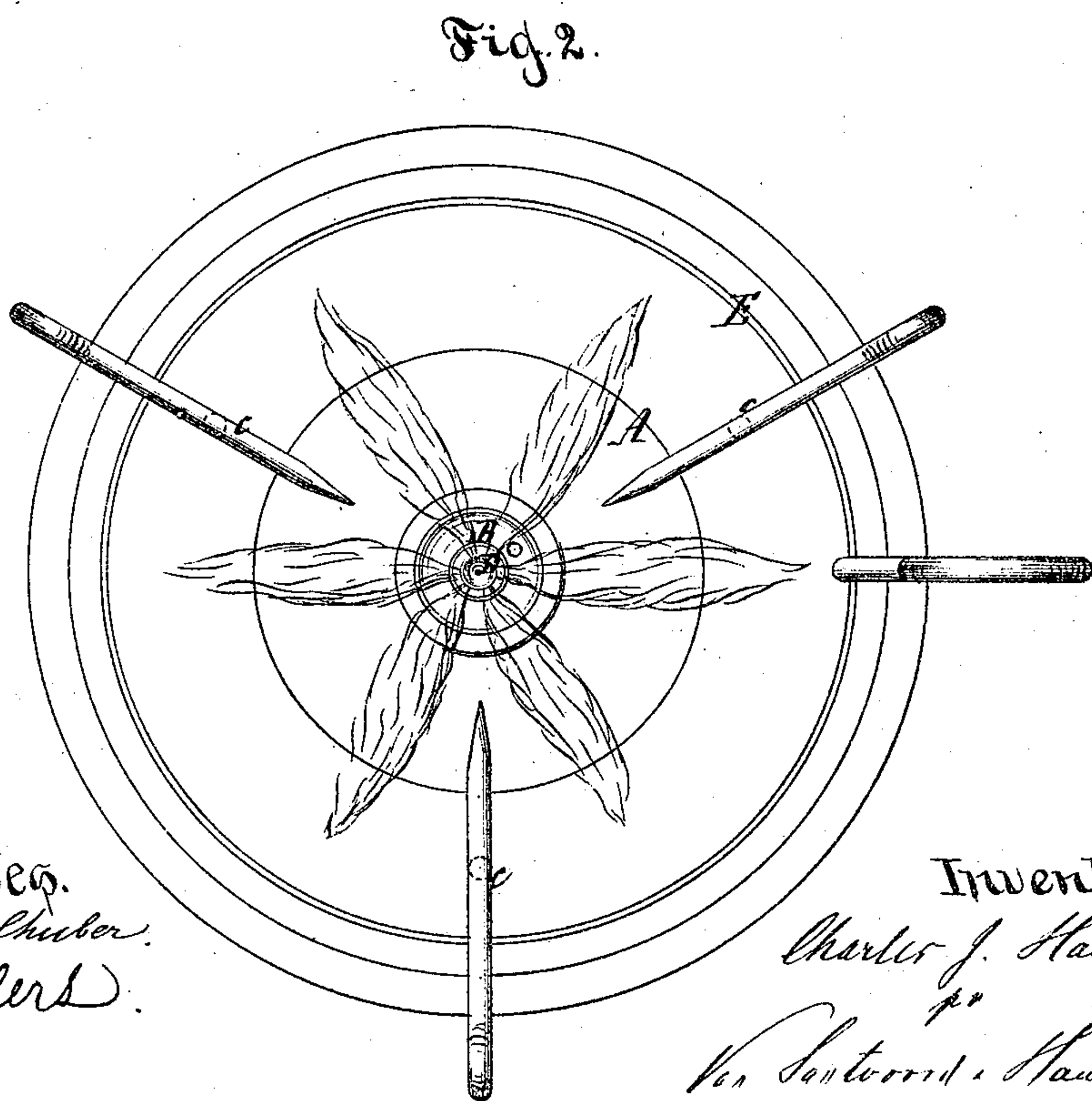
