

(No Model.)

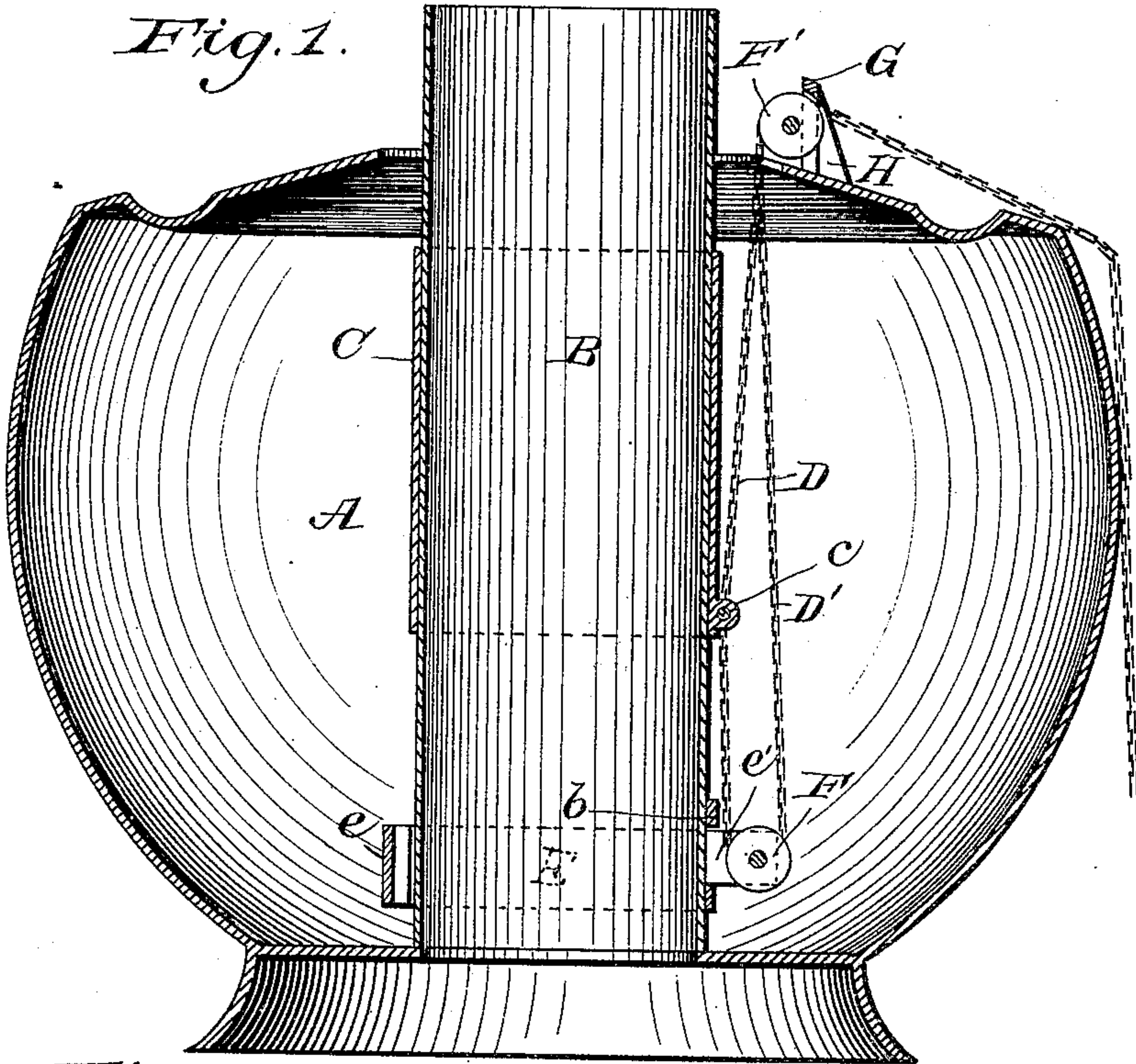
2 Sheets—Sheet 1.

