W. W. TYSON.

Vapor Burner.

No. 98,817. Patented Jan. 11, 1870.

FIG. 1

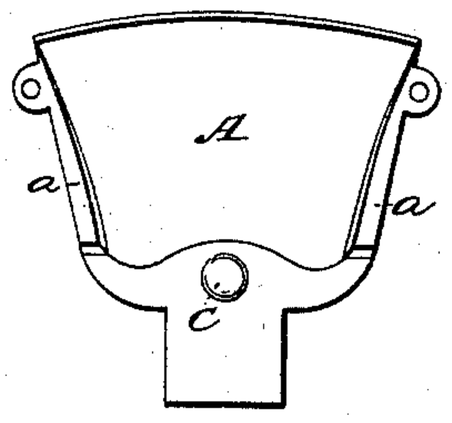


FIG. 2

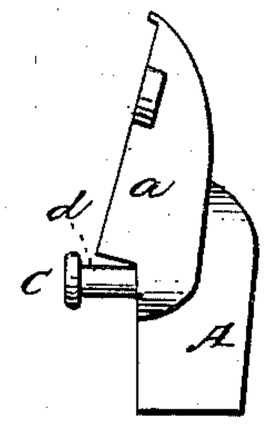


FIG. 3

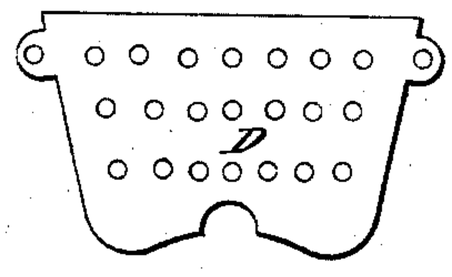


FIG. 4

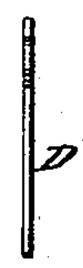


FIG. 5

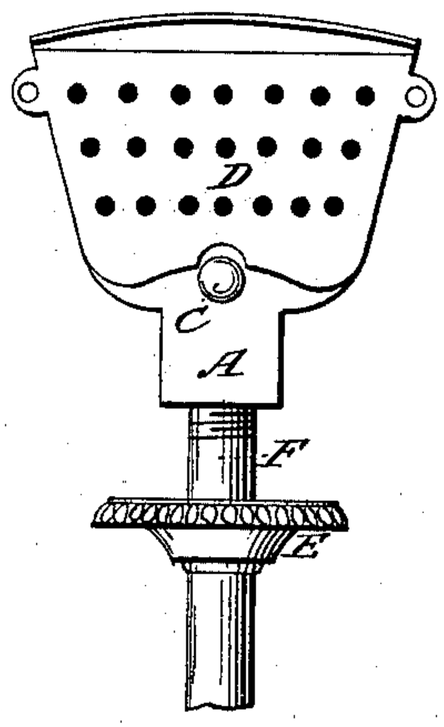
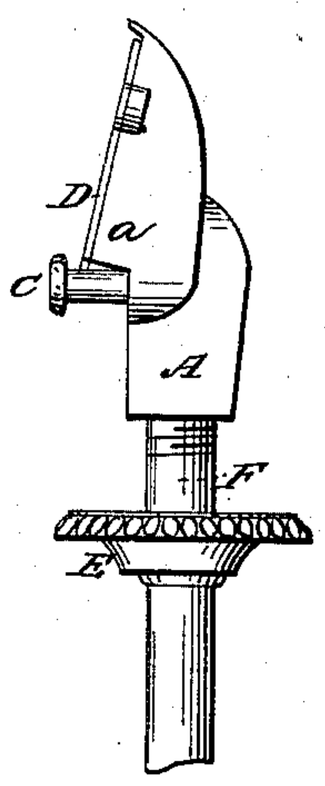


FIG. 6



WITNESSES:
E. R. Brown
C. C. Sheaker

INVENTOR:
W. W. Tyson
by J. C. Sheaker
atty

United States Patent Office.

