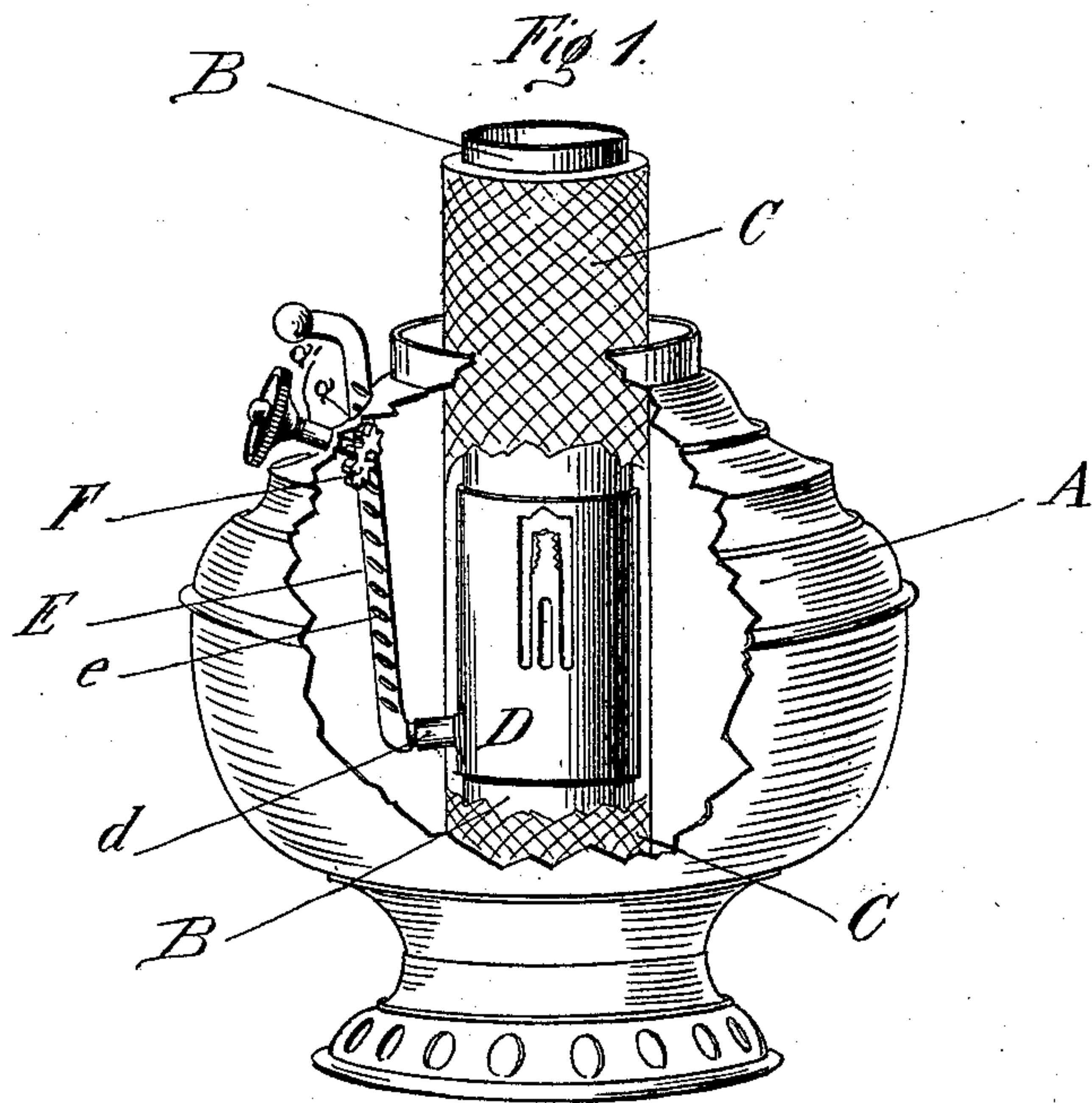


(No Model.)

