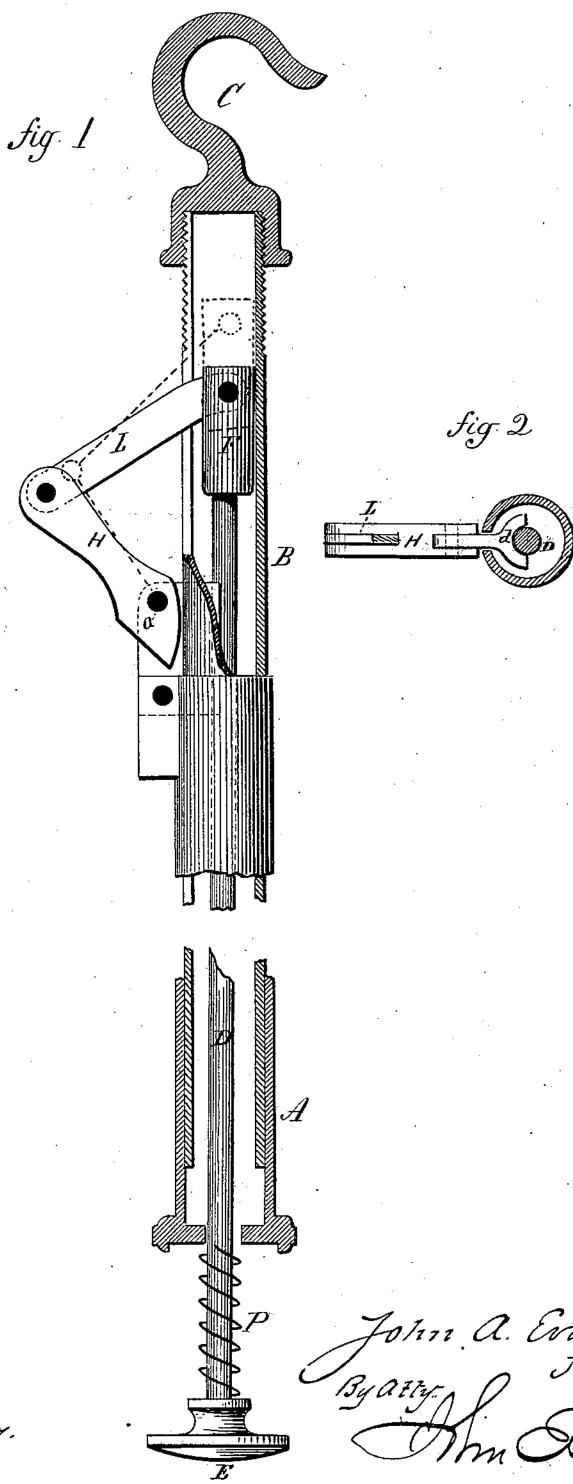
J. A. EVARTS.

Extension Lamp-Fixtures.

No. 206,550. **Patented July 30, 1878.**



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN A. EVARTS, OF MERIDEN, ASSIGNOR TO BRADLEY & HUBBARD MANUFACTURING COMPANY, OF WEST MERIDEN, CONNECTICUT.

IMPROVEMENT IN EXTENSION LAMP-FIXTURES.

Specification forming part of Letters Patent No. **206,550**, dated July 30, 1878; application filed July 12, 1878.

To all whom it may concern:

Be it known that I, JOHN A. EVARTS, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Extension Lamp-Fixtures; and I do hereby declare the following, when taken in connection with the 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, vertical section; Fig. 2, transverse section.

This invention relates to an improvement in that class of fixtures designed for suspending lamps from the ceiling, and which are made extensible, so that the lamp may be adjusted to different elevations and securely held when so adjusted; and it consists in the construction as hereinafter described, and more particularly recited in the claims.

A is a tube, to which the arms of the chandelier or the lamp are attached in the usual manner. This is made to slide freely up and down on a second or inner tube, B, and this tube B is provided with any suitable suspending device, C. Within the inner tube is a vertical rod, D, extending through the lower end of the tube A, and there provided with a suitable head, E.

To the upper end of the outer tube, A, a brake-lever, H, is hinged, as at *a*, and so that the inner end of the lever H will bear against the outer surface of the inner tube, B. At the outer end of the brake-lever H a link, L, extends to the end F of the rod D, and hinged to both the rod and brake-lever H, and so that the normal position of the said link L is upwardly inclined from the brake to the upper end of the rod D. The weight of the rod D is sufficient to draw down the inner end of the link L, which brings the end F of the rod in contact with the inner surface of the inner tube, B, causing the brake H to turn and force the cam-shaped end of the brake to bear against the outer surface of the inner tube. The inner tube, B, has a vertical slot in its side, through which the link L works, and so that the link may pass up or down in the said slot.

To increase the power of the rod D upon the brake H a spring, P, is arranged between the lower end of the outer tube, A, and the head E, which tends to force the rod downward in advance of the tube A. When power is applied to draw down the tube A, the brake H being attached to it, and its cam shaped end bearing on the inner tube, the tendency of the cam is to increase its force against the inner tube, so that when the brake is bearing against the inner tube it is almost impossible to draw down the outer tube.

To release the cam so that the tube may be drawn down, it is only necessary to press upward upon the head E, thereby raising the rod D, and through the link L, turn the brake H, as indicated in broken lines, and, the brake held in that position, the outer tube may be freely drawn downward; but so soon as the lifting-rod D is released the brake is again applied and further descent rendered impossible.

In this class of fixtures one or more springs are usually applied to aid in raising the fixture, and the force of these springs, when fully extended, is so great as to lift the fixture, if free; hence the brake is made to hold against the free raising of the outer tube. The power of the brake against such movement may be entirely by means of the spring P at the lower extremity of the inner rod, or the link L will force the upper end of the rod against the inner surface of the inner tube, making, with the brake H, a compound leverage to resist the raising of the outer tube.

As thus far described, the brake H is applied so as to press upon the inner tube, and by such pressure to force it (the inner tube) against the opposite inner surface of the outer tube; but, because of the vertical slot in the inner tube, near the edges of which the cam bears, the tendency of the brake would be to crush the inner tube. To avoid this difficulty, as well as to make a clamping action of the brake, there is an extension made from the part of the outer tube to which the brake is hinged to within the inner tube, this extension being of semi-cylindrical form, as at *d*, Fig. 2, and corresponding to the inner surface of the inner tube, so that when the brake is applied it clamps the inner tube between the

brake and this projection *d*. This extension *d* may also be made to inclose and support the rod at that point.

It will be understood that when no springs are applied to raise the outer tube the brake H need only be applied to act against the descent of the outer tube, freeing itself when the outer tube is raised.

No claim is here intended to be made to the vertical rod arranged within the vertical tubes so as to operate the holding device, as such is not new; but

What is claimed, and desired to be secured by Letters Patent, is—

1. The combination of the outer sliding tube, the inner stationary slotted tube, the vertical rod within said inner tube, the brake hinged to the sliding tube and so as to bear upon the inner tube, and connection between said brake and the rod through the slot in the tube, substantially as described.

2. The combination of the outer sliding tube, the inner stationary slotted tube, the vertical rod within said inner tube the brake hinged to the sliding tube and so as to bear upon the inner tube, and connection between said brake and the rod through the slot in the tube, and the extension or bearing surface *d* within the inner tube, substantially as described.

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Witnesses:
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