

A. G. KAUFMAN.
OIL LAMP.
APPLICATION FILED MAY 12, 1911.

1,001,859.

Patented Aug. 29, 1911.

Fig. 1.

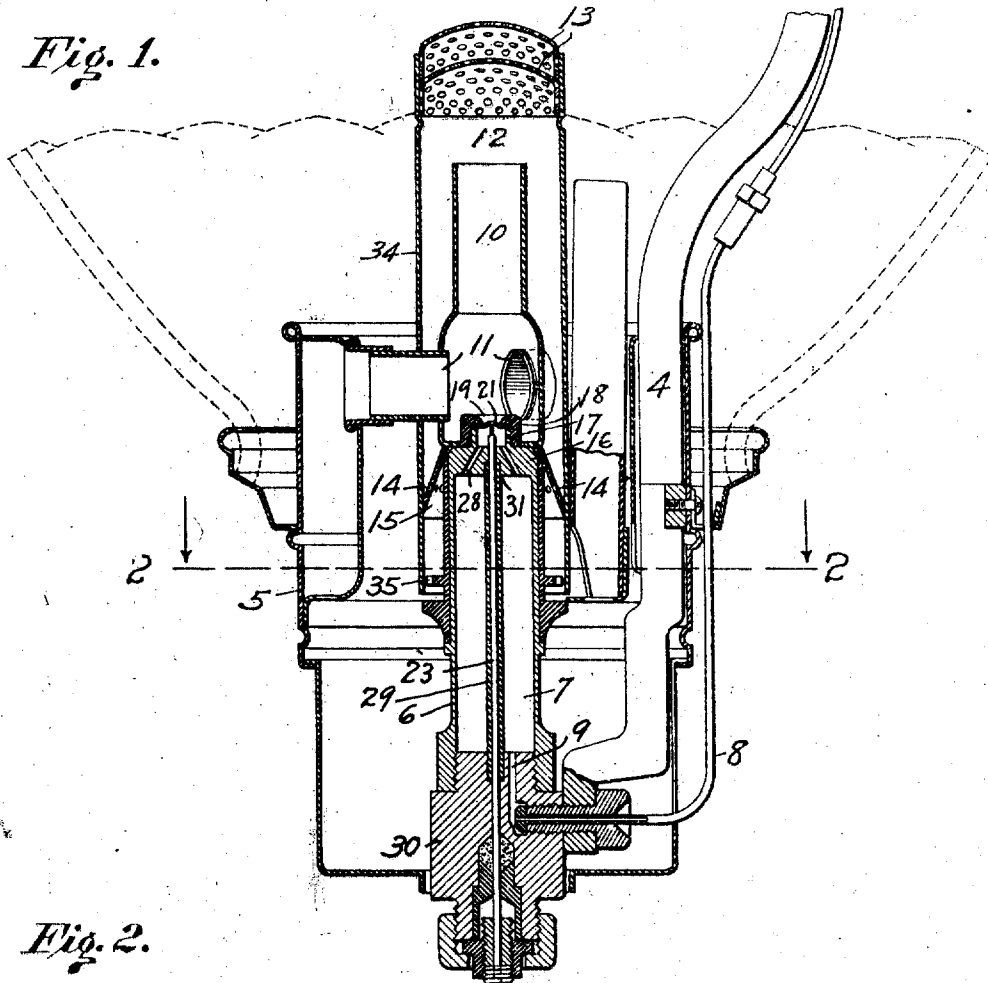
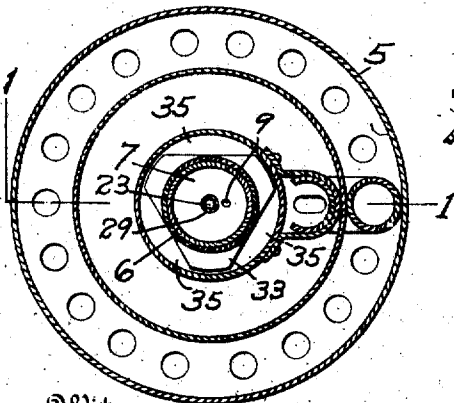
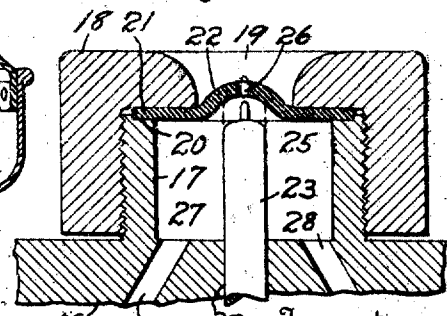


Fig. 2.



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Fig. 3.



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OIL-LAMP.

1,001,859.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ADOLPH G. KAUFMAN, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Oil-Lamp, of which the following is a specification.

This invention relates to lamps, and especially to that class adapted to burn a mineral oil, as kerosene, preferably with an incandescent mantle; and the objects of my invention are: first, to provide a retort, or vaporizer, with a specially-constructed gas outlet whereby the gas will be delivered from the vaporizer to the air mixing chamber and burner with a minimum danger of clogging; second, to provide means to hold the cleaning needle and valve stem in certain alinement with the gas outlet at all times, especially when assembling and even under intense heat; and, third, to provide a lamp of the character described which will be cheap to manufacture, and efficient in use.

The invention is illustrated in the accompanying drawing, in which—

Figure 1, is a central, vertical section of a lamp constructed according to my invention, with the mantle omitted, and other parts broken away in part, the view being taken on the line 1—1 of Fig. 2; Fig. 2, is a transverse section on the line 2—2 of Fig. 1; and, Fig. 3, is a view on an enlarged scale of the gas outlet from the vaporizer, and of the valve seat, stem, and cleaning needle, the parts being in vertical section except the valve stem and needle.

