

T. D. HOTCHKISS.
Extension-Chandelier.

No. 221,561.

Patented Nov. 11, 1879.

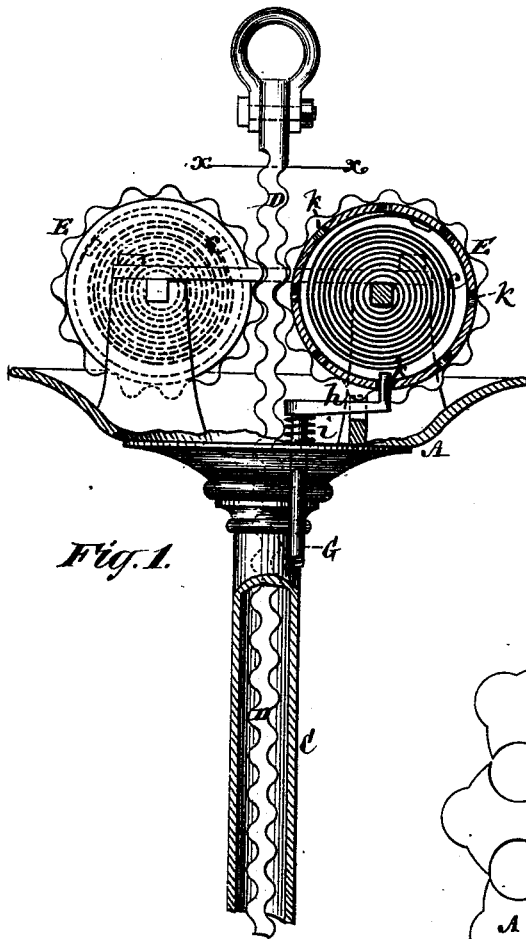


Fig. 1.

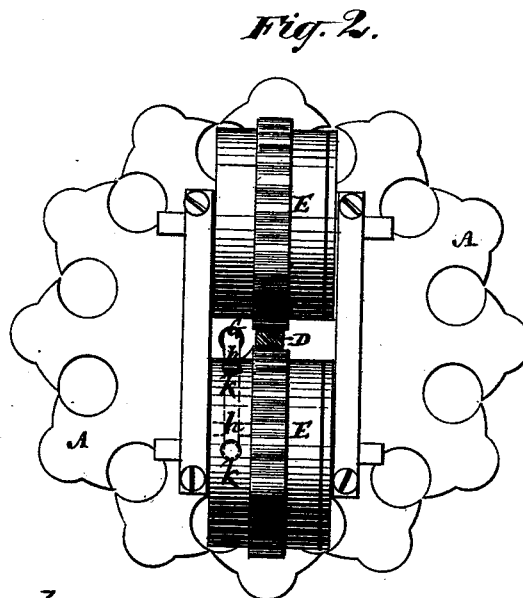
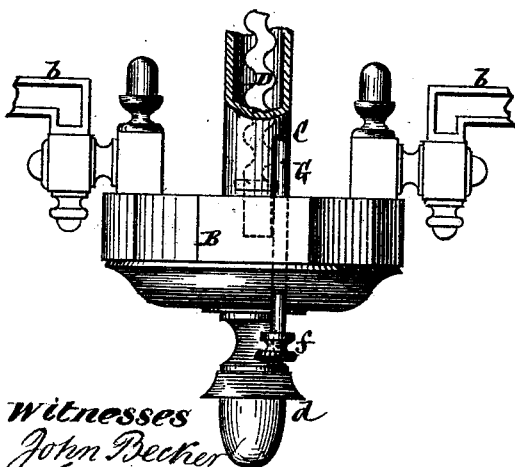


Fig. 2.



Witnesses

John Becker
Jas. H. Hayes

Inventor
Timothy Dwight Hotchkiss
By John A. Horney
Ramon & Brown

UNITED STATES PATENT OFFICE.

TIMOTHY D. HOTCHKISS, OF CROMWELL, CONNECTICUT.

IMPROVEMENT IN EXTENSION-CHANDELIERS.

Specification forming part of Letters Patent No. **221,561**, dated November 11, 1879; application filed March 7, 1879.

To all whom it may concern:

Be it known that I, TIMOTHY DWIGHT HOTCHKISS, of Cromwell, in the county of Middlesex and State of Connecticut, have invented certain Improvements in Extension-Chandeliers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to extension-chandeliers in which the drop-light or extensible body portion of the chandelier has combined with it one or more spring-drums and toothed gearing for counterbalancing and sustaining said body portion as it is raised or lowered and devices for securing the body portion in its raised or lowered position.

