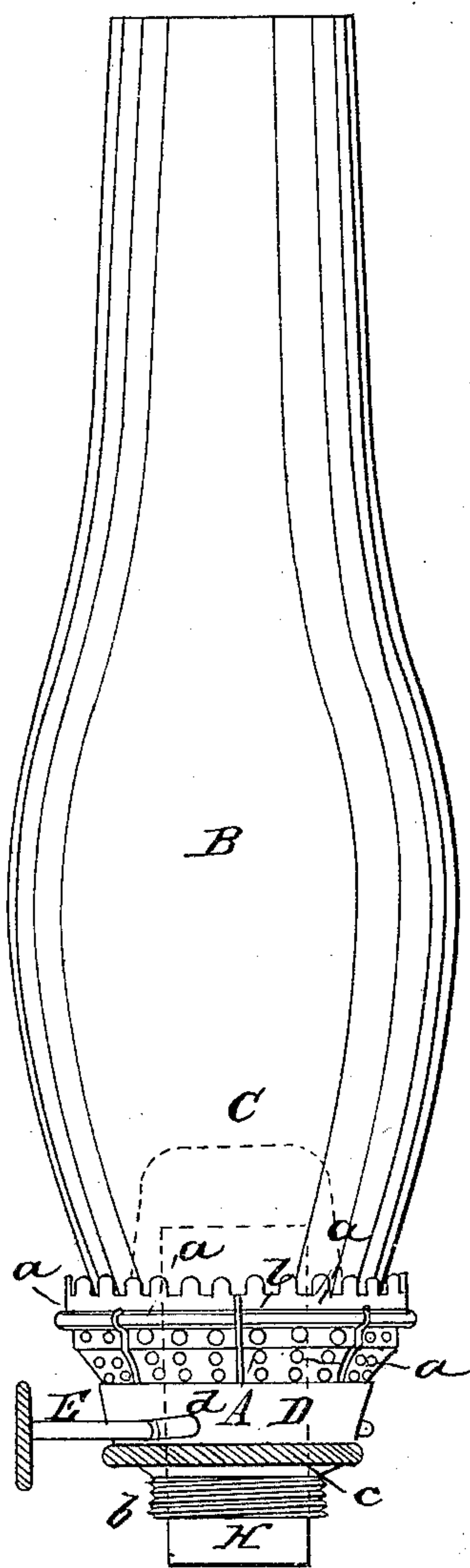


G. NEILSON.  
Lamp Wick Raiser.

No. 30,082.

Patented Sept. 18, 1860.

Fig. 1.



Witnesses:

R. Uddy  
J. P. Hale Jr.

Fig. 3.

