

(No Model.)

W. H. MELANEY.

SHEATH FOR REGULATING LIGHT FROM ELECTRIC LAMPS.

No. 405,427.

Patented June 18, 1889.

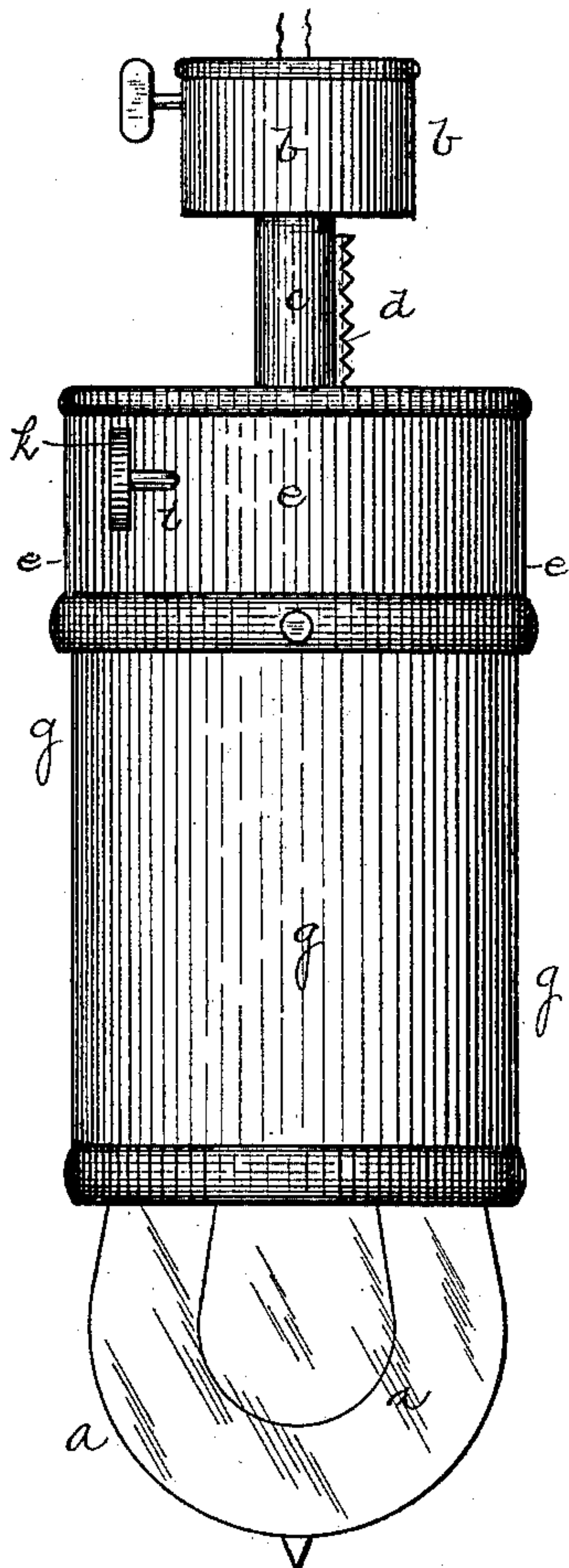


Fig. 3.

