

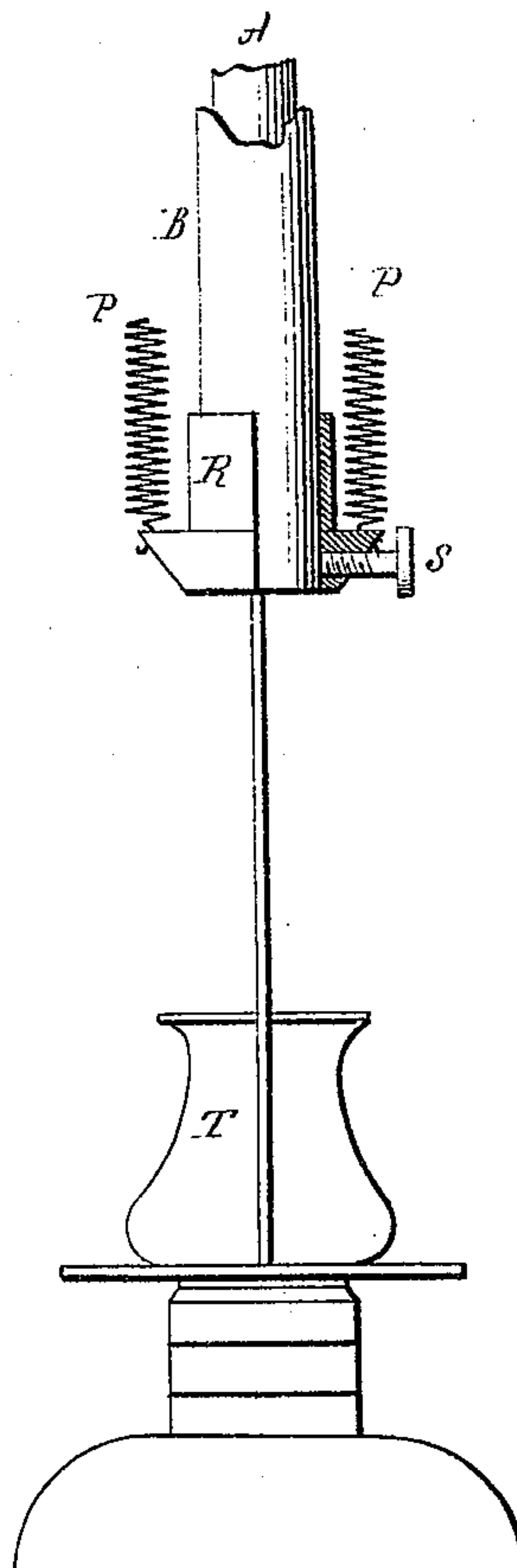
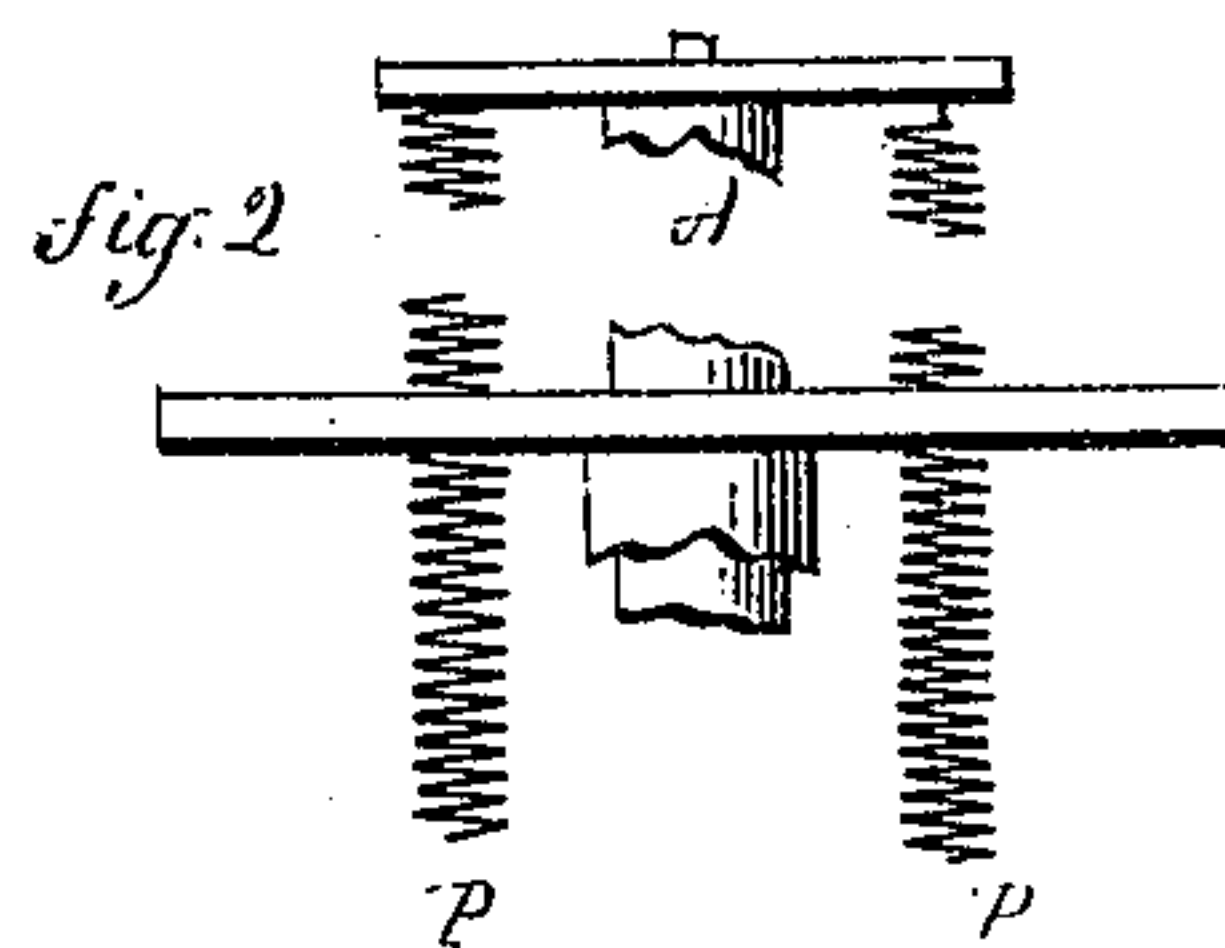
