

No. 723,405.

PATENTED MAR. 24, 1903.

C. M. PITEL.
HANGING LAMP.
APPLICATION FILED NOV. 4, 1902.

NO MODEL.

Fig. 1

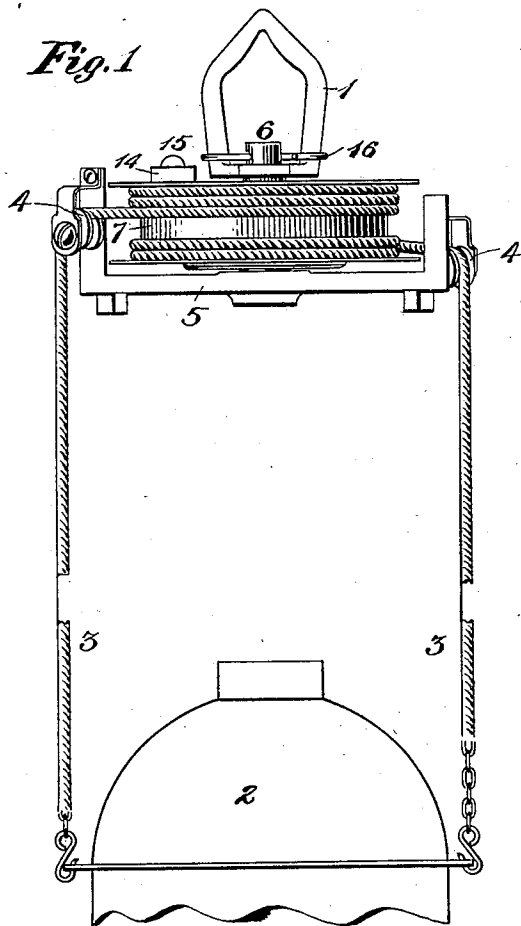


Fig. 3.

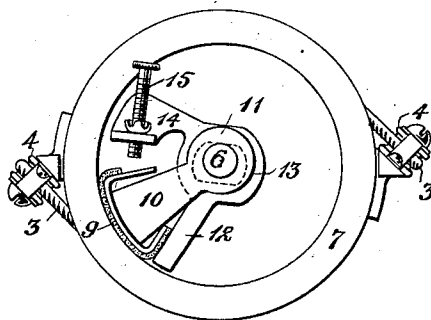


Fig. 4.

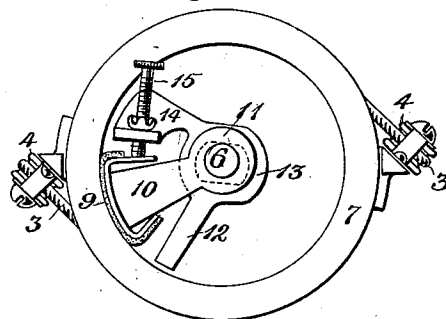


Fig. 2.

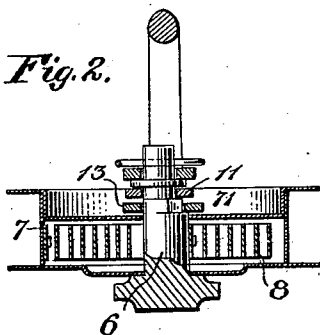


Fig. 5.

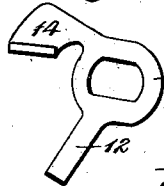


Fig. 6.

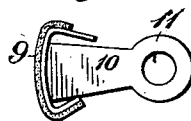
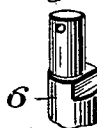


Fig. 7.



Witnesses
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UNITED STATES PATENT OFFICE.

CONRAD M. PITEL, OF MERIDEN, CONNECTICUT, ASSIGNOR TO EDWARD MILLER & COMPANY, OF MERIDEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

HANGING LAMP.

SPECIFICATION forming part of Letters Patent No. 723,405, dated March 24, 1903.

Application filed November 4, 1902. Serial No. 130,018. (No model.)

To all whom it may concern:

Be it known that I, CONRAD M. PITEL, a citizen of the United States, residing at Meriden, in the county of New Haven, State of Connecticut, have invented certain new and useful Improvements in Hanging Lamps, of which the following is a full, clear, and exact description.

My invention relates to suspending devices for lamps and other articles.

The purpose of this invention is to provide a suspending device the construction of which is such that a weight exceeding the sustaining power of the spring may be supported at any desired elevation. In devices of this kind it is customary to employ a spring to operate a barrel which winds up suspending cords or chains carrying the weight. Heretofore it has been customary to rely alone upon the power of a spring to hold the weight in suspension, and in such cases the weight has been substantially such as to counterbalance the spring, so that at whatever elevation the weight was placed it would remain there. Manifestly in such a construction if the load were greater than the sustaining power of the spring it would be impossible to sustain it at any desired point within the range of the supporting cords or chains, since the load would settle to its lowest position.

It is my object to provide a suspending device for lamps and other articles which are of a weight in excess of the sustaining power of the spring and yet to combine in the device such features as will permit the user to move the suspended article to any desired elevation, where it will be sustained so long as desired.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a vertical section of certain details of construction. Fig. 3 is a plan view of the upper part of the suspending device. Fig. 4 is a similar view, certain parts being in a different position. Figs. 5, 6, and 7 are details.

1 is a loop.

2 is a conventional illustration of a weight—for example, a lamp or any other load.

3 3 are cords or chains suitably connected with the weight 2.

4 4 are pulleys over which the chains may pass.

5 is a frame.