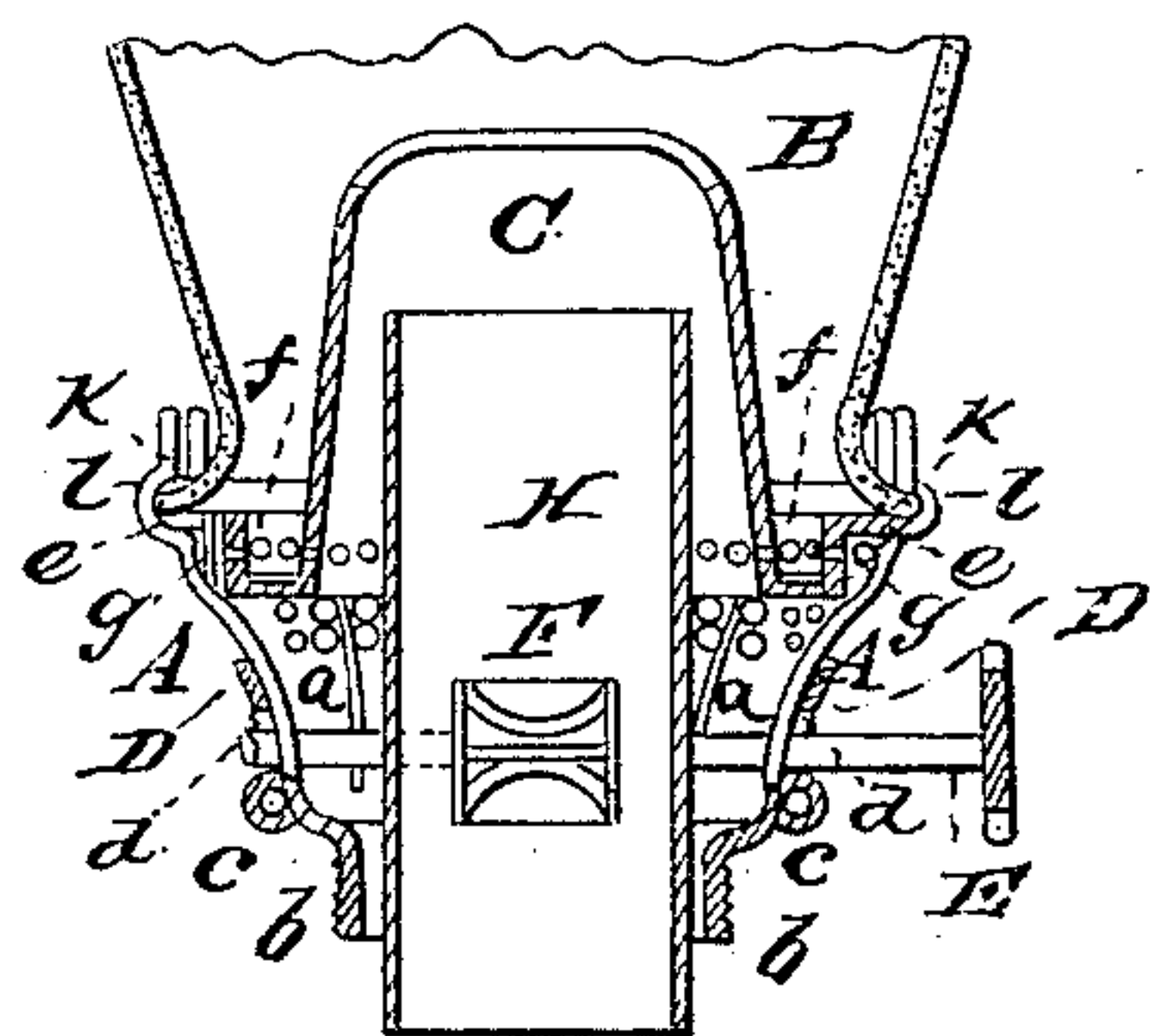


Fig. 4.

