

No. 618,588.

Patented Jan. 31, 1899.

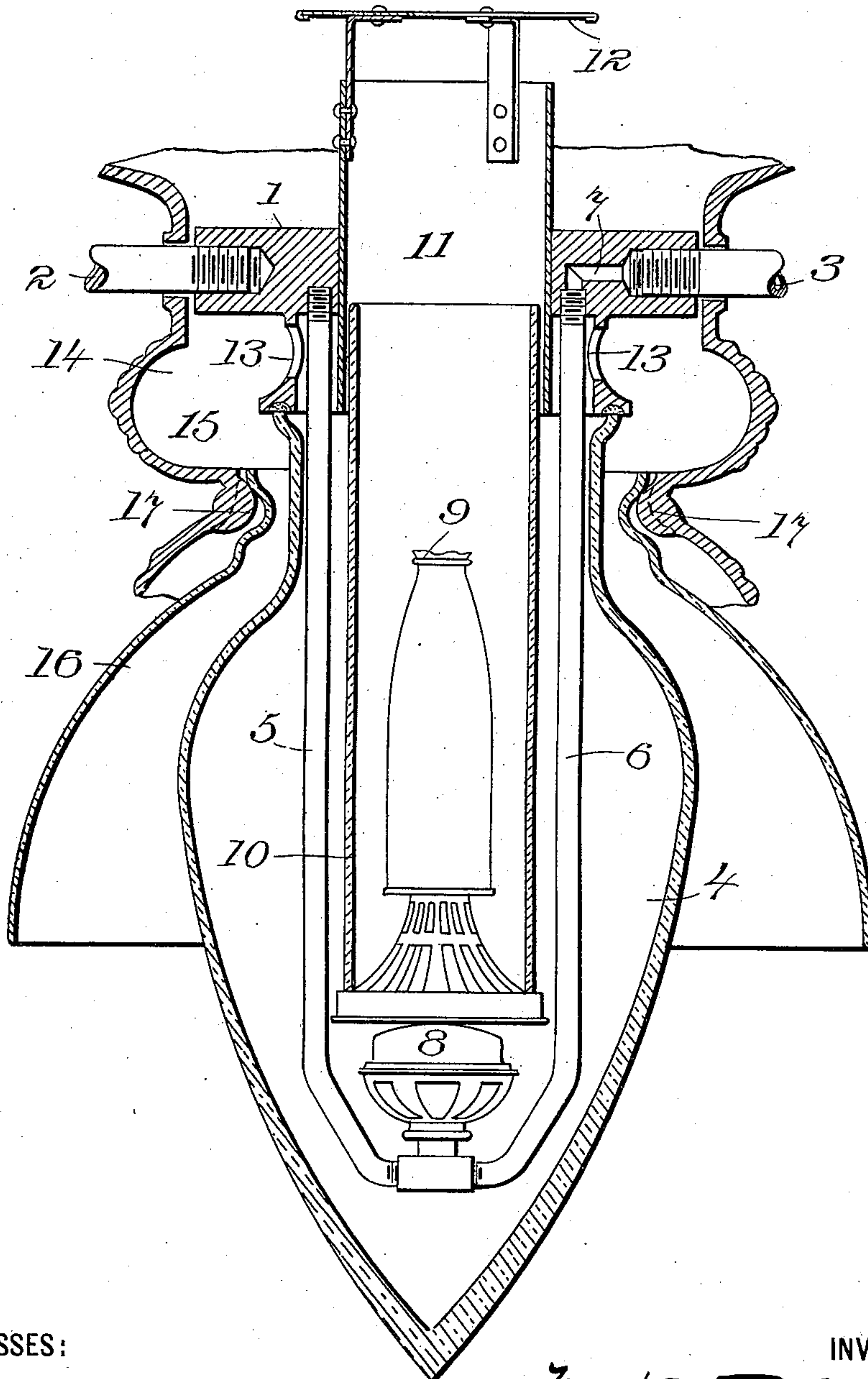
M. P. STEVENS.
GAS LAMP.

