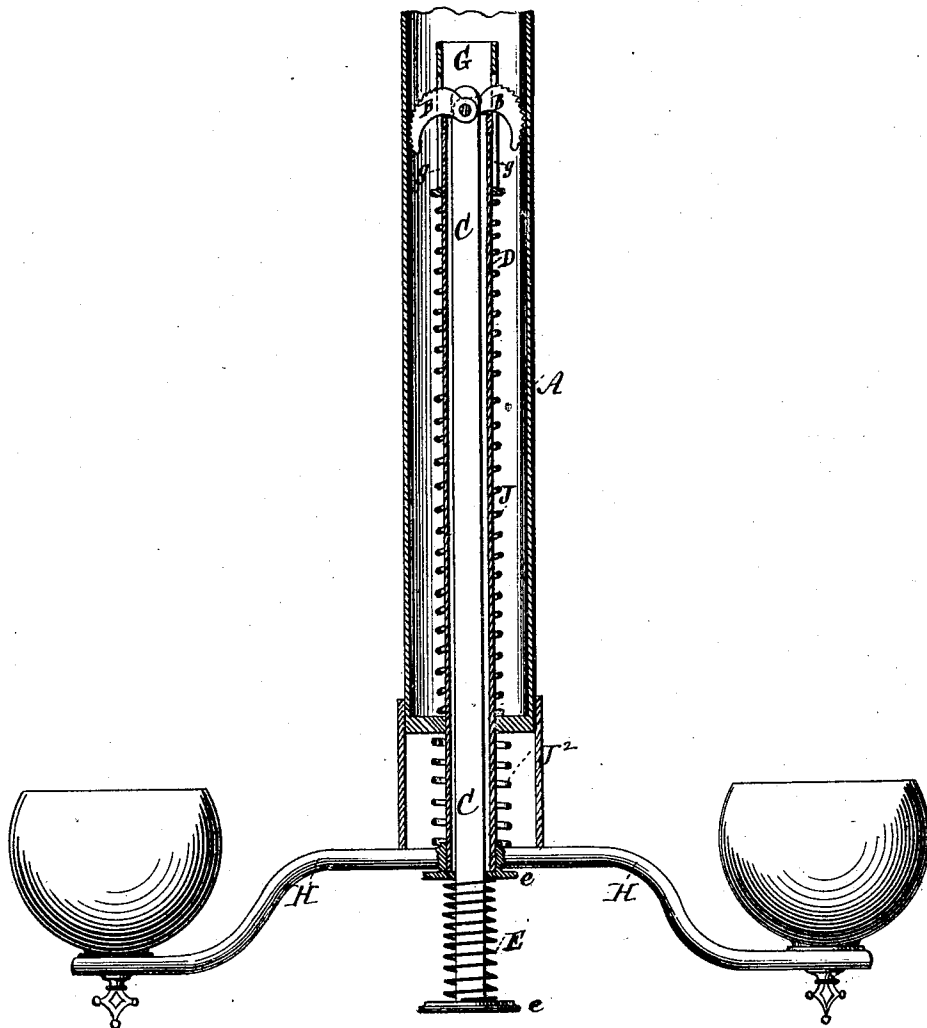


C. H. CARTER & J. E. BROWNE.

CHANDELIERS.

No. 178,733.

Patented June 13, 1876.



Witnesses:
Michael Ryan
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UNITED STATES PATENT OFFICE.

CHARLES H. CARTER, OF BROOKLYN, NEW YORK, AND JAMES E. BROWNE,
OF NEWARK, NEW JERSEY.

IMPROVEMENT IN CHANDELIERS.

Specification forming part of Letters Patent No. **178,733**, dated June 13, 1876; application filed April 28, 1876.

To all whom it may concern:

Be it known that we, CHARLES H. CARTER, of Brooklyn, in the county of Kings and State of New York, and JAMES E. BROWNE, of Newark, in the county of Essex and State of New Jersey, have invented certain Improvements in Extension-Chandeliers; and we do hereby declare that the following is a full, clear, and exact description of the same.

Our invention consists in a novel construction, arrangement, and operation of the various parts of an extension-chandelier, whereby provision is made for readily raising and lowering the chandelier, adjusting and holding it at different heights, and supporting its weight so as to prevent it from being lowered too suddenly, all as hereinafter particularly described.

The accompanying drawing illustrates a mode of carrying out our invention, being a vertical sectional view of an extension-chandelier embodying our improvements.