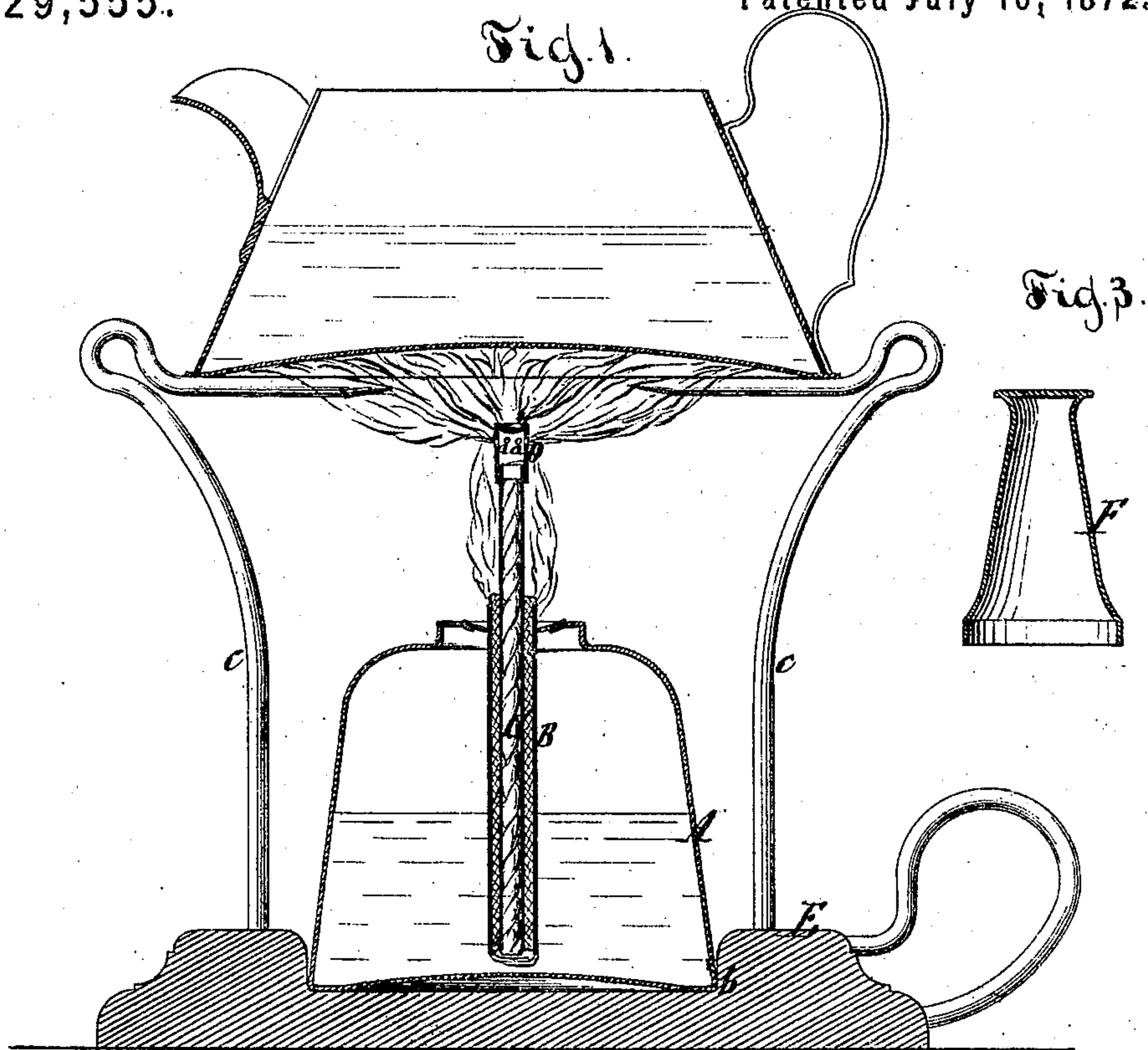


