

950,561.

Patented Mar. 1, 1910.

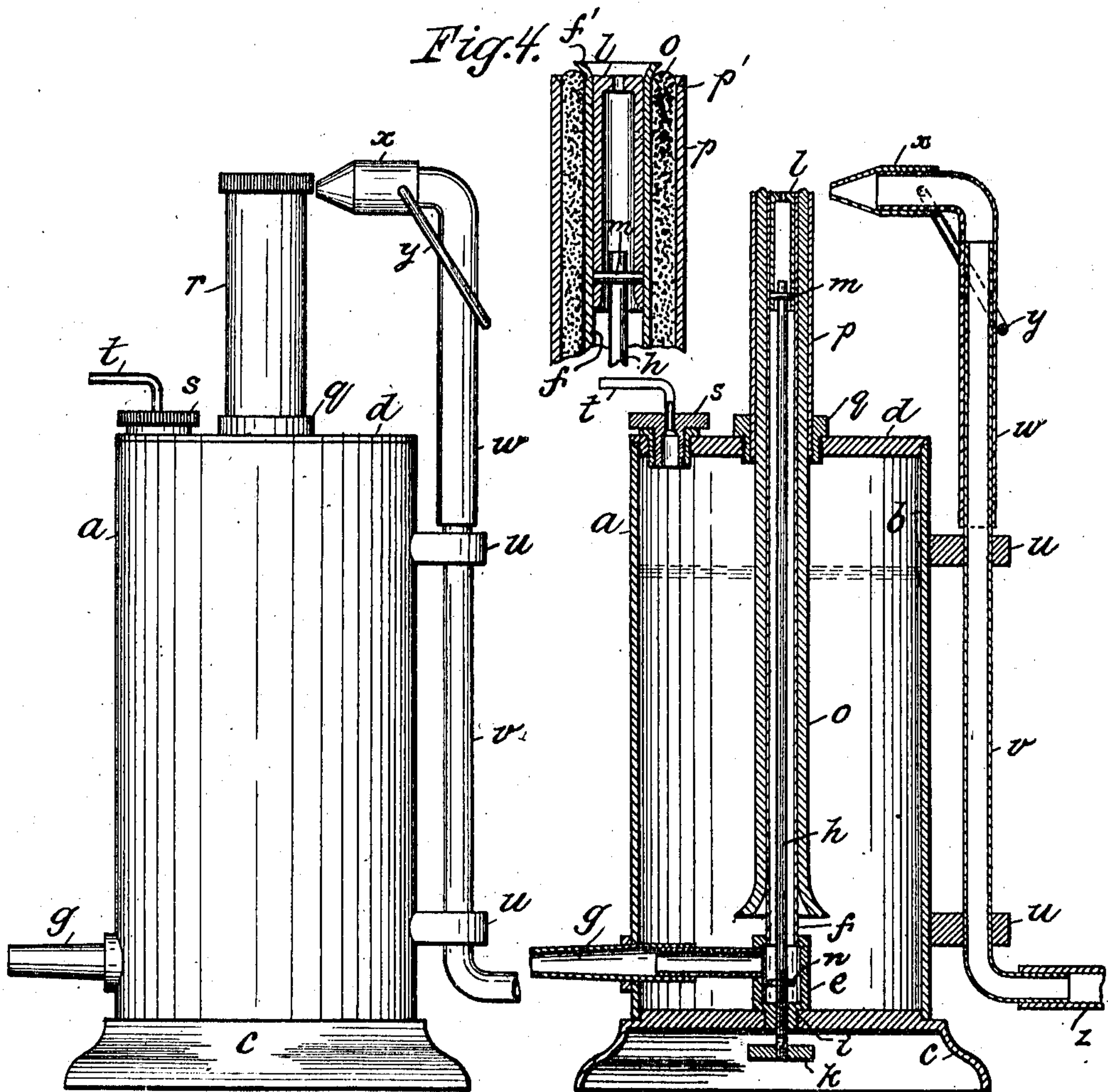


Fig. 1.

