J. J. PALMER.

VAPOR BURNER.

No. 110,276. Patented Dec. 20, 1870.

Fig. 1

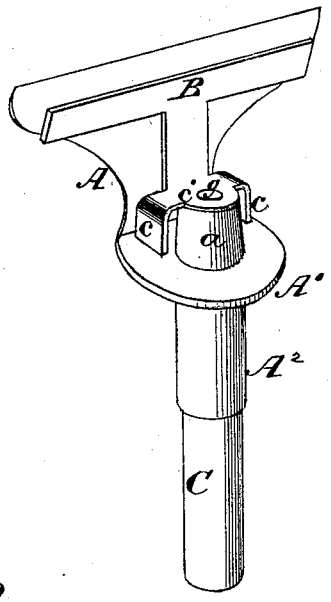


Fig. 2

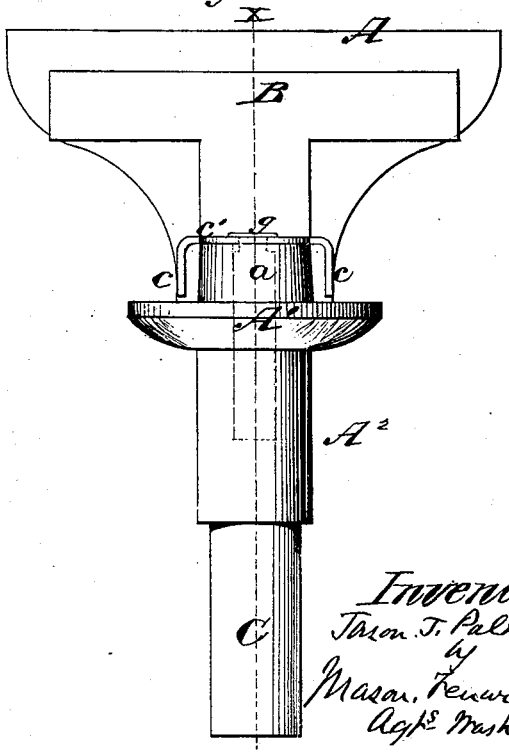
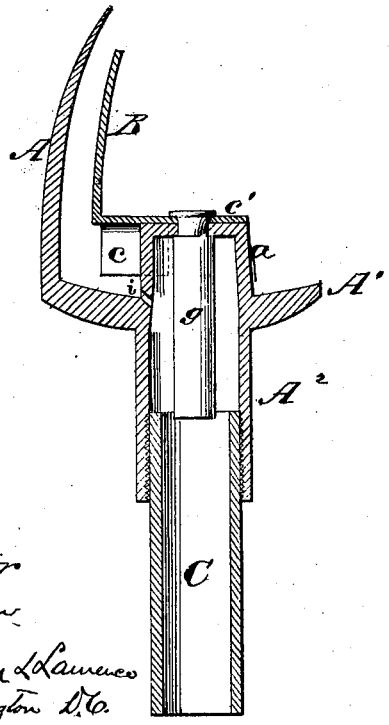


Fig. 3



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JASON J. PALMER, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 110,276, dated December 20, 1870.

IMPROVEMENT IN VAPOR-BURNERS.

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, JASON J. PALMER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and improved Vapor-Burner; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of the improved burner.

Figure 2 is an elevation of one side of the burner

Figure 3 is a diametrical section, through the burner, in the plane indicated by dotted line $x\,x$ in fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements on burners which are intended for burning the vapor generated by the volitilization of light hydrocarbon fluids, and which are so constructed that the jet of vapor issues from one side of a nipple on the burner-tube, and is directed upwardly and outwardly by means of two spreading-plates.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing—

A and B represent two spreading-plates, which are much wider above than below, and which are arranged on one side of the vertical center of a hollow nipple, *a*.

The plate A is made thin, and rises from the edge of a shallow cup, A^1, and is slightly curved, as shown in fig. 3.

The other spreader, B, is a thin plate of metal, copper being preferred, which is of the form of the letter T, and which is secured, by a rivet, *g*, upon the flat top of the nipple *a*, so that it rises perpendicularly from its base-piece *c'*, through which latter the rivet passes.

The lower part of the rivet *g* is extended for enough down below the top of the nipple *a* to impinge upon the upper end of the wick which is contained in the tube C, when the socket-portion A^2 is screwed upon the said tube C, as shown in fig. 3. The elongated rivet *g* serves a twofold purpose, to wit: it unites the spreader B to the nipple *a*, and it also conducts heat down to the wick in the act of lighting the lamp, and thus rapidly volatilizes the fluid.

The vapor, which is generated in the chamber within and below the nipple *a*, is directed upwardly and outwardly through the oblique orifice *i*, so as to impinge against the spreader A near its contracted base. The orifice *i* is made through the nipple *a* near its base, and, on opposite sides of this orifice, wings, *c c*, depend from the portion *c'* of the spreader B, on which portion these wings are formed. The wings *c c* operate as guides, to break the force of the laterally-inflaring currents of air, and thereby to prevent the loss of vapor and unsteadiness of flame.

It will be seen that the spreader A, the nipple *a*, the shallow cup A^1, and the socket A^2 are made of one piece of metal; also, that the T-shaped extension B, its base portion *c'*, and its guard-wings *c c* are made of another piece of metal, which I prefer shall be of copper, for the reason that this metal is readily heated and will retain the heat. It will also be seen that the two pieces above named are united by an elongated rivet, *g*, which is extended down to the top of the wick or "packing" which is contained in the upper part of the tube C.

I make the cup A^1 for the purpose of containing a small quantity of fluid, which is ignited for the purpose of quickly heating up the burner and volatilizing the fluid to light the lamp.

I am aware that vapor-burners were made before my invention, wherein a perforated nipple, *a*, was combined with upwardly-flaring spreaders, and I make no claim to such devices.

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

1. The T-shaped spreader B, constructed with a base portion, *c'*, and guard-wings *c c*, in combination with the perforated nipple *a* and the spreader A, substantially as described.

2. The elongated rivet *g*, serving as a heater, and also as a means of securing the spreader B to the nipple *a*, substantially as described.

3. The spreader B, the spreader A, the nipple *a*, and the cup A^1, constructed and combined substantially as described.

JASON J. PALMER.

Witnesses:

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