

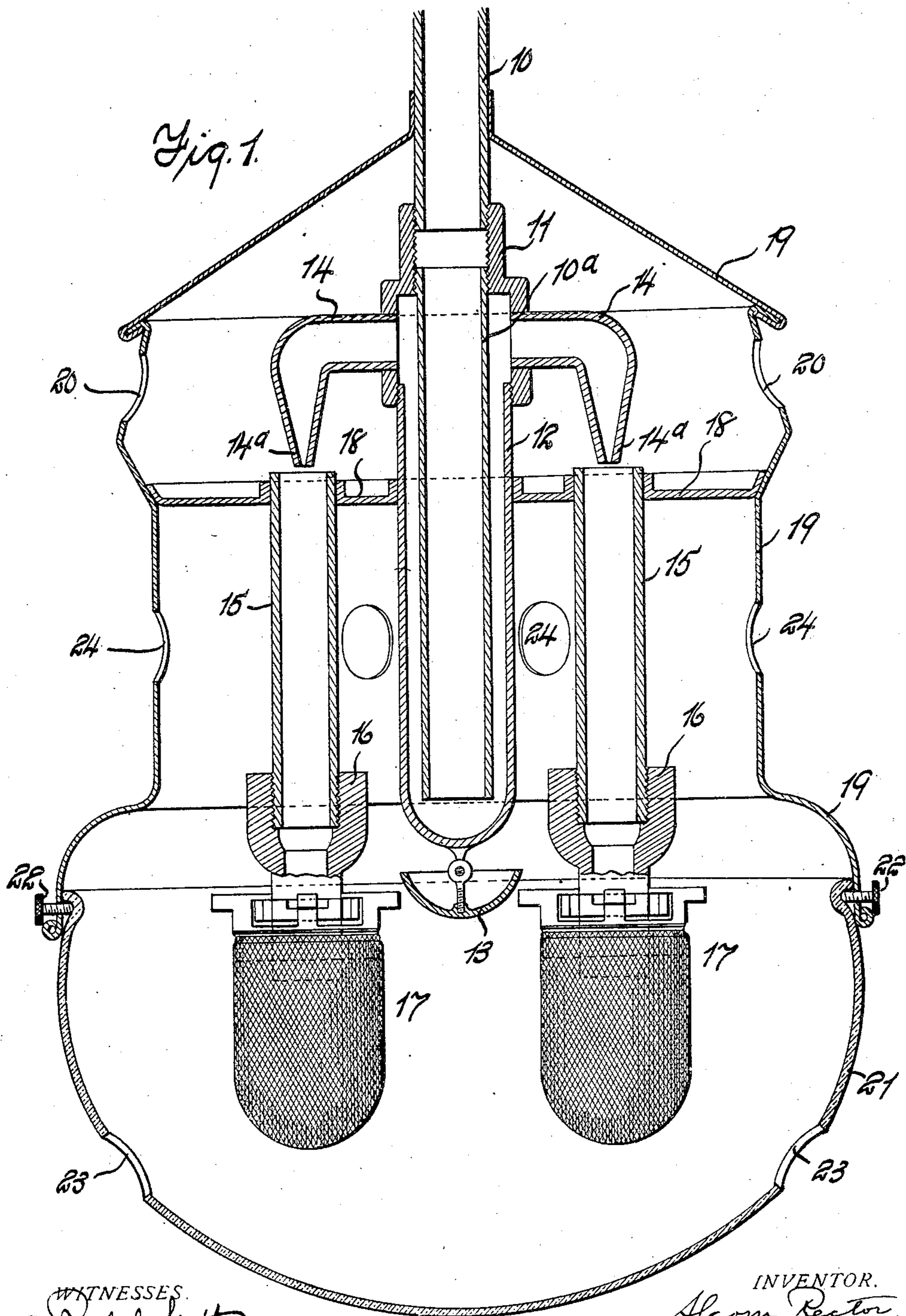
No. 877,862.

PATENTED JAN. 28, 1908.

A. RECTOR.
ALCOHOL LAMP.

APPLICATION FILED MAR. 26, 1907.

