F. H. SHEPHERD.
Street-Lamp.

No. 207,136. Patented Aug. 20, 1878.

Fig. 1

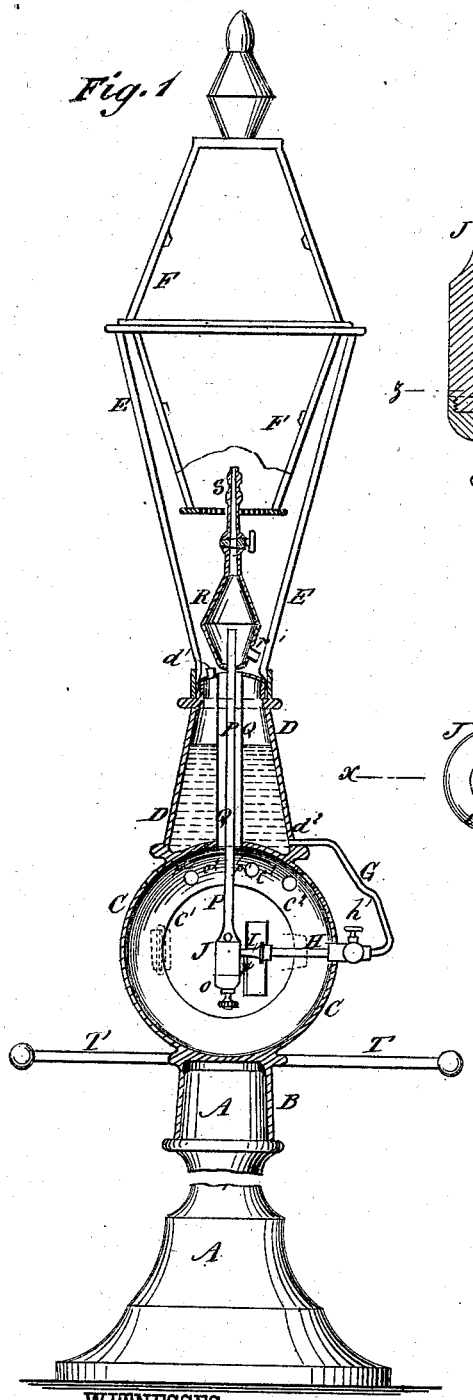


Fig. 2

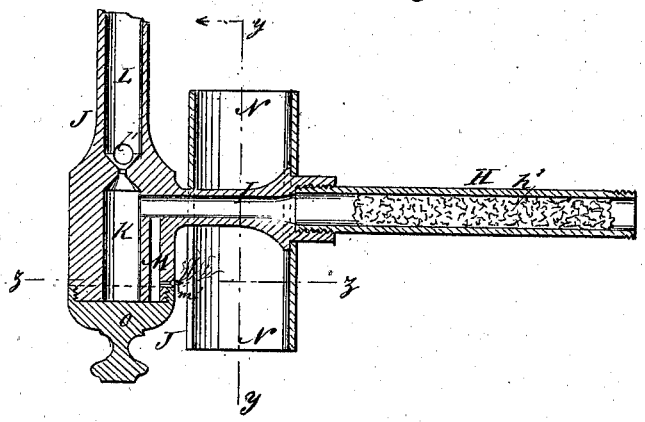


Fig. 3

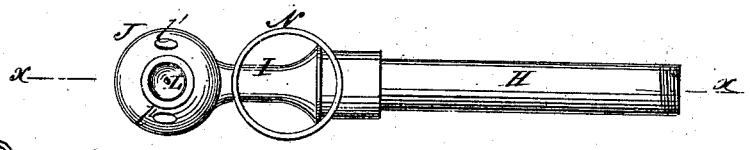


Fig. 4

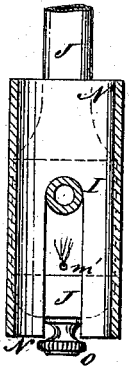
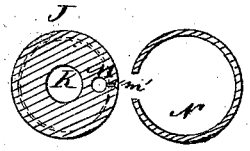


Fig. 5



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INVENTOR:

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UNITED STATES PATENT OFFICE.

FRANCIS H. SHEPHERD, OF DAVENPORT, IOWA.

IMPROVEMENT IN STREET-LAMPS.

Specification forming part of Letters Patent No. **207,136**, dated August 20, 1878; application filed January 24, 1878.

