S. F. ALLEN.

FLUID BURNER.

No. 10,270. Patented Nov. 29, 1853.

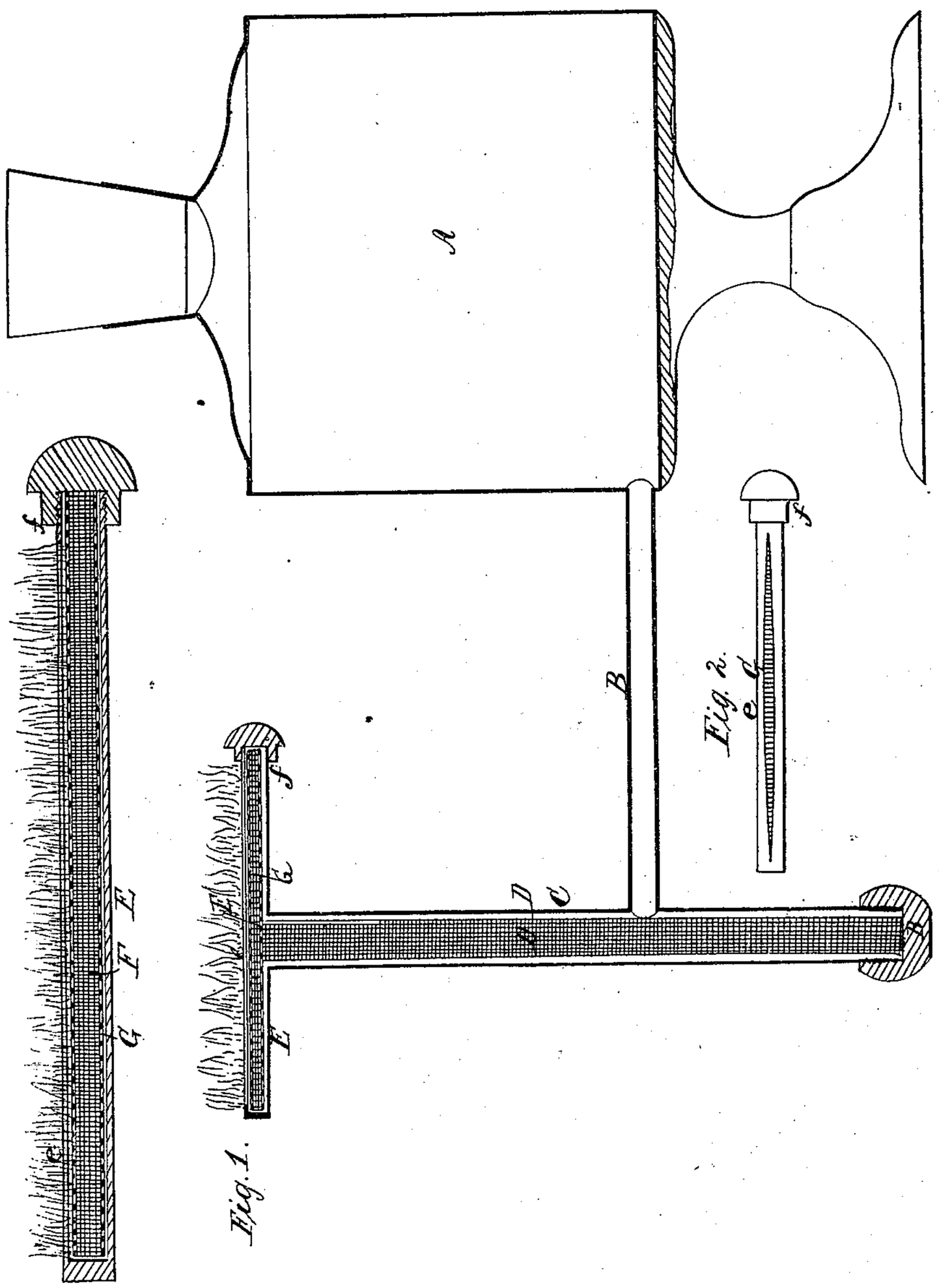

Fig. 1.

Fig. 2.

Fig. 3.

UNITED STATES PATENT OFFICE.

SAMUEL F. ALLEN, OF NEW YORK, N. Y.

FLUID-LAMP.

Specification of Letters Patent No. 10,270, dated November 29, 1853.

To all whom it may concern:

Be it known that I, SAMUEL F. ALLEN, of the city, county, and State of New York, have invented certain new and useful Improvements in Camphene and other Fluid Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical central section of the burner constructed after my plan. Fig. 2 is a top view of slitted cross tube which carries the wire incased wick. Fig. 3, is a longitudinal section of the same on a larger scale, showing the wick incased in wire gauze more plainly.

The same letters of reference in each of the several figures indicate corresponding parts.

My invention consists in making the flame tube of greater length on either side of the vertical wick tube and in combination with the same incasing the wick which it carries inside of a fine wire gauze which serves to give out the fluid in a spread and open state, and consequently to make the light more powerful or brilliant and open, and also to preserve the wick a great length of time from being charred or consumed.

To enable others skilled in the art to make and use my invention I will proceed to describe it more minutely.

A, represents the reservoir filled with fluid as indicated by blue color; this vessel may be of any desired form and dimension, and is to be set some considerable distance from the flame tube, either in the same room or in that adjoining, or in any position where the fluid may be conveyed from it to the flame tube, and it must also occupy such a position in relation to the burner that when it is filled the fluid will of necessity in finding its level in the said tube be caused to rise just even with the top of the incased wick or flame tube and thereby saturate and prepare the wick for burning. This vessel may be sufficiently large to hold fluid to burn for a long time and not require to be filled often, and if it is small and it is necessary to fill it every night it can be done with safety while burning, for it will be seen that it is set at considerable distance from the place of combustion; thus many accidents will be prevented.

B, is the pipe which conducts the fluid from the reservoir to the vertical feed pipe or wick tube C, with which said tube is connected in the manner shown in the drawing, or otherwise, it being made stiff or flexible as desired and can be removed and the communication of the reservoir A, with the pipe C, shut off. This pipe C, is made hollow its full length and carries a wick D, which feeds the fluid to the flame tube—that portion of the tube C, which is below the pipe B, serving to hold fluid and always keep the wick moist and supply the flame tube for a while after the can or reservoir is exhausted. The nut B, at the bottom is taken off when the wick is put in and then screwed on again—it serving when on as a stand for the pipe C.

E, is the horizontal wick and flame tube—it has a long narrow slit *e*, cut in its top as shown particularly in Fig. 2, through which combustion is carried on.

E, is the horizontal wick covered with fine wire gauze G which preserves it from being consumed or charred, and at the same time causes the fluid to be discharged in a solid sheet the full length of the slit *e*, and consequently a long and open brilliant flame to be supplied, from the tube E, as seen in Figs. 1, and 3. The wick E, incased in the wire gauze is inserted into the tube E, at the end *f*, on which is a nut which is taken off when it is desired to put in a wick and again screwed on.

One wick with this lamp can be used a great length of time without being consumed or charred, and if dirt or grit which is generally contained in fluid did not collect around it it would serve for a number of years.

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

I claim the horizontal flame tube, for burning camphene and like fluid, having a long slit cut in its top, in combination with the wick E, when incased in wire gauze; the incasing of the wick in gauze causing the fluid to be discharged and burned in a sheet the full length of the slit, in the manner herein described.

SAMUEL F. ALLEN.

Witnesses:
O. D. MUNN,
L. F. COHEN.