W. D. CUMMINGS.

LAMP REFLECTOR.

No. 187,706. Patented Feb. 27, 1877.

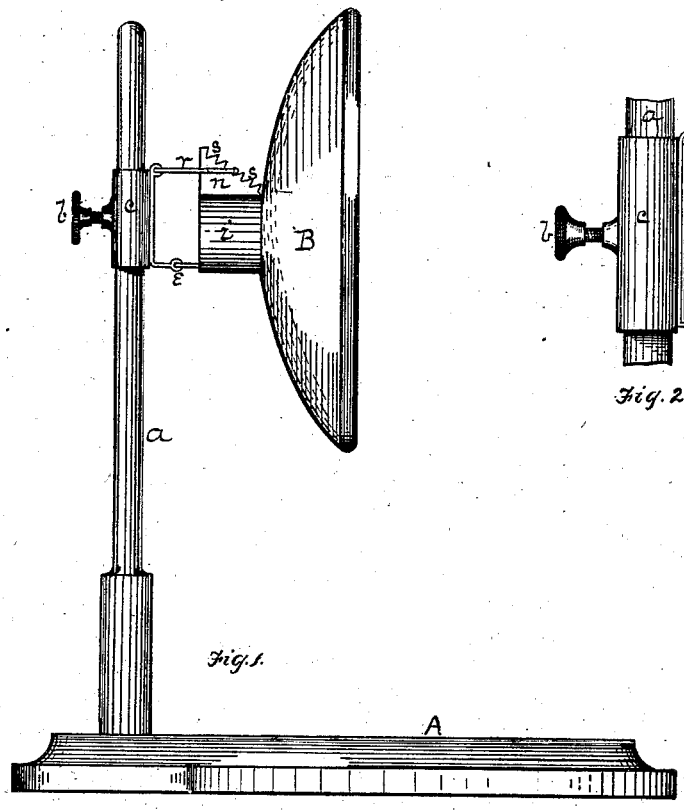

Fig. 1.

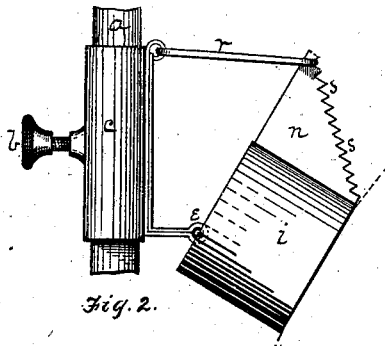

Fig. 2.

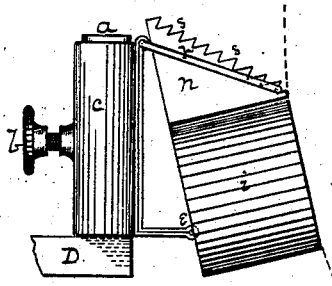

Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM D. CUMMINGS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN LAMP-REFLECTORS.

Specification forming part of Letters Patent No. **187,706**, dated February 27, 1877; application filed December 26, 1876.

To all whom it may concern:

Be it known that I, WILLIAM D. CUMMINGS, of Pittsburg, county of Allegheny, State of Pennsylvania, have invented or discovered a new and useful Improvement in Lamp and Gas-Light Reflectors; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—like letters indicating like parts—

Figure 1 represents, in side elevation, my improved adjustable reflector. Fig. 2 is an enlarged detached view of the adjusting mechanism, showing the adjustment proper to reflect light downward; and Fig. 3 is a like view, with the proper adjustment to reflect light upward.

In the use of artificial lights considerable inconvenience is experienced in obtaining the proper quantity of light at such points only as may be desired. This difficulty is but partially overcome by using the ordinary fixed reflector, as the point toward which the light is directed cannot be changed as occasion may require, in order to suit the convenience of the user.

My adjustable reflector is designed to practically overcome these difficulties, and combines in its construction cheapness, simplicity, and convenience. It consists, in its main features, of a standard, *a*, or suitable support, and a reflector, B, so connected and jointed to the standard *a* that it may be set at any elevation upon the standard, and there adjusted to reflect light at any angle relative to the source or line of light, either in a vertical or horizontal plane.

I secure this adjustable feature in the following way: A sleeve or ferrule, *c*, is so fitted to the standrd *a* that it may be moved up and down the same, but with sufficient friction to enable it to be held at any desired point on the standard, or it may be provided with a set-screw, *b*, for more securely fixing it at the desired point. I attach the reflector B to this sleeve *c* at or near its bottom end by an ordinary hinge-joint, as at *e*, either directly or through the medium of an interposed block or fastening device, *i*, properly secured to the back of the reflector at or near its center. This jointed connection of the reflector allows it to be so adjusted as to reflect light in any direction, up or down, in a vertical plane.

To secure the reflector at such point as may be desired with reference to this adjustment, I attach a ratchet-bar, *n*, to the upper side of the block *i*, having teeth *s* on its upper edge, inclining toward the reflector, and a loop or pawl, *r*, is jointed to the upper end of the sleeve *c*. This pawl is so placed in relation to the teeth of the ratchet-bar that it will engage them, and thus support the reflector, as shown in Figs. 1, 2, and 3.

The manner of securing this adjustment is clearly illustrated in the drawings.

Adjustment in a horizontal plane is secured by turning or rotating the sleeve *c*, with its attached reflector, about the standard *a*.

By these three means of adjustment, as described, I am enabled, without trouble or delay, to direct the light from a lamp or gas-jet in any desired direction and upon any desired object.

The base A may, if desired, be made large enough to receive and hold a lamp, or the source of light may be entirely independent of it.

The advantages arising from such a reflector are apparent, and it is of great service and convenience, not only in the private study, but also in public halls and buildings.

Any known flexible joint suitable for the purpose may be substituted for the hinge-joint *e*, and if the same be made of an elastic strap, the ratchet and pawl should be arranged to hold against the direction of the elastic force of such elastic strap; and the reversal of the arrangement of these parts, their manner of operation remaining the same, is hereby included herein.

With a slight modification, such as will suggest itself to the skilled mechanic, my reflector may be fitted to side or bracket lights with very useful results, and other like modifications and adaptations, especially such as are known in the arts for circular adjustments, may be made without departing from the scope of my invention.

The application of this device to a bracket, D, is also represented in Fig. 3.

I claim herein as my invention—

1. The flexible joint, ratchet, and pawl, combined with a reflector, substantially as described, whereby an angular adjustment of the reflector is effected.

2. In combination with a reflector, B, a sleeve, movable on its standard both vertically and by a rotary movement, a flexible joint, ratchet, and pawl, whereby, in the manner set forth, the reflector may be adjusted vertically, horizontally, and angularly, substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM D. CUMMINGS.

Witnesses:
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