(No Model.)

N. JENKINS.

LAMP FIXTURE.

No. 306,926. Patented Oct. 21, 1884.

Fig. 1.

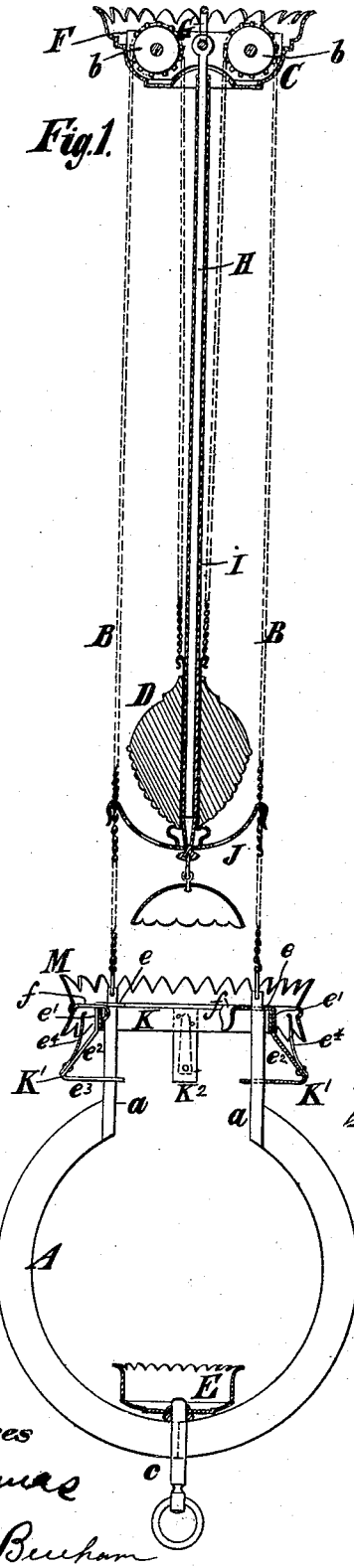


Fig. 3.

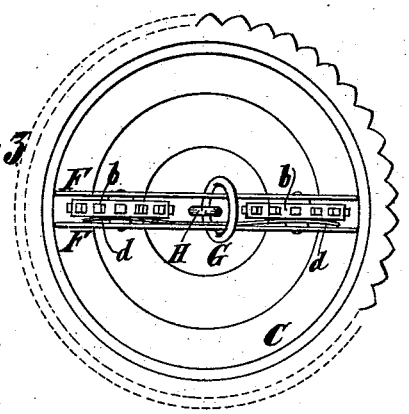
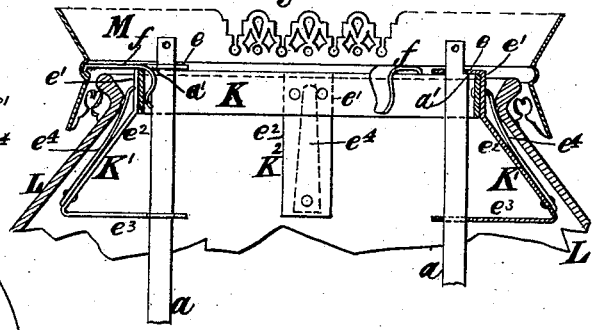


Fig. 2.



Witnesses
H. C. Thomas
Geo. H. Buckham

Inventor
Nicholas Jenkins

UNITED STATES PATENT OFFICE

NICHOLAS JENKINS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO HOLMES, BOOTH & HAYDENS, OF SAME PLACE.

LAMP-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 306,926, dated October 21, 1884.

Application filed August 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS JENKINS, of Waterbury, in the county of New Haven and State of Connecticut, have invented a certain Improvement in Lamp-Fixtures, of which the following is a specification.

This improvement will be fully described, and then pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional side view of a lamp-fixture embodying my improvement. Fig. 2 is a sectional elevation of the upper part of a shade, the shade-support, and shade-crown thereof on a larger scale; and Fig. 3 is a top view of the hanger of the lamp and its appurtenances.

Similar letters of reference designate corresponding parts in all the figures.