F. RHIND.  
WICK ADJUSTING DEVICE.

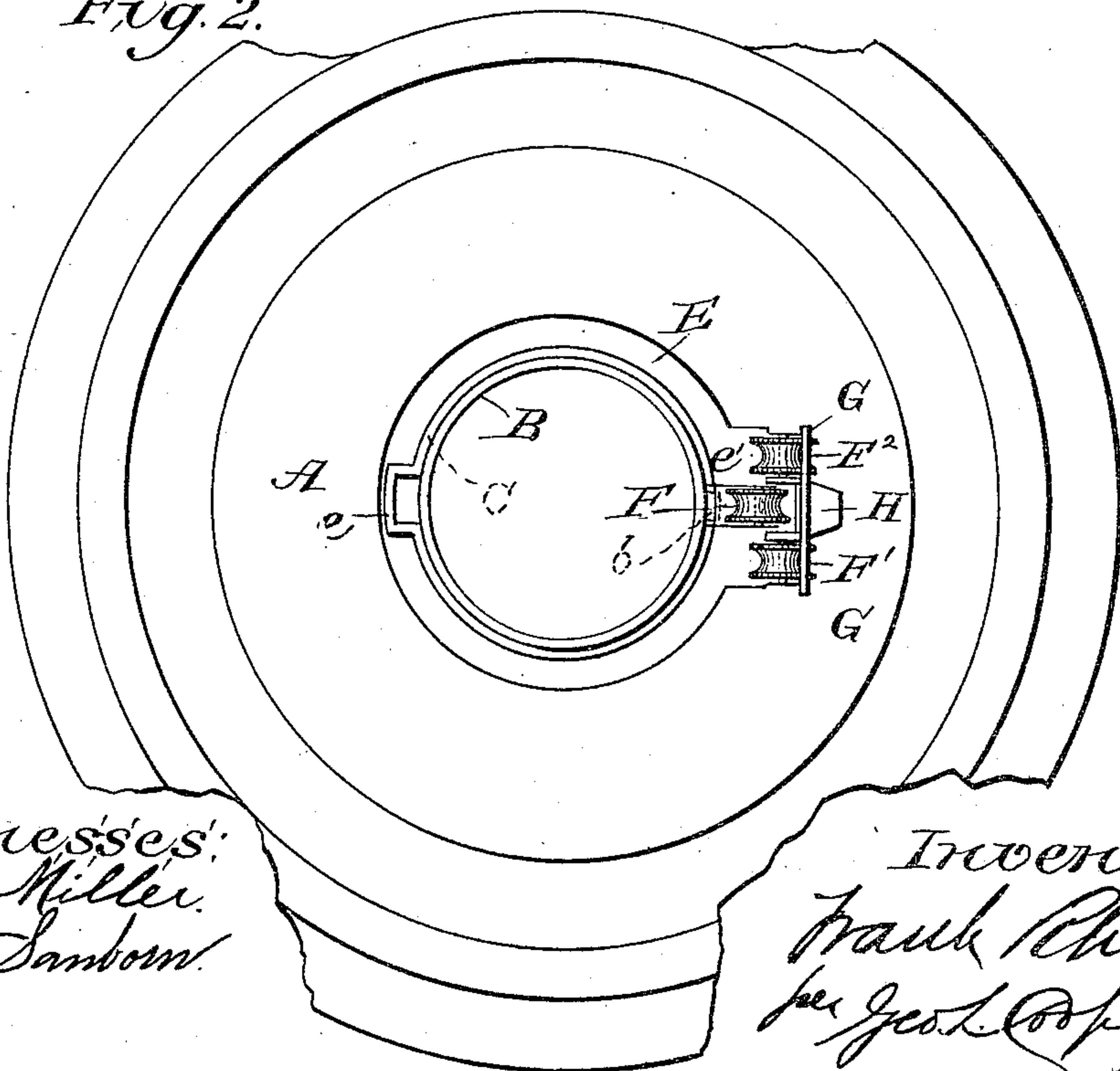
No. 429,743.