(Application filed Dec. 7, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES:

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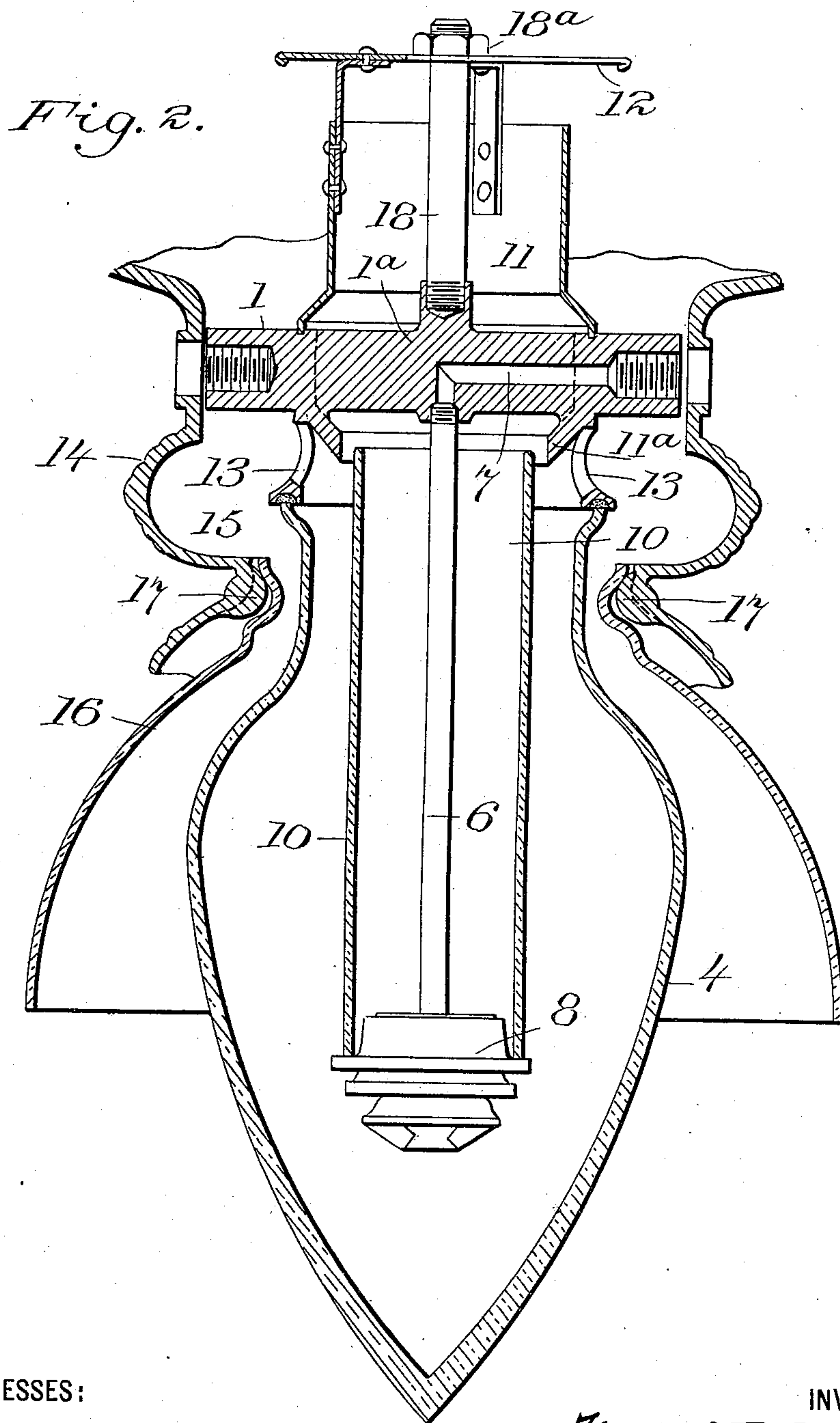
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UNITED STATES PATENT OFFICE.

MERTON P. STEVENS, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE SAFETY CAR HEATING AND LIGHTING COMPANY, OF NEW JERSEY.

GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 618,588, dated January 31, 1899.

Application filed December 7, 1897. Serial No. 661,042. (No model.)

To all whom it may concern:

Be it known that I, MERTON P. STEVENS, a citizen of the United States, residing at East Orange, State of New Jersey, have invented new and useful Improvements in Gas-Lamps, of which the following is a specification.

My invention relates to the production of light; and it consists of an improved form of gas-lamp for suspension from the roof of a car or other compartment in which the Welsbach incandescent mantle or any form of burner giving a long flame may be employed advantageously.

The preferred form of my invention is illustrated in the accompanying two sheets of drawings, in which—

Figure 1 is a vertical central section of my improved form of lamp employing an incandescent mantle, and Fig. 2 is a modification in which the ordinary Argand burner is employed.

Throughout the drawings like reference-figures refer to like parts.

1 represents the supporting-frame of the lamp, which is held in position by any number of supporting-rods 2 3, &c. One of these rods 3 is made hollow to form a pipe for supplying gas.

4 is an elongated globe of glass or other translucent material, preferably given the pear shape shown in the drawings. This globe is attached to and supported on the frame 1.

5 and 6 represent burner-supports, and one of these, as 6, is made hollow to form the gas-supply pipe, being in continuation of pipe 3. Communication between the pipes 3 and 6 is afforded by passage-way 7, cored or bored out in the frame 1.