My improvements in such spring-balance extension-chandeliers consist, first, in a combination, with the raising and lowering chandelier-body, of one or more counterbalancing spring-drums arranged to move up and down with said body and a pendent or suspension rod gearing said body with said drum or drums; likewise, or secondly, in a combination, with the raising and lowering chandelier-body, one or more counterbalancing spring-drums, and a suspension-rod gearing said body with said drum or drums, of a locking device arranged to engage with said drum or drums for holding said body in its raised or lowered adjustment.

My improvements furthermore, or thirdly, consist in a combination, with the raising and lowering chandelier-body, of a pendent or suspension rod constructed to form a double rack and spring-drums arranged to move up and down with said body on opposite sides of said rack, and constructed to gear with the latter; likewise, or fourthly, in a combination of a canopy, one or more spring-drums for counterbalancing the weight of the raising and lowering portion or body of the chandelier arranged within said canopy, a suspension-rod constructed to gear with said drum or drums, a tube connecting said body and said canopy outside of the gearing suspension-rod, and a locking rod or device constructed to engage with said drum or drums.

In the accompanying drawings, Figure 1 represents a broken, partly-sectional elevation of

an extension-chandelier having my invention applied, and Fig. 2 a horizontal section of the same on the line *x x*.

A is the upper portion or canopy of the chandelier; B, its lower portion or body, having arms *b b*, which carry the lamps, candles, or burners; and C, a tube connecting the canopy A with the body B.

D is a suspension-rod, by which the chandelier is or may be attached to the ceiling of a room, hall, or passage. This suspension-rod is arranged longitudinally within the tube C, and projects out through its top. Said rod is of corrugated construction, so as to form a double rack throughout the greater portion of its length, and the teeth of which engage with two rotating drums or boxes, E E, arranged on opposite sides of it, and having their bearings in or on the canopy A. These drums, which are of a pinion-like construction, having teeth on their peripheries pitched to gear with the rack-like suspension-rod, serve, by means of springs *c c* within them, to support, in whole or in part, the weight of the canopy, tube, and body or other moving parts of the chandelier, the drums E thus becoming spring-drums. Said springs are simple coiled ones, made of flat steel, and arranged around the arbors of the rotating drums or boxes E E, with their one end fast to said arbors and their other end to the inner peripheries of the drums, thus being entirely out of sight and protected from injury, yet readily accessible for removal or repair by simply removing the boxes containing them.

The chandelier is, or may be, lowered by pulling against the tension of the springs *c* down on a knob, *d*, fast to the body B, and is, or may be, raised or be assisted in raising by the relaxing action of the springs.

To lock or hold the chandelier at different elevations within the range of its up-and-down motion, a rod, G, of a locking device, capable of being independently moved up and down, is arranged down the outside of the tube C, and made to project through the body B, where it may be provided with a knob or handle, *f*, also passed up through the canopy A, where it is bent or formed with an arm, *h*, which, under the tension of a spring, *i*, automatically shoots into lock with any one of a

series of apertures, *k*, in either one of the drums *E*; or the rod *G* may have duplicate arms, so as to engage with both drums. By pulling down on the knob *f* the locking device is released from its engagement with the spring drum or drums, which leaves the chandelier at liberty to be raised or lowered. Any other locking device, in connection with the spring-drums and geared suspension-rod, may be used, if desired.

It is not absolutely necessary that the suspension-rod *D* should be of corrugated construction or be formed with teeth, as it may be made with a series of holes in it, arranged to engage with pins on the spring-drums *E*, or said geared rod may be of any other suitable construction, and, instead of engaging with both of the drums *E*, it may only gear with one of them; nor is it absolutely necessary that both of the drums *E* should contain springs *c*, but only one of them, which gears with the rod *G*, be so provided. Furthermore, instead of the drums *E* being above the canopy *A*, they might be arranged beneath it or against the sides of the tube *C*; but it is preferred to place them on top or over the canopy.

In using the term "chandelier," the same is designed to include various suspended lamp or burner carrying devices.

I claim—

1. The combination, with the raising and

lowering body of an extension-chandelier, of one or more counterbalancing spring-drums, arranged to move up and down with said body, and a pendent or suspension rod gearing said body with said drum or drums, essentially as described.

2. The combination, with the raising and lowering body of an extension-chandelier, one or more spring-drums for relieving said body of its load, and a suspension-rod gearing said body with said drum or drums, of a locking device engaging with the drum or drums, substantially as specified.

3. The combination, with the raising and lowering body of an extension-chandelier, of a pendent or suspension rod constructed to form a double rack, and spring-drums arranged to move up and down with said body on opposite sides of said rack, and constructed to engage with the latter, essentially as described.

4. The combination of the canopy *A*, one or more spring-drums, *E*, the geared suspension-rod *D*, the tube *C*, the body *B*, and the locking rod or device *G*, constructed to engage with said drum or drums, essentially as shown and described.

TIMOTHY DWIGHT HOTHCHKISS.

Witnesses:

W. PENDORE,

ELISHA STEVENS.