Patented June 10, 1890.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
L. B. Miller.  
A. H. Sanborn.

Inventor:  
Frank Rhind  
per Geo. L. Cooper  
att'y.

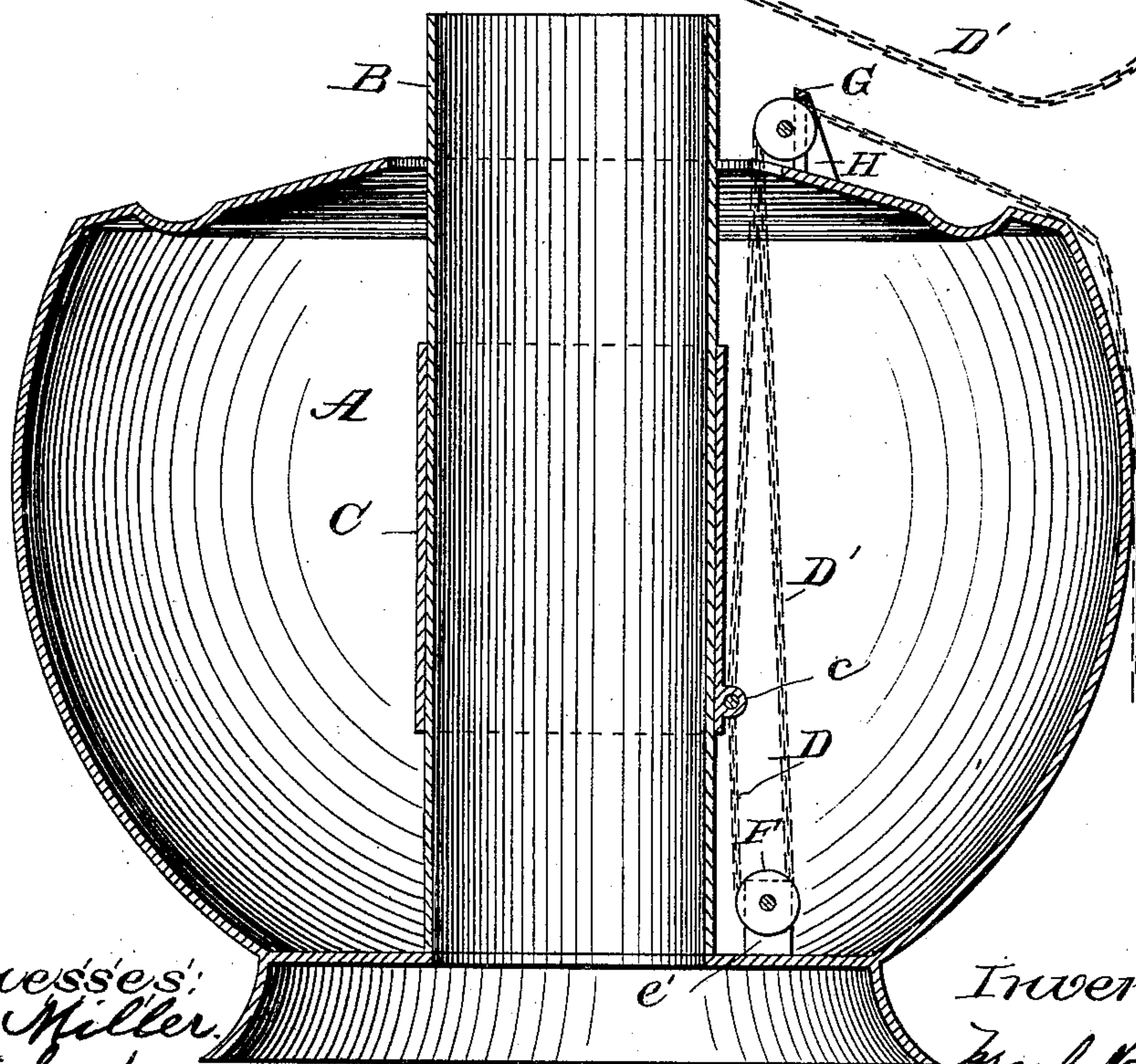
