E. BOESCH.

Street Lamp.

No. 106,990. Patented Sept. 6, 1870.

Fig. 2.

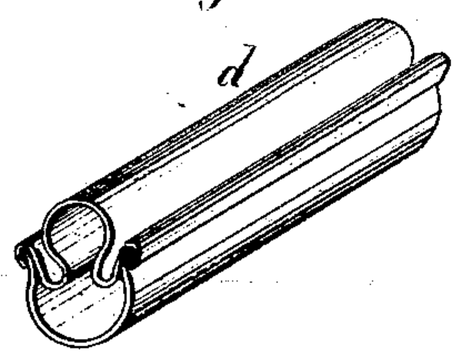


Fig. 1.

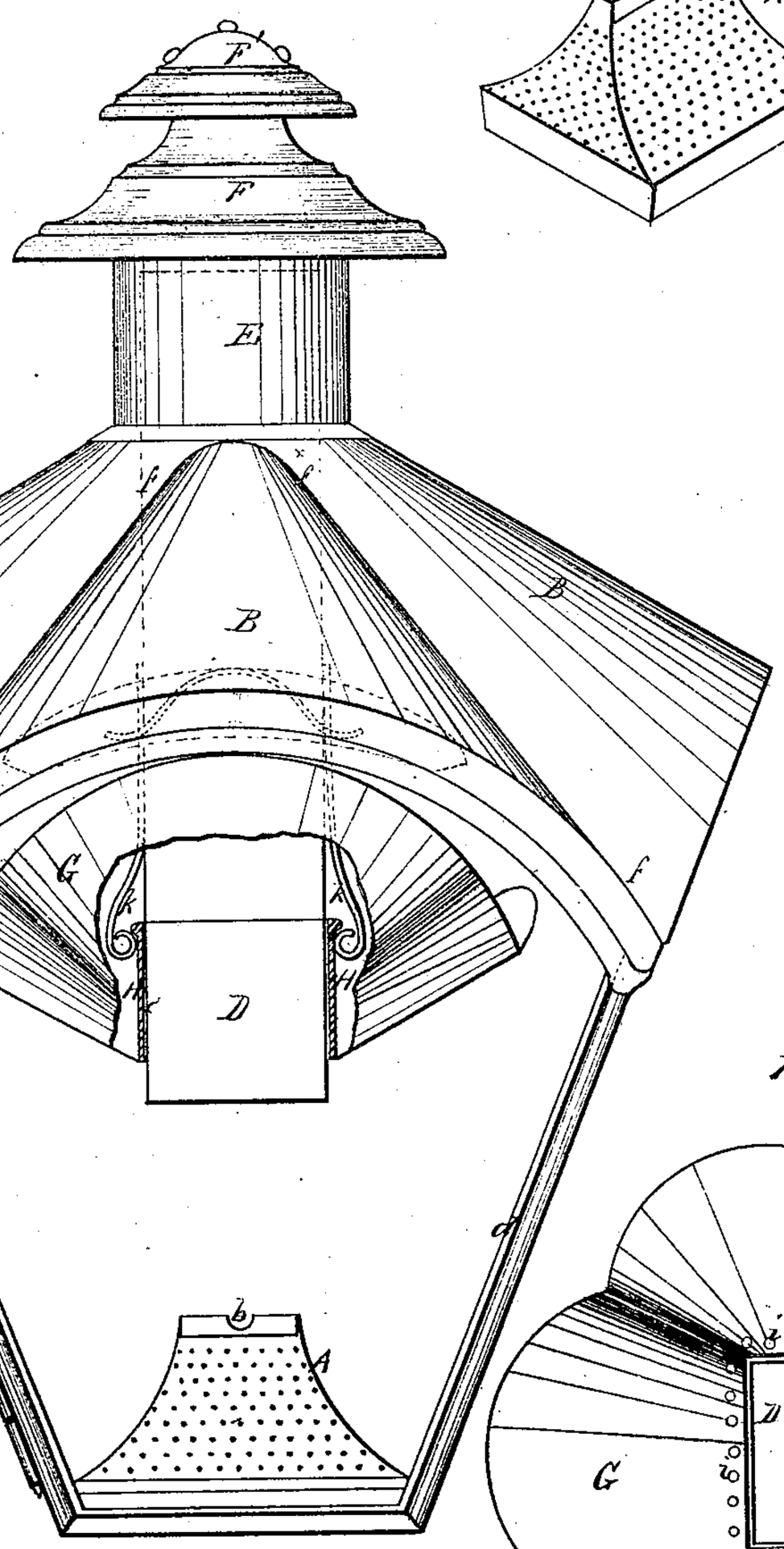


Fig. 5.

Fig. 3.