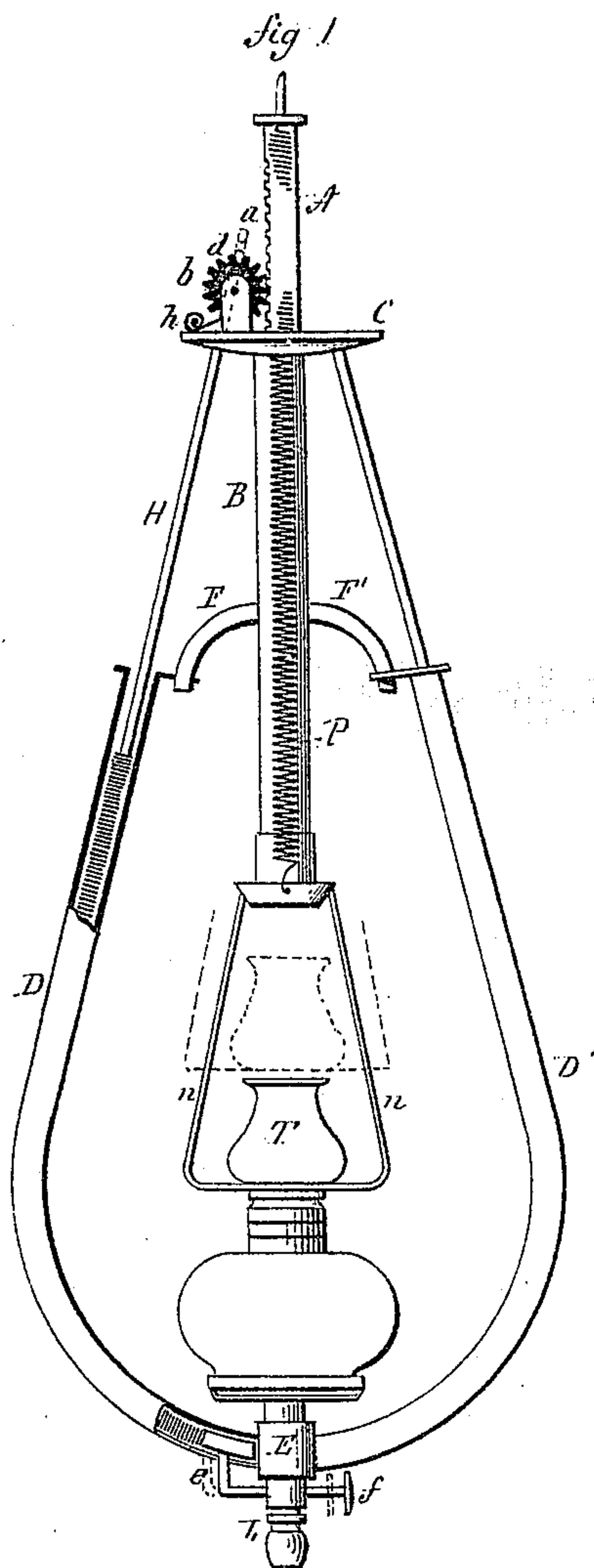
(No Model.)