C. J. HAUCK.  
Lamp-Heater.

No. 129,555.

Patented July 16, 1872.



Witnesses.  
Ernst Bilhuber.  
C. W. Ahlers.

Inventor.  
Charles J. Hauck  
per  
Van Santvoord & Hauck  
attys



# UNITED STATES PATENT OFFICE.

CHARLES J. HAUCK, OF BROOKLYN, E. D., NEW YORK.

## IMPROVEMENT IN LAMP-HEATERS.

Specification forming part of Letters Patent No. 129,555, dated July 16, 1872.

*To all whom it may concern:*

Be it known that I, CHARLES J. HAUCK, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Lamp-Heaters; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a vertical section of my invention. Fig. 2 is a plan or top view of the same. Fig. 3 is a detached section of the extinguisher.

Similar letters indicate corresponding parts.

This invention consists in a lamp which is provided with two wick-tubes, one inside the other, the inner wick-tube, which extends considerably above the outer wick-tube, being furnished at its top with a gas-chamber, being perforated with small holes in such a manner that, when the lamp is filled with alcohol or other suitable burning-fluid and the wick of the outer and short wick-tube is lighted, the liquid which rises in the wick of the inner wick-tube is vaporized by the heat of the flame of the outer wick-tube, and the jets of vapor or gas which issue through the perforations of the gas-chamber at the head of the inner wick-tube are ignited, and produce a flame of great extent and heating-power with a comparatively small amount of alcohol or other burning-fluid. With this lamp I use a tripod, the base of which forms a socket for the lamp, while its three wire standards form the support for the vessel containing the liquid to be heated.

In the drawing, the letter A designates the body or fountain of my lamp, which is provided with two wick-tubes, B C, one being situated inside the other, as shown in Fig. 1 of the drawing. The outer wick-tube rises only a short distance above the top of the fountain, but the inner wick-tube extends upward, beyond the outer tube, to a distance of about one inch, and on its top is secured a gas-chamber, D, which is perforated in its sides with a number of holes, *a*. Both wick-tubes extend down near to the bottom of the fountain, and the wick of the outer tube B rises clear up to the top edge of said tube, while the wick of

the inner wick-tube terminates beneath the gas-chamber D.

When the lamp is filled with alcohol or other fluid of a similar nature and the flame of the outer wick-tube is lighted, the heat produced by this flame vaporizes the fluid rising up through the inner wick, and the vapor or gas thus produced collects in the gas-chamber, whence it issues through the holes *a*. On issuing from these holes the gas is ignited and a flame of great heating-power is produced. The flame of the outer wick requires to be quite small, so that the same consumes but little alcohol, which rises through the inner tube, being vaporized, and produces a flame of very great heating-power with a comparatively small amount of alcohol, so that I am enabled to heat liquids or other materials with alcohol or other fluid of a similar nature at a small expense.

In using my lamp, I place the same in a socket, *b*, formed in the base of a tripod, E, and from this base rise three standards, *c*, by preference made of wire and bent as shown in Fig. 1, said standards being intended to support the vessel containing the liquid to be heated.

When my lamp is not used I cover the wick-tubes by an extinguisher, F, which fits the neck of the fountain closely, so as to prevent the escape of alcohol by vaporization.

I do not claim a supplementary sliding wick-tube passing vertically through the cap of the lamp and interposed between vapor-tubes for volatilizing the fluid; neither do I claim inserting the main burner in a box or case and interposing between the two a non-conducting material, so as to remove the metallic connection between the main and auxiliary burner, for such are old and well known; but

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

The lamp A provided with two wick-tubes, B C, of unequal length, arranged one within the other, the inner one C extending considerably above the outer one, and provided at its top with a perforated gas-chamber, D, as set forth, for the purpose specified.

C. J. HAUCK.

Witnesses:

W. HAUFF,  
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