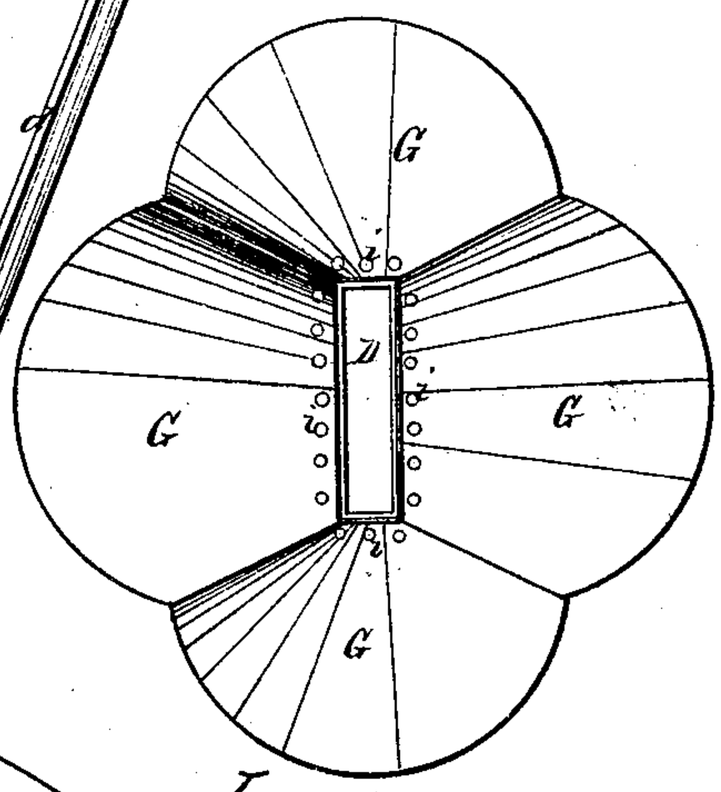
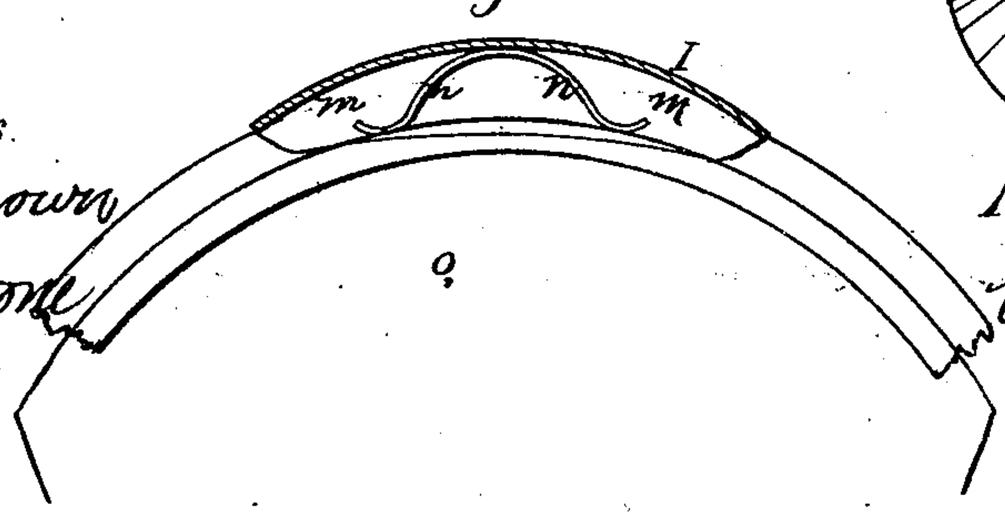


Fig. 4.



Witnesses.
Charles Brown
Jno. L. Boone

Inventor.
Emil Boesch

United States Patent Office.

EMIL BOESCH, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 106,990, *dated September* 6, 1870.

IMPROVEMENT IN STREET-LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EMIL BOESCH, of the city and county of San Francisco, State of California, have invented an Improved Lamp; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates more particularly to that class of lamps which is employed upon the streets of cities to protect gaslights; and

Its object is to so construct the lamp as to obtain an increased volume of light from the same burners as now used. This I accomplish by the application of improved reflectors, which are arranged so as to be adjusted to or from the light, and thus give it more or less range, as desired.

The draught is also provided for in an improved manner, so that the efficiency of the light is also increased thereby.

My invention further relates to an improved method of retaining the glass sides of the lamp in place, so that they can readily removed when it is desired either to clean or renew them.

In order to more fully illustrate and explain my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of my lamp.

Figure 2 is a view of a portion of one of the corner posts, showing their construction.

Figure 3 is a bottom view of the upper reflector.

Figure 4 shows the device for holding the glass in place.

Figure 5 is a view of the perforated reflector.