2 SHEETS—SHEET 1.



WITNESSES.
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Ralph Lancaster

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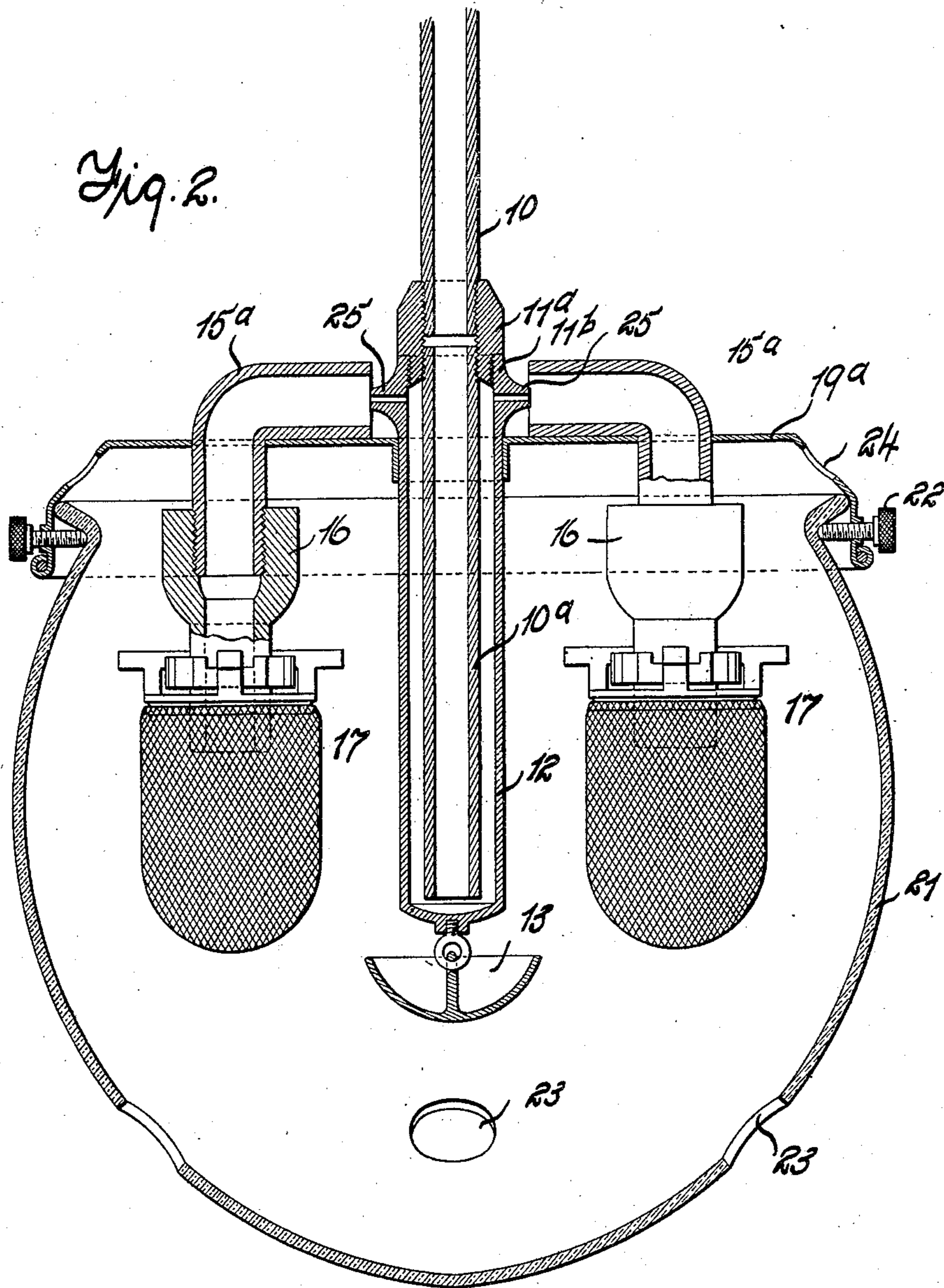
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WITNESSES
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UNITED STATES PATENT OFFICE.

ALCORN RECTOR, OF NEW YORK, N. Y., ASSIGNOR TO WARREN B. HUTCHINSON, TRUSTEE,
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ALCOHOL-LAMP.

No. 877,862.

Specification of Letters Patent.

Patented Jan. 28, 1908.

Application filed March 26, 1907. Serial No. 364,613.

To all whom it may concern:

Be it known that I, ALCORN RECTOR, of the city, county, and State of New York, have invented a new and useful Improvement in Alcohol-Lamps, of which the following is a full, clear, and exact description.

My invention relates to improvements in vapor burning lamps, and especially in lamps intended to burn alcohol vapor.

The object of my invention is to produce a lamp of large candle power which will be an equivalent for the so called arc gas lamp, which is in reality a series of burners arranged in a common globe.

My invention is intended to produce a lamp of this character which will burn alcohol vapor to great advantage, and especially to produce such a lamp which has a vaporizer arranged in a way to highly gasify the fuel so that it will burn with perfect combustion at the mantle.

My invention is also intended to produce a lamp which has its parts easily accessible, and which can be used to advantage for lighting in stores and other places where much light is needed.

