

(No Model.)

3 Sheets--Sheet 1.

J. HINKS.

LAMP.

No. 312,202.

Patented Feb. 10, 1885.

FIG 1.

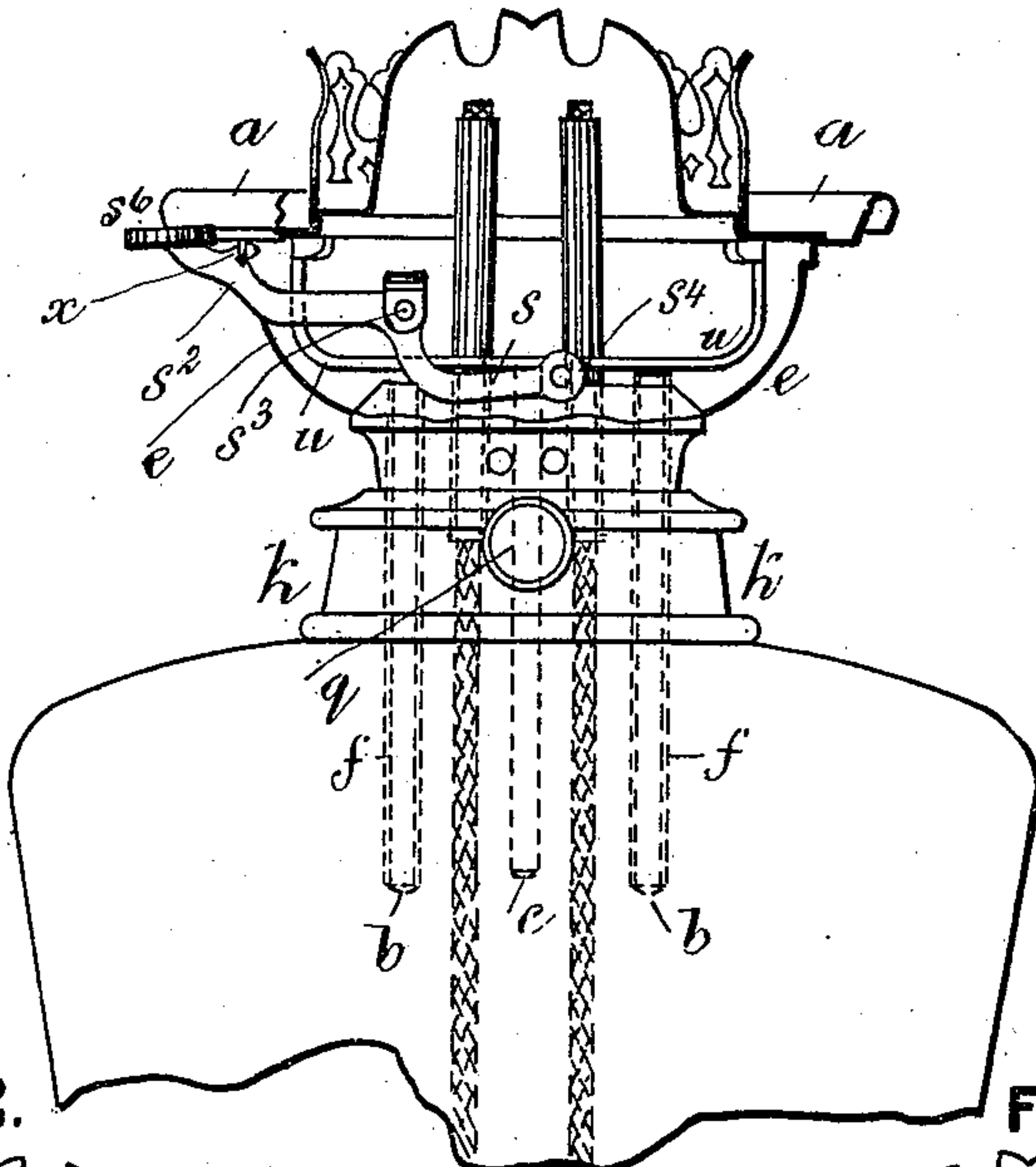


FIG 2.

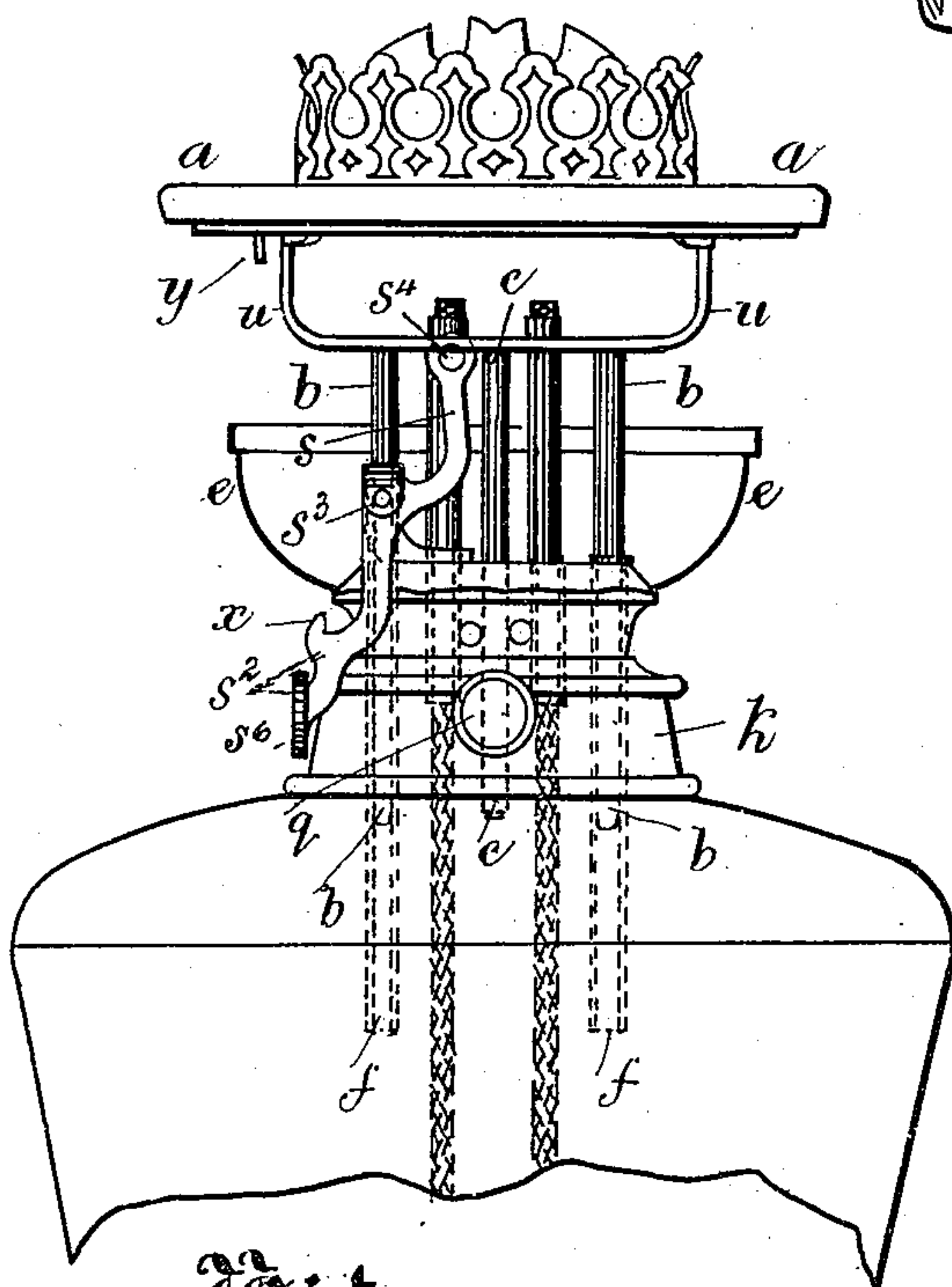
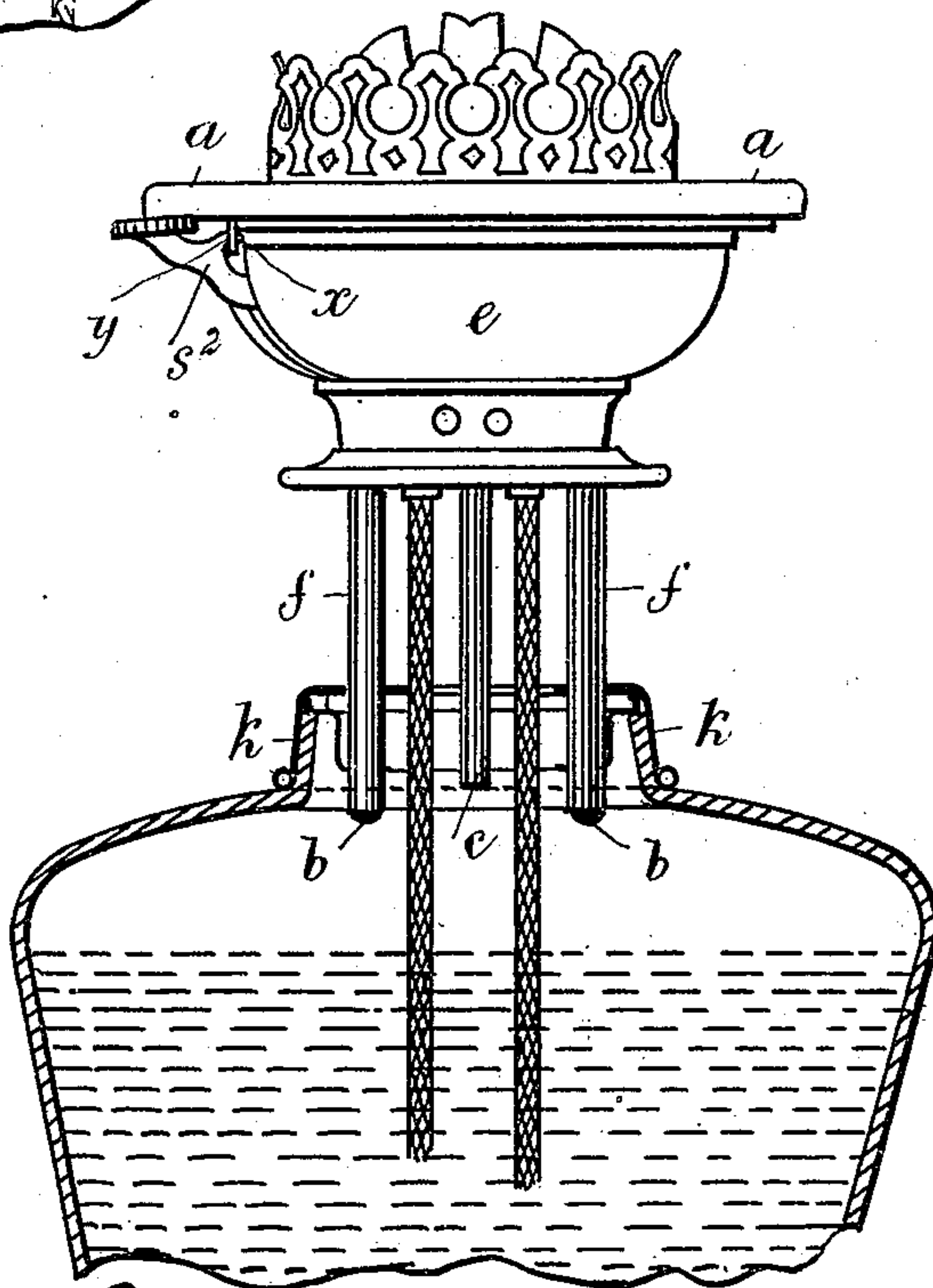