In carrying out the invention I provide an oil lamp, which may have a bracket, as 4, to hold the same in position, a gallery 5, for warming the entering air, and protecting the vaporizer, with the following parts of special construction: The retort, or vaporizer 6, is provided with the chamber 7, into which oil may flow through the pipe 8, and passageway 9. In this chamber the oil is heated in any desired manner until the same commences to vaporize when the gas generated will pass out at the top of the retort, or vaporizer, into the air mixing tube 10, having the air inlet ports 11, where the gas will be mixed with air in the proportion desired, and the greater part of this mixed gas and air will pass through the chamber 12, and screens 13, to be consumed within an incandescent mantle (not shown), as will be readily understood. A part of the gas and air

entering the chamber 12, will flow downward through the ports 14, and will be consumed within the chamber 15, around the retort, thereby keeping the retort heated sufficiently to continue the gasification of the oil as long as desired.

As refined mineral oil of the heavier grades, such as kerosene, have considerable substance which will but partially vaporize, and will clog the valve, or port, as usually constructed, for the discharge of gas from the vaporizer, I have designed a port and valve of special construction. As shown, the retort 6, is provided with a closed end, or head 16, of considerable thickness, from which rises the externally screw-threaded collar 17, on which may be screwed a nut 18, having a port opening 19; and the collar 17, is provided with a seat 20, as may be clearly seen in Fig. 3, in which rests a plate 21, having a centrally bowed part 22, the under side of which forms a valve seat for the valve stem 23, which may be raised vertically without turning by the apparatus 24, as shown in Fig. 1, to the position indicated in dotted lines in Fig. 3. The valve stem 23, carries a needle 25, adapted to pass through the port 26, in the plate 21, not for closing purposes, but for cleaning, as the needle is slightly smaller in diameter than the port. This port is closed by the seating of the valve stem 23 in the valve seat formed by the bowed part 22, of the plate 21.

Within the collar 17, a chamber 27, is formed; and I provide a plurality of inclined passageways 28, through the head 16, which lead from the retort chamber 7, to the chamber 27; and these passageways are inclined at such an angle as to direct the gas entering the chamber 27, from the retort, against the sides of the part 22, forming the valve seat whereby the valve seat is kept clean from sediment.

By making the discharge port in a plate, it is an easy matter to provide a new port at any time, and it is easy also to form a proper seat for the valve stem; and by providing the inclined passageways in the head in alinement with the sides of the valve seat, and the chamber 27, the valve is easily kept clean. These features are very important in a lamp of this kind.

The next important feature is to provide means to hold the valve stem and needle carrier in a vertical plane with the valve seat and port, as the heat applied to the

retort will readily distort a valve stem. Then, too, as the needle in practical use is a very delicate part and easily broken, by providing means to absolutely center the same at all times, and especially when assembling the parts, this breakage will be avoided which now occurs when the needle is slightly out of perfect alinement. With the above in view, I provide a double means to insure the holding of the valve stem in proper position. First, I provide a tube 29, extending from a plug 30, closing the bottom of the retort, to a socket 31, in the head 16, within which tube the valve stem fits closely so that it can not warp. Then, too, as the valve stem passes through the head 16, it is made to fit snugly within the passageway 32, so that even if the tube 29, did not extend into the head 16, the upper part of the valve stem would be held in vertical alinement.

Another valuable feature is the collar 33, on the retort 6. This collar is made of a diameter to fit closely within the tube 34, forming the chamber 12, it being what is known as the burner tube, and the collar is cut away on the sides to form three ports 35, as clearly shown in Fig. 2, so that air may enter the chamber 15, to support the combustion of the gas around the retort entering through the ports 14. Means are thus provided to hold the burner tube 34, in a vertical position, and that with but little cost since the collar 33, is formed integral with a part of the retort.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. An oil lamp having a vaporizer, or retort, with a thickened head having inclined gas passageways therethrough, said retort having a discharge port with a valve seat surrounding the same, said inclined passageways being convergent on said port and said port being situated substantially at the point of convergence of all of said passageways, for the purpose set forth.

2. An oil lamp having a vaporizer, or retort with a thickened head with inclined gas passageways therethrough, a plate mounted on said retort having a passageway therethrough forming the port from said re-

tort, and having a valve seat surrounding said port, said inclined passageways being convergent on said port and in substantial alinement with the sides of said valve seat, for the purpose set forth.

3. In an oil lamp having a retort, or vaporizer, with a thickened head, a plate having a passageway therethrough forming the port for the discharge of gas from said vaporizer, said plate being bent to form a valve seat surrounding said port, a valve stem adapted to engage said seat, and means to operate said valve stem, said vaporizer having a thickened head with inclined passageways therethrough said inclined passageways being convergent on said port and in substantial alinement with said valve seat, for the purpose set forth.

4. In an oil lamp having a vaporizer, or retort, with a thickened head, a plate mounted above said head having a passageway therethrough forming the discharge port for said vaporizer, said plate being bent to form a valve seat, and being held at a distance from said head whereby a chamber is formed between said head and plate, said head having inclined passageways therethrough adapted to direct the outflowing gas directly against the side walls of said seat.

5. The herein described oil lamp comprising a retort having a thickened head with inclined passageways therethrough, and a collar, a plate mounted on said collar at a sufficient distance to form a chamber between said head and plate, said plate being bent to form a valve seat, and having a discharge port centrally thereof, a valve stem adapted to engage said seat, a needle on said stem adapted to pass through said port, means to move said stem and needle vertically, means within said vaporizer to hold said stem and needle in alinement, and said retort having an exterior collar cut away on three sides, as and for the purpose set forth.

Dated this 11th day of May, 1911.

ADOLPH G. KAUFMAN.

Witnesses:

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