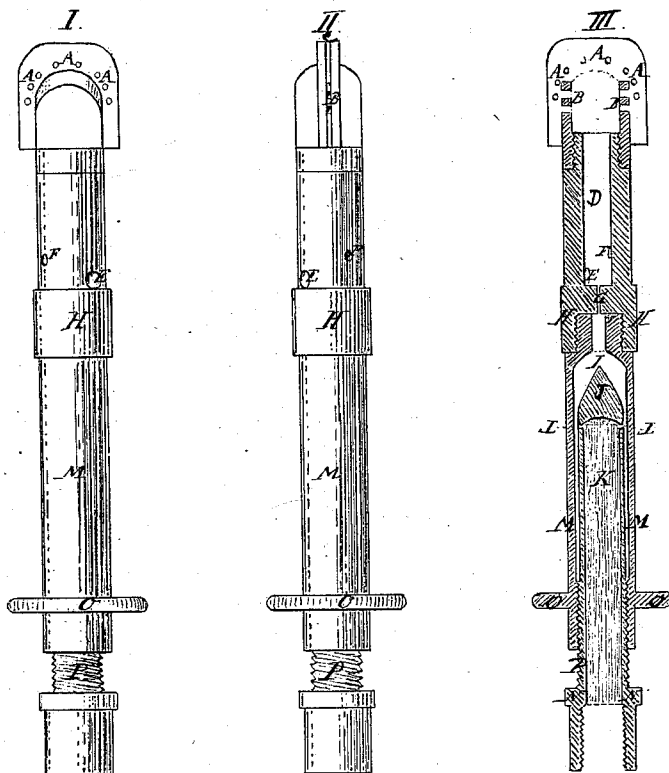


T. WARD.
VAPOR BURNER.

No. 106,522.

Patented Aug. 16, 1870.



Witnesses.

A. H. Hitchcock
John Smith

Inventor,

Thomas Ward

United States Patent Office.

THOMAS WARD, OF COLUMBUS, OHIO,

Letters Patent No. 106,522, dated August 16, 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, THOMAS WARD, of Columbus, of the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Vapor-Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making a portion of this specification, in which—

Figure I is a perspective view of a burner constructed according to my invention.

Figure II is a side view of the same.

Figure III is a longitudinal sectional view of the same. similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to provide an apparatus that will generate gas for illuminating purposes from any combustible fluid.

The invention consist in a vapor-burner having projections at the top, through which are air-holes to assist in the proper working of the same.

The invention further consists in the solid pointed packing-tube acting as a plug-key.

The invention further consists in the novel construction and combination of all the parts of the burner.

To enable others to understand the nature and construction of my invention, I will proceed to describe it with reference to the drawings.

A A A represent the air-holes in the projections at the top, as are shown in figs. I and III, being for the purpose of admitting air to the illuminating flame immediately at the point where it ignites, thus preventing the same from smoking.

B and C, as shown in figs. II and III, represent openings at the top of gas-chamber D, being for the purpose of supplying gas for the illuminating-jet.

E and F represent air-holes for the purpose of admitting oxygen into gas-chamber D.

G represents a small opening from generating-chamber I into gas-chamber D, for the purpose of supplying the same with gas after it is volatilized by means of heat conveyed from the projections at the top.

J represents the solid point at the top extremity of the packing-tube N, and serves for the purpose of a complete shut-off or stop against the flow of gas or fluid into the burner H when the light is to be extinguished, and acts as such shut-off by means of the screw-thread P at the lower end of said packing-tube,

working in a similar thread at the bottom of the hollow tube M, which causes said point to be inserted in the opening or upper portion of said generating-chamber.

K represents the packing to regulate the flow of the fluid.

L represents openings at the top of the packing-tube, to admit the fluid into the generating-chamber.

O represents the thumb-ring, which is used for the purpose of adjusting the stop-cock, opening or closing the same, as is necessary in lighting or extinguishing the burner.

The fluid enters the tube N, passing upward through the packing K, thence out through openings L L into generating-chamber I, and is stopped from further progress by means of the point J acting as a plug in a socket in the upper portion of said generating-chamber.

When the burner is to be lighted, an application of heat is made to the outside of the same, and near the generating-chamber, by means of a small torch, occupying but a few seconds of time, and generating sufficient gas to ignite the illuminating-jet. The plug-point is then removed from the socket by turning the thumb-ring O, and the gas, as it is generated, passes upward through the small opening G into the gas-chamber D, where it is supplied with oxygen by means of openings E and F, thence out at openings B and C, where it is ignited, producing a broad, bright illuminating-flame, which, acting upon the projections at the top, produces sufficient heat to generate gas for the further supply of the burner.

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

1. The flange or projection at the top containing the air-holes A A A, in combination with openings B and C, as specified.

2. The packing-tube, provided with a solid point, J, acting as a plug-key or stop-cock, as described.

3. The combination of burner H, hollow tube M, packing-tube N provided with solid point J, when all arranged to operate as herein specified.

THOMAS WARD.

Witnesses:

JOHN SMITH,
A. H. FRITCHEY.