C. A. GREENE.

Vapor Burner.

No. 17,086. Patented April 21, 1857.

Fig. 2.

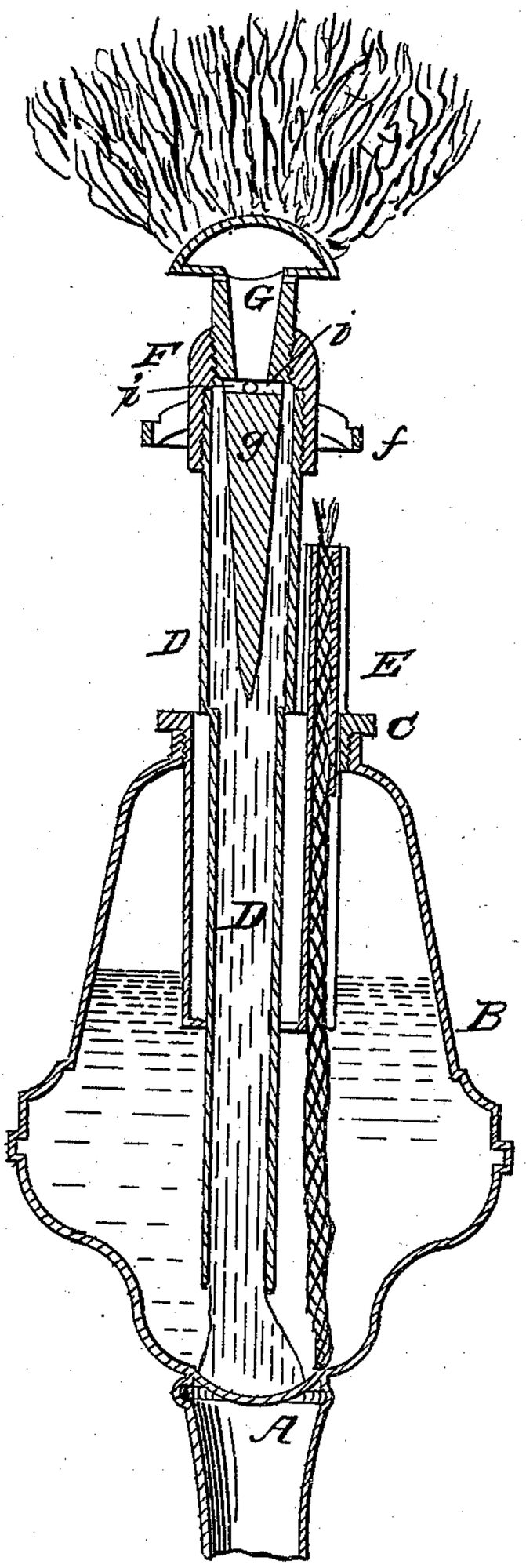
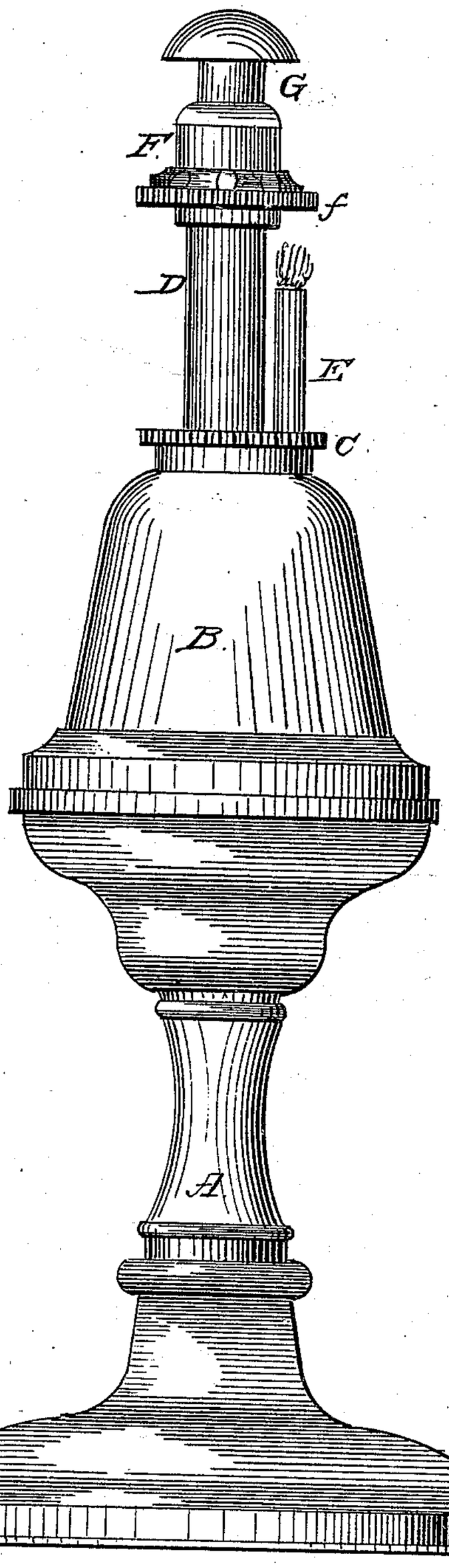
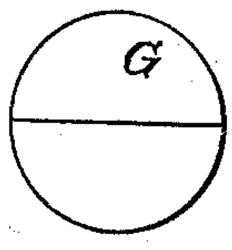


