

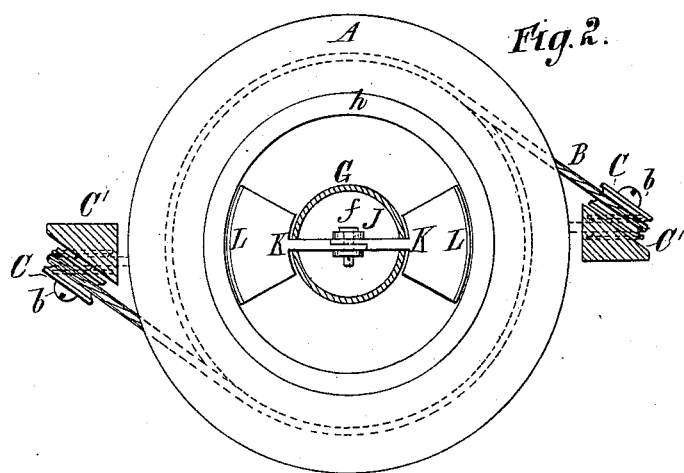
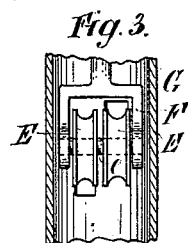
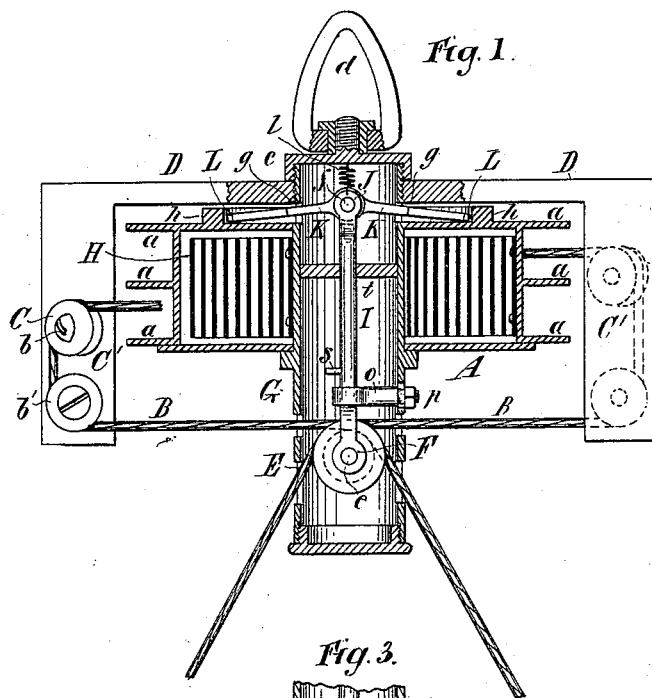
(No Model.)

J. D. GRISWOLD.

SUSPENSION DEVICE.

No. 346,995.

Patented Aug. 10, 1886.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES D. GRISWOLD, OF BROOKLYN, NEW YORK.

SUSPENSION DEVICE.

SPECIFICATION forming part of Letters Patent No. 346,995, dated August 10, 1886.

Application filed October 14, 1885. Serial No. 179,577. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. GRISWOLD, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Suspension Devices for Lamps and other Articles, of which the following is a specification.

I will describe in detail a suspension device embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a sectional elevation of a suspension device embodying my improvement. Fig. 2 is a plan or top view thereof, a portion being removed to disclose parts which would otherwise be concealed; and Fig. 3 is a detail thereof.

Like letters designate like parts in all the figures.

A designates a hollow cylindrical drum, which may be made of metal. The periphery of the drum is provided with flanges *a*. Between the flanges *a* cords or chains B are wound on the drum. These cords or chains, after leaving the drum, pass over guides C, (here shown as pulleys,) mounted upon pins or studs *b* upon upright portions C' of a frame, D. The cords or chains also pass over other guide-pulleys, *b'*, similarly mounted upon the portions C' of the frame. From thence the cords or chains pass over guide-pulleys E. These last guide-pulleys are arranged in a yoke, F, to be more fully hereinafter described. From these pulleys the cords or chains pass to the lamp or other article to be suspended. The drum A surrounds and rotates freely upon an arbor, G. The arbor G is hollow. One end of the same is screw-threaded and fits in a tapped hole in the frame D, formed to receive it. It may be prevented from rotation by a feather or spline. Instead of screw-threading it in, it may be rigidly secured to the frame. The upper end of the arbor has upon it a cap, *e*, to which is affixed by a swiveling connection a loop, *d*, by which the device may be suspended.