The general form of my lamp is similar to those ordinarily used, being largest near the top and tapering toward the bottom.

The bottom of the lamp is left open, and a perforated reflector, A, is placed inside the lamp, so that it shall rest upon the lower rim of the lamp. This reflector is formed with four sloping sides, two of which are united at the top so as to form a ridge, similar to that formed by a hip-roof in architecture.

A long narrow slot, *a*, is left between these two sides, through which the gas, when turned on, can be lighted from below. This slot also furnishes air directly to the flame, and aids to increase the light, at the same time causing it to burn steadily.

A small hole, *b*, is made at the middle of the slot *a*, into which the upper end of the gas-burner enters.

The perforations in the reflector allow a sufficient amount of the light to pass downward immediately around the lamp-post, and also serve to provide fresh air to the flame.

The four standards *d* of the lamp-frame are formed of two pieces of sheet metal, bent and united as shown at fig. 2. This peculiar manner of making the standards provides both the body of the standard and the side channels necessary for holding the glass sides in place.

A curved roof, B, is formed over the top of each glass side, which gradually rises and tapers toward the center, leaving channels *f* at the junction line of each two of the roofs.

The chimney D is made so that a section would give the form of a parallelogram. This chimney is placed through the opening in the top of the lamp, until its lower end is at the proper distance above the flame, when it is soldered or otherwise secured in place. Its upper end also extends a short distance above the roof of the lamp.

An outside chimney or protector, E, which is circular in form, is then placed over the chimney D, and secured to the ridges of the circular roofs, but leaving the channels *f* communicating with its interior. The upper end of this outer chimney is provided with cowls F F', which protect the draught and prevent dust and water from passing into the lamp.

The channels *f*, which pass inside the outer chimney E, provide cool air between it and the inner chimney D, from whence it can pass through the openings at the sides of the chimney D into the interior of the lamp, entering above the adjustable reflector G, and thus keeping it cool.

The reflector G is composed of as many faces as there are sides to the lamp. This reflector is made of one sheet of metal, which may be stamped or otherwise formed. An opening is left in its center, and a long flange, H, formed on its inner side, of a shape corresponding to the chimney D, and is held by flat springs, *k*, which are secured to the chimney near the roof, and bear against it. The flange H slides under these springs, and is held by them at whatever height it is desired to regulate it.

Small holes, *i*, are made around the opening in the reflector, through which the heated air from around the flame can pass in its passage through the top of the lamp.

The glass sides of the lamp, as above stated, are retained in the channels formed in the standards *d*.

In order to keep them steady, and prevent their being displaced by a jar or other accident, a small curved sheet-metal box, I, is secured to the lamp immediately over the center of each arch, in which the glass is to be placed.

A slot, *m*, extends the entire length of the box in a position convenient to permit the upper edge of the glass to be slipped into it.

A spring, *n*, is placed inside this box, being bent so

as to spring both against the upper and lower sides of the box.

The upper edge of the glass *o* is first inserted in the slot in the box by compressing the spring, when it can be readily placed in the grooves prepared for it, the spring holding it firmly in place. This manner of constructing lamps will readily recommend itself to person familiar with their requirements.

Besides the advantages above enumerated, the lighting and extinguishing of the lamp will be more readily accomplished than with those ordinarily used. This will be apparent when it is seen that the cock which lets the gas on is below the lamp, and altogether outside of it, and after it has been turned, by simply placing a lighted match or other flame inside the perforated reflector A, the gas will be lighted.

The lamplighter can be provided with a lamp, which is provided with a hook, so that, by one movement, the gas can be turned on and the lamp lighted simultaneously.

By adjusting the reflector G the light can be given a greater or less range, as desired, and will be thrown out in every direction equally, while the provisions made for ventilation will prevent any part from being heated, or the flame from wavering or burning badly for want of fresh air.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The perforated reflector A, constructed as described, and placed in the bottom of a lamp, substantially as and for the purpose above described.

2. The standards *d*, formed of two pieces of sheet metal, so as to leave the grooves or channels for receiving the glass, substantially as above specified.

3. The arched tapering roofs B over each side, so constructed as to form channels *f*, substantially as and for the purpose described.

4. The adjustable reflector G, having as many concave faces as there are sides to the lamp, and provided with the flange or sleeve H, in combination with the springs *k*, substantially as and for the purpose above described.

5. The box I, provided with the slot *m* and spring *n*, substantially as and for the purpose above described.

6. The above-described street-lamp, in which are combined the reflectors A and G, chimneys D and E, roof B, with its channels *f*, and the cowls F and F', all constructed and arranged substantially as specified.

In witness that the above-described invention is claimed by me, I have hereunto set my hand.

EMIL BOESCH.

Witnesses:

J. L. BOONE,

CHARLES BROWN.