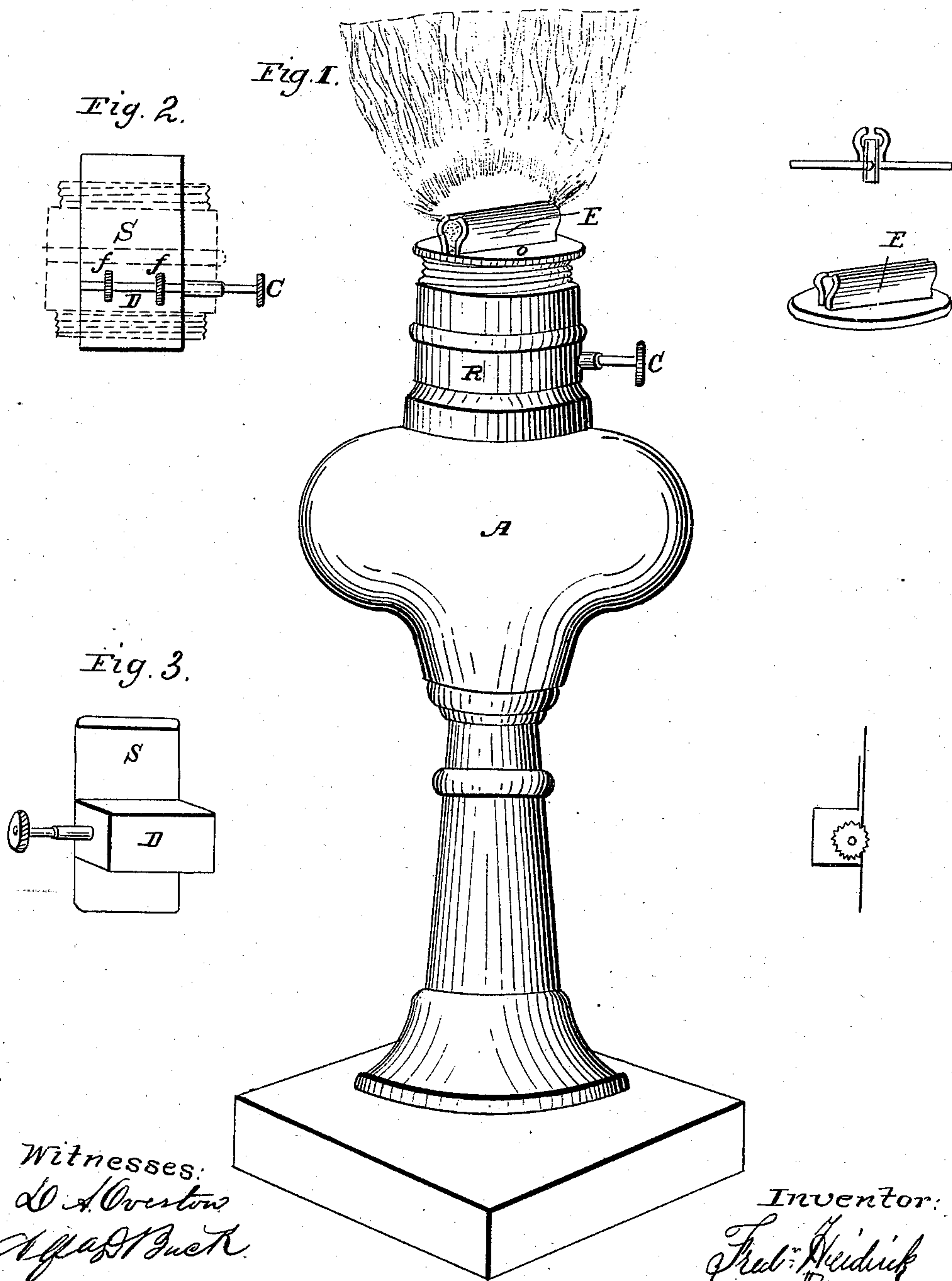


F. HEIDRICK.  
Vapor Burner.

No. 31,887.

Patented April 2, 1861.



Witnesses:  
L. A. Overton  
A. J. Buck

Inventor:  
Fred. Heidrick

# UNITED STATES PATENT OFFICE.

FREDERICK HEIDRICK, OF PHILADELPHIA, PENNSYLVANIA.

## LAMP.

Specification of Letters Patent No. 31,887, dated April 2, 1861.

*To all whom it may concern:*

Be it known that I, FREDERICK HEIDRICK, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful  
5 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 drawings, and to the letters of reference  
10 marked thereon, in which—

Figure (1) is a perspective view of lamp. Fig. (2) is a sectional view of the top or cap, exhibiting my improvement and Fig. (3) is a plan of the tube—showing also the  
15 chamber around the wick pinion.

The nature of my invention consists in providing the wick tube with a chamber around the wick pinion, which shall be fluid tight for the purpose of preventing the  
20 escape of the fluid, and thus avoid the great liability to explosion.

In lamps of the ordinary mode of construction it is well known that the wick pinion is placed on the outside of the wick tube. As these pinions do not entirely stop  
25 up the orifices for their reception, the fluid as it ascends to the mouth of the tube leaks out gradually, until from the heat of the wick tube it suddenly ignites and conveys the flame to the fluid in the lamp, which of course at once explodes the vessel, frequently  
30 with loss of life. Without enlarging upon the many disadvantages and dangers attending lamps thus constructed I shall proceed to describe my improvement for the purpose of enabling those skilled in the art to make and use it.

(A) represents the lamp, (R) the cap or

top, which is screwed upon the lamp (A). Said cap is provided with deflectors (E) as  
40 fully shown in Fig. (1).

(S) is a wick tube, which should extend through the center of cap (R).

(f f) are pinions, operated by means of shaft (C). The object of these pinions is  
45 to regulate the wick. They should therefore enter the wick tube by means of orifices prepared for their reception.

(D) represents a box or chamber, which is soldered to the wick tube over the pinions  
50 (f f). The shaft (C) should be ground and made to fit fluid tight at its journals. Thus the pinions (f f) and their orifices will be completely incased, thereby preventing any  
55 escape of the fluid on the outside of the wick tube, which of course will obviate the proximate cause of explosion.

I render the cap a nonconductor by the employment of two shells or cases, which are joined together, with a space between  
60 the two, which space is filled with plaster of paris. This however I do not claim as my invention, but

What I do claim and desire to secure by Letters Patent is—  
65

The employment of a fluid tight chamber, over the wick pinion in combination with the wick tube, substantially in the manner and for the purpose described.

In testimony whereof I hereunto set my  
70 hand and seal this the 14th day of January, A. D. 1860.

FREDK. HEIDRICK. [L. S.]

Witnesses:

GEORGE THOMAS,  
WILLIAM S. OGLE.