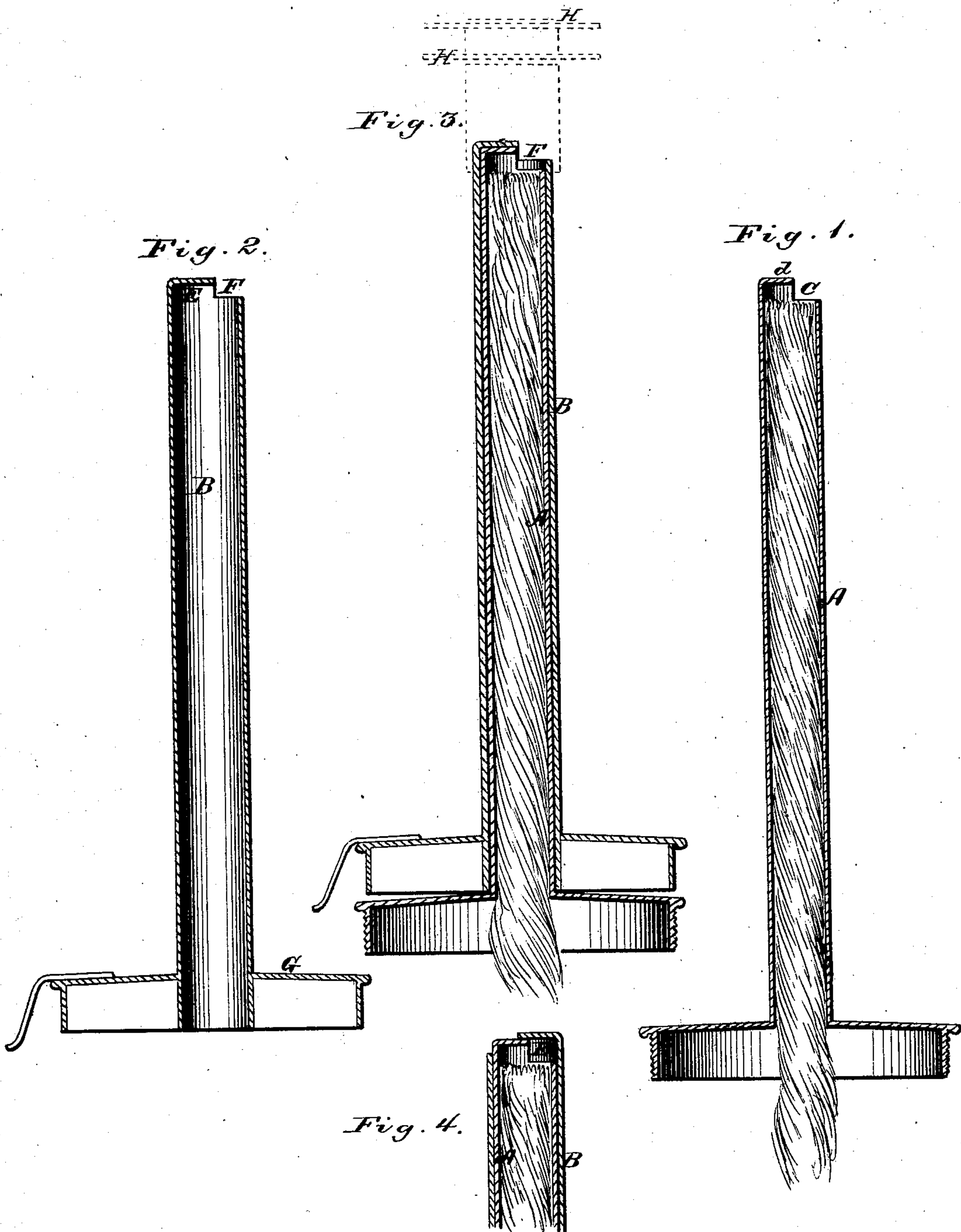


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TRUMAN P. DOANE.  
Vapor Burner.

No. 121,497.

Patented Dec. 5, 1871.



Witnesses.  
C. F. Brown.  
H. L. Savoy.

Inventor.  
Truman P. Doane

# UNITED STATES PATENT OFFICE.

TRUMAN P. DOANE, OF NEW YORK, N. Y.

## IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 121,497, dated December 5, 1871.

*To all whom it may concern:*

Be it known that I, TRUMAN P. DOANE, of the city and State of New York, have invented Improvements for Regulating the Supply of Gas for Hydrocarbon-Vapor Burners, of which the following is a specification:

The object of my invention is to produce a cheap, simple, and effective device for regulating the flame of a hydrocarbon-vapor burner, and to prevent the escape of the gas when the lamp is not in use.

I am aware that many devices for this purpose have been invented; but they have all proved defective from the fact that the construction of them was such that it did not admit of the valve or cut-off arrangement being ground together with emery and oil or other suitable substances, as it is a well-known fact that a valve made of metal can be made gas-tight only by grinding the parts together.

In the drawing, Figure 1 is a vertical sectional view of my wick-tube attached to the lamp-collar. Fig. 2 is a vertical sectional view of the case fitted to slide closely down over tube of Fig. 1. Fig. 3 is a vertical sectional view of wick-tube, Fig. 1, and metal case, Fig. 2, carrying generating-cap H H ready for use. Fig. 4 is a partial vertical sectional view of Figs. 1 and 2, showing the gas shut off and entirely closed.

In constructing my improved regulator I attach to the ordinary lamp-collar a piece of metal tubing, A, Fig. 1, the upper end of which is provided with an orifice, as shown at C, Fig. 1. This orifice may be made of any described shape

or size. Over this I slide the metal case, Fig. 2, the bottom of which may be provided with a flange of wood or metal filled with plaster of Paris or any substance that is a good non-conductor of heat, to which flange or collar an index-finger or pointer may be attached. The upper end of this case is provided with an orifice, F, corresponding with the orifice C, Fig. 1. The bearing-points *d*, Fig. 1, and E, Fig. 2, are then ground together with emery and oil or other suitable substances or material, thereby forming a perfectly gas-tight joint or valve.

By simply revolving the case B, Fig. 2, the orifice F, Fig. 2, and corresponding one C, Fig. 1, may be increased or diminished, and thereby regulating the size of the flame desired, or closed entirely, and thereby preventing the escape of gas when the lamp is not in use.

Any of the ordinary generating-caps, tips, or burners for generating the light hydrocarbons may be attached to this regulator by securing them to the top of the revolving metal case B, Fig. 3, as shown by dotted lines H H.

I claim as my invention—

The wick-tube A provided with orifice C, in combination with the rotary case or cap B provided with orifice F, the tube and case or cap having bearing-points *d* E, constructed and arranged in the manner and for the purpose substantially as described.

TRUMAN P. DOANE.

Witnesses:

EDM. F. BROWN,  
E. A. ELLSWORTH.

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