FIG 3.



Witnesses.
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Arthur J. Powell

Inventor.
Joseph Hinks

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FIG 4.

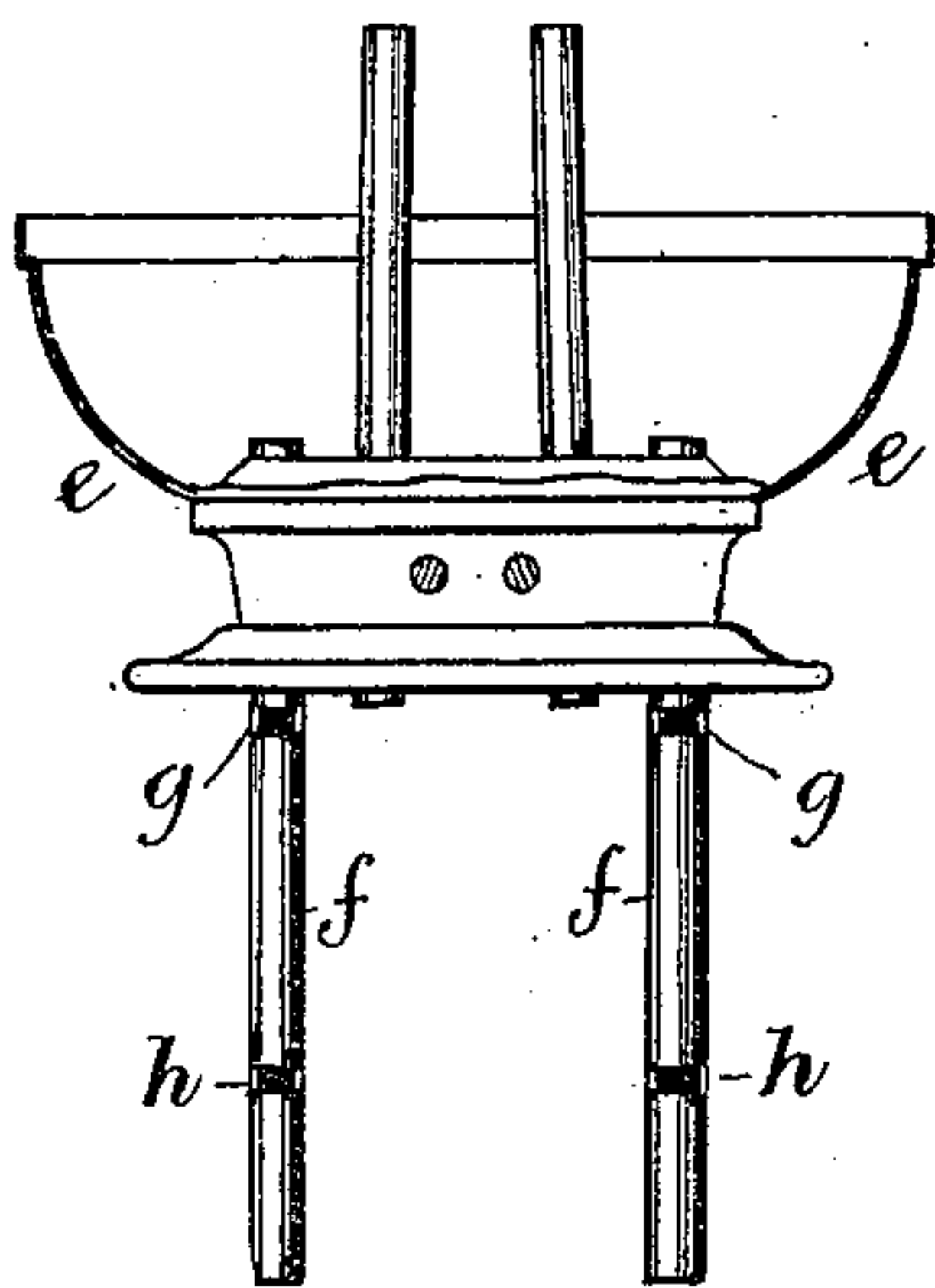


FIG 6.