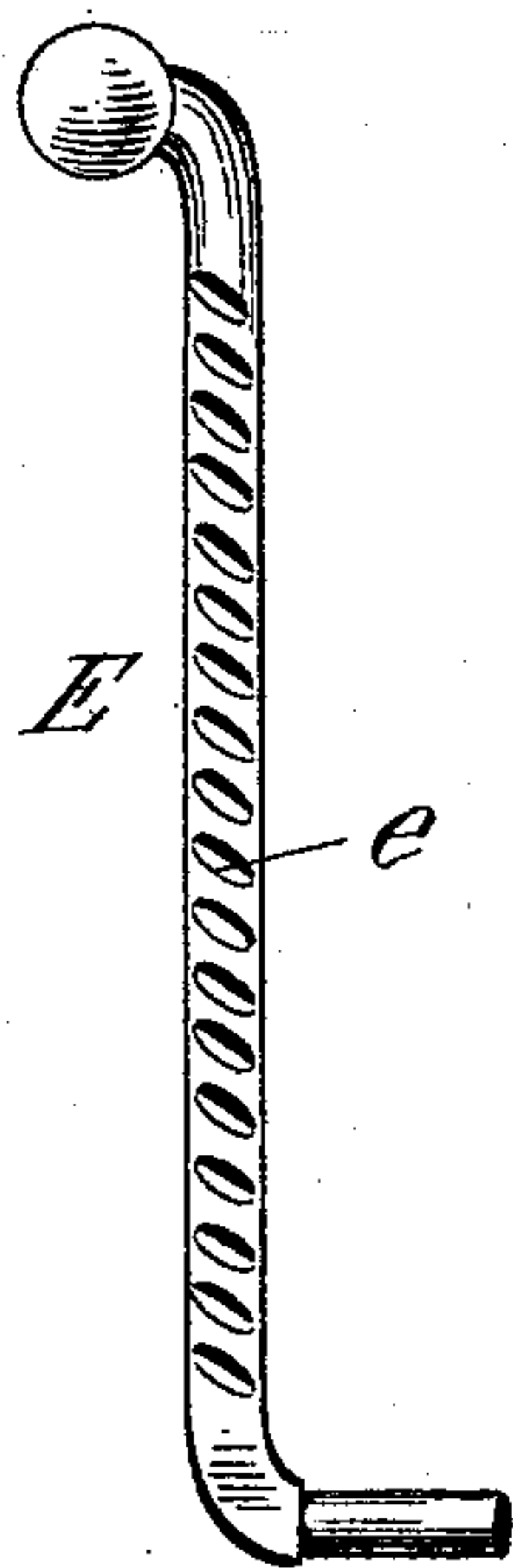
F. T. WILLIAMS.  
LAMP.

No. 539,761.