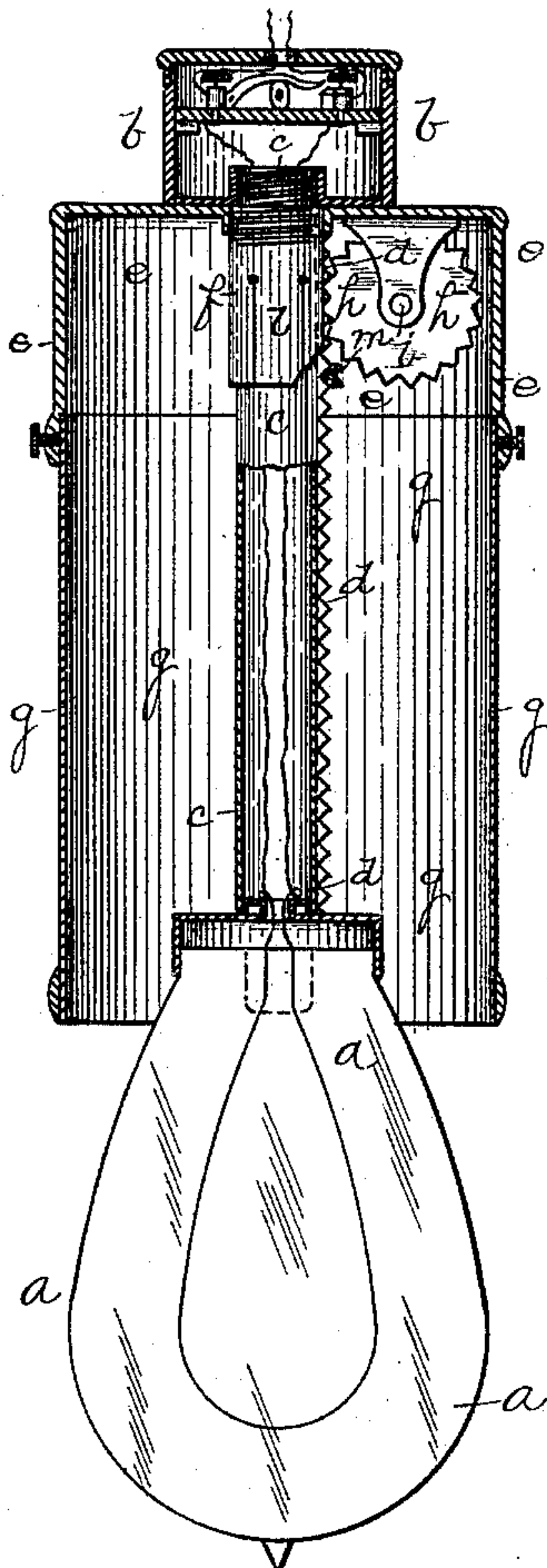


Fig. 1.

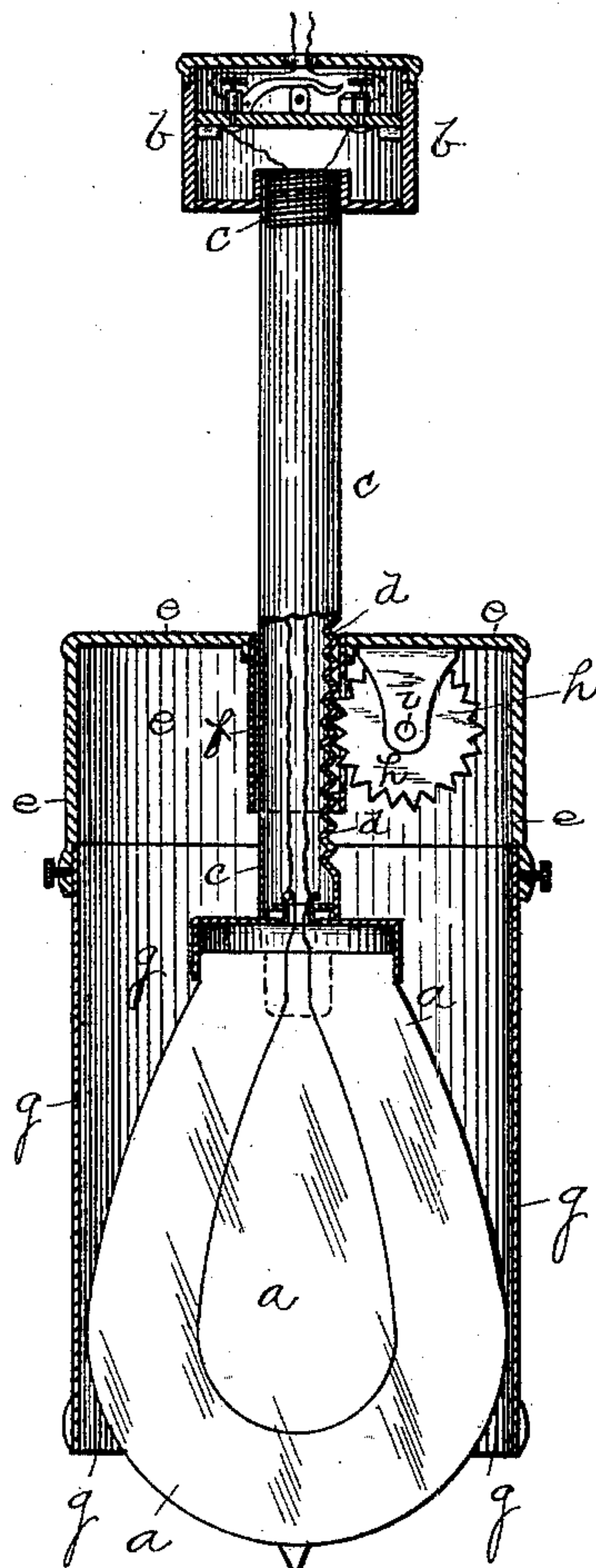


Fig. 2.