Fig. 1.





UNITED STATES PATENT OFFICE.

CHARLES A. GREENE, OF PHILADELPHIA, PENNSYLVANIA.

BURNER OF BURNING-FLUID LAMPS.

Specification of Letters Patent No. 17,086, dated April 21, 1857.

To all whom it may concern:

Be it known that I, CHARLES A. GREENE, of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Fluid-Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to an improvment in that class of fluid lamps in which the light is produced from gas generated by heat imparted to a wick which penetrates the reservoir of fluid but is not in contact with the flame; and my improvements consist in so combining a hollow hemispherical burner, having a tapering projection, with the main tube of a lamp, that the brilliancy of the light may be increased or diminished with facility.

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

On reference to the drawing which forms a part of this specification—Figure 1 is an exterior view of my improved fluid lamp. Fig. 2 a sectional view of the same, and Fig. 3 a top view of the burner.

Similar letters of reference allude to similar parts throughout the several views.

A is the stem of the lamp, B the reservoir containing the fluid, C is a cap screwed to the top of the reservoir and passing downward into the same. The interior of this cap contains plaster of Paris or other non-conducting substance through which passes the main tube D for containing the wick, and also the smaller tube E containing the supplementary wick. The main tube is furnished with a screwed cap F on which is the conductor *f*.

Into the top of the cap F screws the burner G, which at the top is hollow and hemispherical shaped with a single slit (as seen in Fig. 3). On the top *g* is a solid or hollow pointed projection forming part of the burner, and passing downward into the interior of the main tube. Between the solid and hollow portions of the burner are orifices *i i* forming a communication between the interior of the tube and that of the burner. The supplementary tube is furnished with an ordinary slide for increasing, diminishing or extinguishng the lght from the wick.

In the main tube is a wick reaching from about the bottom of the reservoir to the height of the annular conductor *f* and the small tube with an ordinary small wick.

It is especially essential that the main tube be filled with wicking throughout its entire length.

The wick in the small tube is in the first instance ignited until a sufficient heat is communicated to the conductor, the cap F, and burner G and its projection *g* to impart heat sufficient to the wick to generate a flammable gas from the fluid. This gas passes upward through the orifices *i* into the interior of the burner and passes through the slit on the top of the same. The gas is now ignited forming a clear and brilliant flame which of itself imparts a sufficient heat to the projection *g* to generate sufficient gas without the assistance of the supplementary burner (which is accordingly extinguished) and will contain until the fluid is exhausted. Underneath the hemispherical shaped top of the burner are two holes through which the ignited gas passes and imparts an additional heat to the burner and its projection *g*.

By constructing the burner hollow and of the form described I have found by repeated experiments that a more brilliant and steady light can be obtained than by any other form with which I am acquainted.

When it is desirable to increase or diminish the brilliancy of the light, the cap F, or the burners can be screwed or unscrewed and the extent to which the projection *g*, extends into the wick is thus increased or diminished.

I do not desire to lay any claim to the employment of a supplementary wick in connection with lamps or to the employment of plaster of Paris or other non-conducting substance for surrounding the reservoir. Neither do I desire to claim the exclusive use of a tapering spur for penetrating the wick, but

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

The hollow burner G with its rounded or hemispherical cap, and its projection *g* when the whole is rendered adjustable to the main tube in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

C. A. GREENE.

Witnesses:

WILLIAM E. WALTON,

CHARLES D. FREEMAN.