Fig. 2.

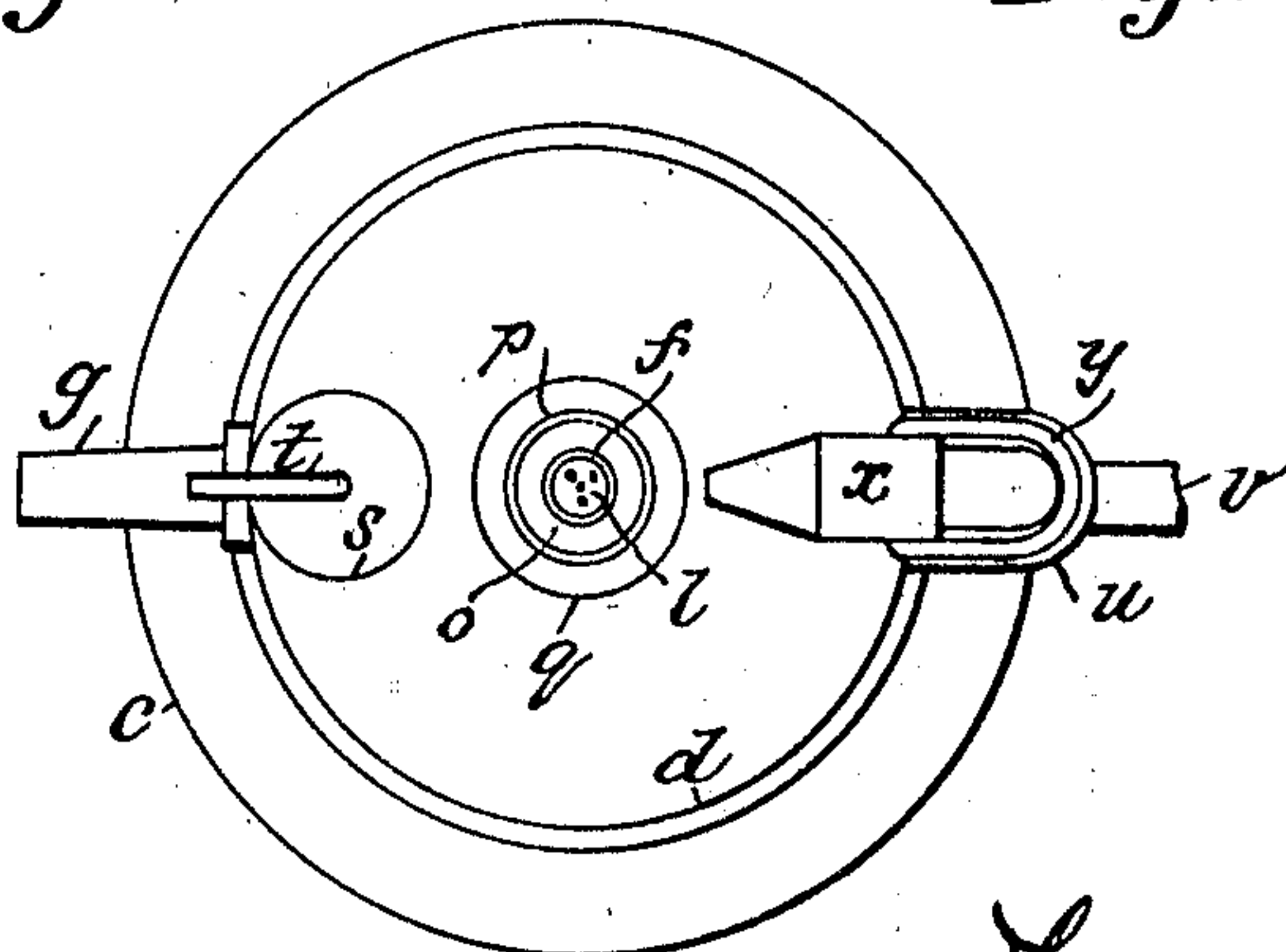


Fig. 3.

