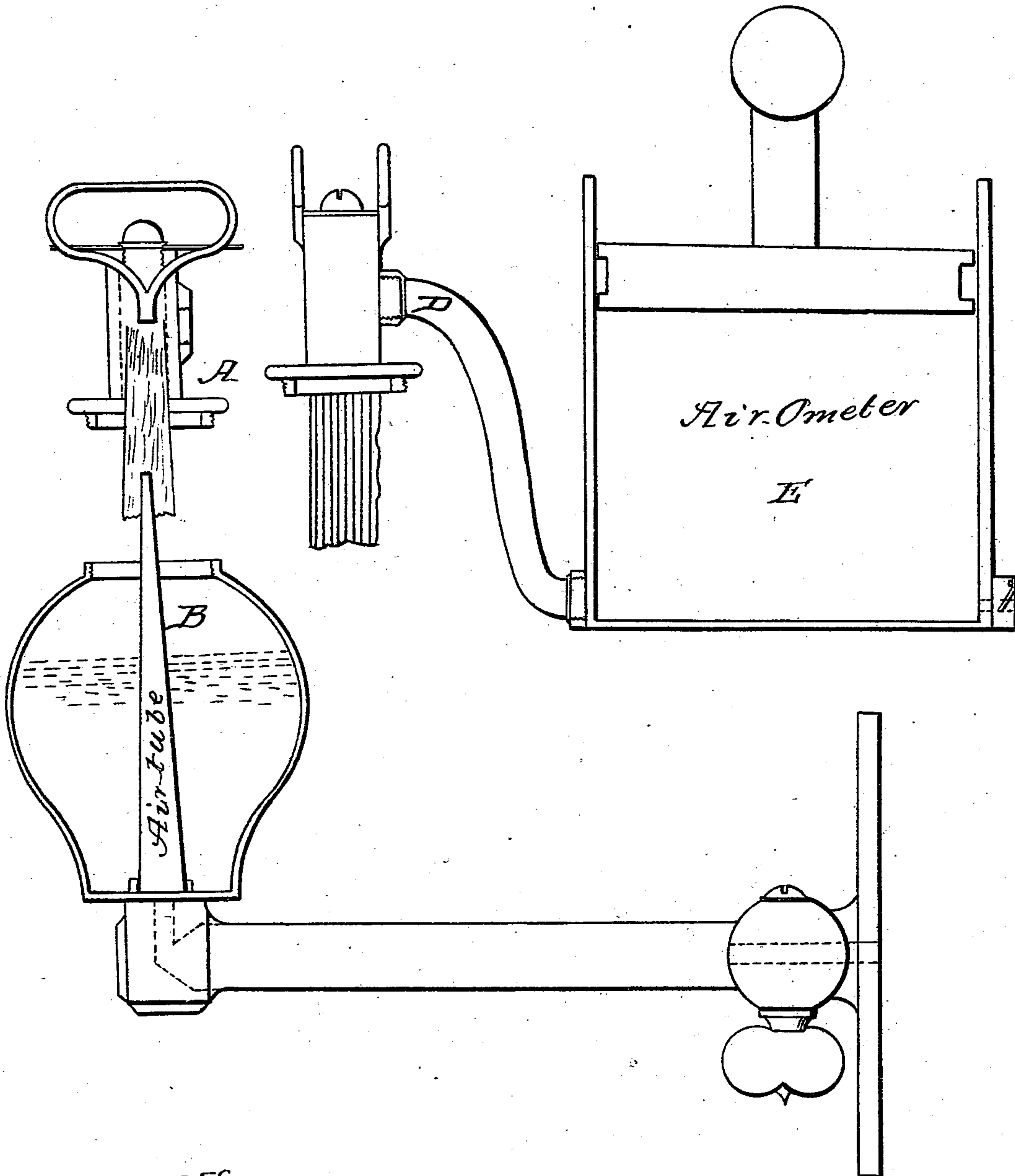


W. B. BILLINGS.

Coal Oil Lamp.

No. 38,879.

Patented June 16, 1863.



WITNESSES

P. P. Finigan
Ben. R. Shopp

INVENTOR

W. B. Billings

UNITED STATES PATENT OFFICE.

WILLIAM B. BILLINGS, OF NEW YORK, N. Y.

IMPROVEMENT IN COAL-OIL LAMPS.

Specification forming part of Letters Patent No. **38,879**, dated June 16, 1863; antedated December 16, 1862.

To all whom it may concern:

Be it known that I, WILLIAM B. BILLINGS, of the city of New York, county and State of New York, have invented a new mode of Burning Coal-Oil, Kerosene, Camphene, Naphtha, and all Similar Hydrocarbons; and I do hereby declare the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct a self-generating burner like any of the various kinds long in use, (see A in drawing herewith annexed,) an indispensable feature in the burner used being that its power of self-generation be sufficient to thoroughly vaporize the material used. I then attach the burner to any ordinary lamp in the usual manner. The material used is carried into the burner by capillary attraction with common wicking, or a lamp may be used when the burner is supplied by hydraulic pressure.

To supply the air necessary to produce perfect combustion when using any of the above-named fluids, I use the following device: I insert a small tube through the center of the lamp, (see B in drawing hereto annexed,) which projects into the lamp, into the burner, at

a point an inch (more or less) below the point of combustion, or I insert a small tube into the burner on either side an inch (more or less) below the point of combustion. (See in the drawing annexed.) Through these tubes I impel a current of air from a reservoir or airometer. (See E in drawing annexed.) The manner of giving the necessary force to the current of air would depend entirely on circumstances. I would sometimes use a fan or fly-wheel propelled by suitable machinery or weights or springs acting on a flexible reservoir or airometer, or the elastic force of the air when compressed in the reservoir.

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

1. The impelled current of air when carried into the self-generating burner, for the purpose and in the manner substantially as set forth.

2. The mixing or mingling of the self-generated vapor with the impelled current of air in the burner near the point of combustion.

W. B. BILLINGS.

Witnesses:

BENJ. R. SHOPP,
P. P. FINIGAN.