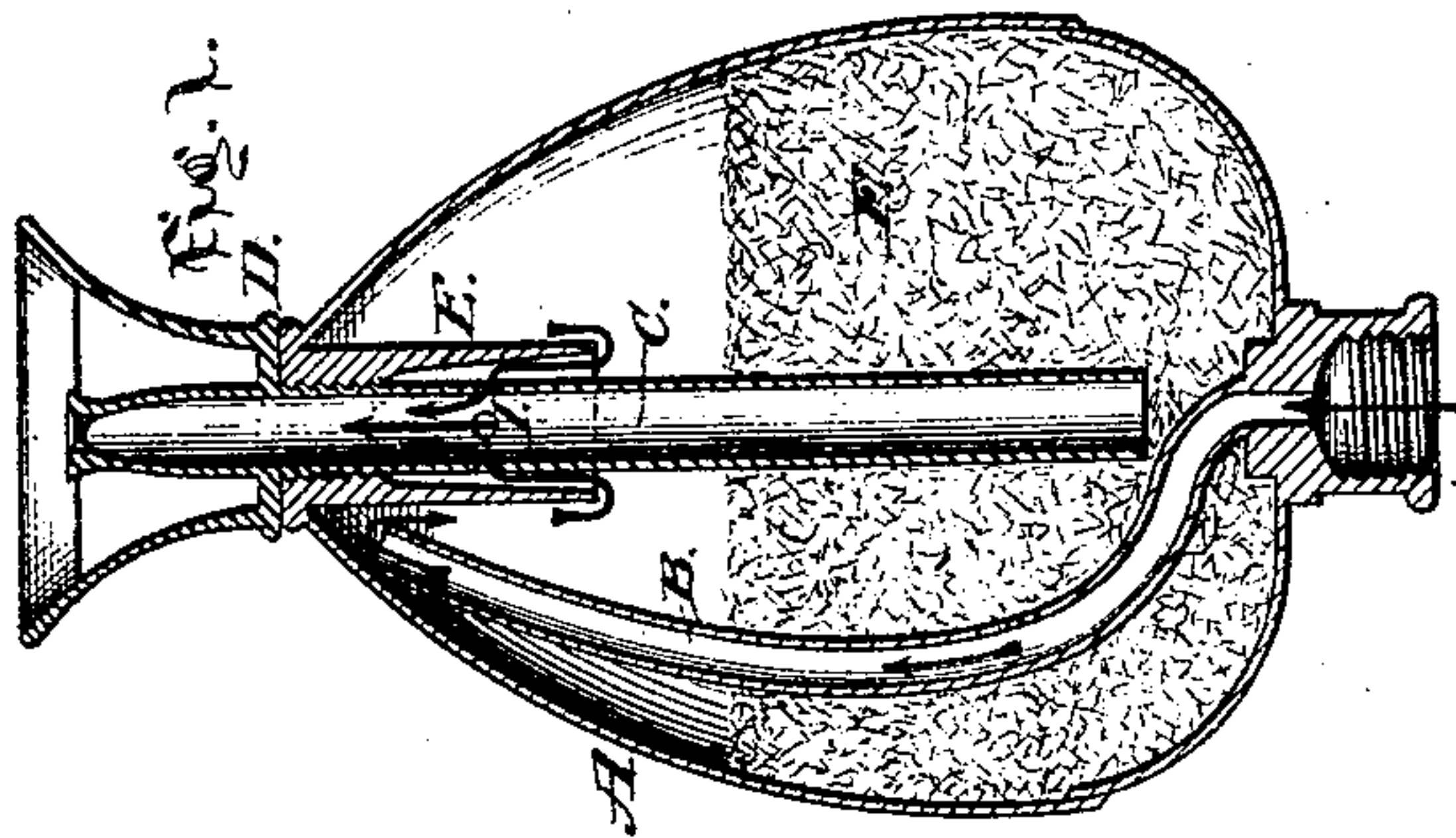
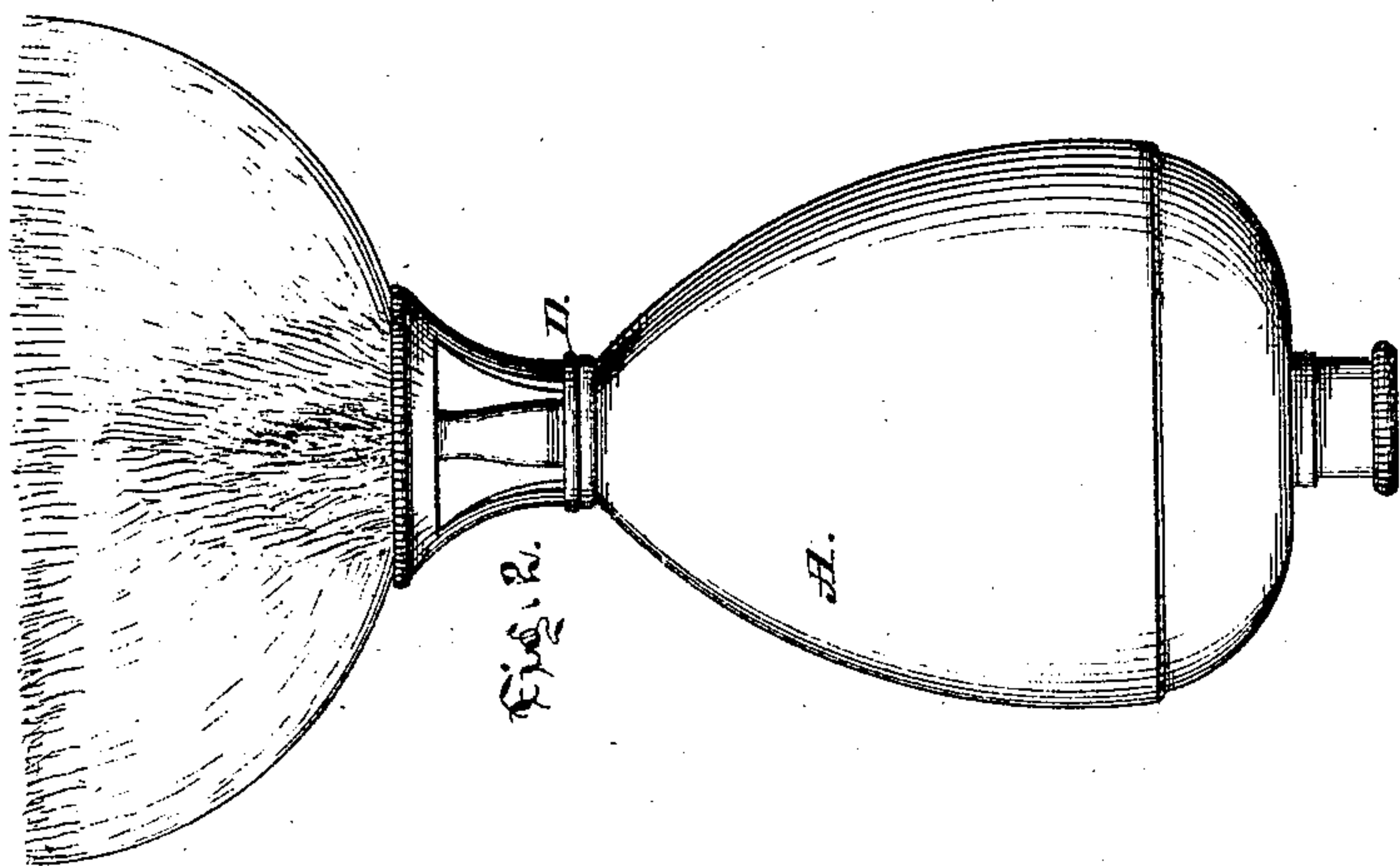


