

(No Model.)

N. JENKINS.
SUSPENSION DEVICE FOR LAMPS.

No. 347,613.

Patented Aug. 17, 1886.

Fig. 1.

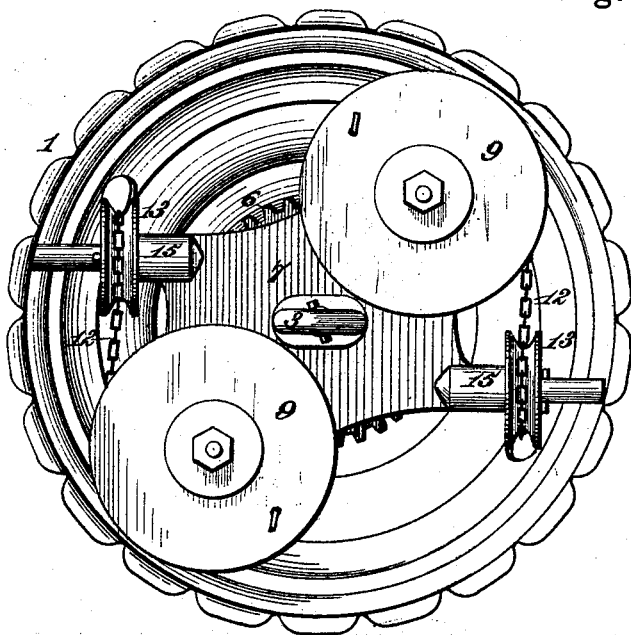


Fig. 2.

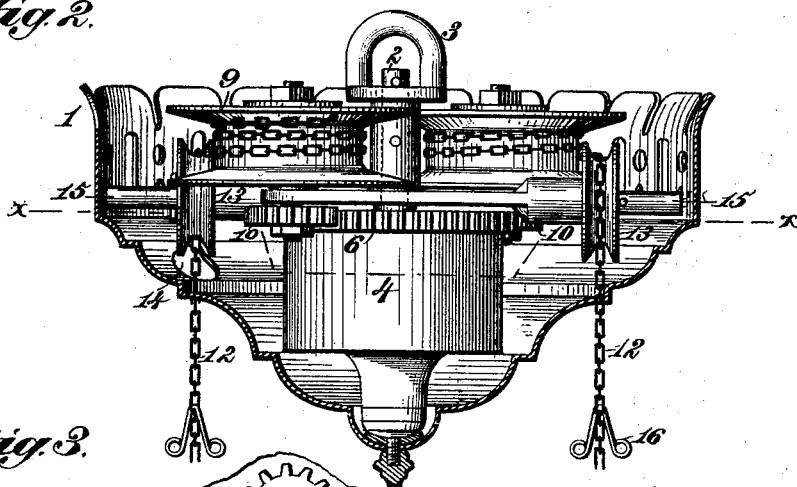
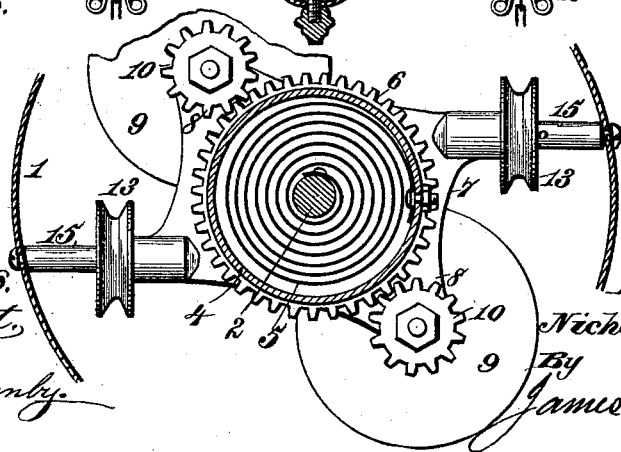


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

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SUSPENSION DEVICE FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 347,613, dated August 17, 1886.

Application filed April 22, 1886. Serial No. 199,812. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS JENKINS, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Suspension Devices for Lamps, of which the following is a specification.

This invention consists in an improved construction and combination of devices for suspending a lamp from the ceiling of a room and adjusting it at any desired height.

In the annexed drawings, Figure 1 is a top view of my improved lamp suspension devices. Fig. 2 is an elevation of the same with casing partly removed. Fig. 3 is a horizontal section of the suspension devices viewed from the under side.

The numeral 1 designates a casing, which may be struck up or otherwise made from sheet metal or other material, and suitably ornamented. In this casing is a central vertical arbor, 2, the upper end of which is reduced in diameter, and carries a loop, 3, by which the casing and its contents are to be suspended from a hook secured to the ceiling or other support.