E. A. PARKER.

Extension Lamp Fixture.

No. 230,047.

Patented July 13, 1880.



Witnesses:
John Tyler
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UNITED STATES PATENT OFFICE.

EDMUND A. PARKER, OF WEST MERIDEN, CONNECTICUT.

EXTENSION LAMP-FIXTURES.

SPECIFICATION forming part of Letters Patent No. 230,047, dated July 13, 1880.

Application filed May 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, EDMUND A. PARKER, a citizen of the United States, residing at West Meriden, Connecticut, have invented new and useful Improvements in Extension Lamp-Fixtures, of which the following is a specification.

This invention relates to an improvement in that class of lamp-fixtures which are designed to be suspended from the ceiling, and so that the lamp may be drawn down and set at different elevations. So far as I am aware, all vertically-adjustable lamp-fixtures designed to support and carry oil-reservoirs have been constructed either with the reservoir suspended upon one end of a series of weighted chains running over pulleys pivoted in a suitable bearing secured to the ceiling, in which case the lamp and reservoir are obviously liable to vibration, which is undesirable, or else the adjustment has been accomplished through straight supporting-rods, which gives to the fixture an awkward and unsightly appearance. There is another class of fixtures in which a lamp supporting and surrounding frame telescopes with a stationary hollow frame through the medium of chains and weights, and is set at any altitude by a set-screw; but in this construction the rigid relation between the telescoping parts varies according to the distance telescoped, and the design of the supports composed of such telescoping sections is also varied according to the adjustment.

My invention is designed to avoid the difficulties and disadvantages named; and it consists in providing a means for suspending in vertically-adjustable positions a lamp or reservoir upon curved or other gracefully-shaped surrounding supports of permanent design, as will be presently explained.

My invention further consists in the minor details of construction hereinafter and more fully explained.

Figure 1 is a side, and Fig. 2 an end, elevation, partly sectional.

Similar letters indicate like parts in both figures.

A is the central or suspending rod; B, a sleeve or tube arranged upon the rod A so as to slide freely up and down thereon. C is a cap attached to and so as to move with the

sleeve B. D D' are the two sides of what is commonly called the "harp." The one, D, is a tube terminating at the central lamp-support, E, at the bottom, and running up toward the cap C, and is connected to the sleeve B by an arm, F, or otherwise.

The side D' may be tubular or not, and is attached to the tube B by an arm, F', or so as to make it correspond in appearance with the opposite side.

On the rod A is a toothed rack, *a*, and on the cap C is a pinion, *b*, the teeth of which work in the teeth of the rack *a*, so that as the harp is drawn down or raised the pinion *b* will be turned accordingly.