V. ZEIS.
GAS-BURNER.

No. 178,984.

Patented June 20, 1876.



Attest:
Wm. Bannerman
H. Nicholas, Secretary.

Inventor:
Victor Zeis.

UNITED STATES PATENT OFFICE.

VICTOR ZEIS, OF NEW YORK, N. Y.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **178,984**, dated June 20, 1876; application filed January 7, 1876.

To all whom it may concern:

Be it known that I, VICTOR ZEIS, of the city, county, and State of New York, have invented a new and Improved Carbonizer and Regulator for Gas-Burners, of which the following is a specification:

My invention consists of a carbonizing and pressure-regulating attachment for gas-burners, made of a hollow vessel of copper or other good heat-conducting material, with a socket at the lower end to attach to the fixture; also, with a gas-tube extending from the socket up to the upper part of the interior; also, with a burner at the top and a tube extending from it nearly to the bottom, and also with a bell-mouthed tube extending from a point near the top of the burner down through the cap into the carbonizing-chamber, for the purpose of deflecting the gas, and causing it to descend and mix with the hydrocarbon vapor before passing through the perforations of the pipe leading to the burner; also, for gathering heat from the flame, and conducting it down into the carbonizing-chamber, to facilitate the vaporizing of the hydrocarbon substance with which it is charged, for carbonizing the gas, the whole being a simple and efficient contrivance for economizing the gas, and at the same time improving the light and regulating the flame.

Figure 1 is a sectional elevation of my improved carbonizing and regulating device, and Fig. 2 is a side elevation.

Similar letters of reference indicate corresponding parts.

A is the hollow vessel, of copper or other material, for containing the hydrocarbon substance F, and for receiving the gas for mixing with the vapor. It has a socket at the bottom for screwing onto the gas-fixture; also, a tube, B, for conducting the gas up to the space above the oil. C is the burner, which screws

into the cap D, and extends nearly to the bottom of the holder, to heat the oil and prevent the too ready escape of the gas through it from the lower end, and cause it to escape through small perforations at I, whereby it is divided into fine streams, which facilitates the admixture of the hydrocarbon vapor with it. E is the bell-mouthed tube, which is mounted in the cap D, so as to gather heat from the flame in its upturned base and conduct it down into the carbonizing-chamber, to facilitate the generating of the vapor.

The extension of the tube down into the chamber below the mouth of tube B, and also below the perforations in the burner-tube C, subserves another important function, to wit: It prevents the gas discharged from tube B passing directly through the perforations in tube C, and causes it to descend and mingle with the hydrocarbon vapor, and thus become more thoroughly carbonized.

By the expanding of the gas into the carbonizing-chamber, and the passage through the small openings I, the issue to the burner is regulated in great measure, and a much steadier flame is obtained.

I do not claim, broadly, the employment of a carbonizing-chamber in connection with a gas-burner; but,

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

The bell-mouthed tube E, extending below the perforations in burner-tube C, and the mouth of gas-supply tube B of holder A, all combined as shown and described, to operate as and for the purpose specified.

VICTOR ZEIS.

Witnesses:

BEN. BOWMANN,

H. NICHOLAS JARCHOW.