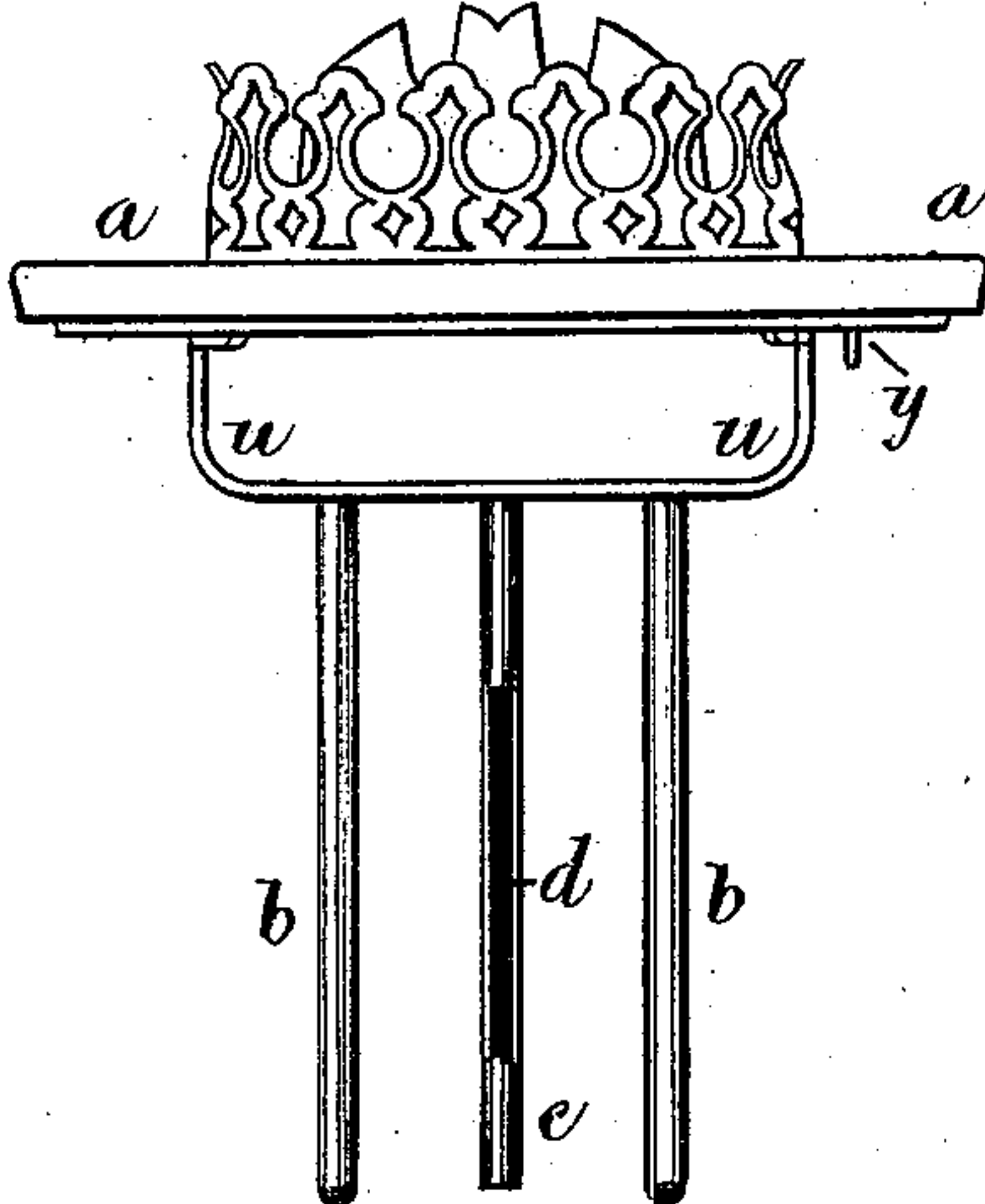


FIG 8.

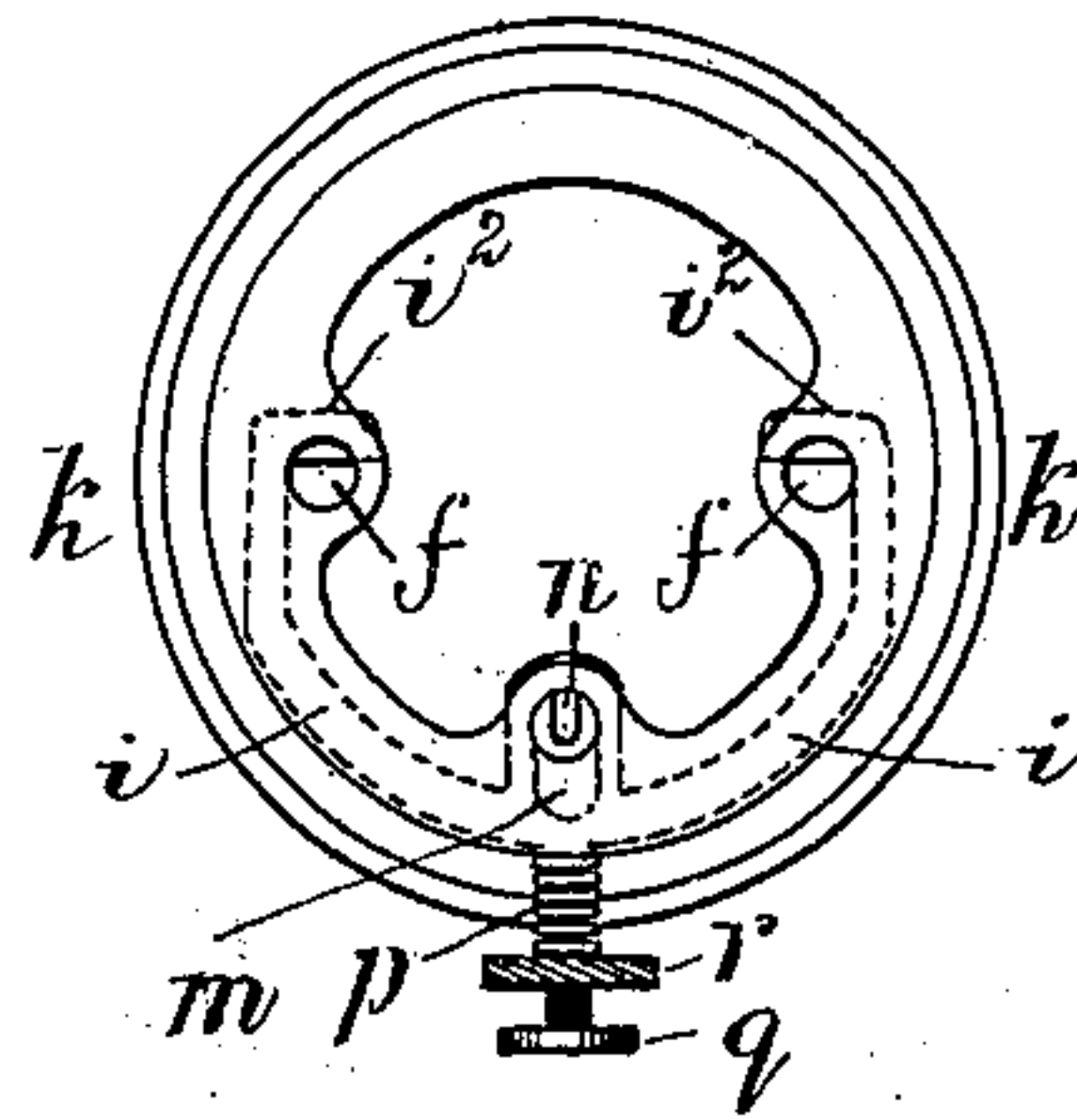


FIG 9.

