

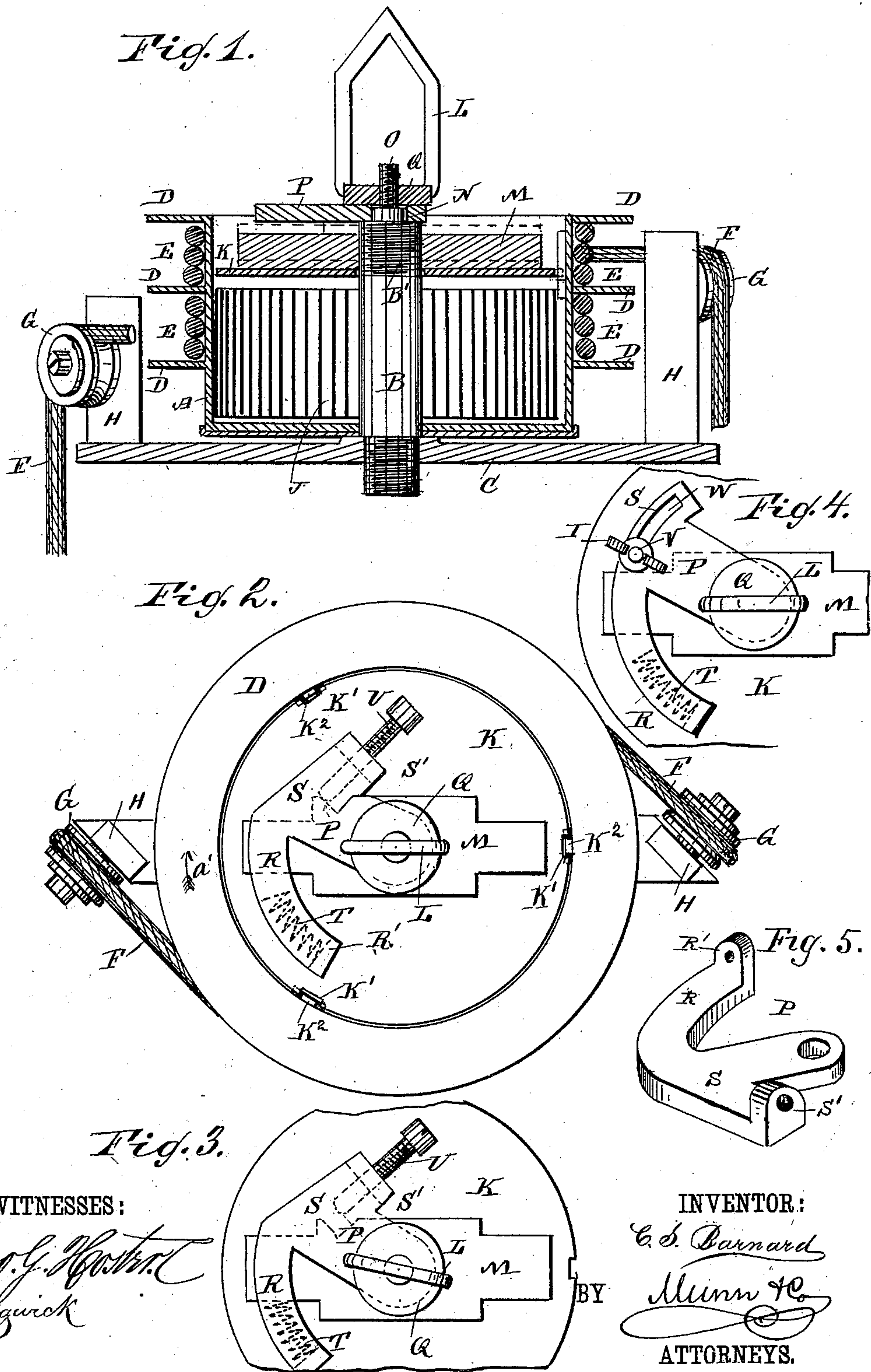
(No Model.)

C. S. BARNARD.

SUSPENSION DEVICE FOR LAMPS AND OTHER ARTICLES.

No. 357,142.

Patented Feb. 1, 1887.



UNITED STATES PATENT OFFICE.

CHARLES S. BARNARD, OF ANSONIA, CONNECTICUT.

SUSPENSION DEVICE FOR LAMPS AND OTHER ARTICLES.

SPECIFICATION forming part of Letters Patent No. 357,142, dated February 1, 1887.

Application filed November 19, 1885. Serial No. 183,339. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. BARNARD, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Suspension Devices for Lamps and other Articles, of which the following is a full, clear, and exact description.

This invention relates to devices for hanging and suspending lamps or other articles in such a manner that they can be moved up and down, and will always be held in place when released, which devices contain springs.