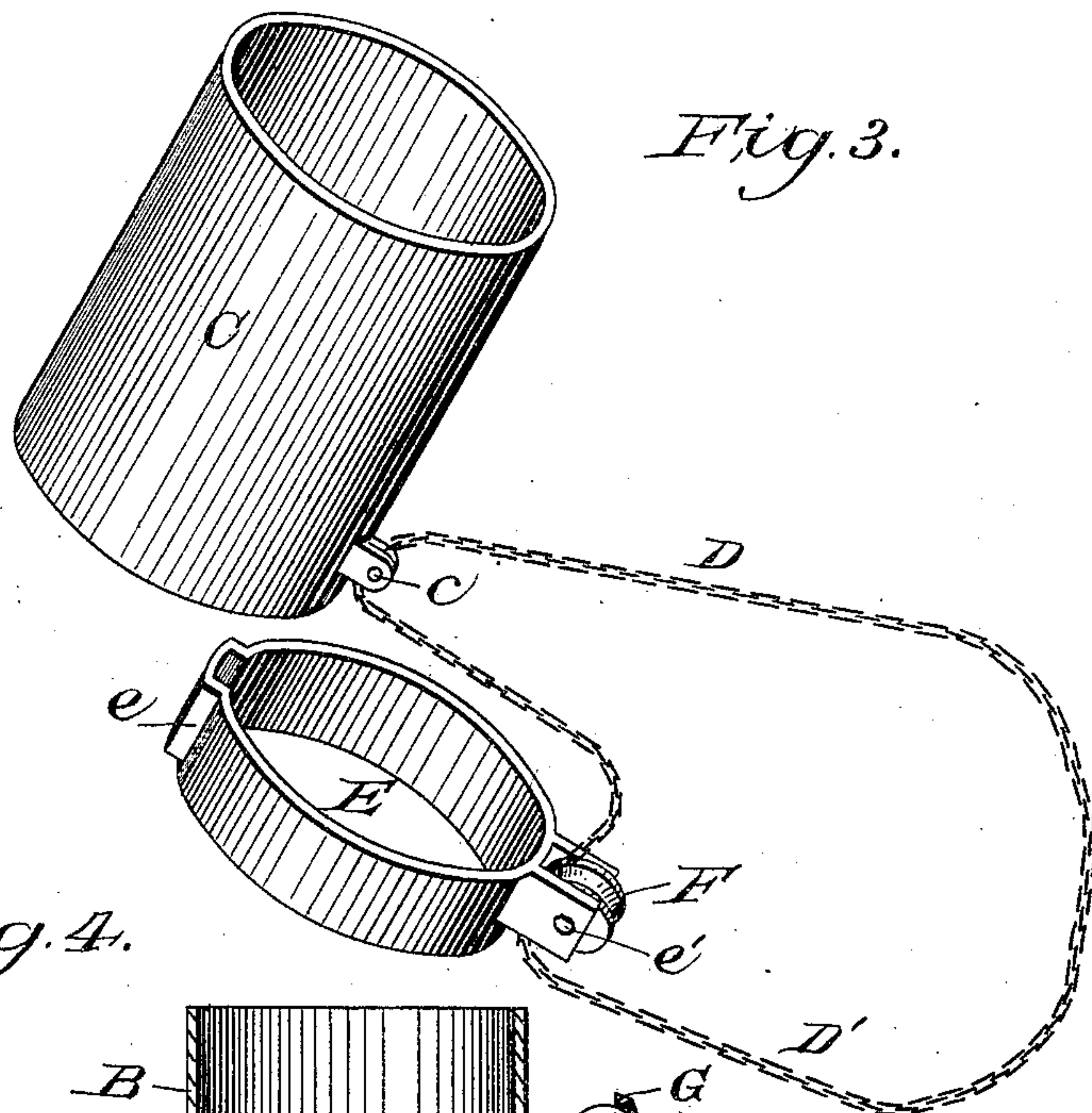
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Witnesses:  
J. B. Miller  
A. F. Santon

Inventor:  
Frank Rhind  
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Atty.



