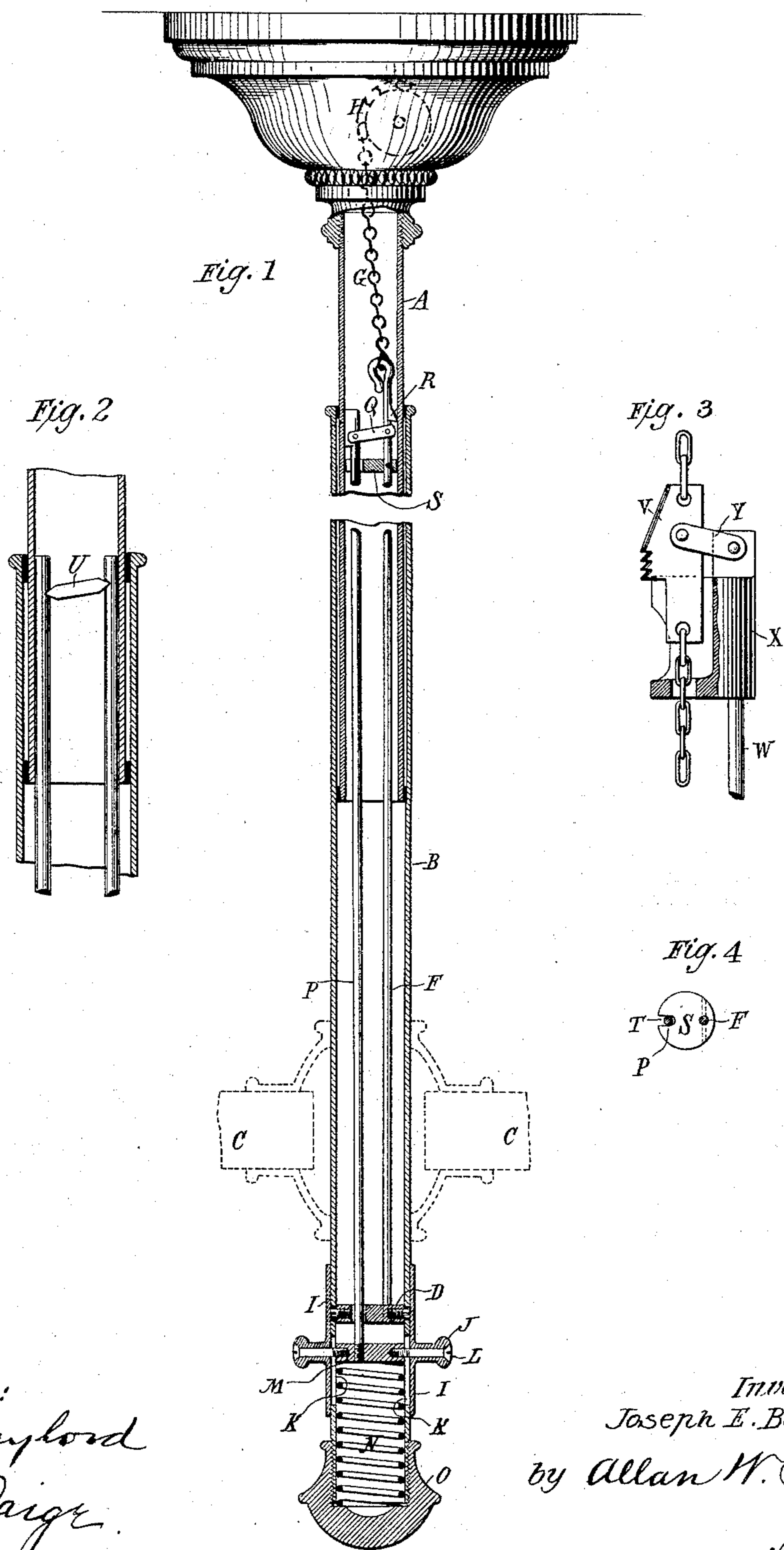


(No Model.)

J. E. BOHNER.  
EXTENSION CHANDELIER.

No. 482,712.

Patented Sept. 13, 1892.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOSEPH E. BOHNER, OF ANSONIA, CONNECTICUT, ASSIGNOR TO WALLACE & SONS, OF SAME PLACE.

## EXTENSION-CHANDELIER.

SPECIFICATION forming part of Letters Patent No. 482,712, dated September 13, 1892.

Application filed April 2, 1892. Serial No. 427,583. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH E. BOHNER, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Extension-Chandeliers, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same. The invention relates to new and novel devices whereby lamp-carrying chandeliers can be raised and lowered and adjusted to any desirable height.

It relates particularly to that class of such chandeliers which consist generally of two telescopic tubes adapted to be attached, respectively, to the ceiling and to the cross-arms or lamp-supports, the latter being connected to a spring-drum operating to counterbalance, or nearly so, the weight of the lower tube and its carried parts.

The object of the invention is to produce a simple and cheap locking mechanism for such a chandelier, which mechanism is adapted to fix or secure the telescoping tubes relatively and at any desired point of their movement one upon the other.

The invention consists of a locking device arranged within the upper tube, which is composed of a suspension connection extending from the ceiling and fixedly attached to the lower tube, a locking-rod vertically spring-operated and carried on the lower tube, and a toggle or link arranged between the suspension connection and the upper end of the locking-rod, which toggle is operated by the upward pressure of the rod to spread or separate the rod and the adjacent part of the suspension device and cause the same to engage the inner surface of the upper tube.