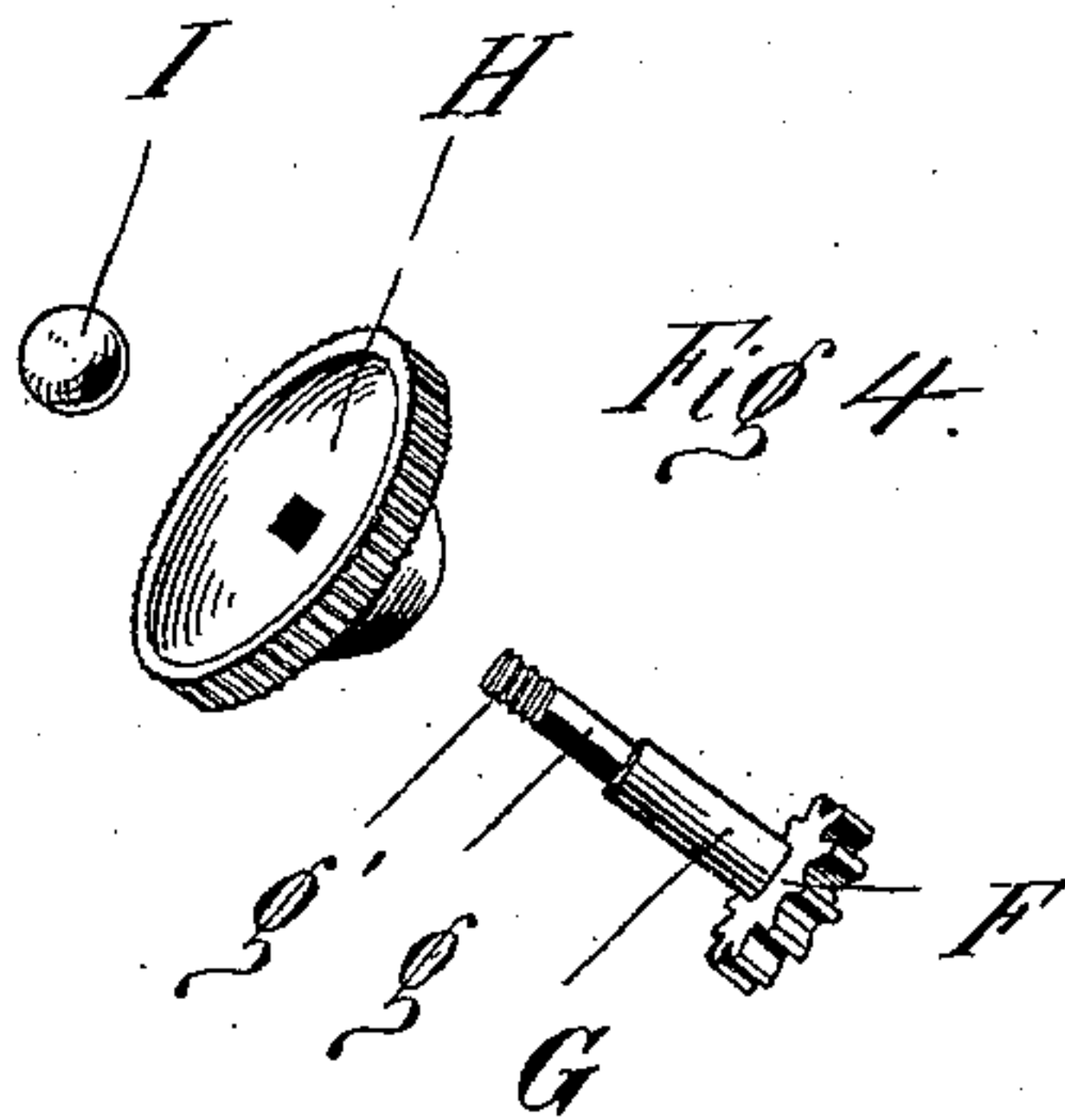