6 is a central stud or post. The frame 5 is connected with the loop 1 through the medium of said central stud or post 6, and it will be seen that the frame has no independent rotative movement relatively to the loop, the function of the loop being to suspend the entire apparatus from a suitable overhead hook or other device. 7 is a barrel revolubly mounted thereon and to which the cords 3 3 are secured and around which they may wind.

8 is a spring secured to the post 6 at one end and to the barrel 7 at its other end. The spring 8 tends to revolve the drum 7 and wind the cords 3 3 thereon. It follows that the tendency of the spring 8 is to lift the weight 2. If the weight is in excess of the lifting or sustaining power of the spring, it cannot be placed at any desired elevation, but will settle to its lowest position. To prevent this, I employ certain means which will coact with the barrel and other parts in such a manner that although the weight may be in excess of the sustaining power of the spring it may be suspended at any desired elevation within the range of the cords 3 3. This means comprises a friction-brake 9, which may bear against the inner wall 71 of the barrel 7 to produce the desired restraint. The brake 9 is carried by an arm 10, in the body of which may be formed an eye 11, adapted to take a bearing upon a part of the post 6, which may be specially formed, so as to be eccentric to the axis of rotation of the barrel 7. (See Figs. 2 and 7.)

12 is a stop, the body 13 of which is fixed upon the central post 6 in any desired manner. The body 13 may have another extension 14, which may be threaded to receive an adjusting-screw 15, which also acts as a stop.

When the parts are assembled, any convenient means—for example, a pin 16—may be passed through a hole in the upper end of the post 6, the ends of said pin being bent around the hanger-loop 1 to prevent the latter from rotating thereon.

The operation is as follows: Assume the weight 2 is in the position indicated in Fig. 1. The brake will be in the position indi-

cated in Fig. 4. When the operator lifts the weight, the barrel will rotate under the action of the spring and the brake will shift from the position indicated in Fig. 4 to the position indicated in Fig. 3, and being mounted on an eccentric the face of the brake will make a lighter contact with the inner wall of the barrel—in fact, so light as to not interfere with the function of the spring in revolving the drum. When the weight has been raised to the desired elevation and is released by the operator, it will settle back slightly and enough to give a slight reverse rotation to the barrel 7, which will cause the brake 9 to swing from the position indicated in Fig. 3 to the position indicated in Fig. 4, in which the frictional engagement of the brake is sufficient to check the rotation of the barrel, so that the combined power of the spring and the resistance of the brake will be sufficient to sustain the weight. The frictional engagement of the brake upon the barrel is not so great as to prevent the operator from pulling the lamp down. The degree of frictional resistance between the brake and the inner wall of the drum depends upon the range of movement of the brake-arm, which may be varied as desired by providing adjustable stops. For example in the drawings the screw 15 serves as a stop to enable the operator to control the swing of the brake in one direction. As shown, this screw-stop 15 is adapted to check the brake at that end of its swing where it applies the greatest resistance. Obviously a similar stop could be provided at the opposite side of the brake to limit its swing in that direction. If in the course of time the spring should become so weakened that the resistance of the brake plus the lifting tendency of the spring should not be sufficient to sustain the weight at any desired elevation, the operator has merely to retract the adjusting-screw 15, whereupon the brake may have a greater range of action and supply the necessary restraint to the barrel.

In the apparatus thus far described it is obvious that it is necessary to employ only a comparatively light spring. In fact, a spring having a capacity sufficient to lift the suspending-cords might be used; but a more powerful spring would be preferable.

It is obvious that the brake will perform a useful function even though the torque of the spring practically counterbalances the weight, since when a brake or means equivalent thereto is employed it will partially relieve the spring of its work, and hence prolong its life.

In a companion case (Serial No. 130,017,

filed November 4, 1902) for a different species I shall claim a modification of this apparatus in which the spring employed has more power than required to elevate the weight. In the present case, however, it is my intention that the broadest claim shall cover both species.

What I claim is—

1. In a device of the character described, a hanger-loop, a frame supported thereby and having a fixed position relatively thereto, a revoluble drum, a spring for driving said drum, a weight suspended therefrom, the power of the spring being less than that required to sustain said weight, a swinging brake coacting with the annular inner wall of said drum and mounted eccentrically of the axis of said drum to resist the free rotation of the same, the resistance of the brake plus the power of the spring being sufficient to counterbalance said weight.

2. In a device of the character described, a hanger-loop, a frame supported thereby having a fixed position relatively thereto, a spring-controlled drum, a weight suspended therefrom, cords or the like connecting said weight with said drum, a swinging friction-brake bearing against said drum and mounted eccentrically of the axis of rotation of said drum, substantially as and for the purpose described.

3. In a device of the character described, a hanger-loop, a frame supported thereby and having a fixed position relatively thereto, a spring-controlled drum, a weight suspended therefrom, cords or the like connecting said weight with said drum, a swinging friction-brake bearing against the inner annular wall of the said drum and mounted eccentrically of the axis of rotation of said drum, and a stop for said brake, substantially as and for the purpose specified.

4. In a device of the character described, a hanger-loop a frame carried thereby and having a fixed position relatively thereto, a spring-controlled drum, a weight suspended therefrom, cords or the like connecting said weight with said drum, a swinging friction-brake bearing against the inner annular wall of said drum, said brake being mounted eccentrically of the axis of the rotation of said drum, and an adjustable stop for said brake, substantially as described.

Signed at Meriden, Connecticut, this 30th day of October, 1902.

CONRAD M. PITEL.

Witnesses:

JAMES W. MASKELL,
SAMUEL McNAB.