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ALCOHOL-LAMP.

950,561.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed March 23, 1908. Serial No. 422,608.

To all whom it may concern:

Be it known that I, JAMES H. SEAMAN, a citizen of the United States, residing at Prince Bay, Staten Island, State of New York, have invented certain new and useful Improvements in Alcohol-Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make, construct, and use the same.

The object of my invention is to provide a lamp for use of jewelers, dentists, and others, which shall possess all of the advantageous features of a lamp for use with a blow pipe, but also provide a central forced draft lamp, with an adjustable nozzle of such a character as to permit the variation of the size of the flame issuing therefrom, and also to provide an adjustable external blow pipe for use in connection therewith.

In the accompanying drawings forming a part of this specification, Figure 1 illustrates a side elevation of my improved lamp. Fig. 2 illustrates a vertical section of the same. Fig. 3 is a top plan view; and Fig. 4 is an enlarged vertical section of the jet and adjustable interior nozzle.

In the accompanying drawings, like letters of reference refer to like parts throughout.

The body or reservoir *a* of my improved lamp is cylindrical in form, but may be of any desired shape or configuration. As illustrated, it consists of the cylindrical shell *b*, having secured thereto, in any convenient manner, as by soldering, the flanged bottom *c*, and the top or cover *d*. Extending centrally from the bottom, and rigidly connected therewith, is a small chamber *e*, to the upper end of which is rigidly connected the tube *f*, said tube extending out through an aperture in the top *d* to a suitable height. Extending laterally into the chamber *e* from the exterior of the shell *b*, is the inlet port *g*, which is secured to the shell by any convenient means, so as to form a liquid tight joint. The connection of the tube *g* with the chamber *e*, is also made liquid tight, so as to form a continuous passage from the tube *g* to the upper end of the tube *f*. Extending centrally through the chamber *e*, and tube *f* is a solid rod *h*, screw-threaded at the lower extremity into the shank *i*, of

the chamber *e* and provided at its exterior end with the head *k*.

At the upper end of the rod *h*, I provide the cylindrical thimble *l*, fitting rather closely the upper end of the tube *f*, and connected to the rod *h* by means of a pin *m*. The upper end of this thimble is provided with a plurality of fine apertures, so that when air is forced through the tubes *g* and *f*, it will emerge through said apertures in fine jets. It will be noted that the internal diameter of the thimble *l* is somewhat larger than the diameter of the rod *h*, so that there will be free passage through the tube *f* into the thimble *l*.

In order to limit the vertical adjustment of the thimble *l* at the mouth of the tube *f*, I provide a small stop nut *n*, upon the lower screw-threaded portion of the rod *h*, so that in screwing down the rod *h*, said nut *n* will limit its downward movement, while the head *k* will limit the upward movement of the rod *h* and with it the thimble *l*. Surrounding the tube *f* is the tubular lamp wick *o*, passing through the aperture in the cover *d*. In order to form a guide for the lamp wick *o*, I provide the cover *d* with a tubular extension *p*, projecting above the cover *d* to a height equal to the height of the tube *f*. The tube *p* may be secured into the head *d* by any convenient means, as by means of the screw thimble *q*, screwed into the central aperture in the head *d*.

As shown in Fig. 1, I provide the tube *p* with a cap *r*, to prevent evaporation of the alcohol within the shell *b*, when not in use. As a means for filling the shell *b* with the alcohol or other fluid fuel, I provide the screw thimble *s*, which may be removed for the purpose of filling. The thimble *s* is also provided with a small bent tube *t*, which extends through the top of the cap in order to provide a vent.