A designates the frame, whereby the lamp-reservoir, with its appurtances, is supported. This frame may be made of a strip of sheet metal bent edgewise into circular or other desirable shape, and having arms *a*, secured by solder or otherwise to the ends and extended upward. Chains B or other tackles are attached to the upper ends of the arms *a*, passed around pulleys *b* in a hanger, C, and fastened to a counterbalance-weight, D. The lower part of the frame A has affixed to it a bifurcate-pin, *c*, whose arms embrace it and extend above. The lower end of the pin is provided with a ring serving as a pull-piece, and the upper end of the pin has affixed to it a holder, E, for a lamp-reservoir. The frame A may be lowered by pulling on the pull-piece and raised by relaxing the pull on the pull-piece. The counterbalance-weight D may be so heavy as to always preponderate over the lamp-frame and its appurtenances, and in such case a stop will be provided for the weight to abut against, so that it will be prevented from descending too far; but the counterbalance-weight may approximately equal the heft of the lamp-frame and its appurtenances when the lamp-reservoir is full of oil. In the latter case the pulleys *b* of the hanger C may have applied to them a brake, whereby any slight variances between the heft of the counterbalance-weight and the heft of the lamp-frame and its appurtenances, due to the consumption of oil, may be compensated for and the balance between the parts preserved.

The hanger C consists of a canopy which is of circular form, and which is struck-up or formed by dies from sheet metal. In the bottom of the canopy are holes, through which the chains B or other tackles pass, and across it extend at a slight distance above the bottom two bars, F, forming a bridge-piece. These bars F impart the necessary strength to the hanger C and enable the canopy to be made of very thin sheet metal. The pulleys *b* are journaled in the bars F of the bridge, and a spring, *d*, fastened to one of the bars, impinges against the pulleys and constitutes a brake, whereby they are prevented from moving when slight variations occur between the heft of the weight D and the heft of the lamp-frame and the appurtenances thereof, owing to the consumption of oil or otherwise. The pulleys *b* are preferably provided with sprocket-teeth for engaging with the chains B, to prevent the latter from slipping. A suspending-ring, G, slipped through the bars F, serves as a means for connecting the hanger to a support, and also serves to connect to the bars a rod, H.

To the rod H is fitted a sleeve, I, that, at the lower end, is fastened to a yoke or cross-piece, J, whereby the chains B or other tackles are connected together near the ends, which are fastened to the arms *a* of the frame A. When the frame A is raised or lowered, the sleeve I slides along the rod H. The counterbalance-weight D is of annular form and surrounds the sleeve I. When the frame A is adjusted, this weight therefore slides along the sleeve I. The rod H and sleeve or tube I form an extensible guide for the weight D. The yoke J serves as a stop against which the counterbalance-weight may abut, and whereby it may be prevented from descending too far. The yoke J also serves to steady the lower end of the weight-guide H I as the latter is extended and contracted. The rod H is pivotally connected by the ring G to the bars F, and passes through a large hole in the hanger C, hence the lamp can be swung relatively to the hanger C; but owing to the con-

nection of the chains or tackles by the yoke J and the connection of the yoke J to the sleeve I the chains or tackles will be less flexible, and the lamp-fixture will be less liable to swing than one of ordinary construction.

The holder for the lamp-shade consists in a band, K, of metal, having arms K′ K² fastened to it. The band K is of such diameter that it extends loosely around the arms *a* of the frame A. The arms K′ are made of metal, and comprise portions *c*, extending over the top of the band, other portions, *c′*, fitting against the outer side of the band K and outwardly-extending inclined portions c^2. These arms also have inwardly-extending portions c^3 at the lower ends. The portions *c* of the arms K′ are provided with holes, and are fitted over the upper ends of the arms *a* of the frame A. They rest on shoulders *a′*, with which these arms *a* are provided. The portions c^3 of the arms K′ are provided with holes which fit upon the lower portions of the said arms *a*. The arms K² have only portions *c′* fitting against the band K, and outwardly-extending inclined portions c^2. I have shown but two of the arms K², but any suitable number may be employed. They and the arms K′ are shown as equidistant. The portions *c′* of the arms are secured to the band K by rivets or otherwise. The outwardly-extending inclined portions c^2 of these arms are provided with springs c^4, that are fastened in place near the lower ends by rivets or otherwise, and at the upper ends are free. These springs may be made of steel, brass, or other suitably-resilient metal.