With these ends in view, and with the object of producing an efficient vapor burning lamp of high candle power, my invention consists of certain features of construction and combinations of parts which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section of a lamp embodying my invention, and Fig. 2 is a similar view of a slightly modified form of the lamp.

Referring especially to Fig. 1, the lamp has a supply pipe 10, which is pendent, and an extension 10^a of the pipe is connected to the pipe 10 by a coupling 11, the latter being enlarged to form a supporting head for other parts of the lamp, and the coupling carries a vaporizer tube 12, which is closed at the bottom, and which incloses the extension 10^a of the pipe 10. Secured to the lower end of the vaporizer 12 is a cup 13, in which alcohol or other fuel can be placed, and ignited to start the lamp, as will presently appear. The lamp has projecting from the coupling 11 a series of pipes 14 which are curved downward and terminate in nozzles 14^a,

these being reduced so as to have very small openings, and they discharge into vertical pipes 15, which connect by couplings 16 with the hangers of the mantles 17. Of course it will be understood that the mantles 17 can be of any approved kind, and can be hung on the tubes 15 in any convenient way.

The tubes 15 are secured in the plate or diaphragm 18 which divides the housing 19 into an upper and lower part, and the housing can be of any approved design, but it is preferably divided as shown, so that air inlets 20 can be made in the upper part of the housing and the air coming through these inlets mixes with the vapor from the tubes 14 and passes downward through the pipes or tubes 15, mixing with the vapor and serving to promote combustion at the mantle. The mantles are inclosed in a globe 21, which can be secured to the housing as shown at 22, by ordinary set screws, or the globes can be hinged like the well known car lamp, or attached in any convenient way. The globe can be air tight if preferred, or it can be provided with openings 23 to admit air to the mantles, and the hot air can pass out through vents 24 in the housing 19.

In Fig. 2 I have shown the lamp slightly modified, the vaporizing parts being as described, and the coupling 11^a is also a little different, this part connecting with a second piece 11^b, having jet openings 25 discharging into pipes or tubes 15^a, which are curved, and carry the mantles 17 as already described. In this form of lamp the top of the housing 19^a is made flat, and serves as a support for the tubes 15^a, and the upper part of the housing is dispensed with. The most essential feature in both types of lamp is the vaporizer comprising the parts 10^a and 12, and it will be noticed that the arrangement of mantles is such that after the initial vaporizing caused by heat from the fuel in the part 13, the heat from the mantles will serve to heat the vaporizing tube 12 very hot, and so the fuel will be more highly gasified than in the ordinary vapor burning lamp. The course of fuel is down through the tube 10^a and up through the part 12, and so there is a good and prolonged opportunity for vaporization. Moreover, it will be noticed that the lamp has the parts arranged so that they can be easily reached, and the arrangement is compact and efficient.

It will be understood also that any num-

ber of mantles and corresponding parts connecting with the vaporizer can be used without affecting the principle of the invention, and while in the claims I shall refer to a plurality of these parts, it is evident that any number from one up can be used as desired.

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

10 1. A lamp of the kind described, comprising a pendent vaporizer having an outer tube closed at its lower end and an in-let tube extending into the outer tube, a series of mantles grouped around the vaporizer, and supply pipes connecting the mantles with the upper part of the vaporizer.

20 2. In a lamp of the kind described, the combination with the vaporizer consisting of a tube closed at its lower end, and the in-let pipe extending into the closed tube, of the cup suspended from the lower end of the vaporizer, a series of mantle tubes grouped around the vaporizer and carrying mantles at their lower ends, and pipes leading from the upper end of the vaporizer and discharging through restricted openings into the mantle tubes.

30 3. A lamp of the kind described, comprising an elongated pendent vaporizer comprising an outer tube closed at its lower end, and an in-let tube extending into the outer tube, a series of mantle tubes grouped around

the vaporizer, and having mantles at their lower ends, and pipes leading from the upper part of the vaporizer and discharging through jet openings into the mantle tubes. 35

4. A lamp of the kind described, comprising a vaporizer having an elongated tube closed at its lower end, and an in-let tube leading into the closed tube, a heating cup supported from the lower part of the vaporizer, a group of mantle tubes arranged around the vaporizer and carrying mantles at their lower ends, and discharge pipes leading from the upper part of the vaporizer into the mantle tubes. 45

5. A lamp of the kind described, comprising an elongated pendent vaporizer having a fuel in-let, a housing having a transverse diaphragm or plate dividing it into upper and lower parts, said housing fitting around the vaporizer, mantle tubes supported in the plate or diaphragm and carrying mantles at their lower ends, an air in-let into the upper part of the housing, means for supporting the globe on the lower part of the housing, heat exits in the lower part of the housing, and discharge pipes leading from the upper part of the vaporizer into the mantle tubes. 55

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Witnesses:

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