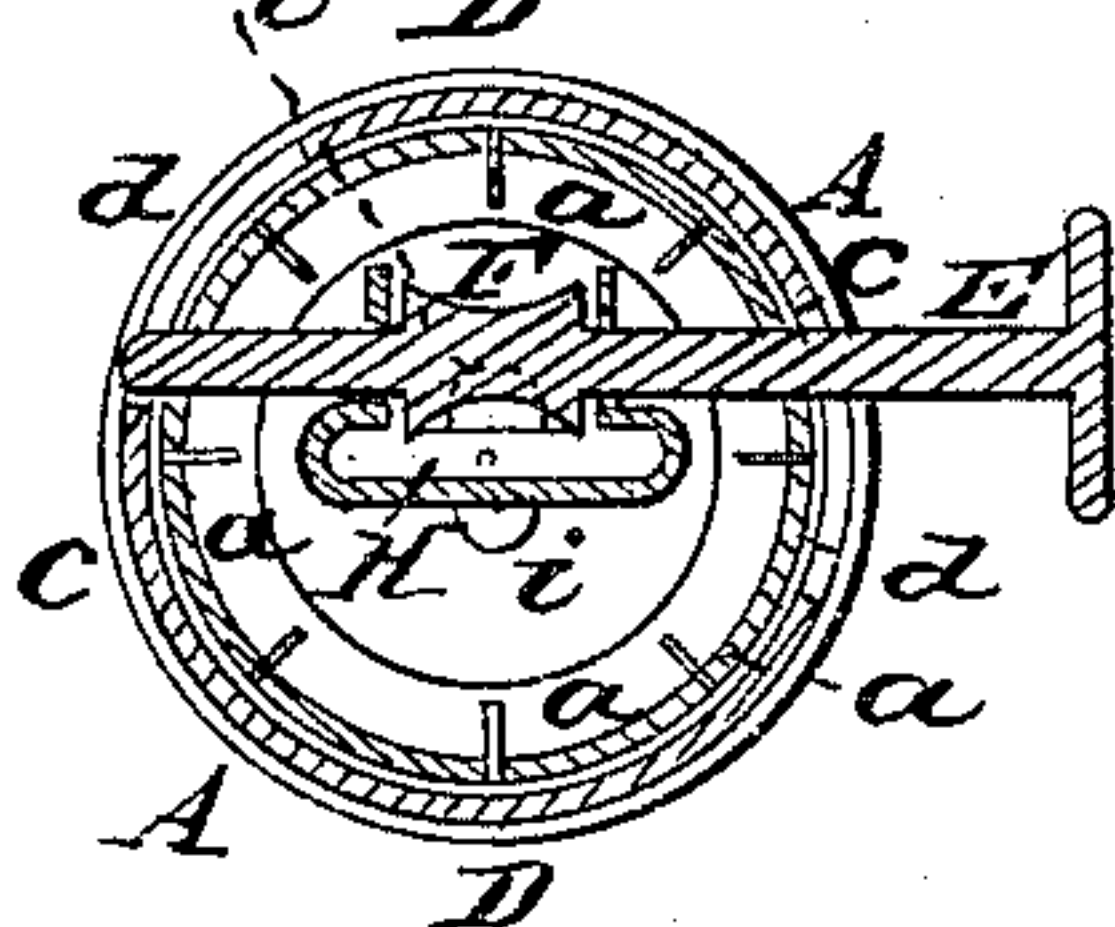


Fig. 5.