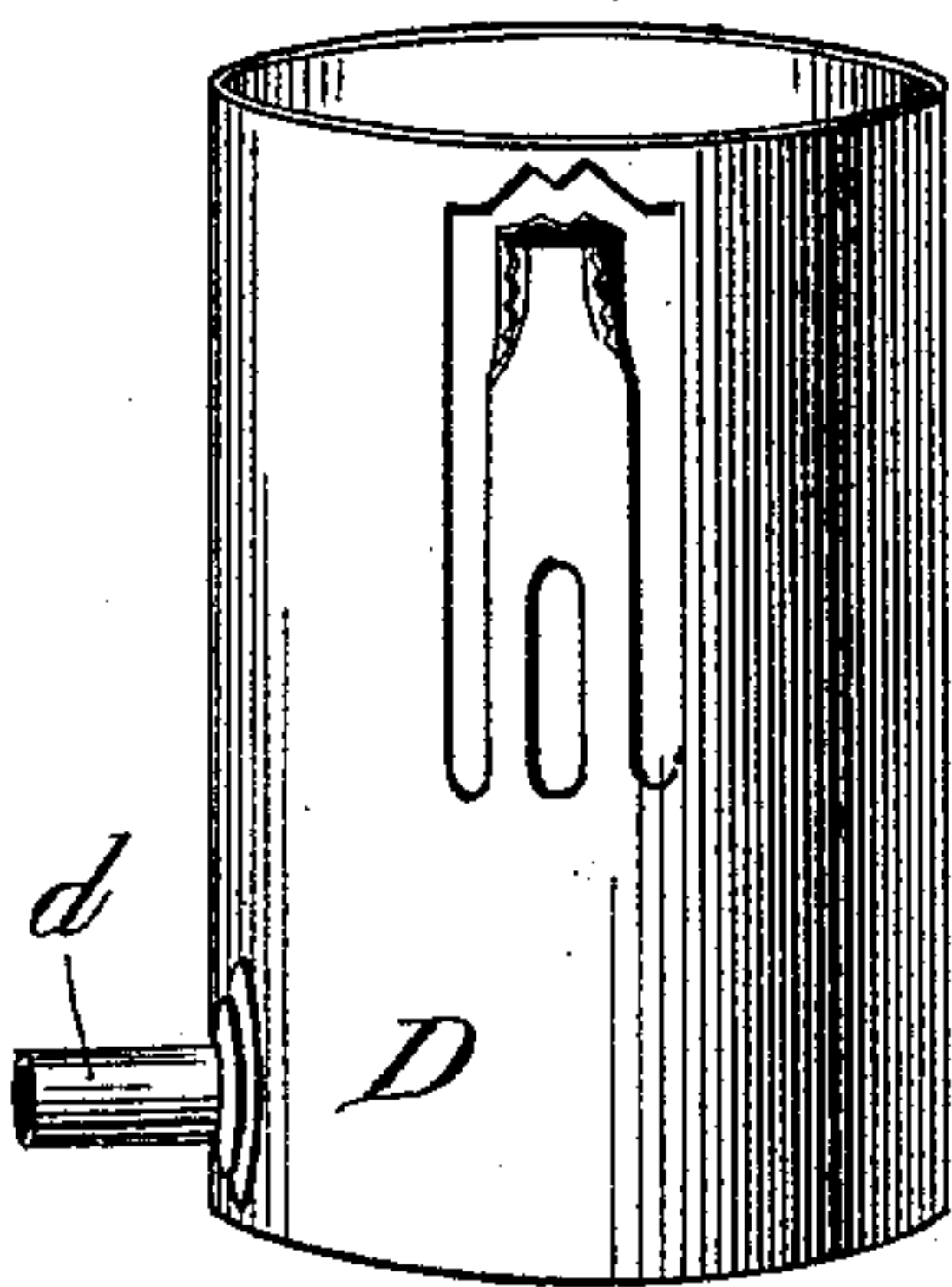
Patented May 21, 1895.