8 is the gas-burner, located in the lower end of the elongated globe 4. This burner may be the ordinary Argand burner shown in Fig. 2; but preferably it is of the type designed to coöperate with a mantle of refractory material which is heated to incandescence by the flame, such as the well-known Welsbach mantle 9. (Indicated in Fig. 1.)

10 is a long chimney of glass or other translucent material mounted on the burner and extending nearly, if not quite, to the supporting-frame 1. In or on this frame is

mounted a flue 11, which overlaps the upper end of the chimney and protects the same from drafts.

12 is a deflector of any ordinary form mounted over the top of the chimney for the purpose of preventing back drafts and also for diffusing the upward stream of hot gas.

13 13 represent air-inlets in the supporting-frame just above the point at which the globe 4 is attached, and 14 represents a hood of any convenient shape which surrounds and hides the supporting-frame and extends around and below the air-inlets therein. This hood is preferably given the shape shown in the drawings, so as to form a reservoir 15 for air about the upper portion of the lamp. The air in said reservoir is thus subjected to the heating action of the lamp.

16 is a reflector of any convenient shape which forms practically a downward extension of the hood, being held in such hood by lugs 17 or other convenient fastening means. This reflector is so shaped as to form an annular passage-way for the air as it passes up to the reservoir 15.

In the modification shown in Fig. 2 the flue 11 instead of being mounted in a central opening in the supporting-frame is mounted on said frame and held in place by the bolt 18 and nut 18^a, which passes through the deflector 12, the lower end of the bolt being screwed into the spider 1^a, cast integrally with the supporting-frame 1. One of the arms of said spider is bored or cored out to form the gas-passage for the gas-supply pipe 6, which is screwed into the under side of the spider and connects with said gas-passage. In this construction the under side of the supporting-frame is provided with a flange 11^a, which is practically a downward extension of the flue 11 and which surrounds the upper end of the chimney 10.

The mode of operation of my invention is evident from the foregoing description of its construction. The gas enters through the pipes 3 and 6 and is fed to the burner, the flame passing up through the chimney and the hot gas escaping through the flue 11. The draft thus created draws air through the openings 13 13 from the reservoir 15 within the hood, and air passes up under the reflector

to said reservoir to supply the partial vacuum thus created. The air the moment it enters under the reflector is gradually heated, and its temperature rises as it passes to the reservoir 15 and through the openings 13 13 down beside the chimney 10 to the burner.

The advantages of the invention consist in its compact form, in the arrangement of the air-passages by which a steady flow of air such as will not permit of the flickering of the light is secured, and in protecting the upper end of the chimney from side drafts and back drafts. The elongated form of globe permits of the utilization of a long flame or of a long incandescent mantle, and at the same time the arrangement of reflector and globe utilizes all of the light given out by the flame or the mantle. The elongated globe 4 is preferably made of ground glass or some other substance which is translucent but at the same time hides the internal apparatus of the lamp and when the lamp is burning produces the effect of a large luminous body radiating a soft and pleasant light.

Having therefore described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. In a gas-lamp the combination of the elongated globe of translucent material open at the top and closed at the bottom, the supporting-frame to which the upper end of the globe is attached, the burner located in the lower end of the globe, the gas-supply pipe leading from the supporting-frame to the burner, and the chimney of translucent material for said burner extending to the upper end of the globe, together with the annular hood depending from the supporting-frame below the air-openings in said frame, and forming an air-reservoir around the top of the lamp from which the air-supply for the lamp is drawn, substantially as described.

2. In a gas-lamp the combination of the elongated globe of translucent material open at the top and closed at the bottom, the supporting-frame to which the upper end of the globe is attached, the burner located in the lower end of the globe, the gas-supply pipe leading from the supporting-frame to the burner, and the chimney of translucent material for said burner extending to the upper end of the globe, together with the annular hood depending from the supporting-frame below the air-openings in said frame, and forming an air-reservoir around the top of the lamp from which the air-supply for the lamp is drawn, and the reflector forming a downward extension of said hood, substantially as described.

3. In a gas-lamp the combination of the elongated globe of translucent material open at the top and closed at the bottom, the supporting-frame to which the upper end of the globe is attached, the burner located in the lower end of the globe, the gas-supply pipe leading from the supporting-frame to the burner, and the chimney of translucent material for said burner extending to the upper end of the globe, together with the annular hood depending from the supporting-frame below the air-openings in said frame, and forming an air-reservoir around the top of the lamp from which the air-supply for the lamp is drawn, and the incandescent mantle mounted over said burner and extending up to the level of the lower end of the hood, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

MERTON P. STEVENS.

Witnesses:

E. W. BULKLEY,
JOHN T. CLARK.