In the drawings, Figure 1 is a central sectional view of one form of chandelier embodying my invention. Fig. 2 is a like section of a portion of the telescoping tubes, this view showing a modified form of locking device. Figs. 3 and 4 are detail views of another modified form of a part of the locking device and of a part of the locking device of Fig. 1, as hereinafter will be more fully explained.

A represents the inner tube of the chandelier, which is secured to the ceiling above in any of the well-known ways.

B is the outer tube, movable freely on the inner tube and which extends downwardly and carries the cross-arms C, which support the lamps.

In the lower end of the outer tube is secured the disk D, to which is fixedly attached the lower end of rod F. To the upper end of this rod and within the tube A is connected the suspension-chain G, which extends to a spring-drum in the canopy H near the ceiling.

I is a tubular slide on the tube B, which carries the finger-knobs J, through which and through slots K in the tube B pass screws L, that enter the slide-disk M within tube B, and thus secure the disk to the exterior slide. A spring N within the tube B acts to push the slide upwardly, this spring being held to position against the slide-disk and within the tube by a hand-knob O, screwed on the lower end of the tube.

To the slide-disk M is fixed the rod P, which extends to a height about the same as that of the outer tube. At this point the rods F and P are connected by the toggle or link Q, each end of which is pivotally attached to one of the rods. The length of this link is such that it cannot come to a position at right angles to the rods by reason of the rods coming in contact with the inner surface of the upper tube.

R represents a pointed or edged lug or projection on the rod F, which is designed to sharply engage the surface of the inner tube, so as to insure a certain hold of the rod upon the tube.

S is a circular plug-disk carried upon the rod F and which has a slot T, through which freely passes the rod P. (See Fig. 4, which is a plan view of this disk.) This plug-disk practically fills the tube A and serves to prevent it being spread out of circular form by the engagement thereof of the rods F and P, thereby also assisting to prevent the rods losing their hold upon the tube.

The operation will now be plain, it being understood that the spring N at the lower end of the outer tube acts constantly to press up the movable or locking rod P. Then it will be seen that this upward pressure acts to rock or tilt the link connecting the rods at their upper ends, and thus to force the movable rod to engagement with the upper tube, the stationary rod of course being also equally

forced to engaging contact with the tube. To unlock the rods from engagement with the upper tube, the movable or locking rod is pulled down relatively to the other rod. This is conveniently effected and the chandelier at the same time kept under control by the person operating the locking mechanism placing his hand with the palm on the knob O and pulling on the finger-knobs J with his extended fingers. Thus the locking mechanism can readily be released and the chandelier raised or lowered at will. It is to be particularly noticed that the suspension devices are fixedly attached to the lower tube in such manner that the lug R or other portion of the connections which engages the upper tube is not vertically movable relatively to the lower tube or against the tension of the suspension devices. It is to be noted that the rod F is in effect but an inflexible construction of the suspension-chain to the lower tube. This is not an essential feature of construction, as the link Q could as well be secured to the chain itself, as will be described of Fig. 3; but by the use of the rod the desired rigidity of the locking parts where they engage the upper tube is more easily effected and facility in assembling the parts is secured.

In Fig. 2 I illustrate the movable and stationary rods as constructed without engaging lugs or teeth. In this case the extended bearing of the rods engages the upper tube by frictional contact. The link U between the rods for separating the same is here shown as held between rods by its ends resting in recesses in the rods in such manner that the link has a pivotal action on and relative to the rods.

In Fig. 3 I show another modification of the locking parts. Here a toothed or notched dog V is inserted in the suspension-chain, which continues to the lower end of and is secured to the movable tube. To the movable rod W, corresponding to rod P of Fig. 1, is secured the sliding block or plug X, which is of cylindrical form and of about the diameter of the bore of the upper tube. This plug is also slotted to loosely receive the dog U, to which it is pivotally attached by the toggle or link Y. It will now appear that by the movement up and down of the rod W the dog V is forced to engage the upper tube and lock the same relatively to the lower tube.

I am aware that it has been proposed to use dogs, links, cams, wedges, and various like devices adapted to lock the lower or movable tube of a chandelier upon the upper or

stationary tube, and I do not broadly claim any such device or devices. My invention, as contradistinguished from these devices, comprehends an extensible suspension connection so arranged as to constitute one of the locking parts and also arranged as not to have vertical motion relatively to the lower tube, and a locking-rod carried by the lower tube and movably supported thereon, and a link or like device arranged between the supporting connections and said rod and adapted by the vertical movement of the rod to cause the latter and the connections to engage the upper tube, by which means the locking and unlocking of the parts can be effected without the necessity of lifting the lower tube and the chandelier carried thereon and without affecting the tension of the suspension devices.

What is claimed as new is—

1. In combination, in an extension-chandelier, an upper stationary tube and a lower tube movable thereon and adapted to carry the lamp-supports, an extensible suspension connection arranged within the tubes and adapted to permit their relative movement one on the other, which connection is constructed and attached to the lower tube, so as to only have movement therewith, a locking-rod projecting to within the upper tube and carried by and vertically movable on the lower tube, and a link located within the upper tube and arranged between the locking-rod and the suspension connections and adapted to force the rod and said connections to engaging contact with the upper tube, substantially as set forth.

2. In combination, the upper stationary tube A and the lower tube B, adjustable thereon, extensible suspension connections, as chain G and rod F, arranged within the tubes and attached to the lower tube to move only therewith, the locking-rod P, vertically movable on the lower tube and projecting to within the upper tube, the spring N, acting to press the rod upwardly, and a link or toggle Q, arranged between the rods F and P and adapted to separate said rods and permit them to come together by the vertical movement of rod P, whereby the rods are brought to engaging contact with the upper tube and released therefrom, substantially as set forth.

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Witnesses:

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