Within the drum is a counter-balance consisting of a convolute spring, H. One end of this spring is secured to the arbor G, and the other end is secured to the drum, near the periphery thereof. The object of this spring is

to counterbalance the weight of a lamp or other article suspended from the cords or chains.

The yoke F forms a portion of a rod, I, and the pulleys E are suspended therein upon an arbor, *e*, extending through suitable holes near the ends of the yoke. The rod I extends through the arbor. The end thereof opposite the yoke F has upon it another yoke, J, in which one of the ends of brakes K are suspended by means of a pin, *f*, passing through suitable holes therein and in the yoke J, near its free ends. The brakes K pass through slots *g* in the arbor G at points approximately opposite each other. Their other ends have upon them arc-shaped brake-shoes L. The faces of these brake-shoes are preferably faced with leather, india-rubber, or other suitable material of considerable frictional resistance. The brake-shoes are adapted to bear upon a circular raised portion of the drum, here shown as a ring or flange, *h*. A spring, *l*, secured at one end to the yoke J and at the other to the cap *e*, tends to keep the inner ends of the brakes normally raised, and, consequently, the brake-shoes out of contact with the ring or flange *h*. It will be seen that the brakes K are levers, and in effect constitute toggles. It will also be seen that the rod I constitutes a movable support for the pulleys E. When the weight of the lamp or other article is brought to bear upon the cords or chains, the levers or toggles are operated to force the brake-shoes into contact with the ring or flange *h*, and the rotation of the drum is thereby retarded. When said weight is relieved, the spring *l* operates to move the brake-shoes out of contact with the ring or flange, and the drum may then rotate freely to rewind the cords or chains.

The degree of pressure which the brakes may exert upon the ring or flange may be varied by means of a stop, shown as consisting of a loop upon a rod, *o*, and surrounding the rod I. The other end of the rod *o* passes through a slot in the arbor, and may be secured in any desired position in the slot by means of a jam-nut, *p*. A projection, *s*, (here shown as a pin on the rod I,) is adapted to come in contact with this stop when the rod I is moved far enough in one direction. This stop also acts as a guide for the rod I in its movements.

Another guide therefor, *t*, arranged upon the inside of the arbor G, may be employed, if desirable. Of course, but one of the brakes K may be employed, if desirable.

5 What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a suspension device for a lamp or other article, the combination of a spring-drum, a ring or flange upon the drum, an arbor, upon
10 which said drum is mounted and about which it may rotate, a counterbalance-spring acting in conjunction with the drum, a cord or chain wound upon the drum and passing over guides to a lamp or other article to be suspended, a
15 sliding support, upon which one of said guides is mounted, and a brake consisting of an arm having one end in contact with a face of the drum, which is transverse to the axis of the arbor, and bearing at the end against said
20 flange, and pivotally connected at the other end to the sliding support beyond the face of the drum, whereby the weight of a lamp or other article upon the cord or chain will cause said brake to bear against said rim or flange,
25 substantially as specified.

2. In a suspension device for a lamp or other article, the combination of a spring-drum, a hollow arbor, upon which said drum is mounted, and about which it may rotate, a counter-

balance-spring acting in conjunction with the
30 drum, cords or chains wound upon the drum and passing over guides to the lamp or other article to be suspended, a movable support extending through the arbor, upon which cer-
tain of said guides are mounted, and a brake
35 with which said movable support is connected, substantially as specified.

3. In a suspension device for a lamp or other article, the combination of a spring-drum, a rim or flange on said drum, a hollow arbor,
40 upon which said drum is mounted and about which it may rotate, a counterbalance-spring acting in conjunction with the drum, cords or chains wound upon the drum and passing over
guides to the lamp or other article to be sus-
45 pended, a movable support extending through the arbor, upon which certain of said guides are mounted, and a brake consisting of a toggle, pivotally connected near its center to the
sliding support, whereby the weight of a lamp
50 or other article upon the cords or chains will cause said brake to bear against said rim or flange, substantially as specified.

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Witnesses:

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