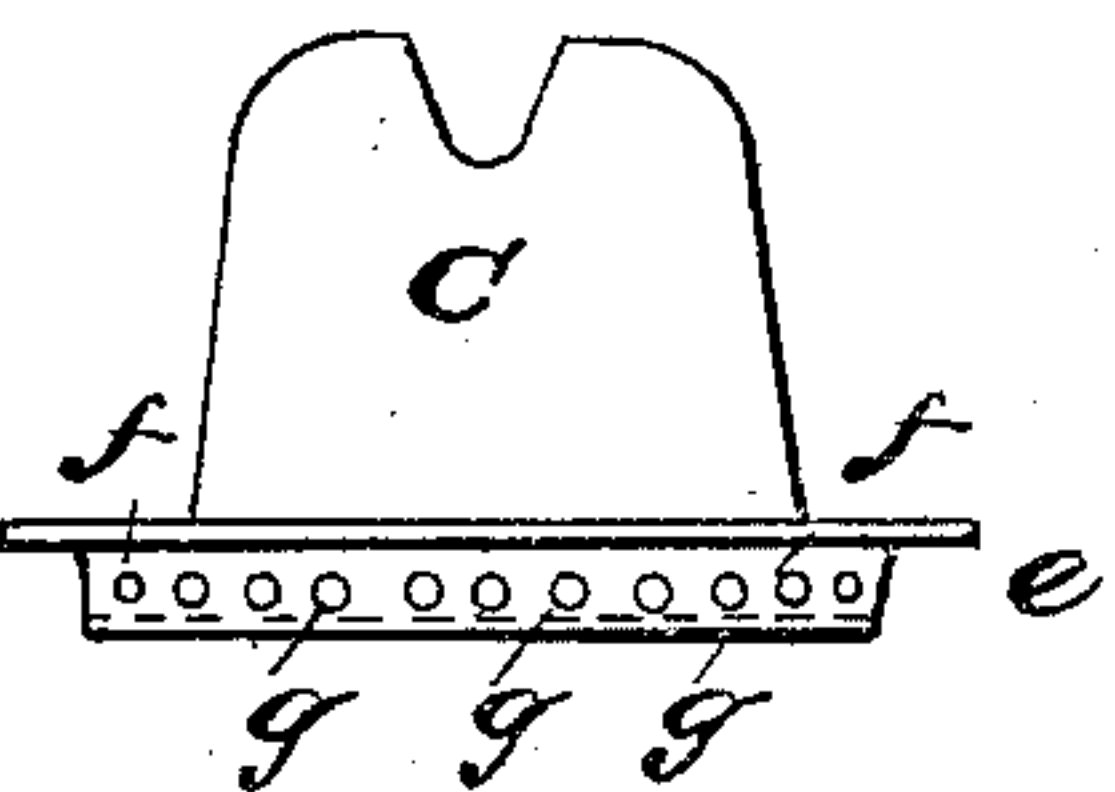
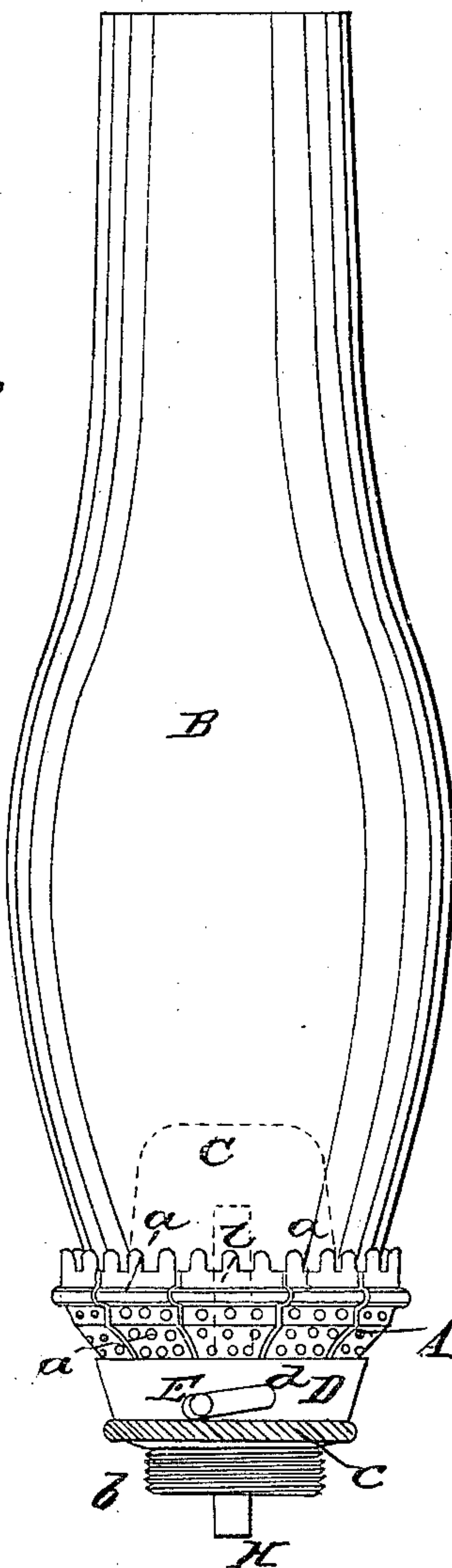


Fig. 2.



Inventor:  
George Neilson

# UNITED STATES PATENT OFFICE.

GEORGE NEILSON, OF SOUTH BOSTON, MASSACHUSETTS.