# UNITED STATES PATENT OFFICE.

FRANK RHIND, OF MERIDEN, CONNECTICUT, ASSIGNOR OF ONE-HALF TO  
THE EDWARD MILLER & COMPANY, OF SAME PLACE.

## WICK-ADJUSTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 429,743, dated June 10, 1890.

Application filed December 18, 1889. Serial No. 334,235. (No model.)

*To all whom it may concern:*

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

My invention relates chiefly to that class of Argand or central-draft lamps in which a sleeve to which the wick is secured is provided with means for vertical adjustment on the wick-tube. It is intended to simplify and facilitate such adjustment.

In the accompanying drawings, Figure 1 represents in vertical section so much of an Argand lamp as is necessary to show my device. Fig. 2 is a top plan view of the same, the wick-sleeve and chain being detached for the sake of clearness. Fig. 3 is a view in perspective of a portion of the device detached from the lamp. Fig. 4, in vertical section, shows a modification.

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

A designates a lamp fount or body; B, an inner wick-tube; *b*, a boss on the tube B; C, a wick-adjusting sleeve; *c*, an ear on the sleeve C; D D', chains; E, a band on the tube B; *e*, an offset on the band E; *e'*, an ear; F F' F'', pulleys; G, a guard; H, a tongue.

In the example of my invention illustrated in Figs. 1, 2, and 3 of the drawings the fount A may be of any desired form or material. The inner wick-tube B, which, as here shown, serves also as the central-draft or inner air-supply tube, is provided at a short distance from its lower end with an external projection or boss *b*. The wick-sleeve C, as here shown, is of an interior diameter slightly greater than the exterior diameter of the tube B, and so as to slide freely thereon. It may be provided with any convenient means for securing the wick to its exterior surface. Many of these means are so well known that I have deemed it unnecessary to show them in this connection. It is also well known that wick-adjusting sleeves of this general character may be made sufficiently large to surround the wick instead of being encircled by it. As these two forms of sleeves are equivalent so far as my present invention is concerned, I

have not thought it necessary to illustrate both. The sleeve C is provided, preferably, near its lower end with a projecting ear *c*, to which the chains D D' are attached. A band E, of such a diameter as to slip snugly over the tube B, is provided with an offset portion *e*, adapted to pass over the boss *b*. At a point on the band E preferably opposite or nearly opposite the offset *e* two parallel ears *e'* *e'* are formed or secured. Between these ears is hung the pulley or idler F, grooved to receive the chain D'. The collar of the lamp-fount A or the detachable burner portion, or both, may be recessed to permit the chains D D' to pass out of the top of the lamp-fount. To lessen friction, I preferably secure two pulleys or idlers F' F'', grooved to receive the chains D D', to the top of the fount A, as shown.

To operate the device the chain D' is reeved through the pulley F, as shown in Fig. 3. The band E is then passed over the tube B and pressed downward, the ears *e'* and idler F passing between the idlers F' F''. The band E is partially rotated on the tube B, so as to permit the offset *e* to pass over the boss *b*. After the band E has been forced below the boss *b* the band is further rotated to bring the idler F in a vertical plane with the recess between the idlers F' F'', through which it entered the fount. In this position the boss *b* will operate to prevent the upward motion of the band E on the tube B. The wick-sleeve C may then be passed over the tube B and the wick secured to the sleeve. The ends of the chains D and D' are then passed over the idlers F' and F'' beneath the guard G, and may preferably be attached together, as shown in Fig. 1. The function of the guard G is to prevent the chains D D' riding out of the grooves in the pulleys F' F''. The tongue H, which may preferably be secured to or form part of the guard G, passes between the outer ends of the chains D D', and if the ends of the chains are attached together, as suggested, serves to prevent their running back into the fount. It will be seen that by pulling chain D the wick-sleeve C and the wick may be raised, and by pulling chain D' they may be lowered. It is found in practice that by taking hold of both chains at once a steady