*Fig. 2.*



*Fig. 3.*



WITNESSES

Louis W. Stadtmiller

Geo. H. Pittman, Jr.

Frank Theodore Williams  
INVENTOR

Geo. L. Cooper  
ATTORNEY



# UNITED STATES PATENT OFFICE.

FRANK THEODORE WILLIAMS, OF MERIDEN, CONNECTICUT, ASSIGNOR TO  
THE EDWARD MILLER & COMPANY, OF SAME PLACE.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 539,761, dated May 21, 1895.

Application filed September 14, 1894. Serial No. 522,987. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK THEODORE WILLIAMS, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have invented a new and useful Improvement in Lamps, of which the following is a specification.

My invention relates to that class of lamps in which a wick raising sleeve is connected to a draw-bar which passes out at the top of the lamp. It is intended to provide means for accurately adjusting the wick exposure through said draw-bar without interfering with the "plunge" or rapid downward movement of the draw-bar which is of great convenience in extinguishing the flame.

In the accompanying drawings, Figure 1 represents in elevation, partly broken away, an Argand lamp embodying my invention. Figs. 2, 3, and 4 show the working parts of my device separately and detached from the lamp.

The same letters refer to like parts in the several views.

A, designates a lamp fount provided with a draw-bar opening  $a$  and shaft guide  $a'$ ; B, an inner air supply tube; C, a wick; D, a wick sleeve;  $d$ , an offset on the sleeve D; E, a draw-bar provided with a rack  $e$ ; F, a pinion; G, a shaft squared at  $g$  and screw threaded at  $g'$ ; H, a button; I, a nut.

In the example of my invention illustrated in the drawings, the fount A, inner air supply tube B and tubular wick C are of ordinary or convenient form. The wick sleeve D as shown encircles the tube B and may be provided with means, many of which are well known in the art, for securing the adhesion of the wick C. To the sleeve D is attached the offset  $d$  here shown as a horizontally projecting tubular socket adapted to receive the bent lower end or foot of the draw-bar E. The socket  $d$  is made from a solid drawn tube one end of which is enlarged and united to the sleeve D as by swaging. In the draw-bar E is cut an inclined rack  $e$  into which within the fount A mesh the teeth of the pinion F. The inclined shaft G on which the pinion F is mounted passes through the guide or bearing  $a'$  in the top of the fount A. At the outer

end of the shaft G is the button H by means of which the operator is enabled to rotate the pinion F thereby raising or lowering the draw-bar E with its attached sleeve D and wick C. The button H as shown has a square central aperture corresponding to the squared portion  $g$  of the shaft G and so as to fit thereon. On the screw threaded end  $g'$  of the shaft G is screwed the nut I, which serves to hold the button H in place.

It will be seen that the fount A may be buffed and otherwise finished before the parts F, G, H and I are assembled with it, thus reducing both the cost and the risk of bending or injuring the parts. By making the socket  $d$  on the sleeve D from a drawn tube instead of a bent piece of sheet metal and securing the socket on the sleeve by swaging I materially strengthen the wick adjusting device and adapt it to the quick thrust required to suddenly extinguish the flame. It will also be seen that my device does not detract from the appearance of the lamp as the working parts are within the fount. For this reason also the device is less expensive as no case is required to hide the pinion. The most considerable advantage of inclining the shaft  $g$  and placing the pinion F within the fount in connection with the bevel rack  $e$  on the draw-bar E is that the lower end of the draw-bar entirely clears the pinion when the draw-bar is raised to its highest point so that the foot of the draw-bar may be withdrawn from the socket  $d$  and fount opening  $a'$ . In this way the separate withdrawal of the bar E and wick sleeve D from the fount A is still permitted and the advantage gained by the invention covered by United States Patent No. 477,862 is retained.

I am aware of the existence of United States Patent No. 454,528 in which is shown an inclined shaft passing through the top of the lamp and acting directly on the wick sleeve. I am also aware of Patent No. 409,086 in which a drawbar is provided with a rack at right angles with its axis and a pinion mounted on a horizontal shaft and engaging with said rack. I do not wish to be understood as claiming anything shown or described in either of said patents.



What I claim as my invention, and desire to secure by Letters Patent of the United States, is as follows:

1. In a lamp in combination a wick sleeve,  
5 a radially projecting socket on said sleeve, a draw-bar the lower end of which is bent to form a foot adapted to enter said socket, an opening in the top of the lamp in which said draw-bar may move either vertically or hori-  
10 zontally, an inclined or beveled rack on said draw-bar, an inclined shaft passing through the top of the lamp and a pinion on said shaft within the lamp and meshing in said rack, substantially as described.

2. In a lamp in combination a wick sleeve, 15 a draw-bar connected with said sleeve, an inclined or bevel rack on said draw-bar, an inclined shaft passing through the top of the lamp, a pinion on said shaft within the lamp and meshing in said rack, a button above the 20 top of said lamp and detachably secured on said shaft and means as a nut for securing said button on said shaft, substantially as described.

FRANK THEODORE WILLIAMS.

Witnesses:

GEO. L. COOPER,

GEO. M. CHITTENDEN.