Fig. 6.

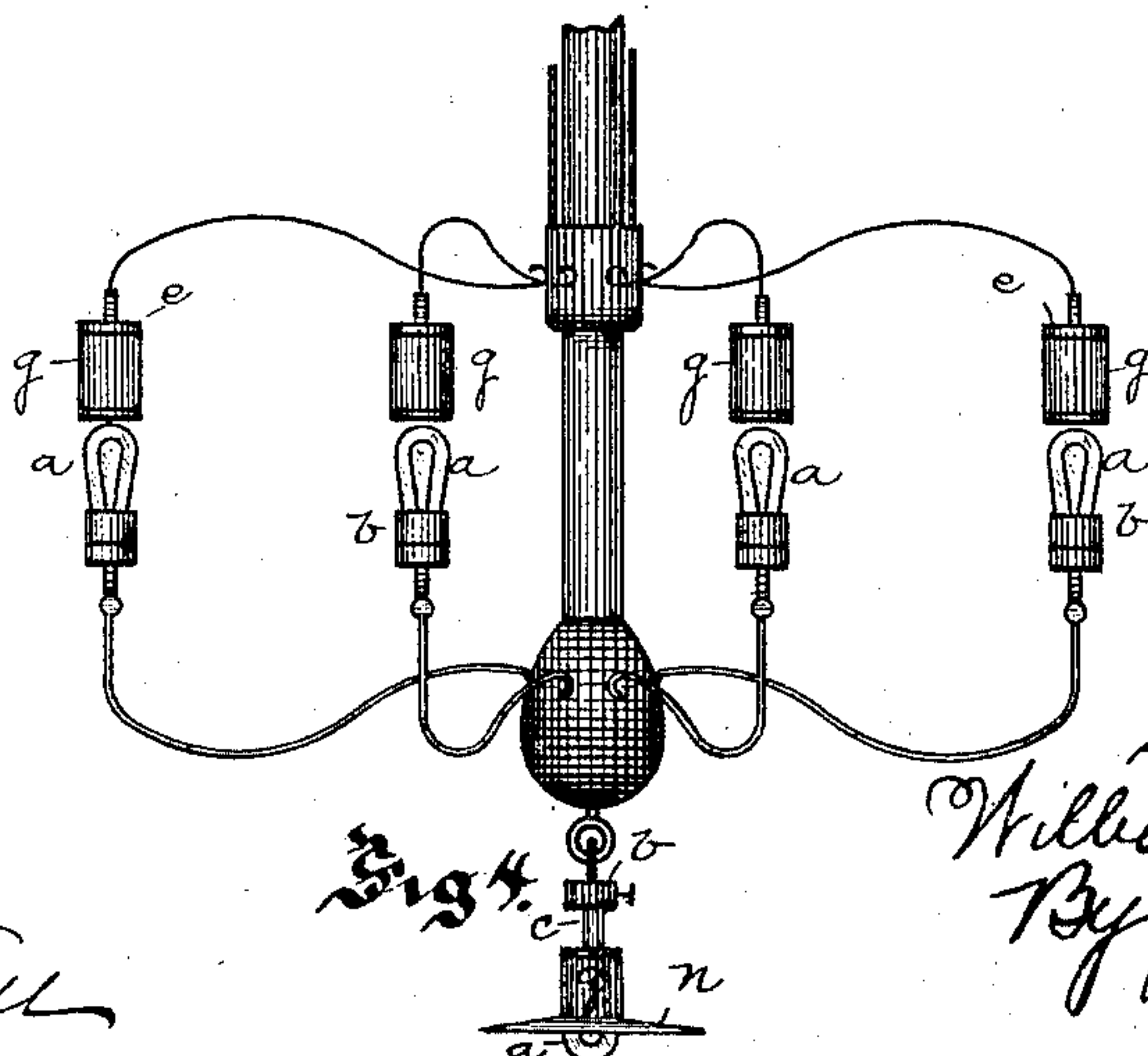


Fig. 4.