WILLIAM W. TYSON, OF ALLEGHENY CITY, ASSIGNOR TO PHILIPP WEISENBERGER, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 98,817, *dated January* 11, 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, WILLIAM W. TYSON, of Allegheny City, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Gas-Burner for Fluid Gas; and I do hereby declare that the following is a full, clear, and exact description thereof.

The first part of my invention relates to the combination of a heating or generating-plate, having flanged or raised edges, and a front plate or jacket, in such a manner that it will produce a perfect combustion of all the gas generated, and consume all the smoke, giving a pure and perfect flame or jet.

The object of this part of my invention, is, by the use of the heating or generating-plate, having flanged or raised edges, as aforesaid, to confine the flame, and give it proper shape; and, by the use of the jacket or shield in front, to produce a draught from bottom to top, and thus produce a steady and brilliant jet or flame, and insure a perfect combustion of all the gas, and consumption of all smoke.

The second part of my invention relates to the combination of the plate A with a small thimble or cup and the supply-pipe, said thimble or cup to be attached to the supply-pipe, a short distance below the heating or generating-plate.

The object of this part of my invention is to aid in generating the gas, by filling the thimble or cup with fluid, and lighting it, when the supply-pipe will be rapidly heated, and the gas will be more quickly generated. It will also prevent the dropping of fluid from the burner to the floor.

To enable those skilled in the art to which my invention appertains, to make and use the same, I will proceed to describe its construction and operation, reference being had to the accompanying drawings, making part of this specification, and to the letters and figures marked thereon.

Figure 1 is a front elevation of the heating or generating-plate, with flanged or raised edges.

Figure 2 is a side elevation of the same.

Figure 3 is a front elevation of the jacket or plate.

Figure 4 is a side elevation of the same.

Figure 5 is a front elevation of the burner entire, with thimble or cup on the supply-pipe.

Figure 6 is a side elevation of the same.

A is the heating-plate or generator, made of copper, brass, or other suitable metal. It may be either cast, or struck out by means of dies.

It is formed with flanged or raised edges, *a*, for confining and shaping the flame or jet.

C is the nipple or tip, with a small orifice, *d*, for supplying the gas to be burned.

D is the perforated jacket or shield, which is riveted, brazed, or otherwise fastened to or on the heating or generating-plate A. It is made of copper, brass, or other suitable metal, and may be either cast, or struck out by means of dies.

E is the thimble or cup, into which a portion of the fluid to be used is placed, which, when ignited, heats the pipe F, and generates the gas more rapidly.

F is the pipe for supplying the fluid to the burner. It is furnished with a suitable stop-cock or valve, for stopping the flow of the fluid, and regulating the same.

The fluid from which the gas is to be generated is supplied to the heating or generating-plate through the supply pipe F, shown in figs. 5 and 6, from a reservoir attached to the supply-pipe, at a sufficient height to insure the rising of the fluid to the burner.

In lighting the burner, the thimble or cup is first filled with fluid by turning the cock, and allowing the fluid to escape from the orifice *d*, (fig. 2,) and run down into it, or by filling it from a can. Then the fluid in the thimble or cup is ignited, thus heating the fluid in the pipe, and causing it to generate gas, which will then escape from the orifice *d*, (fig. 2,) and ignite from the flame in the thimble or cup; after which, the cock being turned so as to allow the fluid to flow into the supply-pipe, the heat of the plate will convert it into gas, and keep up the supply of gas for consumption at the orifice *d*.

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

1. The heating or generating-plate A, formed with flanged or raised edges *a a*, substantially as shown and described.

2. The perforated jacket or shield D and nipple C, when constructed and arranged in relation to each other and the plate A, substantially as shown and described.

3. The plate A, with its flanges *a*, in combination with the perforated jacket D, substantially as shown and described.

4. The combination of the plate A, with its flanges *a*, and the pipe or nipple C, provided with the orifice *d*, all substantially as shown and described.

5. The combination of the cup E, pipe F, and plate A, formed with flanged or raised edges *a a*, all substantially as shown and described.

Witnesses: WM. W. TYSON.

E. R. BROWN,

C. C. THEAKER.