To all whom it may concern:

Be it known that I, FRANCIS H. SHEPHERD, of Davenport, in the county of Scott and State of Iowa, have invented a new and useful Improvement in Street-Lamps, of which the following is a specification:

Figure 1 is a vertical section of my improved apparatus. Fig. 2 is a detail vertical section of the gas-generating device, taken through the line *x x*, Fig. 3. Fig. 3 is a top view of the same. Fig. 4 is a cross-section of the same, taken through the line *y y*, Fig. 2. Fig. 5 is a horizontal section of the same, taken through the line *z z*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved apparatus for generating gas from gasoline and burning it for lighting streets, which shall be simple, neat, and compact in construction, and convenient and reliable in use.

The invention consists in the combination of the post, the globe provided with the socket, the door, and the air-holes, the tank provided with the pipe, and the lantern-frame and lantern; in the generator formed of the hollow arm, the three chambers, the air-holes, the burner, the slotted shell, the inlet-pipes, the outlet-pipe, and the guard-plate, in combination with the globe and the tank.

A represents a wooden post of any convenient size and height, and the upper end of which fits into a socket, B, formed upon the lower side of a globe, C. Upon the upper side of the globe C is formed a conical or cylindrical chamber or tank, D, to receive the gasoline.

To the upper end of the tank D is attached the frame E of the lantern F. In the top of the tank D is formed an opening, d^1, through which it is supplied with gasoline, and in the lower part of its side is formed an outlet-opening, d^2. In the outlet-opening d^2 is secured the upper end of a pipe, G, the lower end of which is secured to the outer end of the pipe H, which passes in through the side of the globe C, and is secured to the hollow arm I of the generator. The pipe H is provided with a stop-cock, h^1, and is packed with wire-gauze h^2, through which the gasoline percolates as it passes to the generator, and by which it is minutely divided to prepare it for being vaporized.

J is the generator, with the upper part of the chamber K of which the cavity of the hollow arm I communicates. The top of the chamber K is conical, and its apex meets the apex of the conical bottom of the upper chamber, L, forming a small orifice, through which the gas or vapor passes up.

M is a small chamber, leading down from the lower side of the cavity of the hollow arm I, and from the lower part of which a small hole, m', leads out through the side of the generator J, directly below the hollow arm I, to serve as a burner to supply heat to vaporize the gasoline as it passes through the hollow arm I. The flame and heat from the burner m' are confined around the hollow arm I by the cylindrical shell N, which has a hole formed through it to receive the said hollow arm I, is open at both ends, and is slotted upon the inner side of its lower part to receive the flame and heat from the burner m'. The chambers K M are bored from the lower end of the solid body of the generator, and their lower ends are closed by a cap, O, screwed upon the body of the said generator J. In the sides of the lower part of the chamber L are formed holes l', to allow air to enter said chamber and mingle with the gasoline-vapor.

With the open upper end of the chamber L is connected the lower end of the pipe P, which passes up through the larger pipe, Q. The pipe Q passes up through and forms a part of the tank L, and forms a passage for the hot air from the globe C, so that the said hot air may keep the gasoline-vapor warm, and at the same time may warm the gasoline in the said tank.

To the pipe P, in the upper part of the globe C, is attached a concavo-convex plate, p', to prevent the draft of air through the pipe Q from extinguishing the flame of the burner m'. The upper end of the pipe P passes into and is connected with the lower end of the gasometer R, placed within the lantern-frame E, and to its upper end is attached the burner S. In the lower part of the gasometer R is

formed a hole, r', to admit air to mingle with the vapor as it passes to the burner S.

The globe C is provided with a door, c^1, to give convenient access to the generator, and in its walls are formed a number of holes, c^2, to admit air. The socket B is provided with a ladder-rest, T, in the manner of an ordinary lamp-post.

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

1. The combination of the post A, the globe C, provided with the socket B, the door c^1, and the air-holes c^2, the tank D, provided with the pipe Q, and the lantern-frame and lantern E F, substantially as herein shown and described.

2. The generator J, formed of the hollow arm I, the three chambers K L M, the air-holes l', the burner m', the slotted shell N, the inlet-pipes G H, the outlet-pipe P, and the guard-plate p', in combination with the globe C and the tank D, substantially as herein shown and described.

FRANCIS H. SHEPHERD.

Witnesses:
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R. J. MUCKLE.