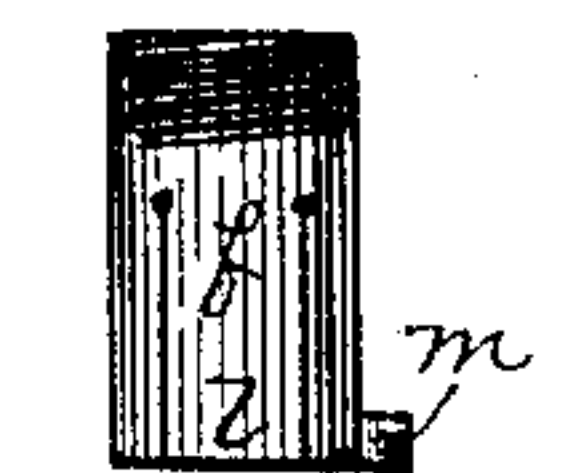


Fig. 5.

Witnesses:

J. T. Coote
W. J. Frockwell

Inventor.
William H. Melaney
By James D. Kay
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM H. MELANEY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO R. C. TOTTEN, OF SAME PLACE.

SHEATH FOR REGULATING LIGHT FROM ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 405,427, dated June 18, 1889.

Application filed December 12, 1887. Serial No. 257,587. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MELANEY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Sheaths for Regulating the Light from Electric Lamps; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to electric lights, and has for its object the regulation of the light or illumination obtained therefrom. It is well known that though the incandescent or arc electric lights give a high degree of illumination, yet there is no satisfactory means of regulating the current so as to reduce the amount of light obtained, and consequently the electric light cannot be well employed in lighting theaters, where to obtain scenic effects it is desirable to reduce or vary without extinguishing the light, or dwellings, where it is often desirable, especially in sleeping-apartments, to reduce the light, the full power even of an incandescent light being disagreeable to the eyes, and in many cases a dim or medium light being desirable. To accomplish this, attempts have been made to provide means for increasing or diminishing the current passing through the carbon filament, but none of these have been practically successful.

By my invention I am enabled to regulate the illumination obtained from these burners without affecting the electric current passing through the burner, and this I accomplish by employing therewith an opaque or substantially opaque sheath surrounding and longitudinally adjustable over the lamp or burner, so as to pass over and cut off any desired portion of the light therefrom, so reducing or regulating the area of the illuminating-surface exposed within and radiating the light into the apartment.

To enable those skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a longitudinal section, partly in full lines, showing my invention where the entire lamp is exposed. Fig. 2 is a like view showing the lamp entirely inclosed. Fig. 3

is a side view showing the lamp partially covered. Fig. 4 is a view showing a cluster of burners and covering-sheaths passing over the lamps in the opposite direction. Figs. 5 and 6 are detail views of the operative parts, and Fig. 7 is a sectional view of the sleeve or extension and its engaging tooth.

Like letters of reference indicate like parts in each.

The sheaths employed to cover the lamps, as hereinafter described, may be made of any suitable opaque or substantially opaque material which will cut off or reduce the light when caused to surround the lamp. Dark glass, paper, brass, or other metals may be employed for the purpose, and these may be ornamented in any desired way, so as to add to the appearance of the lamp. For instance, a brass or metal sheath may be provided with jewel-glasses of different colors, which, while cutting off or reducing the light, will permit sufficient refraction to produce a pleasing effect.

In the most approved form of my invention the device is supported with the lamp or burner, as shown in Figs. 1, 2, and 3. When so employed, between the lamp or burner *a* and the box *b*, containing the cut-off device, I place the tube or extension *c*, which is slightly longer than the lamp *a*, this tube forming the conduit for the wires extending from the cut-off to the lamp. On one side of this tube *c* is formed the rack *d*, the teeth of which are preferably formed inclined in both directions, for the purpose hereinafter referred to. This rack may either be raised above the outer face of the tube, as shown in Fig. 1, or, as preferred by me, pressed into the tube, as shown in Fig. 2. Fitting around this tube *c* is the sheath-holder *e*, which has the extension *f*, extending down the tube, so as to retain the sheath and its holder in proper line therewith. Supported by the sheath-holder *e* is the sheath *g*, which, when the holder *e* is raised to its highest position, extends down to the upper end of the lamp *a*, and which is of slightly greater diameter than the bulb or lamp *a*, so as to pass down around the same. Where the sheath is formed of brass or like metal, the sheath-holder and sheath may be formed in one piece; but where the sheath is formed of

