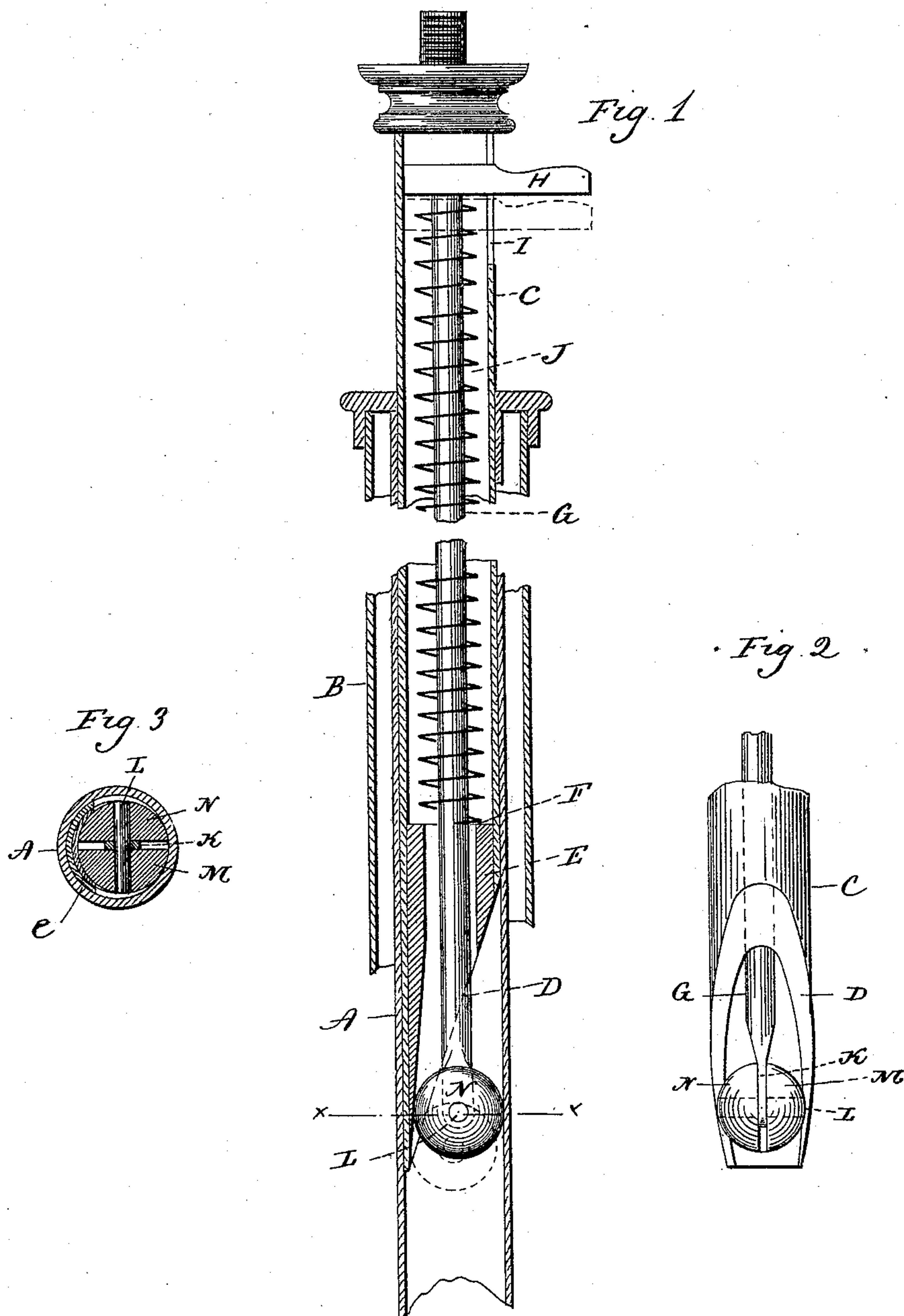


(No Model.)

C. MASCHMEYER.
EXTENSION LAMP SUPPORT.

No. 432,278.

Patented July 15, 1890.



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EXTENSION LAMP-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 432,278, dated July 15, 1890.

Application filed March 10, 1890. Serial No. 343,282. (No model.)

To all whom it may concern:

Be it known that I, CHARLES MASCHMEYER, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Extension Lamp-Supports, (A;) 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 vertical central section of so much of the standard as necessary to illustrate the invention; Fig. 2, a side view of the inner tube, showing the oblique or inclined surface of said inner tube with the hemispherical rollers resting thereon; Fig. 3, a transverse section on line *xx* of Fig. 1.

This invention relates to an improvement in that class of adjustable lamp-fixtures specially adapted for standard lamps and in which the standard is of a telescopic character, one part supported from the floor, the other part adjustable vertically therein and carrying the lamp, and so that the lamp may be raised or lowered to different elevations, the object of the invention being to provide a simple locking device which will securely hold the adjustable portion of the standard at any point to which it may be desired to set it, such locking device permitting the standard to be raised to take the lamp to a higher elevation, but prevent its descent, except after the manipulation of the locking device; and the invention consists in the construction, as hereinafter described, and particularly recited in the claim.