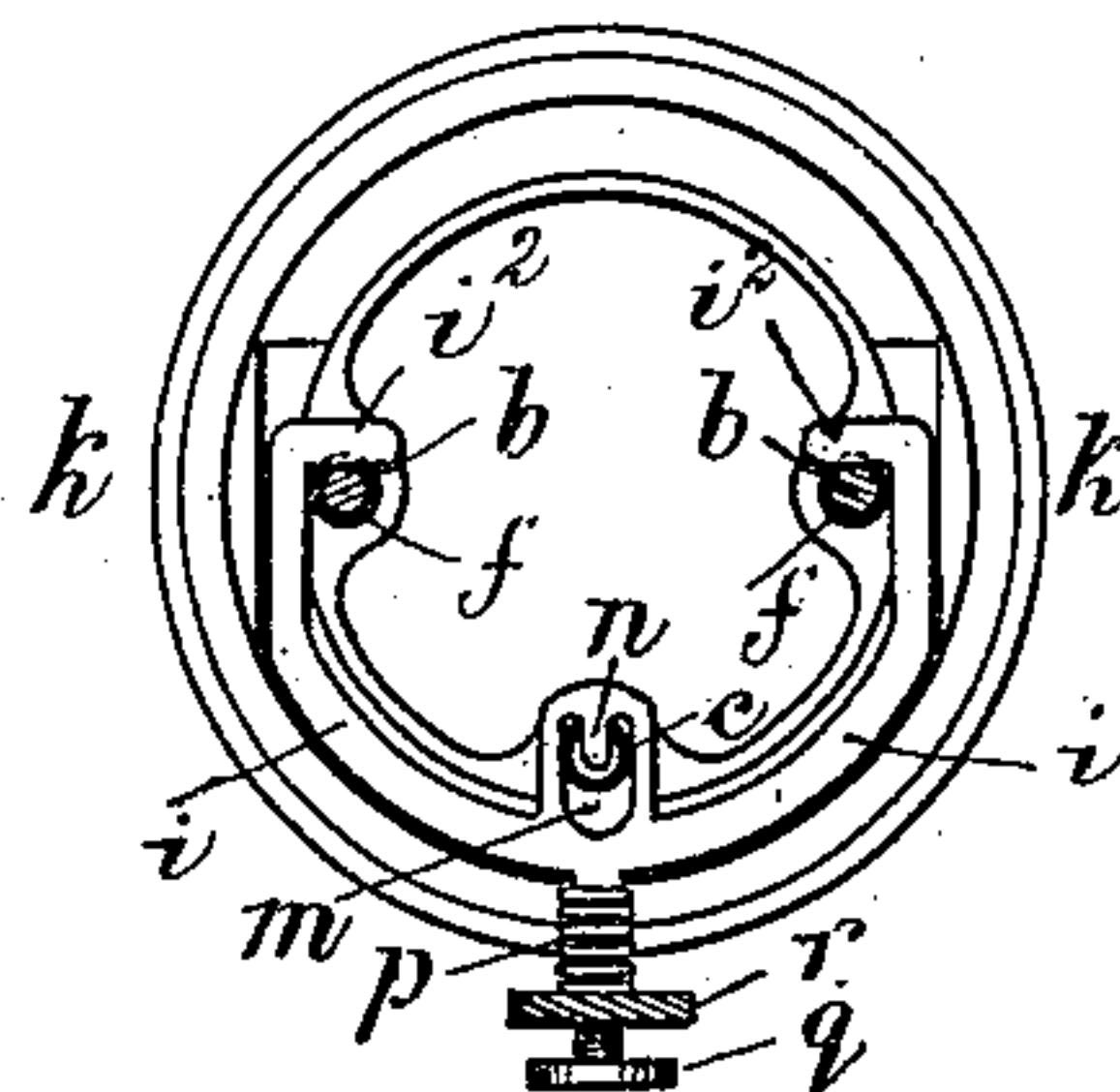


FIG 5.

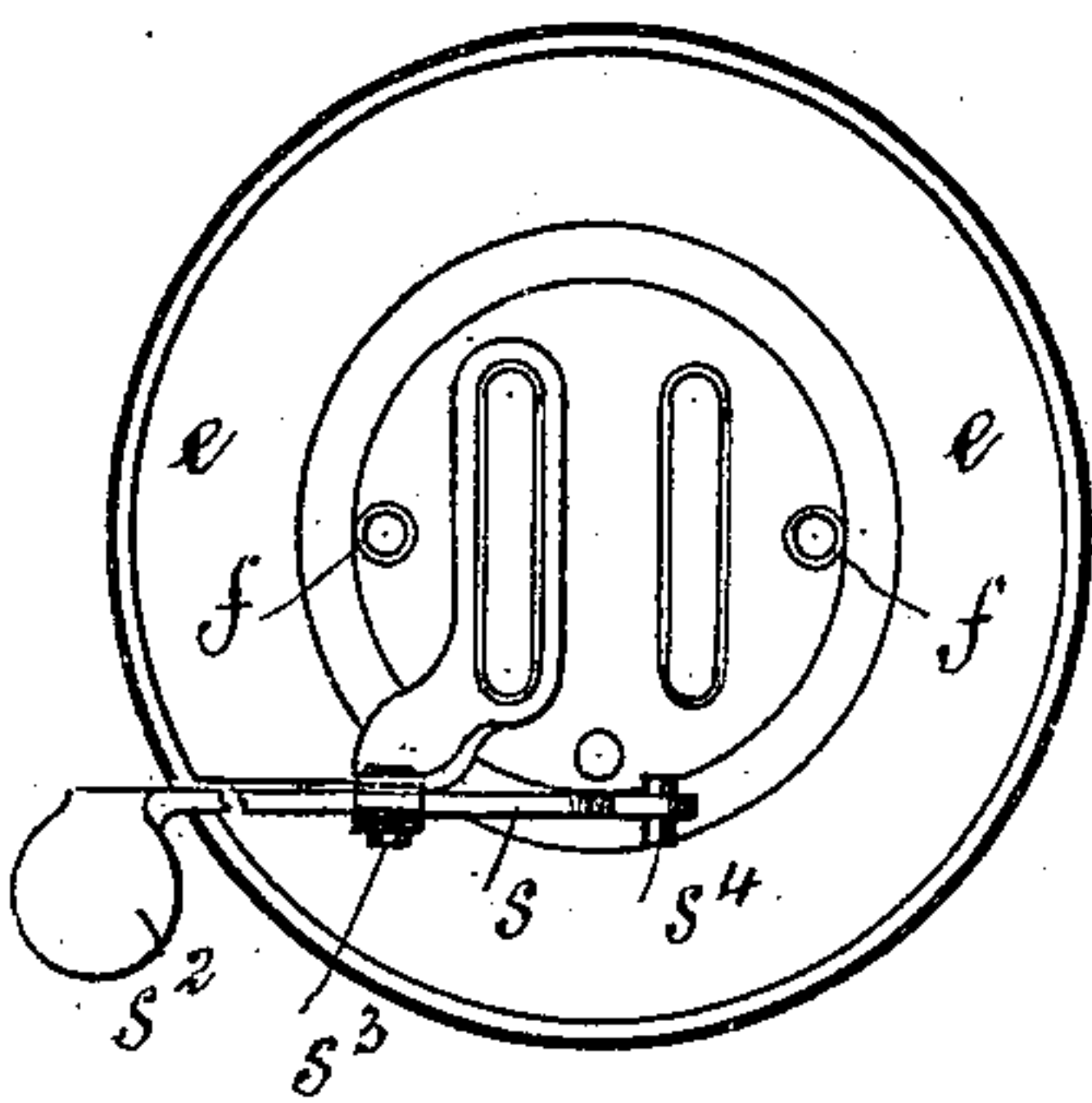


FIG 7.

