the burner shown in elevation. Fig. III is an enlarged cross-section taken on line III III, Fig. II. Figs. IV and V are sections of modifications.

1 designates an oil-conducting pipe through  
 25 which oil flows from a fountain-reservoir.

2 is a feed-tube fitted to the pipe 1 and provided with an interior valve-seat 3, (see Fig. II,) located intermediate of the ends of the  
 30 tube.

4 designates a bowl of ring shape surmounting the feed-tube 2, to which it is connected by a neck 5, that carries a pair of diverging tubular arms 6. The arms 6 lead to the bowl 4, with which they communicate  
 35 through ducts 7 at their outer ends. In the bottom of the bowl 4 is a ring 8, of asbestos or other absorbent material by, which oil is absorbed to be furnished for starting burner.

9 is a tubular post centrally positioned  
 40 above the inner ends of the tubular arms and extending to a greater elevation than the oil-level in the bowl 4.

10 designates a valve-stem extending loosely through the post 9 and downwardly  
 45 therefrom into the feed-tube 2, in which it is screw-threaded, as seen at 11, Figs. II and III. At the lower end of the stem 10 is a conical valve 12, that opposes the valve-seat 3 in the feed-tube 2. Extending longitudi-

nally of the valve-stem 10 is a groove 13, that  
 50 terminates at its lower end within a chamber 14 above the valve-seat 3 and terminates at its upper end in communication with the diverging tubular arms 6.

15 designates a key fitted to the upper end  
 55 of the valve-stem 10 interior of the ring-bowl 4 and provided with a lever-arm 16, that extends downwardly from the key to a position beneath said bowl and then outwardly, as  
 60 seen in Fig. II, where it terminates in a handle 17 in a position convenient of access for operation to turn the key and rotate the valve-stem 10. By this construction the handle 17 of the key-lever arm is prevented from  
 65 being heated during the use of the burner and is therefore always in a condition to permit of its being grasped to actuate the valve-stem without liability of the user's hand being burned.

18 designates the supply-reservoir from  
 70 which the oil to feed the burner-bowl 4 is delivered and in which the oil remains on a level with a corresponding point of elevation in the burner-bowl at its bottom, as seen in  
 75 Fig. II.

19 is a fountain-tank located in the supply-reservoir 18 and having a leg 20, that extends  
 80 downwardly beneath the bottom of the tank and is closed by a cap 21, provided with an oil-exit orifice 22.

23 is a valve-rod the lower end of which rests upon the bottom of the supply-tank 18 and which carries a valve 24, located above  
 85 the orifice 22 in the cap 21.

25 is a perforated hood in the leg 20, and 26  
 90 is a coil-spring surrounding the valve-rod 23 in said hood, by which the valve 24 is held seated in the orifice 22 previous to the placing of the fountain-tank 19 in the supply-reservoir 18.

In the practical use of my burner the oil to supply the burner is first placed in the fountain-tank 19, and the tank is placed in the supply-tank 18, whereupon the valve 24 becomes unseated to permit the flow of oil from  
 95 the fountain-tank into the supply-reservoir and therefrom into the conducting-pipe 1. The oil continues to flow from the fountain-

tank into the supply-reservoir until it reaches the level of the lower end of the leg 20, when the flow is stopped by reason of the leg being sealed by the oil, so that air cannot gain access to the fountain-tank to displace the oil therein. This level is maintained until it is lowered by the consumption of oil in the burner. The valve 12 is then unseated by rocking the lever-arm 16 to rotate the screw-threaded stem, by which said valve is carried. On the unseating of said valve the oil flows past the valve-seat 3 into the chamber 14 and gains access therein to the longitudinal groove 13 in the valve-stem 10, through which it flows upwardly and enters the tubular arms 6. From these arms the oil passes to the ducts 7, through which it flows to the bowl 4. By providing the tubular post 9, extending above the tubular arms 6 to a greater elevation than the level of the oil in the bowl 4, and consequently to a greater elevation than the oil-level in the supply-tank 18, I avoid the necessity of packing the upper end of the post where the valve-stem 10 passes therethrough, inasmuch as the oil being always maintained at a lower level than the upper end of the post there is no liability of its egress through the post.

It is obvious that variations from the construction herein described may be made without departing from my invention to obtain the same object sought to be accomplished in the burner—viz., that of conducting the oil

longitudinally past the valve-stem in the feed-tube or burner.

In Figs. IV and V, I have shown modifications which are the equivalents of the construction shown in the other views, the modification shown in Fig. IV consisting of the introduction of a duct 2<sup>a</sup>, leading longitudinally through the feed-tube from the chamber 14<sup>a</sup> at the lower end of the space occupied by the valve-stem 11<sup>a</sup>. In the modification shown in Fig. V a groove 2<sup>b</sup> extends from the chamber 14<sup>b</sup> longitudinally through the feed-tube alongside of the valve-stem 11<sup>b</sup>.

I claim as my invention—

The combination with a supply-reservoir, of a conducting-pipe leading from said reservoir, a feed-tube mounted on said conducting-pipe, tubular arms supported by said feed-tube, a ring-shaped burner-bowl having communication with said tubular arms, a tubular post surmounting said arms and extending through the opening of said burner-bowl, spaced from the bowl, to an elevation above the normal level of oil in said supply-reservoir, a valve-stem extending through said post into said feed-tube and adapted to be operated from above, and a valve at the lower end of said valve-stem, substantially as set forth.

EDWARD BOEKENKAMP.

In presence of—  
E. S. KNIGHT,  
M. P. SMITH.