motion and delicate adjustment may be given the wick, and by quickly pulling chain D' the flame may be suddenly extinguished, thereby preventing the escape of the disagreeable odors always produced in a large lamp by the gradual lowering of the wick below the point of perfect combustion. To rewick the lamp, it is only necessary to raise the sleeve to or just above the top of the tube B, remove the old wick, and attach a new one to the sleeve in any desired manner.

It is obvious that a reversal of the process by which the band E was inserted into the fount will remove it, and that this will only be necessary in case of the breaking of the chain D'. As this breaking of the chain is unlikely to occur, it suffices, to the successful application of my device, to secure the idler F to the bottom of the lamp-fount, as shown in Fig. 4 of the drawings. In this drawing I have shown the chains D D' passing out of holes in the top of the fount instead of a recess in the collar or detachable portion, as before described. It is plain that the operation of the device will not be thereby altered.

My device is especially adapted to hanging lamps, as the chains may be made of any length requisite to reach the hand of the operator.

In the case of a lamp having a wick-tube of large diameter it might be advantageous to provide two ears c, two sets of chains D D', with idlers, &c.—in other words, to duplicate the wick-adjusting mechanism described. I have not deemed it advantageous to illustrate this alteration, as it is obviously mere multiplication.

It is plain that many mechanical changes may be made in my device without departing from my invention. Thus instead of chains any flexible connections may be used, the guides by which the path of motion of these flexible connections is changed need not be operative pulleys, or the flexible connection may be integral instead of in two parts, as described.

I am aware that in a former construction an endless chain passing over two pulleys within the lamp has been used to communicate motion to the wick, the upper pulley being rigidly secured to a spindle passing out of the lamp and provided with a thumb-piece or button. In this case the operator must be able to reach the top of the lamp in order to adjust the wick, and the considerable advantage of being able to suddenly extinguish the flame is of course lost.

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

1. In a wick-adjusting device, the combination of a guide in the lamp-fount, a flexible connection passing around said guide and out of the top of the fount, a second flexible connection also passing out of the top of the fount, and means for connecting said flexible connections with the wick, substantially as described.

2. In a wick-adjusting device, the combination of a guide in the lamp-fount, a flexible connection passing around said guide and out of the top of the fount, a second flexible connection also passing out of the top of the fount, and a wick-sleeve secured to said flexible connections, substantially as described.

3. In a wick-adjusting device, the combination of a guide in the lamp-fount, guides at the top of the fount, a flexible connection passing around said first-named guide and over one of said last-named guides out of the fount, a second flexible connection also passing over one of said last-named guides out of the fount, and a wick-sleeve secured to said flexible connections, substantially as described.

4. In a wick-adjusting device, the combination of a guide in the lamp-fount, guides at the top of the fount, a guard surmounting said last-named guides, a flexible connection passing around said first-named guide and over one of said last-named guides out of the fount, a second flexible connection also passing over one of said last-named guides out of the fount, and a wick-sleeve secured to said flexible connections, substantially as described.

5. In a wick-adjusting device, the combination of a guide in the lamp-fount, guides at the top of the fount, a guard surmounting said last-named guides, a tongue adapted to act in conjunction with said guard, a flexible connection passing around said first-named guide and over one of said last-named guides out of the fount, a second flexible connection also passing over one of said last-named guides out of the fount, and a wick-sleeve secured to said flexible connections, substantially as described.

6. In an Argand lamp, the combination, with the lamp-fount, of an inner wick-tube, a band detachably secured to said tube, a guide on said band, a flexible connection passing around said guide and out of the fount, a second flexible connection also passing out of the fount, and means for connecting said flexible connections with the wick, substantially as described.

FRANK RHIND.

Witnesses:

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