The object of my invention is to provide a device of this kind which is provided with an automatic brake attachment which assists in holding the weight of the lamp when the same is released.

This invention consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a cross-sectional view of my improved suspension device for lamps and other articles. Fig. 2 is a top view of the same. Fig. 3 is a plan view of the top plate, the pieces having different positions and parts being broken out. Fig. 4 is a plan view of a modified construction of the brake-check. Fig. 5 is a perspective of the under side of the plate P.

The cylindrical casing A is mounted to turn on the pin or arbor B, fixed and projecting upward from the plate C, and said casing is provided with circumferential ribs or partitions D on the outside of its rim, whereby annular grooves E are formed on the outside of the casing for receiving the chains, wires, or cables F, secured to the casing, and passed over the grooved pulleys G on the standards H on the plate C, by which wires, chains, or cables the lamp or other article is suspended. A powerful coil or spiral spring, J, is contained in the casing A, around the arbor B, and has one end secured to the casing and the other end secured to the pivot. All these parts are old and well known, and have only been enumerated and described in this case to clearly illustrate my invention.

A flat circular plate, K, having a central aperture for the arbor B, is placed in the top of

the cylindrical casing, and is provided in its edge with notches K', for receiving lugs K² on the inner side of the casing A, whereby the said plate K is caused to revolve with the casing on the arbor B, and at the same time the said lugs K² are shouldered at their lower ends to prevent the said plate K from dropping upon the top of the spiral spring J. That part B' of the pivot B above the plate K is provided with a screw-thread, and on said screw-threaded part the brake-block M is screwed, so that the flat under side of the same rests upon the upper surface of the plate K. The screw-threaded portion of the brake-block M, which surrounds the screw-threaded portion of the pivot B, constitutes in effect a nut engaging with the screw.

The arbor B is provided at its top with the shoulder N, and above the same with the upwardly-projecting screw-stem O, the flat lever or plate P, secured on the upper end of the arbor B, parallel with the plate K, the neck formed at the shoulder N on the arbor B passing through an aperture in one end of the said lever or plate P. The lever or plate P is provided with arms R and S on opposite sides at the free end, and the said arms are provided at their outer ends with the downwardly-projecting lugs R' and S. (Shown in dotted lines in Figs. 2 and 3.) On the lug R' the spiral spring T is held, which projects toward one side edge of the brake-block M, and on the lug S' the check-screw U is held. In place of providing said check-screw, I may provide a stop having a screw, V, passed through the curved slot W in the arm S, on which screw the winged nut I is screwed.

On the screw-stem O the nut Q is screwed, and holds the swinging lever or plate P in place, and on said nut the eye or loop L, for hanging or suspending the entire device, is formed.

The operation is as follows: By pulling down the lamp and the cords or chains F the casing A and the plate K are revolved in the direction of the arrow a', and the brake-block M is carried around by the plate K, with the upper surface of which the under side of the brake-block is in frictional contact, and as the brake-block is revolved or turned on the threaded upper end, B', of the arbor B, it is thus moved down and pressed on the top of the plate K.

The limit of movement of the brake-block can be controlled by the screw U or the stop shown in Fig. 4, and consequently the pressure of the brake-block on the plate K and the consequent friction can be regulated, for the greater the distance that the block M is moved by the plate K the greater will be the distance that the block M will be screwed down and pressed on the plate K. When the chains or cords F are slackened by raising the lamps, the spring J, which was coiled by pulling down the lamp, uncoils and revolves the casing A and the plate K in the inverse direction of the arrow a' , whereby the block M, which is turned with the plate K by frictional contact, is unscrewed slightly from the part B' of the arbor B, and is thus moved up from the plate K. The spring T prevents the brake-block M from swinging too far in the inverse direction of the arrow a' . Thus it follows that whenever there is a downward strain on the cords or chains F the block M is turned more or less in the direction of the arrow a' , and the block is screwed down on the plate K and acts as a brake against the

effect of the downward strain, and assists the spring in holding the weight of the lamp and preventing it from descending. As soon as the lamp is raised and the strain taken from the cords or chains F the spring revolves the casing, the block M is disengaged from the plate K, and permits the spring J to revolve the casing A and to wind up the chains or cords.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the casing, a spring for revolving the casing, and suspension-cords connected with the casing, of a screw-arbor in alignment with the axis of the casing, a brake-block loosely mounted on the screw and contacting with a part or connection of the casing, and a plate secured to the brake-supporting arbor and provided with a yielding and rigid stop at its free end, on the opposite sides of the brake-block, as and for the purpose set forth.

CHARLES S. BARNARD.

Witnesses:

CHARLES T. HEARD,

JOHN D. BAILLOU.