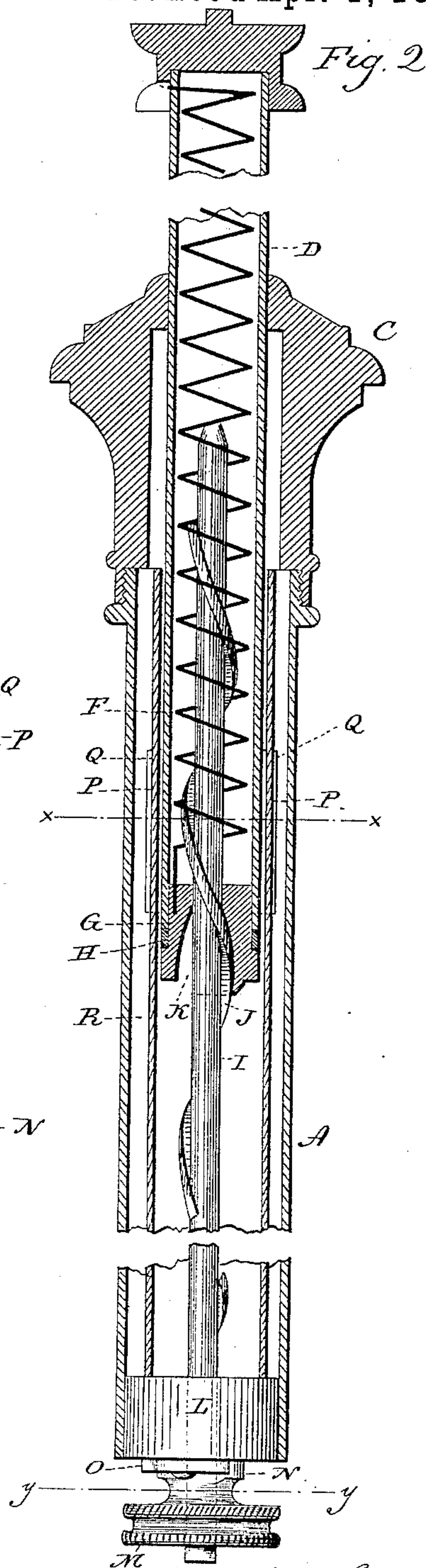