Located at the side of the chamber *a* are the brackets *u, u*, for the purpose of carrying the external blow pipe *v* over the upper end of which is the telescoping bent tube *w*, having its upper end directed toward the tube *p*, and vertically adjustable so as to permit a jet of air to be directed to any part of the flame from the wick *o*. The outer end of the bent portion of the tube *w*, is provided with a telescoping nozzle *x*, which may be adjusted upon said bent portion toward and away from the flame, and as a

convenient means for providing such adjustment, I secure the bail y to the sides of said nozzle x , so that such bail may be used as a handle for pushing the nozzle x out 5 and in.

With the construction just described, I am able to use either the external blow pipe or the internal blow pipe. By connecting the lower bent end of the tube v with a rubber tube z , through which the blast of air may be sent, I make an external blow pipe lamp, or if desired to make it an internal blow pipe lamp, the rubber tube z is transferred from the tube v to the tube g , and 10 the blast sent therethrough to the chamber e , and thence to the tube f , whence it emerges through the thimble l in the fine jets heretofore referred to.

By the adjustment of the central blow pipe, through the vertical movement of the thimble l , at the top of the tube f , I am able to concentrate the central draft to any degree desirable in use, as for example, when the same is adjusted to its lowermost position, the flame is broadened materially and 20 when the thimble l is extended from the tube f , the flame is contracted so as to draw the flame to a fine point. Between these extremes of broad jet and fine pointed jet, any degree of adjustment may be had. 25

I find in practice that when the mouth of the tube f is flared outwardly as at f' , there is no tendency for the wick o to overlap and obstruct the fine air passages through the nozzle l . When this flaring of the tube f is done, the mouth of the tube p is also slightly flared as at p' , so that there will be no obstruction to the free raising and lowering of the wick o . 30

I claim:

1. In an alcohol lamp, the combination of a reservoir with a rigidly fixed blow pipe, a tubular wick upon the exterior of said blow pipe and means for adjusting the draft 35 through said blow pipe at its exit therefrom.

2. In an alcohol lamp, the combination of a fuel reservoir, a central wick supporting blow pipe rigidly secured therein and an adjustable nozzle located in the mouth of said 40 blow pipe.

3. In a fluid fuel lamp, the combination of a fuel reservoir, a central wick supporting blow pipe, rigidly secured therein, a nozzle located in the mouth of said blow pipe and means for adjusting said nozzle longitudinally of said blow pipe. 55

4. In a fluid fuel lamp, the combination of a fuel reservoir, a tubular wick supporting blow pipe rigidly secured therein extending from the bottom of said reservoir through 60 the top or cover thereof, a nozzle at the mouth of said blow pipe and means at the lower end of said blow pipe for adjustably securing said nozzle in the mouth of said blow pipe. 65

5. In a fluid fuel lamp, the combination of a fuel reservoir, a central wick supporting blow-pipe rigidly secured to the bottom of said reservoir, a tubular wick mounted upon said blow-pipe, a lateral supply pipe leading 70 from the exterior of the reservoir and communicating with said blow-pipe and a vertically adjustable nozzle located in the mouth of said blow-pipe.

6. In a fluid fuel lamp, the combination of 75 a fuel reservoir, a central wick supporting blow-pipe having a tubular wick mounted thereon, an adjustable nozzle located in the upper end of said blow-pipe and external means for adjusting said nozzle longitudinally in said blow-pipe. 80

7. In an alcohol lamp, the combination of a fuel reservoir, a central wick supporting blow-pipe rigidly secured to the bottom of the reservoir and extending through the top 85 thereof, a lateral supply pipe connected with said blow-pipe and extending without said reservoir, a tubular wick surrounding said blow-pipe, a tubular extension secured to the reservoir top and surrounding said wick and 90 an adjustable nozzle located in the upper end of said blow-pipe and longitudinally adjustable therein.

This specification signed and witnessed this 21st day of March 1908.

JAMES H. SEAMAN.

Witnesses:

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