## LAMP.

Specification of Letters Patent No. 30,082, dated September 18, 1860.

*To all whom it may concern:*

Be it known that I, GEORGE NEILSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lamps for Burning Kerosene or other Hydrocarbon Liquids Rich in Carbon; and I do hereby declare that the same are fully described and represented in the following specification and the accompanying drawings, of which—

Figures 1, and 2, are side elevations, and Fig. 3, a vertical section of my improved burner. Fig. 4, is a horizontal and transverse section taken through the shaft of the wick elevator. Fig. 5, is an elevation of the conical deflector.

In the drawings A, denotes the cap or part for supporting the chimney B and the deflector C.

The sides of the part, A, are conical or tapering and are slit or divided into several separate parts or spring jaws, *a, a, a*. Just above the screw, *b*, of the bottom, the said spring jaws are encompassed by an annular tapering collar or a contractile ring, D, whose lower edge is provided with a milled flange, *c*. This ring is constructed with two slots *d, d*, which are arranged on opposite sides of it and with each inclined at an acute angle with the base of the ring. The shaft E, of the wick elevator, F, is carried through these slots and they have their inclinations so arranged that when the ring, D, is rotated or turned in one direction on the part, A, such ring by the action of the slots against the said shaft shall be crowded upward against the spring jaws so as to cause them to move in radial directions toward the glass chimney B, and close upon it so as to confine it to the burner.

The lower or base part of the conical deflector, C, is constructed with an annular shelf, *e*, and a trough *f*, arranged concentrically about the body of the deflector. Through the outer side of the trough, *f*, a series of air ducts or holes *g, g, g*, are made as shown in the drawings. Furthermore, the body or spring jaws, *a, a, a*, of the burner are so formed that when the deflector is within them as shown in Fig. 3, the surface of the

lower edge of the trough, *f*, shall so rest against the inner surface of the jaws as to cut off the flowage of the hydro-carbon vapor between such edge or part, *h*, and the said jaws. Both above and below the circle of contact, the jaws are perforated with air inlets or orifices. The bottom of the burner is also provided with a vapor escape hole, *i*, leading from the interior chamber of the burner and aside of the wick tube, H. The chimney rests on the shelf, *e*, and is formed with a flange, *k*, which enters a corresponding recess, *l*, formed on the inner face of each spring jaw. It is by means of the contractile ring that the said spring jaws are clamped on the chimney so as to hold it fast to the burner. The improved mode of constructing the lower or base part of the deflector or cone is preferable to forming it with corrugations and in other respects as heretofore patented by me.

The above described improved mode of making the deflector enables it to be manufactured at less cost and causes it to operate to better advantage in comparison with the corrugated bottom deflector. The air which passes into the space surrounding the body of the deflector is insulated from the currents of vapor that escape from the body of the lamp and pass into the body of the deflector and by it are deflected into the flame on the wick so as to be consumed by it.

I would remark that essential features of my invention are the extension of the shaft of the wick elevator through the contractile ring and providing the latter with means substantially as described, or the equivalent thereof, by which while the ring is revolved on the body of the burner such ring may be crowded upward against the springs *a, a, a*, &c., so as to close them upon the chimney. The peculiar arrangement and application of the contractile ring with reference to the burner and the shaft of its wick elevator causes the shaft to maintain the ring in place and to serve with the slots as a means of effecting the upward movement of the ring while such ring is being turned on the burner.

I claim—

1. The arrangement and application of



the contractile ring with reference to the  
spring jaws *a, a, a*, and the shaft of the  
wick elevator and to operate in manner sub-  
stantially as described.

5 2. The improved mode of constructing the  
base part of the conical deflector, viz. with  
an annular shelf, *e*, and trough, *f*, and a

series of air inlets, *g, g*, arranged together  
and with the conical body of the deflector  
substantially as specified.

GEORGE NEILSON.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.