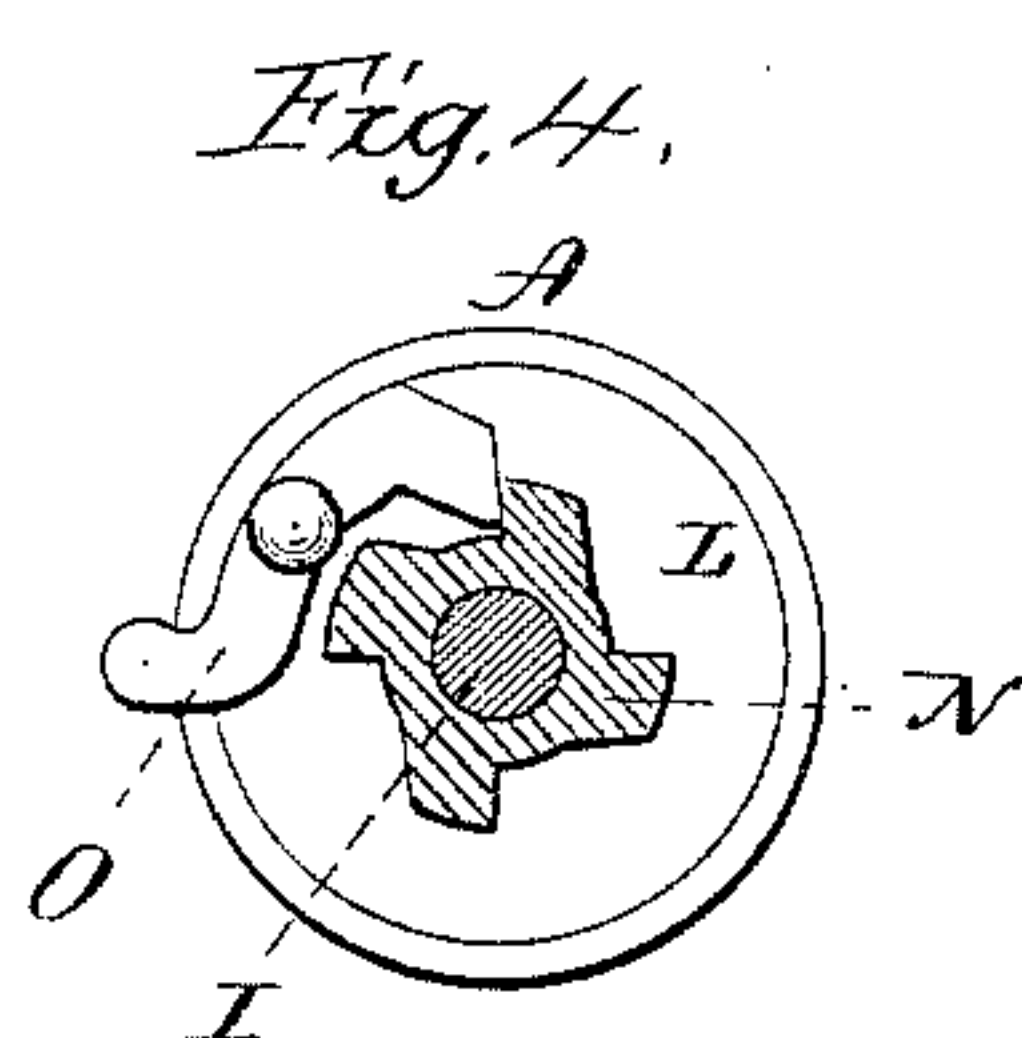
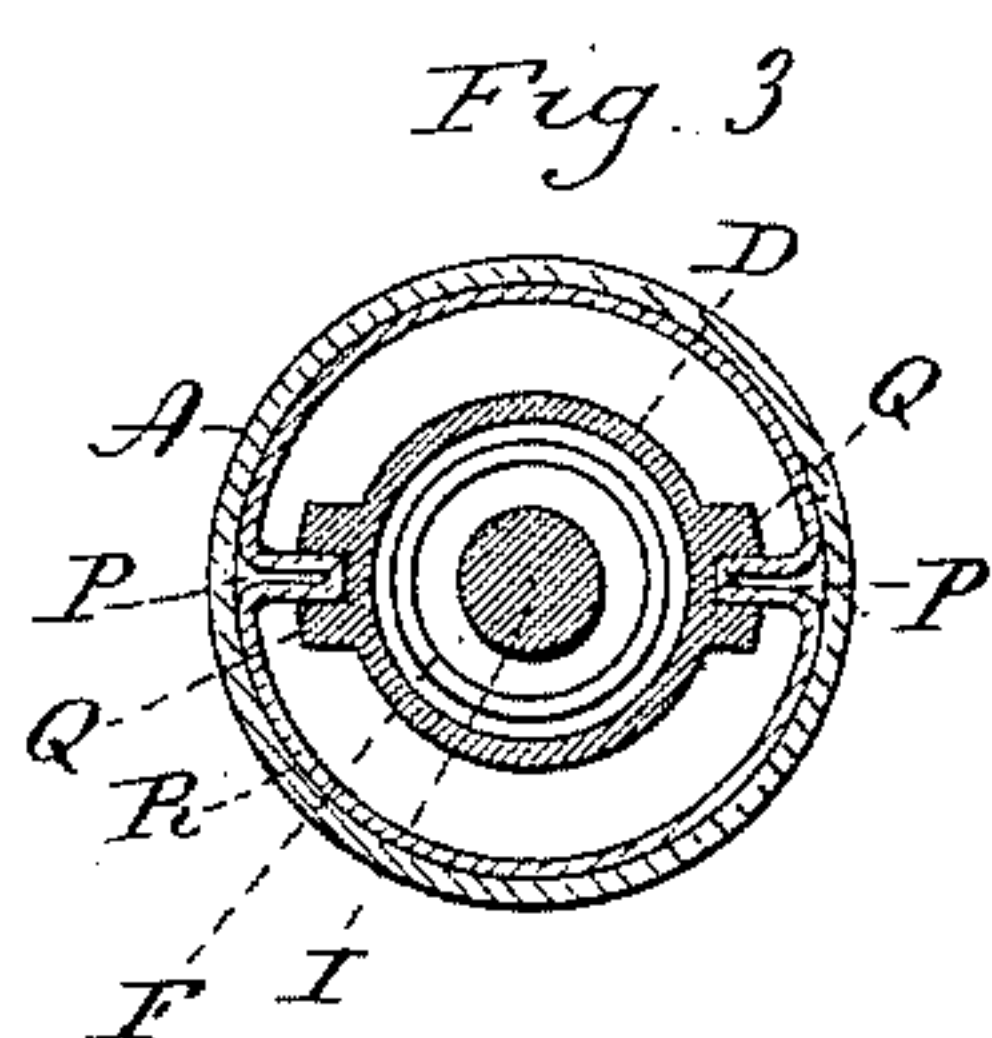