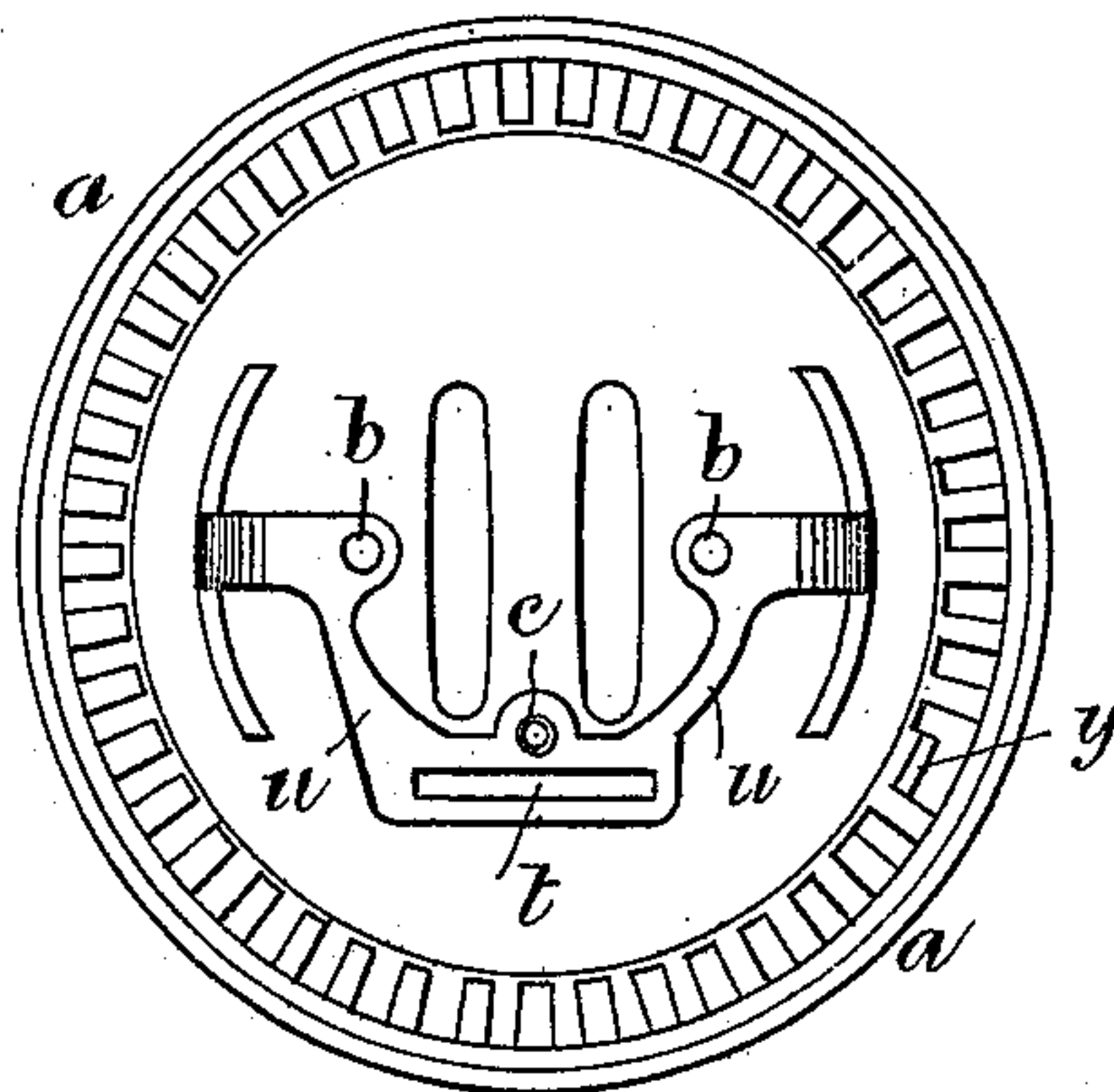
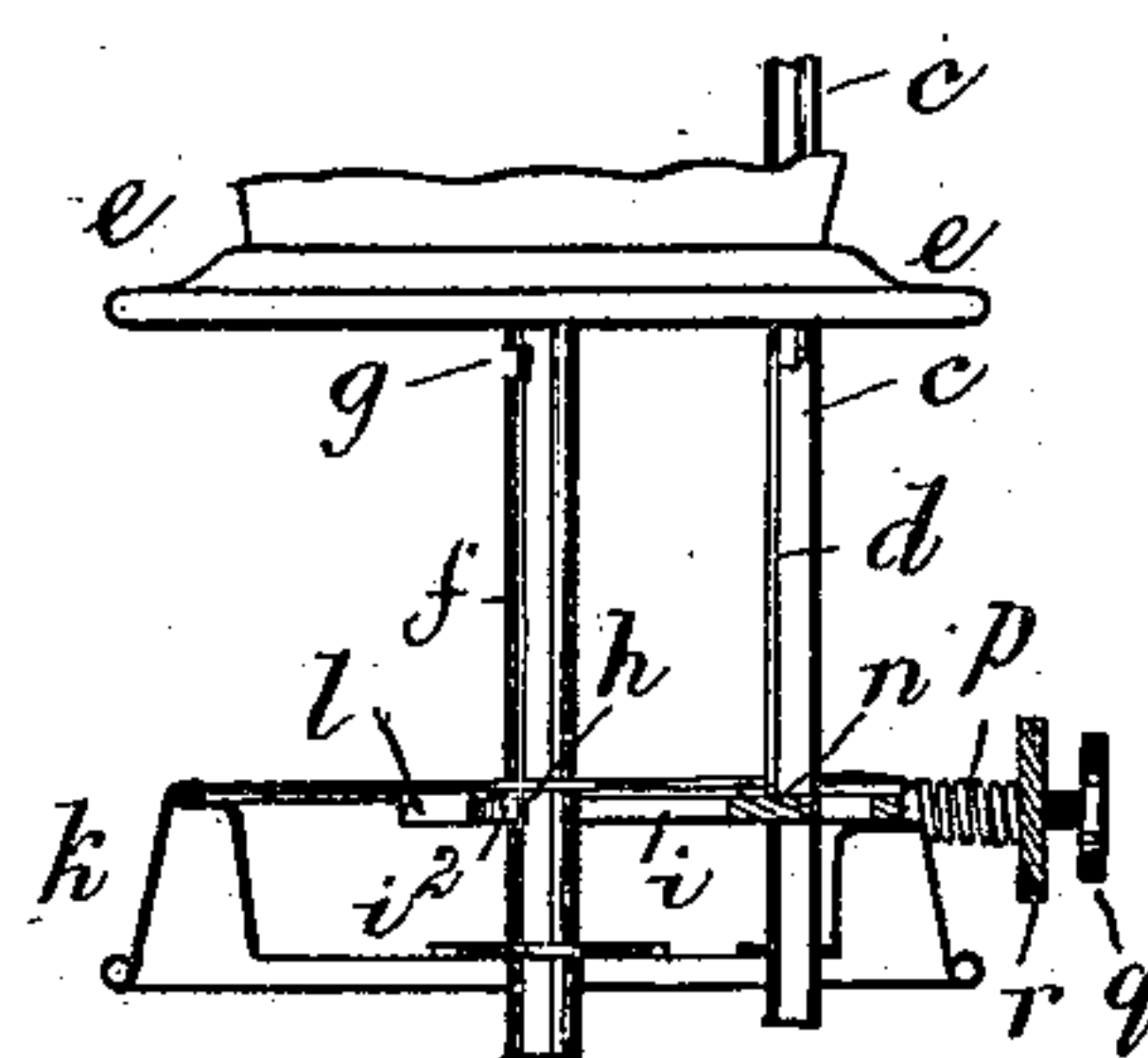


FIG 10.



Witnesses.