glass, paper, or the like, it is necessary to employ a separate sheath-holder. Mounted within the sheath-holder is the pinion *h*, which engages with the rack *d* on the tube *c* and has
 5 a shaft *i* extending out through the holder *e* and provided with the thumb-wheel *k*, for operating the pinion, the sheath being raised or lowered by turning this pinion *h*. To hold the sheath in the desired position, the tubu-
 10 lar extension *f* of the holder *e* is slotted longitudinally from the base upward a sufficient distance to form the spring-lip *l* at the base thereof, which has a tooth engaging with the rack *d*, and as the teeth of the rack are in-
 15 clined in both directions this spring-lip will slip over the rack as the sheath is raised or lowered, but will spring into one of the teeth of the rack, and so hold the sheath in any de-
 20 sired position thereon. When the rack *d* extends out from the tube *c*, the extension *f* is cut away to pass over the rack, and a loop *m* extends over the rack, forming the spring-lip *l*. Instead of the spring-lip formed as above
 25 described, a spring-lip or other friction device may be applied in some other way to the tube *c* or the pinion. The sheath may, if de-
 30 sired, carry a shade *n* thereon, as shown in Fig. 4, so that when it is lowered the light may be reflected or disseminated thereby and the same general effect as now produced by
 such shades be obtained when only a portion of the incandescent filament is exposed.

When the lamp is in use, the sheath is held above the lamp, and so interferes in no way
 35 with the light radiated therefrom. In case it is desired to reduce or turn down the light, the sheath is lowered so as to cut off part of the rays of light from the incandescent carbon filament, and as there is not so great area
 40 or surface exposed within and radiating its light into the apartment the light therein is correspondingly diminished. In case it is desired to darken the room—as for sleeping
 45 purposes—the sheath is lowered so as to surround the lamp and extend below it, and consequently the only light radiated from the lamp is from the open end of the sheath,
 which imparts only an exceedingly dim light to the apartment. The light from the lamp
 50 can thus be regulated at will by the simple adjustment of the sheath and exposing of the area of illuminating-surface desired.

The sheath surrounding the lamps may, if desired, be connected together and adjusted
 55 over the lamps by a single device—as where employed with a cluster of lamps—as shown in Fig. 4, or one sheath employed for a cluster of lamps where they are located close to-
 60 gether. As also shown in Fig. 4, the sheaths may also be arranged to pass over the lamps

in the opposite direction, the sheaths in this case being formed separate from and supported over the burner by any suitable arm or bracket, and in this case any suitable
 65 means of adjusting the arm or bracket carrying the sheath may be employed. By my invention I am thus enabled to regulate at will the amount or degree of illumination in and even to darken the apartment when the
 70 full electric current is passing through the carbon filament, and by so doing overcome entirely the objections to the use of these incandescent electric lights for domestic and other purposes where the degree of illumina-
 75 tion therefrom is necessarily varied.

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

1. In combination with an electric lamp or burner, a substantially opaque sheath surrounding and longitudinally adjustable over
 80 the lamp, substantially as and for the purposes set forth.

2. In combination with an electric lamp or burner, a tubular extension secured thereto, and a substantially opaque sheath mounted
 85 on said extension and surrounding and longitudinally adjustable over said lamp, substantially as and for the purposes set forth.

3. In combination with an electric lamp or burner, a tube or extension secured thereto
 90 and having a rack-face thereon, a sheath mounted on said extension and surrounding said lamp, and a pinion carried by said sheath and engaging with said rack, substantially as and for the purposes set forth.
 95

4. In combination with an electric lamp or burner, a tube or extension secured thereto, and a sheath mounted on said extension and surrounding the lamp, and having a spring-
 100 lip or friction device adapted to hold the sheath in any desired position, substantially as set forth.

5. In combination with an electric lamp or burner, a substantially opaque sheath surrounding and longitudinally adjustable over
 105 the lamp, and a shade or reflector carried by and at the base of the sheath, substantially as and for the purposes set forth.

6. In combination with the electric lamp *a*, the tube or extension *c*, having the rack *d*, the
 110 sheath mounted on said tube and having the tubular extension *f*, provided with the spring-lip *l*, and the pinion engaging said rack, substantially as and for the purposes set forth.

In testimony whereof I, the said WILLIAM
 115 H. MELANEY, have hereunto set my hand.

WM. H. MELANEY.

Witnesses:

N. S. STOCKWELL,
 J. N. COOKE.