

R. W. PARK.
VAPOR-BURNER.

No. 191,252.

Patented May 29, 1877.

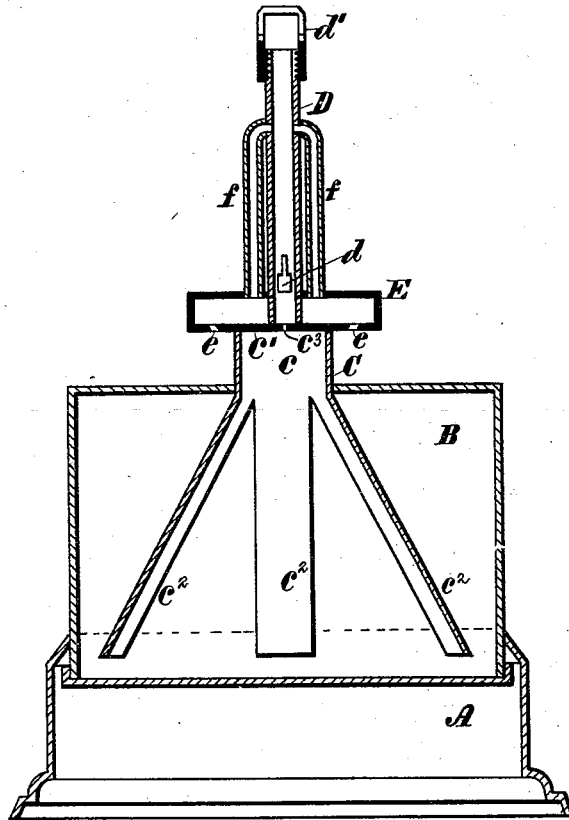


Fig. 1

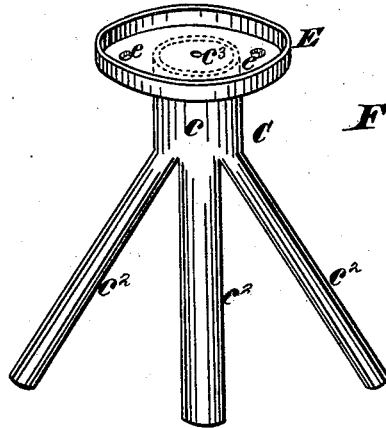


Fig. 2

Witnesses
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UNITED STATES PATENT OFFICE

ROBERT W. PARK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. **191,252**, dated May 29, 1877; application filed October 12, 1876.

To all whom it may concern :

Be it known that I, ROBERT W. PARK, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Lamps or Vapor-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical transverse section, and Fig. 2 a detail perspective.

The object of my present improvements is to provide efficient means for conducting heat from the burner to the reservoir and distributing it uniformly through the latter, so as to secure speedy generation of gas.

The invention consists in the peculiar construction and combination of parts, as herein-after more fully described.

Referring to the accompanying drawing, A shows a shell or casing, which forms a stand for the lamp, and contains the reservoir B, said reservoir being intended to be packed with wick or equivalent material, saturated with hydrocarbon fluid. C is a pipe, which passes through the top of the reservoir, the part above said top being a cylinder, *c*, with a closed or blank end, *c*¹, while the part below is split or divided to form flaring wings *c*², which ramify the reservoir B. D is the burner-stem, extending from the pipe C, and E is an expansion-chamber surrounding the base of said stem, and communicating with it by means of slender tubes *ff*. *c*³ is a pin-hole

in the head *c*¹, and *ee* are jet-orifices in the bottom of the expansion-chamber E.

The operation is substantially as follows: Heat being applied externally to the reservoir B by any suitable means—as by igniting a small quantity of alcohol, poured on the top—gas is generated in said reservoir, and passes thence through the openings between the wings *c*² into the cylinder *c*, and out of said cylinder through the pin-hole *c*³ to the burner-stem D. Here it mingles with air drawn in through the openings *d*, and passes up toward the burner *d*'. Part of the gas thus passed up the burner-stem returns through the tubes *ff* to the expansion-chamber E, issuing from the latter through the jet-holes *e*, being there ignited and caused to impinge against the cylinder *c*. Said cylinder thus becomes highly heated, its caloric being conducted to the wings *c*², which distribute the same through the body of the reservoir B, causing the speedy generation of gas, which passes up, as already described, to the burner for illuminating purposes, a part being returned for heating, in the manner set forth.

What I claim as my invention is—

In combination with the cylinder *c*, the gas-orifices *ee*, affording means for heating said cylinder, substantially as shown and set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 6th day of October, 1876.

ROBERT W. PARK.

Witnesses :

JOS. B. CONNOLLY,
CHAS. F. VAN HORN.