The advantage of this method of constructing springs to support a lamp-shade is that when the upper ends of the springs impinge against the solid part of the arm *c′* of the arms they are thereby prevented from being pressed inward by the combined weight of the shade and crown flat against the exterior surface of the said arms, thereby allowing the shade to drop down past the said springs and below their influence.

L designates a conical shade made of opal glass or other suitable material. Its upper part surrounds the band K of the shade-holder and rests upon the springs c^4. The springs c^4 will yield if the shade is struck; hence in many cases they will save the shade from injuries which it would receive if struck while resting upon an unyielding surface. They will also yield to accommodate shades of different sizes.

M designates an ornamental crown, which is arranged above the shade. It extends downwardly around the upper part of the shade, and is provided with arms *f*, that extend over the top and against the inner side of the band K of the shade-holder. It may be detached from the shade-holder at pleasure, and it and its arms may be made of metal or other suitable material.

I am aware that metal tongues for supporting a shade-crown have been formed by slitting a metal shade-holder and bending outward the portion surrounded by the slits.

The advantage of my method of supporting a lamp-shade is that when the upper ends of the springs impinge against the solid part of the arms on the shade-holder they are thereby prevented from being pressed inward by the combined weight of the shade and crown flat against the exterior surface of said arms, thereby allowing the shade to drop down past the said springs and below their influence.

I am also aware that rubber springs have been attached to a shade-holder for supporting the shade.

The advantage of a metal spring over a rubber spring for this purpose is that the rubber spring is liable to be detrimentally effected by the heat of the lamp and to lose its elasticity through age. None of these objections apply to my metal spring.

The above-named do not constitute part of my invention.

I have filed an application, No. 116,058, for Letters Patent for an improvement in lamp-fixtures, December 31, 1883. I have also filed an application, No. 116,224, for Letters Patent for an improvement in lamp-fixtures, January 2, 1884. I do not herein claim anything claimed therein.

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

1. In a lamp-fixture, a frame for supporting a lamp, a counterbalance-weight, a hanger provided with pulleys, chains, or other tackle connecting said frame and weight and passing around the pulleys of the hanger, a yoke connecting the chains or tackle above said frame, and a telescopic guide on which the weight is adapted to slide, and which is attached at its lower end to said yoke and at its upper end to said hanger, all being combined and organized substantially as herein described, whereby said yoke and weight-guide will be lowered and the weight raised by the drawing down of the frame.

2. The combination of the frame A, the hanger C, provided with pulleys *b*, the weight D, the chains or tackle B, connecting said frame and weight and passing around the pulleys, the yoke J, connecting said chains or tackle, and the weight-guide consisting of the rod H, attached at its upper end to said hanger, and the sleeve or tube I, attached at its lower end to said yoke, all substantially as specified.

3. The combination, with the hanger C, consisting of a canopy of thin sheet metal, and parallel bars F, made separate from each other and secured in said canopy, of the ring G, passing through said bars, and the rod H, passing between the bars and hung from said ring, substantially as specified.

4. The combination of a ring, K, arms K′, attached thereto and extending downwardly and outwardly therefrom, and springs c^4, consisting of strips of metal attached to the exterior of said arms, and extending lengthwise

of said arms, so arranged that the upper ends of said springs may impinge against the part e' of said arms, and the outer sides of said springs may impinge against the interior of a shade, substantially as specified.

5. The combination, with the frame A, provided with upwardly-extending arms a, having shoulders a', of a shade-holder consisting of a band, K, and arms K′, comprising bent-over portions e, that are perforated to fit over the upper ends of the arms a, and to rest on said shoulders a', so that the shade-holder will be hung from said shoulders, substantially as specified.

6. The combination, with the frame A, provided with arms a, of a shade-holder consisting of a band, K, and of arms K′, comprising portions e and e^3, perforated to fit the arms a, substantially as specified.

7. In a lamp-fixture, the combination of a shade-holder and a crown, M, made separate from the shade-holder, and provided with arms f, extending inward from its interior and resting upon the top of the shade-holder, substantially as specified.

NICHOLAS JENKINS.

Witnesses:
GEO. H. BEECHAM,
H. H. WALKER.