A represents the stationary tube, which is adapted to be supported in a stationary position in the usual manner, as by a foot or base to rest upon the floor.

B represents a jacket or outer tube, which is applied as a cover for the tube A, not, however, essential to the invention.

Within the tube A a second tube C is arranged, and so as to slide freely therein in a telescopic manner. This second tube carries the lamp, also in the usual manner. At its lower end the tube C presents a face D oblique to the axis, and so as to form an in-

clined plane on the tube C within the tube A. This oblique portion of the end of the tube is re-enforced, as at E, to give it an increased strength, and also to form a shoulder F within the tube C. Through the tube C a vertical rod G is arranged, which extends down through the lower end of the tube C and upward above the outer tube, and at its upper end is provided with a handle H, which extends laterally through an opening I in the side of the tube C. Around the rod G, and between the shoulder F and the hub of the handle H, a suitable spring J is arranged. (Here represented as a spiral spring.) The tendency of this spring, resting upon the shoulder F and bearing upward against the handle H, is to force and hold the rod G in its up position. The rod G at its lower end is flattened, as at K, Figs. 2 and 3, the plane of the flat sides being at substantially right angles to the transverse plane of the oblique surface D at the end of the tube C. Transversely through this flat portion K of the rod G an axle L is arranged, and on this axle two hemispherical rollers M N are placed. These two rollers M N together present substantially a spherical surface, as seen in Fig. 3, of somewhat less diameter than the diameter of the tube A, and so that under the action of the spring G, as the rod is raised, the said rollers will be drawn onto the inclined surface of the tube C, and between it and the opposite side of the tube A, and thus, under the force of the spring, produce a wedge-like action between the tubes A and C. These rollers thus act as a cramp between the said two tubes, tending to force the tube C into such frictional contact with the interior of the tube A as to hold the said tube C against descent whenever the said rollers shall be left free to be thus drawn up by the action of their spring. The natural tendency of the tube C to descend will operate upon the side of the roller on which the said oblique surface bears, while the opposite side of the roller will find a resistance upon that side of the tube A, and, thus tending to force the tube C downward, will cause it to operate as a wedge against the roller N to increase the cramp or locking tendency between the two tubes; but if the rod

G be pressed downward, as by applying the thumb to the handle H and as indicated in broken lines, Fig. 1, the rollers will be forced down and away from their cramped positions between the two tubes, thus leaving the tube C to be pressed downward until the desired elevation shall be reached. Then, the handle H released, the spring reacts and draws the rollers again into their cramping position to engage the two tubes. If the tube C be raised, it naturally draws away from the rollers to a sufficient extent to reduce the friction between the two tubes, so that the tube C may be readily raised without necessarily pressing the rollers from their cramped position. Yet the rollers may be relieved from their cramped position when raising the tube C, as described, for its descent.

By making the rollers of spherical shape, as described, the bearing-surface between the two rollers and the stationary tube correspond so nearly as to give a considerable bearing-surface and so as to prevent indenting the tube when the rollers are brought to the said position, thereby having the advantage of a ball-shaped locking device, and at the same time the division of the ball into two parts permits its attachment to a rod, whereby it may be thrown into or forced from its locked position and at all times be within the control of the person operating the fixture.

While the invention is especially adapted for the class of lamps commonly called "standard lamps," it will be understood that it may be applied to other classes of lamp-supports in which telescopic rods are employed. For the handle any of the known substitutes for operating the rod may be employed.

I am aware that telescopic tubes made adjustable have been provided with an inclined surface upon the inner tube, combined with

a ball or spherical-shaped roller arranged between said inclined surface and the opposed inner surface of the outer tube so as to automatically cramp or interlock the two. I therefore do not claim, broadly, the employment of a spherical-shaped locking device between the stationary and adjustable portions of the tube, the one portion having an oblique surface upon which the said spherical roller may operate; but

What I do claim is—

In an extension-support for lamps, consisting of two tubes telescopically arranged, one tube stationary and the other movable, the inner tube constructed to present a surface within the outer tube oblique to the axis, combined with a rod within the said inner tube extending to a point between the said oblique surface of the inner tube and the corresponding inner surface of the outer tube, a pair of hemispherical rollers arranged upon an axis through the said end of said rod, one each side said rod, and the said rollers located so as to take a bearing upon the said inclined surface of the inner tube and the opposing inner surface of the outer tube, the said rod extending through the said inner tube from said rollers to a point outside the inner tube, and provided with a suitable handle at its other end by which vertical movement may be imparted to said rod, with a spring within said inner tube, the tendency of which is to force the said rod to bring the said rollers to bear between the said inclined surface of the inner tube and the opposing portion of the outer tube, substantially as described.

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