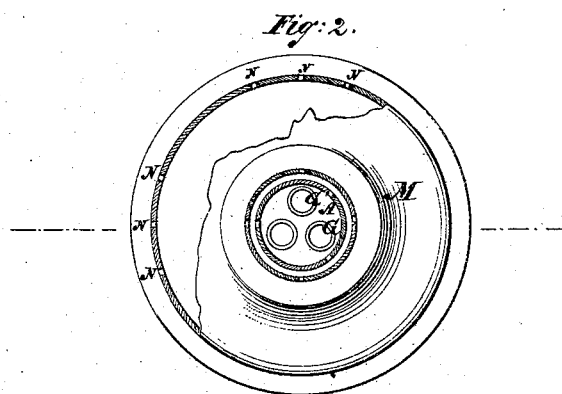
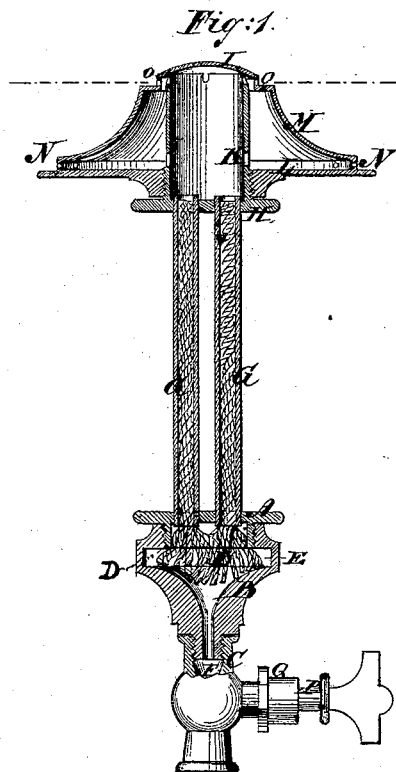


WILLIAM E. BARTLETT.
Improvement in Vapor Burners.

No. 115,015.

Patented May 23, 1871.



Witnesses:

C. Raettig
Wm. H. C. Smith.

Inventor:

W. E. Bartlett.

PER

Wm. H. C.

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM E. BARTLETT, OF NEWBURG, NEW YORK.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 115,015, dated May 23, 1871.

To all whom it may concern:

Be it known that I, WILLIAM E. BARTLETT, of Newburg, in the county of Orange and State of New York, have invented a new and Improved Naphtha-Burner; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification.

This invention relates to improvements in burners for vaporizing naphtha, gasoline, and the like; and it consists in the construction and arrangement hereinafter described, whereby it is designed to provide a very efficient and safe burner.

Figure 1 is a sectional elevation taken on the line *x x* of Fig. 2, and Fig. 2 is a horizontal section on the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is a screw-cap adapted for screwing into an attachment, B, for connecting it to a gas-pipe, C, or to a common lamp-top. Said attachment B is provided with a large cavity, D, in the upper end for receiving the ends E of the wicking, and from this cavity a passage, F, extends to the lower end, which is reduced to the size of the gas-pipe to which it is to be attached and screws into it, while the upper end is large enough to receive the cap A. From this cap rise, preferably, three small metal tubes, G, a suitable distance, to a cap, H, which screws into the burner I at the lower side, and has a tubular extension, K, rising to the upper wall of the burner, and having perforations in it to allow the gas to escape into the burner. The burner, consisting of the broad flat disk L forming the bottom plate and the inverted cup M resting on it and connected tightly to it, has twelve small orifices, N, arranged in clusters of three, equidistant from each other at the four sides; and at O it has one orifice at each side in the same radial planes that the center orifices of each cluster of the

holes N are. This arrangement of orifices I have found in practice to give a clear and brilliant light, while modifications, apparently unimportant, give less favorable results; for example, orifices between the clusters of holes N will cause a sluggish smoky flame, or the orifices O, arranged in the radial planes between the said clusters, will give the same results. The cause of this I am unable to explain, although having had ample demonstration of the fact. I therefore consider the arrangement of the said orifices above described essential to the successful operation of the burner. The tubular extension K is employed to convey the heat from the top of the burner to the tubes G, for heating them sufficiently to vaporize the naphtha, and is intended for use more particularly when the burner is to be applied to a lamp. It may be dispensed with when a font is used for holding the naphtha, and arranged sufficiently high to insure the upward flow of naphtha to the burner. In the latter case a key, P, will be employed for regulating the flow, said key screwing through a stuffing-box, Q, into the passage, so as to effectually cut it off.

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

1. The cap A, tubes G, cap H, and the burner I, constructed and arranged substantially as specified.

2. The arrangement of the orifices N and O in the burner, in the order specified.

3. The combination, with the burner-tubes and cap A, of the attachment B, adapted for connecting said burner to gas-pipes, substantially as specified.

The above specification of my invention signed by me this 4th day of April, 1871.

WILLIAM E. BARTLETT.

Witnesses:

GEO. W. MABEE,
T. B. MOSHER.