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FIG 11

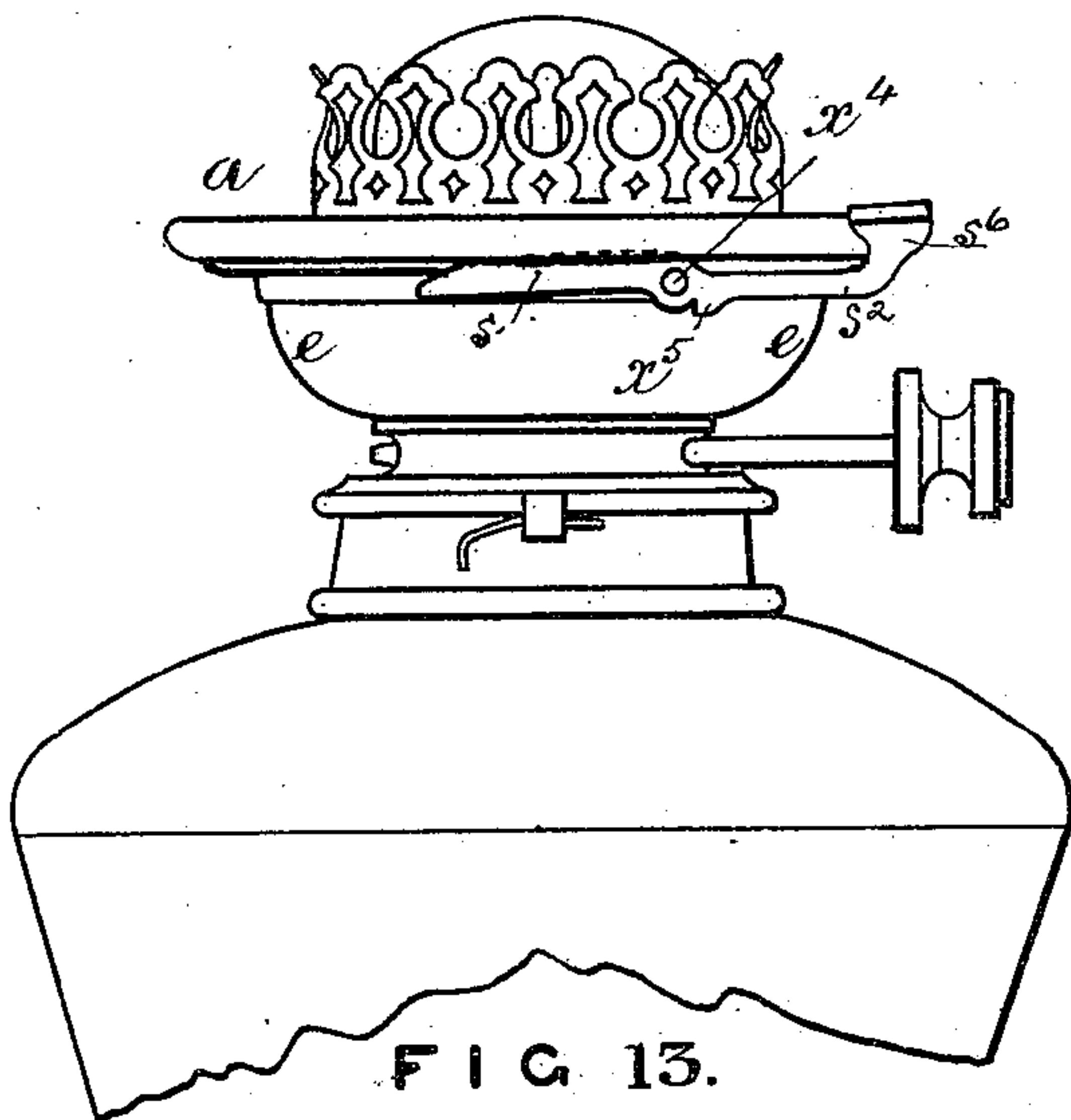
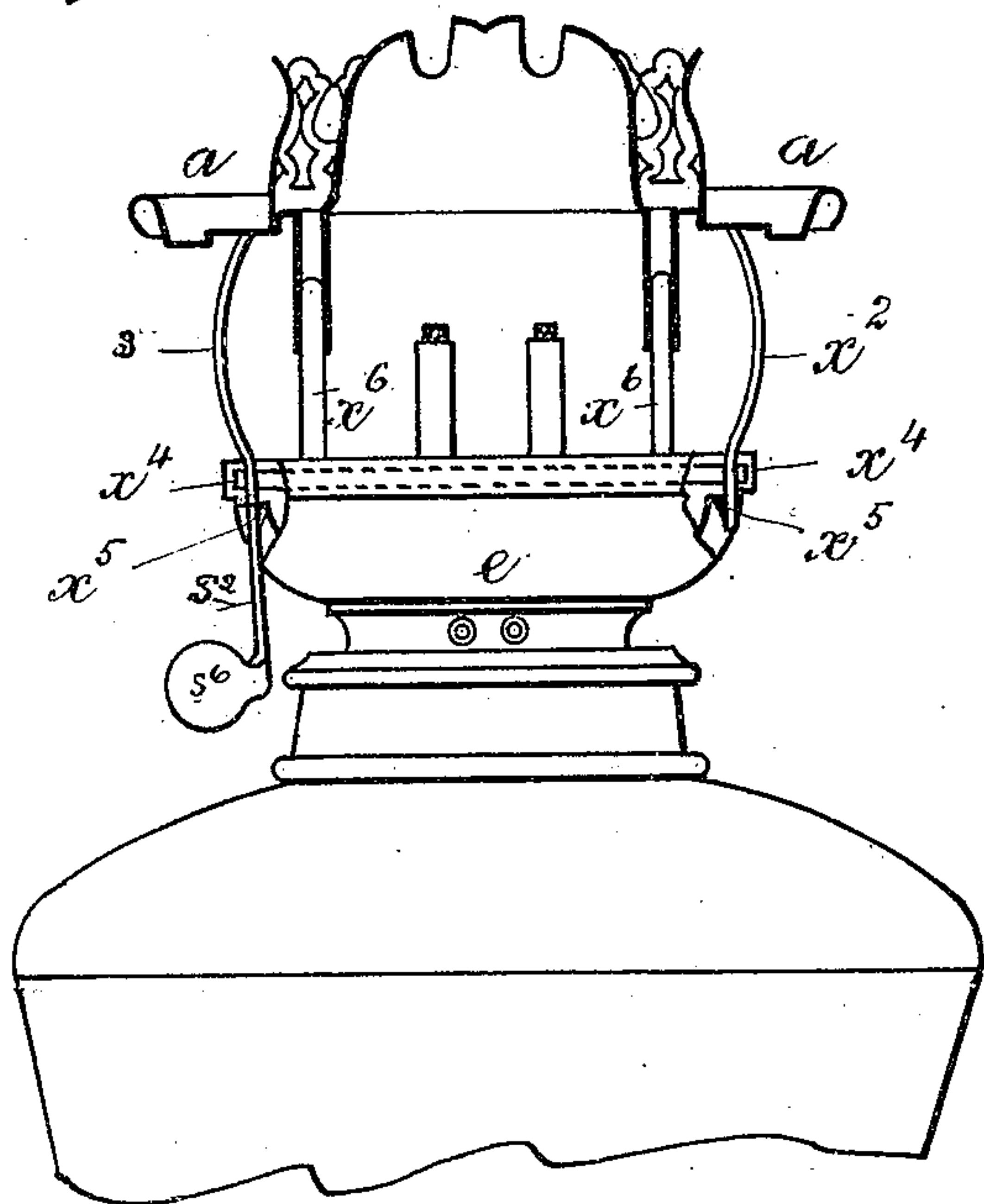


FIG 13.



Witnesses.
Richard Skerrett
Arthur J. Powell

FIG 12.