On the lower part of the fixed arbor 2 is mounted a rotary drum, 4, which incloses a coiled spring, 5, that surrounds said arbor, one end of the spring being secured to the arbor and the other end to the interior of the drum. The outer side of the drum is cogged or provided with a spur-gear, 6, through which the drum is rotated, as hereinafter explained.

Secured to the arbor 2 above the drum 4 is a plate, 7, of approximately rectangular form. Two diagonally-opposite corners of this plate are formed with arms 8, each of which affords a bearing for the vertical shaft or journal of a horizontal sheave, 9. These sheaves 9 are arranged immediately above the arms 8, and secured to the sheave-journals beneath said arms are pinions 10, which mesh with the gear 6 on the central drum. Each sheave 9 is deeply flanged to receive and support the lamp suspension-chains 12, the upper ends of which are secured to said sheaves. These chains 12 pass from the horizontal sheaves 9 over vertical guide-pulleys 13, adjacent to said sheaves, and thence extend down through openings 14

in the lower part of the casing. The guide-pulleys 13 are journaled at diagonally-opposite corners of the plate 7 on arbors 15, projecting from said plate.

The lamp or other object to be suspended is connected with the chains 12 in any suitable or well-known manner. By drawing the lamp or other object down, the chains 12, in paying out from the sheaves 9, will rotate the same, together with their pinions 10, thereby rotating the drum 4 in such direction as to coil up or wind its inclosed spring. On moving the lamp or other suspended object upward the tension of the coiled spring 5 will rotate the drum 4 and sheaves 9 in such direction as to wind the chains 12 on said sheaves. In order to limit the upward movement of the suspension-chains 12, they may be provided beneath the casing 1 with stops 16, of such form and size as to preclude their passage through the openings 14 in the bottom of said casing.

It will be seen that by providing a spring, 5, of proper tensile power a lamp or other object of ordinary weight can be suspended and adjusted at will to any required altitude without the intervention of special weights or locking devices.

Heretofore in lamp suspension devices of this general character the suspension chains or cords have been wound either upon vertical sheaves or else directly upon the spring-inclosing drum, and in the former case said drum has been geared by intermediate pinions with crown-gears on the vertical winding-sheaves, or it has sometimes been provided with a miter-gear meshing with a miter-pinion connected with said vertical sheave. So far as I am aware, the arrangement of a spring-inclosing drum having a spur-gear meshing with horizontal pinions connected with horizontal sheaves for winding and supporting the lamp suspension-chains, as herein shown and described, has not hitherto been used or known. This construction is simple, convenient, and effective, distributes the weight of the suspended lamp more equally, and enables it to be adjusted and balanced with great accuracy at any desired elevation.

What I claim as my invention is—

1. In a lamp suspension device, the combi-

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nation of suspension-chains, vertical guide-pulleys therefor, a central arbor, a spring-inclosing drum having a spur-gear and mounted on said arbor, a plate, 7, horizontal sheaves 5 journaled to the plate and geared with said drum and carrying the suspension-chains, substantially as described.

2. In a lamp suspension device, the combination of a central arbor, a spring-inclosing 10 drum mounted thereon and having a spur-gear, a plate, 7, horizontal sheaves provided with shafts supported by said plate, and having pinions engaging the spur-gear of the drum, vertical guide-pulleys, and suspension- 15 chains passing over said pulleys and secured to the horizontal sheaves, substantially as described.

3. The combination of suspension-chains having stops, a casing provided with openings 20 for the passage of the stops, an arbor, a spring-inclosing drum mounted on the arbor and having a spur-gear, a plate, 7, and horizontal sheaves supported by the plate, and having pinions engaging the spur-gear, substantially 25 as described.

4. In a lamp suspension device, the combi-

nation of a casing having openings in its lower part and provided with a central fixed arbor, a rotary drum mounted on said arbor and provided with a spur-gear, a coiled spring in- 30 closed in said drum, a plate, 7, horizontal sheaves supported by the plate and having pinions meshing with the drum-gear, vertical guide-pulleys, and suspension-chains passed 35 through the casing over the pulleys and secured to the sheaves, substantially as described.

5. In a lamp suspension device, the combination of the casing 1, having openings 14 and central arbor, 2, the drum 4, having spur- 40 gear 6, the spring 5, inclosed in said drum, the plate 7, having arms 8 and arbors 15, the horizontal sheaves 9, provided with pinions 10, the guide-pulleys 13, and the suspension- 45 chains 12, having stops 16, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

NICHOLAS JENKINS.

Witnesses:

GEO. H. BENHAM,

THOMAS I. WALKER.