H is a rod extending through the tube D, and terminating at its upper end in a dog, *d*, to engage the teeth of the pinion *b* to prevent its turning. The rod H extends down through the tube D to near the lamp-rest E, and at that point is provided with an outward projection, *e*, by which the rod H may be raised by moving the projection *e* outward, and for convenience of so moving the projection *e* is turned toward the center and passes through the tip L, and is provided with a head, *f*, upon the opposite side, so that by taking hold of the tip L and pressing with the thumb upon the head *f* the force is applied to move the rod H, as indicated in broken lines. This movement of the rod H raises the dog *d* from its engagement with the pinion *b*, and while it is so raised the fixture may be moved up or down; but when the pressure is removed from the head *f* then the pressure of a spring, *h*, in connection with the rod, will force it down and the dog *d* into engagement with the pinion, so as to hold and prevent further movement of the fixture until the dog *d* is again raised.

Because of the curved shape of the tube D it is necessary to make the rod H flexible. This is done by using a rod made from a helical spring or springs, and such as known to the trade as "flexible" rod.

At the lower end of the tube B, and at each side of the tube, a spring, P, is attached, and extends up through the cap C to near the point of suspension, where they are attached as a counter-balance for the weight of the fixture, and aid in raising it, substantially as in other

fixtures where similar springs are employed. These springs are preferably attached to a sleeve, R, at the lower end of the tube B, the said sleeve secured to the lower end of the tube by a set-screw, S, but so as to be moved upon the sleeve by loosening the screw S. To this sleeve R the shade T is hung, by connections *n*, to the globe or shade rest; and when it is desired to raise the shade—as for trimming or lighting purposes—it is only necessary to loosen the screw S; then the springs P will draw the sleeve upward, and with it the globe or shade T, from the lamp, as shown in broken lines, Fig. 1; and when the object for which it was raised is accomplished the sleeve R is drawn down to replace the shade and the screw S again reset, so that, while the globe or shade is capable of being raised from the lamp without the movement of the lamp, it yet moves with the lamp, so as to always retain the same relative position to it; and it will be observed that by this construction and arrangement I utilize the counterbalance-springs P for the double purpose of lifting the lamp or reservoir and shade-holder when the screw S is set and lifting the shade-holder only when the screw S is loosened.

It will also be observed that the rack and pinion, as well as the dog and spring, which cooperate in the adjustment of the lamp, are concealed behind or above the cap C, which is secured to the top end of the sliding or movable tube B, the counterbalancing-springs P passing through holes formed in said cap, so that it will be understood that the cap C, always maintaining a given relation to the reservoir and forming a pleasing finish to the general design, also conceals the several parts mentioned without reference to the attitude of the lamp.

I do not wish to be understood as confining or limiting my invention to the particular stop mechanism shown, nor to the exact design of the outward or surrounding supports D D', as any other stop mechanism may be employed without departing from the spirit of my invention, and the supports D D' may be of angular or other pleasing design, and the rod H operated as well by angle or curved levers as by the flexible connecting-rod described. the gist of my invention resting in the broad idea of lo-

cating the lamp or lamp-reservoir of extension-fixtures within supporting-rods, whose upper ends are rigidly secured to the central adjustable portion, and whose lower ends are similarly connected to the lamp or reservoir, and whose direction or travel is not in a straight line, whereby a rigid frame of permanent design surrounds the lamp.

In case of an open-bottom shade the character of the holder would be changed accordingly, so that it would be suspended in substantially the same manner as shown.

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

1. In combination with the stationary vertical hanger-rod A and the adjustable portion B, the lamp or reservoir supports D D', rigidly connected at the top and bottom ends, and means for locking or releasing the parts, whereby an adjustable surrounding support of permanent design is obtained, as set forth.

2. The combination of the suspending-rod A, provided with rack *a*, the lamp-supporting fixture movable thereon, the pinion *b*, flexible rod H, and dog *d*, substantially as and for the purposes set forth.

3. The combination of the suspending-rod A, the stationary toothed rack *a* thereon, the lamp-supporting fixture movable on said rod, with pinion *b* working in said rack, the movable rod H, terminating in and so as to engage the dog *d* in the teeth of the pinion, the said rod H extending through the tubular side of the harp to a projection from the tube near the lamp, and by which the said rod may be operated, substantially as described.

4. The combination of the suspension-rod with a tube movable vertically thereon, carrying the lamp-supporting device, with a sleeve adjustable by set-screw S on said tube and carrying the globe or shade holder, and springs P, attached to said sleeve and to the stationary part of the fixture above, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDMUND A. PARKER.

Witnesses:

M. M. ROHRER,
T. W. SMITH, Jr.