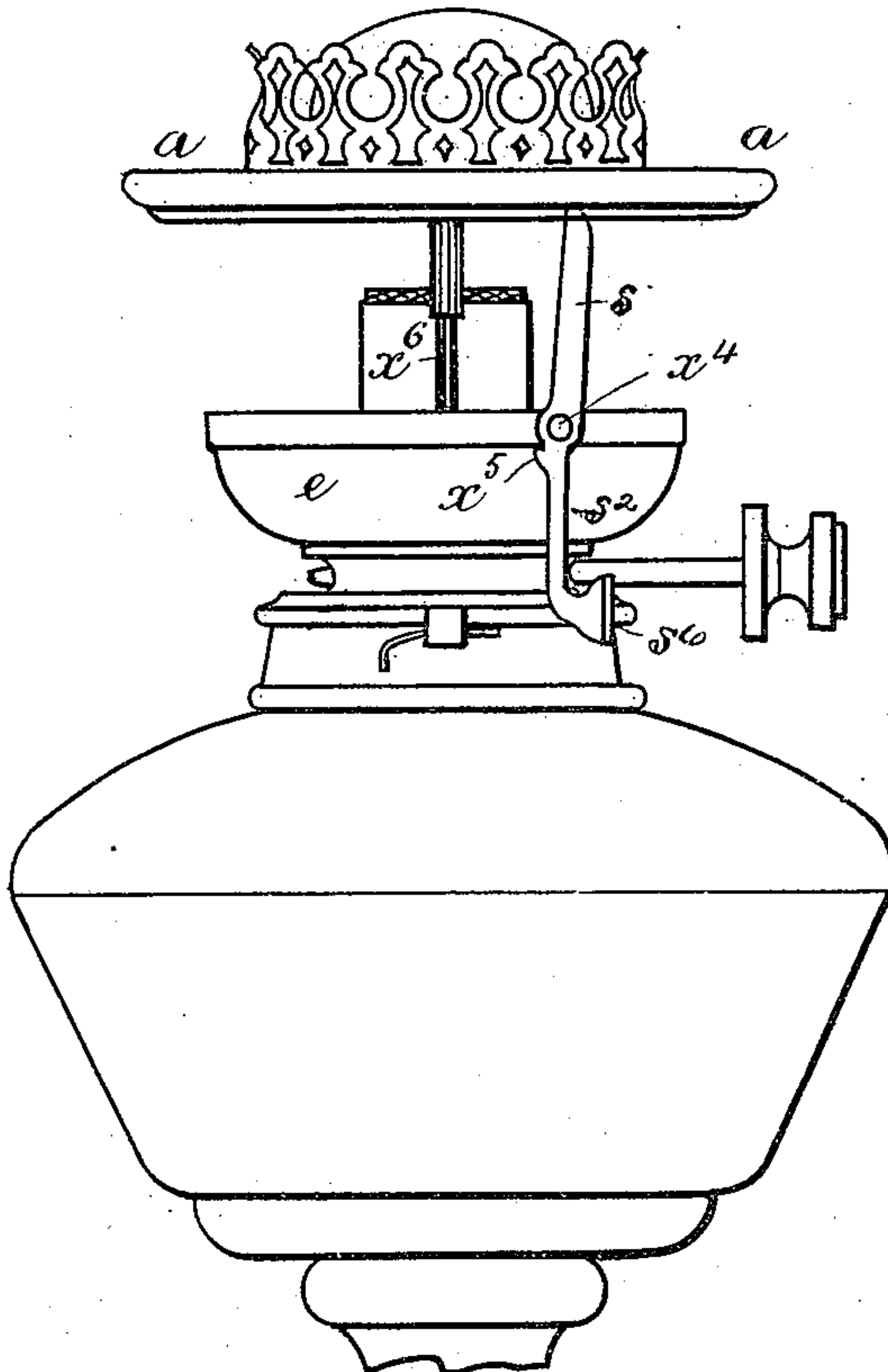
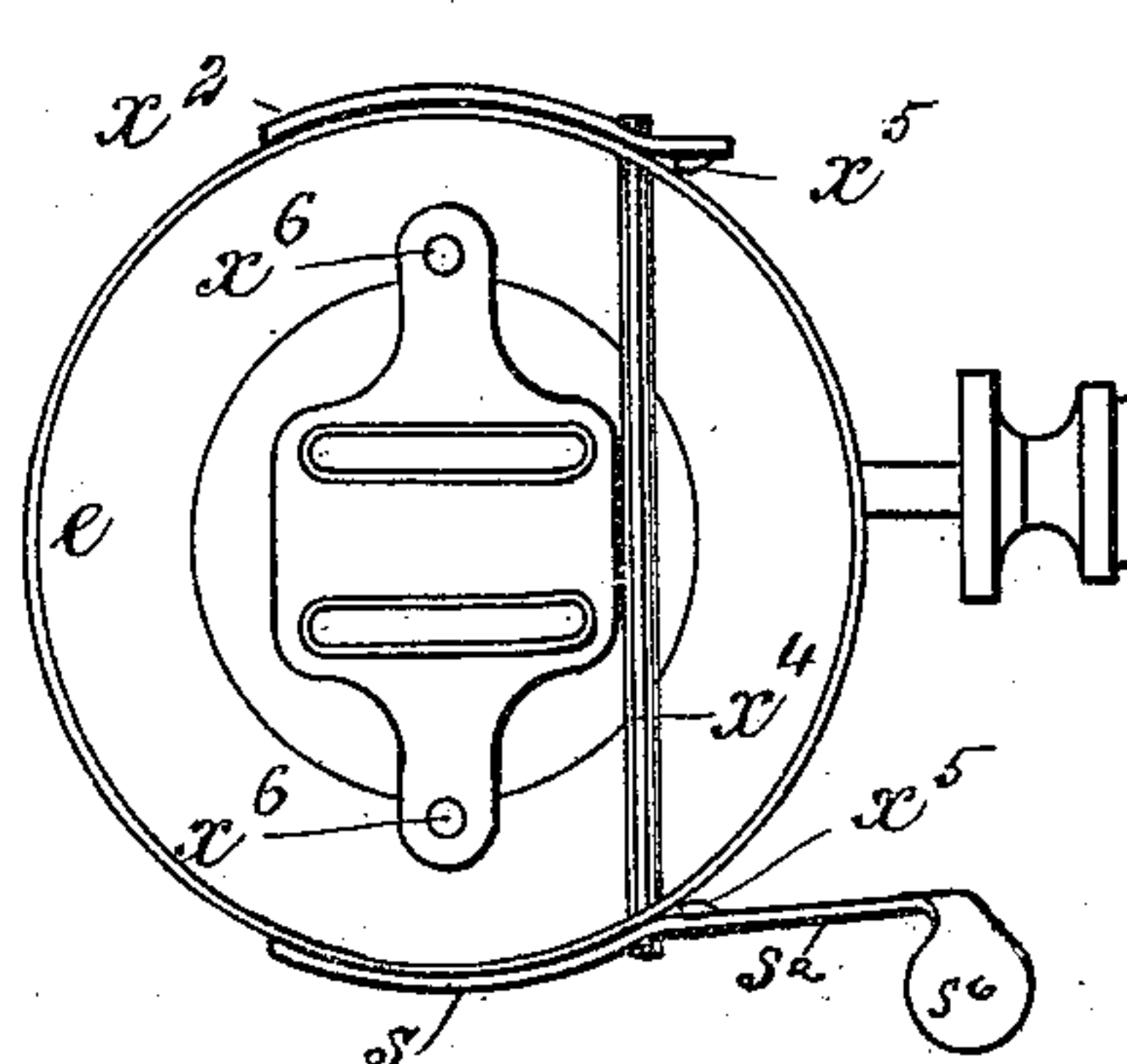


FIG 14.



Inventor.
J. Hinks

UNITED STATES PATENT OFFICE.

JOSEPH HINKS, OF BIRMINGHAM, COUNTY OF WARWICK, ENGLAND.

LAMP.

SPECIFICATION forming part of Letters Patent No. 312,202, dated February 10, 1885.

Application filed July 5, 1884. (No model.) Patented in England September 11, 1883, No. 4,341.

To all whom it may concern:

Be it known that I, JOSEPH HINKS, of Birmingham, in the county of Warwick, England, manufacturer, a subject of the Queen of Great Britain, have invented Improvements in Lamps for Burning Light or Volatile Oils, (for which I have obtained a patent in Great Britain, No. 4,341, bearing date September 11, 1883,) of which the following is a specification.

My invention has for its object to facilitate the trimming of the wicks and the lighting of the said lamps, and the filling of the reservoirs of the said lamps; and it consists of improvements in an invention for which patents were granted to me in the United States on the 20th day of March, 1883, and numbered 274,326 and 274,327. In the said patented invention the globe-holder is supported by three rods sliding vertically in guide-holes in the burner and collar of the oil-reservoir. The globe-holder is supported in its highest and fixed in its lowest position by a spring-bolt snapping into one or other of two notches or recesses made in the top and bottom of the middle rod. The said middle rod has also a longitudinal slot in which a bolt or projection engages and limits the motion of the holder. The burner has an under vertical rod with top and bottom notches for supporting the burner and globe holder when they are raised, and locking them when down.

In my present invention the globe-holder has the three rods described; but the middle rod is without the top and bottom notches—that is, it has only the longitudinal slot for limiting its motion. To the under side of the burner I attach two vertical tubes, in which tubes the two outer rods of the globe-holder slide. These two tubes have notches at top and bottom, into which the ends of a semicircular spring-bolt snap, for the purpose of supporting the burner and globe-holder when raised, and locking the burner when it is lowered.

The raising and lowering together of the burner and globe-holder is effected in the way described in the patents referred to; but the raising and locking of the globe-holder alone is effected by means of a lever turning upon a

fulcrum or center on the burner. This lever is in its normal position nearly horizontal, one arm being external to the burner and terminating in a thumb-plate, the other arm being inside the upper perforated part of the burner, and bearing on the under side of the globe-holder. When the thumb-plate terminating the outer arm of the lever is pressed down, the inner arm rises and lifts the globe-holder, and by pressing the lever into a vertical position the globe-holder is supported in its raised position, the lever when vertical having no tendency to resume its horizontal position. In order to lower the globe-holder the lever is restored to its normal position when the globe-holder descends by its own weight.

The burner may, where preferred, be connected to the oil-reservoir in the usual ways—that is, by means of a screw or a socket, or a bayonet-joint fastening. In this case the parts described for raising and lowering the burner are dispensed with, the rising and falling motion of the globe-holder being effected by the lever described.

I will now proceed to describe, with reference to the accompanying drawings, the manner in which my invention is to be performed.

Figure 1 represents in side elevation, partly in vertical section, a portion of a lamp for burning light or volatile oil containing my invention, both the shade-holder or gallery and the burner being represented in their lowered or normal positions. Fig. 2 represents the globe-holder raised from the burner for lighting the lamp or trimming the wicks, and Fig. 3 represents both the globe-holder and burner raised from the oil-reservoir for filling the said oil-reservoir. Fig. 4 represents in side elevation, partly in section, and Fig. 5 in plan of upper side, the burner detached from the lamp. Fig. 6 represents in side elevation, and Fig. 7 in plan of upper side, the shade-holder detached from the lamp. Fig. 8 represents in plan, Fig. 9 in horizontal section, and Fig. 10 in vertical section, the semicircular spring-bolt and details of the same, by which the burner is supported in its raised position and locked in its lowered position, and the motion of the shade-holder limited. Fig. 11 repre-

sents in side elevation a portion of a lamp in which the burner is connected to the oil-reservoir in the ordinary way, and the shade-holder is raised by a modified lever arrangement.