A represents a pendant, adapted for suspension from a ceiling, or a bracket or arm of any suitable description. This pendant supports and furnishes bearings for the working parts of the apparatus. It is here shown as of tubular form, in order to allow a rotary motion of the working parts when it is desired to turn the chandelier; but it may be of any suitable form otherwise than tubular when a rotary motion of the parts is not desired. The inner surface of the pendant furnishes a bearing for the face or faces of one or more lever-like cams, B, carried by a rod, C, working in a tube, D, which occupies a central position in the pendant, and which is capable of sliding or moving up and down therein, the said tube having attached to it the arms or branches H H of the chandelier. There may be any number of cams, B, but the two shown herein are deemed sufficient for illustration. The cams are pivoted by their inner ends to the upper end of the rod C, so that when at rest their outer ends have a tendency to drop of their own weight. But in order to keep them pressed outward, with their faces bearing against the inner surfaces of the pendant, I provide a spring attached to the carrying-rod C in such a manner as to exert a downward pressure

upon the rod, while the edge of the upper end of the tube D serves as a bearing for the lower edges of the cams. As the spring forces the rod downward, the lower edges of the cams bear against the upper edge of the tube so as to cause the cams to swing outward until their faces or bearing-surfaces come in contact with the bearing-surfaces of the pendant.

The spring may be of any suitable description, and be arranged in any suitable manner which will accomplish the desired purpose; but it is here shown as a spiral spring, E, arranged near the lower end of the rod C, and working between two seats, *e e*, one of which is attached to the rod, and the other to the tube D. This arrangement provides for the convenient operation of the rod, as the seats may be grasped by the thumb and finger, and the spring compressed between them, so as to enable the rod to be pushed upward to draw the cams toward each other, in order to allow the rod to be easily moved up or down without friction of the cams against the inner surface of the pendant. At the upper end of the tube D is a cap, G, provided with a slot, *g*, in which the cams B work. The upper ends of the slots *g* form bearings for the upper edges of the cams, so as to prevent them from being forced outward too far, and also to assist in pressing them toward each other when the rod is pushed upward.

The apparatus is provided with a spring or springs, arranged in any suitable manner, for taking the weight of the chandelier and letting it down gently. There may be a spring, J, arranged inside the pendant A and operating by compression, or a spring, J², arranged outside said pendant and operating by expansion, or both of said springs may be used, arranged to operate with each other. When the spring J² is used it may be covered by a tube working telescopically with relation to the pendant.

The extension-chandelier, constructed as above described, is operated as follows:

When it is desired to lower the chandelier, the rod C, which is simply a checking and releasing rod, is pushed upward within the sliding tube D, and by that means is

caused to withdraw the faces of the friction-cams from contact with the bearing-surfaces of the stationary pendant A. The tube D with the attached branches H H may be then drawn down or allowed to descend easily. When the desired adjustment is obtained the pressure is removed from the rod, so as to allow the spring E to pull downward on the rod and cause the cams to swing outward and bear against the surfaces of the pendant with sufficient friction to arrest or check the motion of the chandelier at any height to which it may be adjusted. The faces of the cams may be roughened or provided with teeth, in order to facilitate their engagement with the bearing-surfaces of the pendant. When it is desired to raise the chandelier, it is simply pushed upward until the desired height is reached, as the shape and arrangement of the cams allow them to easily slip over the bearing-surface when moving upward, and as soon as the upward pressure is removed, the cams swing outward and bind against the bearing-surfaces of the pendant, so as to hold the chandelier in place.

Instead of the cams operating by friction, as herein described, two or more pointed levers may be used, and the bearing-surfaces of

the pendant may be notched or serrated to receive the points of said levers, so that the motion of the chandelier may be arrested or checked by the engagement of said levers with said notches or serrations.

This invention is applicable to chandeliers for gas as well as to those for oils, suitable packing being applied to prevent the leakage of gas.

What we claim as new, and desire to secure by Letters Patent, is—

1. In an extension-chandelier, the combination of a stationary pendant, A, an inner sliding tube, D, carrying arms or branches H H, and a checking and releasing rod, C, working inside of said tube, and a system of cams or checking-levers, actuated by said rod, all substantially as herein described.

2. The combination, with the checking and releasing rod C, cams or checking-levers B, tube D, of the cap G, for regulating and limiting the motion of said cams all substantially as herein specified.

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Witnesses:

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