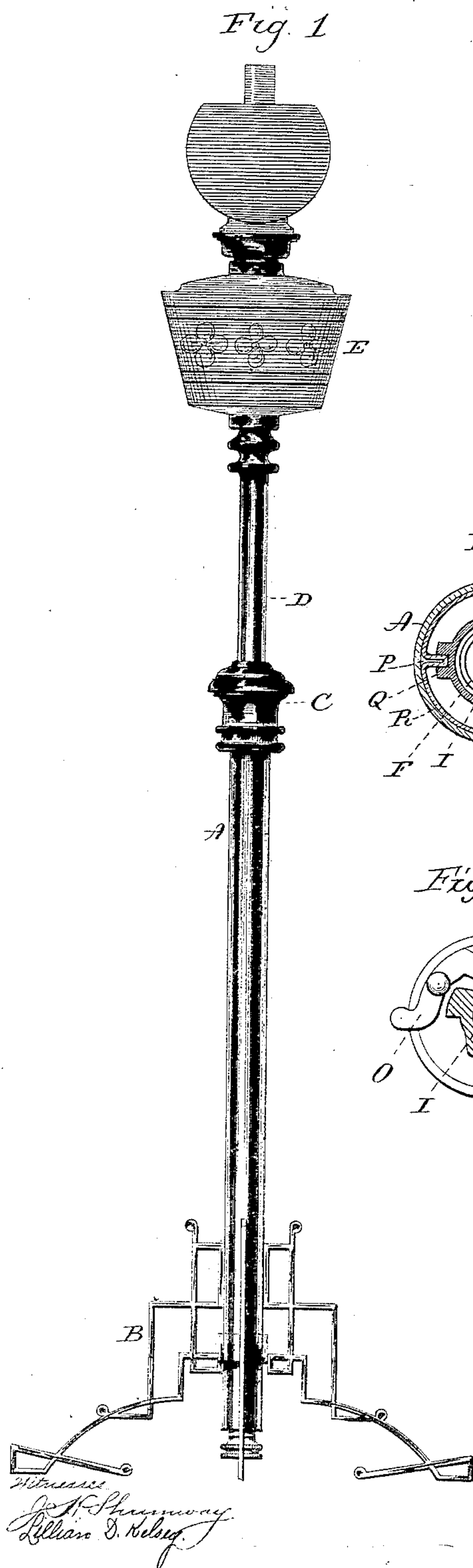