5 Figs. 12 and 13 represent side elevations, partly in section, of the lamp, taken at right angles to one another, with the shade-holder in its raised position. Fig. 14 represents in plan the burner with the shade-holder re-
10 moved.

a is the shade-holder of the lamp, having on its under side three vertical rods, b b and c . The said rods are without cross-notches in them; but the middle rod or tube, c , has in
15 it a longitudinal slot, d , for limiting the motion of the shade-holder, as hereinafter explained.

e is the sliding burner of the lamp, having on its under side two vertical tubes, f f , in
20 which the two outer rods, b b , on the globe-holder a slide. The said tubes f f have cross-notches g g at top, and other cross-notches h h near the bottom. Into one or other of these sets of notches the cross parts i^2 i^2 of the semi-
25 circular spring-bolt i snap, as hereinafter explained. The construction of the said spring-bolt will be best understood by referring to Figs. 8, 9, and 10. The semicircular spring-bolt i i^2 i^2 is carried by the fixed mount k ,
30 secured to the oil-reservoir of the lamp, the said bolt sliding upon and being supported by the semicircular shoulder l , made in the said mount. At the middle part of the bolt is a loop, m , which embraces the
35 middle slotted tube, c , on the shade-holder a , a stop pin or stud, n , on the looped part m engaging with the slot d in the said tube c , as seen in Figs. 8, 9, and 10. By means of the said stop pin or stud n the vertical motion in
40 either direction of the shade-holder a is limited. The snapping or outward motion of the bolt i i^2 i^2 is effected by the coiled spring p , around the headed and screwed push-rod q of the said bolt, the said spring having a bearing
45 ing at one end against the fixed mount k , and at its other end against the adjustable collar r on the screwed end of the said push-rod q . By pushing inward the push-rod q of the bolt its cross ends i^2 i^2 may be removed from the
50 notches in the tubes f f , for permitting the raising or lowering of the burner. The pushing inward of the bolt is limited by the compressed coiled spring and the adjustable collar r . When the collar r is in the position as shown
55 in Figs. 8, 9, and 10, the pushing inward of the bolt does not remove the stop pin or stud n from the slot d in the tube c . When, however, it is required to disconnect the shade-holder a from the mount or metallic collar K
60 on the oil-reservoir, the screw-collar r , on the screwed end of the push-rod q , is adjusted nearer to the head of the said push-rod. The bolt i can now be pushed inward to such an extent as will completely remove the stop-pin
65 or stud n from the slot d in the tube c , when the shade-holder can be lifted vertically and

detached from the mount or collar k , as will be understood by an examination of Fig. 10. When the burner e is in the position shown in Figs. 1 and 2, the cross ends i^2 i^2 of the
70 spring-bolt i are engaged in the upper slots, g g , in the tubes f f , and the said burner is locked in its lowered position.

In order to raise the burner e , together with the shade-holder a , into the position represented in Fig. 3, the spring-bolt i i^2 i^2 is pressed
75 inward by acting upon the push-rod q . The burner is thereby liberated from the mount k , and the said burner and shade-holder can be raised into the position represented in Fig. 3,
80 in which position the cross-arms i^2 i^2 of the spring-bolt snap into the lower slots, h h , in the tubes f f , and support the said burner and shade-holder in their raised position. On releasing the burner it falls by its own weight,
85 and is refastened in its lowered position by the spring-bolt snapping into the upper slots, g g , in the tubes f f . When the burner is in the position shown in Fig. 3, it may be disconnected from the mount for placing wicks
90 in it, for cleaning or other purpose, by withdrawing the bolt from the lower slots, h h , and lifting the burner vertically. The raising of the globe-holder a alone into the position shown in Fig. 2, the lighting the lamp
95 and fastening the globe-holder in its lowered position, Fig. 1, are effected by the lever s s^2 , turning on the center s^3 , carried by the burner e . The arm s is wholly within the burner; but the thumb-plate end s^6 of the other arm,
100 s^2 , is situated external to the burner. The end of the inner arm, s , of the lever works in a slot, t , in the bracket u on the shade-holder a , (see Fig. 7,) the said bracket also carrying the three rods b b c . Near the top of the le-
105 ver s s^2 is a cross-pin, s^4 , which on the motion of the said lever takes a bearing against the under side of the said bracket u . When in the position Fig. 1, the lever s s^2 is situated horizontally, and when the thumb-plate end
110 s^2 is pressed down, the inner arm, s , rises and lifts the shade or globe holder a , and by pressing the lever into a vertical position the globe-holder is supported in its raised position, as represented in Fig. 2. By restoring the lever
115 s s^2 to the position represented in Fig. 1, the globe-holder a falls by its own weight, and when it has descended onto the burner a tooth, x , on the thumb-plate end of the lever snaps into the loop y on the side of the shade-holder
120 a , and fastens the latter in its lowered position, as shown in Figs. 1 and 3.

In modifications shown in Figs. 11, 12, 13, and 14, the lifting-lever s s^2 at one side of the burner is fitted on one end of a horizontal
125 rod or cross-pin, s^4 , passing through the burner-shell and carrying a lever-arm, x^2 , on its opposite end, as is shown in Fig. 13. When this axis is rocked by depressing the thumb-plate s^6 of the first lever, s s^2 , both levers are
130 raised, so as to elevate the globe-holder, by bearing under the opposite sides of the gal-

lery of said globe-holder, and bring the latter into the position shown in Figs. 12 and 13. When the lever-arms s , s^2 , and x^2 are in their fully-lifted positions, stops x^5 x^5 on them en-
 5 gage under the rim of the burner e , and their further motion is prevented. The said lever-arms s , s^2 , and x^2 in their raised positions are slightly inclined, or are situated slightly beyond a vertical line, so that the weight of the
 10 shade-holder tends to press the stops x^5 x^5 against the burner, and the descent of the shade-holder is thereby prevented. By raising the thumb-plate end s^6 of the lever the stops x^5 x^5 are withdrawn from under the burner e ,
 15 and the lever-arms s , s^2 , and x^2 may be depressed and removed from the shade-holder a , when the latter falls by its own weight. The shade-holder is guided in its vertical motion by the tubes on its under side working upon
 20 the fixed pegs or rods x^6 x^6 on the burner e .

The arrangement of lever last described may be applied to lamps having sliding burners in place of the lever represented in combination with a sliding burner.

25 I am aware that the upper and lower sections of a lamp-burner have been connected by means of parallel levers or arms, so that the upper section can receive a combined vertical and lateral movement to obtain access
 30 to the wick-tube for lighting or trimming purposes. I disclaim such construction, as it forms no part of my invention, since I use a gallery or globe-holder that is guided in its upward movement, and is moved in a strictly
 35 vertical line by means of a finger-lever mechanism.

I am also aware that a burner has been devised in which the upper section or chimney-carrier is capable of being elevated by sliding tubes operating or moving on vertical
 40 rods, and held in its elevated position by spring-catches.

Having now described the nature of my invention, and the manner in which the same
 45 is to be performed, I wish it to be understood that I claim as my invention of improve-

ments in lamps for burning light or volatile oils—

1. In a lamp-burner, the combination, with a vertically-sliding gallery or chimney-holder, 50 and means for guiding the movement of the latter, and the stationary bottom shell of the burner, of a pivoted lever fulcrumed in the lower shell of the burner, and having a finger-piece arranged on the outside of the latter, 55 whereby the gallery or shade-holder can be elevated and held in such position by depressing the finger-lever, substantially as described.

2. In a lamp-burner, the combination of the transverse axis or rock-shaft having lever- 60 arms at its opposite ends, with the stationary burner-base and the vertically-movable gallery or chimney-holder for raising the latter from the base by said lever-arms and rock-shaft, substantially as described. 65

3. The combination, with the body of a lamp, of a sliding burner having two vertical tubes provided with top and bottom notches, and a semicircular spring-pressed bolt arranged on the lamp-body and adapted to lock 70 the burner in its raised and lowered positions, substantially as described.

4. The combination, with the body of the lamp carrying a semicircular spring-bolt provided with a loop, m , and projection n , of the 75 vertically-sliding gallery or shade having a pendent slotted tube, c d , substantially as described.

5. The combination of the semicircular bolt having the spring-encircled push-stem 80 q , adjustable collar r , loop m , projection n , and cross parts i^2 i^2 , with the vertically-sliding burner having the notched tubes f , and the gallery or shade-holder having the stems b and slotted tube c d , substantially as de- 85 scribed.

JOSEPH HINKS. [L. S.]

Witnesses:

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 ARTHUR J. POWELL.