(No Model.)

W. C. HOMAN.
LAMP STANDARD.

No. 424,711.

Patented Apr. 1, 1890.



Wm. C. Homan.
Inventor.
By atty
Charles Seymour

UNITED STATES PATENT OFFICE.

WILLIAM C. HOMAN, OF MERIDEN, CONNECTICUT, ASSIGNOR TO EDWARD MILLER & COMPANY, OF SAME PLACE.

LAMP-STANDARD.

SPECIFICATION forming part of Letters Patent No. 424,711, dated April 1, 1890.

Application filed December 24, 1889. Serial No. 334,838. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HOMAN, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Lamp-Standards; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in elevation of a standard lamp embodying my invention. Fig 2 is a broken view in vertical section, on a larger scale, of the standard of the lamp. Fig. 3 is a view of the standard in transverse section on the line *xx* of Fig. 2. Fig. 4 is a similar section taken on the line *yy* of the said figure and looking toward the lower edge of the shell or outer tube of the standard.

This invention relates to an improvement in extensible standards for standard lamps, the object being to produce a cheap, simple, convenient, and reliable standard, operating on the counterbalance principle, and therefore adjusted without the use of locking devices, which are dispensed with.

With these ends in view my invention consists in an extensible standard having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

As herein shown, the extensible standard consists of an outer tube or shell A, an ornamental foot B, to which the lower end of the said tube or shell is rigidly secured, a collar C, secured to the upper end of the said tube or shell, and a movable inner tube D, adapted at its upper end to support the lamp E, and having its lower end entered into the upper end of the shell before mentioned through the collar C, which forms a bearing for it. The construction thus far described is not new with me, but well known.

My invention consists, in part, in a spiral counterbalance-spring F, located within the movable tube D, and having its upper end rigidly attached thereto and its lower end attached to a collar G, mounted in the lower end of the tube so as to rotate freely therein,

a friction-collar H being interposed between the rotatable collar and the end of the tube. A screw or worm consisting, as shown, of a straight rod I, having a spiral rib J applied to it, extends upward into the movable tube through the said collar, which is provided with a spiral slot K, receiving the said rib J, which couples the collar and worm together, the collar virtually forming a sliding rotatable connection between the spring and the worm. The lower end of the worm passes through a head L, located in the lower end of the shell A, and is threaded to receive a combined thumb-nut M and ratchet-wheel N, the teeth of the latter being normally engaged for holding the worm against rotation by a horizontal pawl O, pivoted to the said head. I desire to state here, however, that the worm herein shown may be replaced by a twisted rod or any other equivalent construction. The lower end of the movable tube is provided with two grooved guides P P, which receive lips Q Q, extending into them from a stationary guiding-tube R, mounted in the shell of the standard, the said guides and guiding-tube preventing the movable tube from rotating on its longitudinal axis while being moved in and out of the shell. The spiral spring and the worm are arranged so that when the movable tube is depressed the consequent rotation by the worm of the rotatable collar mounted in the lower end thereof will wind and stiffen the spring, which has previously been set through the worm and the thumb-nut thereof to a tension sufficient to support the movable tube and a lamp filled with oil in their highest position. The spring will now act as a counter-balance and support the tube and lamp in any position within the range of movement allotted to the tube, and without regard to the amount of oil in the lamp, and also assist the elevation of the tube and lamp.

Under my invention a slight pressure downward or lift upward will overcome the inertia of the movable tube and permit the lamp to be depressed or raised as desired, and without the manipulation of any coupling devices. My improved extensible standard is therefore very convenient and easy to operate. It

is also simple of construction and durable in use.

I would have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an extensible standard for standard lamps, the combination, with a longitudinally-movable tube held against rotation and a shell, of a spiral counterbalance-spring having one end rigidly secured to the said tube, a worm locked against rotation, and a rotatable sliding connection for coupling the other end of the spring with the worm, whereby the spring is wound when the movable tube is depressed, substantially as described.

2. In an extensible standard for standard lamps, the combination, with a longitudinally-movable tube held against rotation and a shell, of a spiral counterbalance-spring having one end secured to the tube, a worm extending into the tube, means for coupling the free end of the spring and the worm together, and means for rotating the worm to wind and

set the spring and for locking it when the spring is set, substantially as described.

3. In an extensible standard for standard lamps, the combination, with a longitudinally-movable tube held against rotation and a shell, of a counterbalance-spring having one end attached to the tube, a worm extending into the tube, and a rotatable collar mounted in the lower end of the tube, having the other end of the spring attached to it and coupled with the worm, whereby it is rotated to wind the spring when the tube is depressed, substantially as described.

4. In an extensible standard for standard lamps, the combination, with a longitudinally-movable tube held against rotation and a shell, of a spiral counterbalance-spring having one end attached to the tube, a worm extending into the tube and having the free end of the spring coupled with it by a rotatable connection, a combined thumb-nut and ratchet applied to the lower end of the worm, and a pawl for engaging with the said ratchet to hold the worm against rotation, substantially as described.

WILLIAM C. HOMAN.

Witnesses:

FRED C. EARLE,
LILLIAN D. KELSEY.