(No Model.)

E. L. BRYANT.

WEIGHT FOR EXTENSION LAMPS.

No. 308,592. Patented Dec. 2, 1884.

Fig. 1

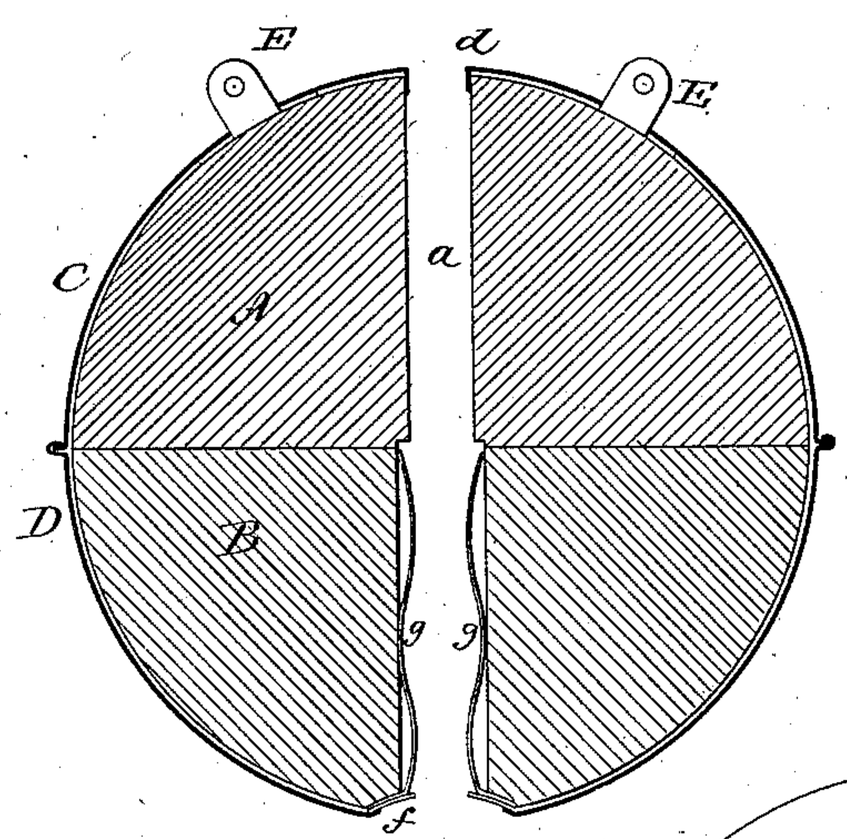


Fig. 3

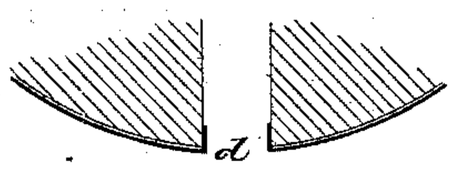


Fig. 6

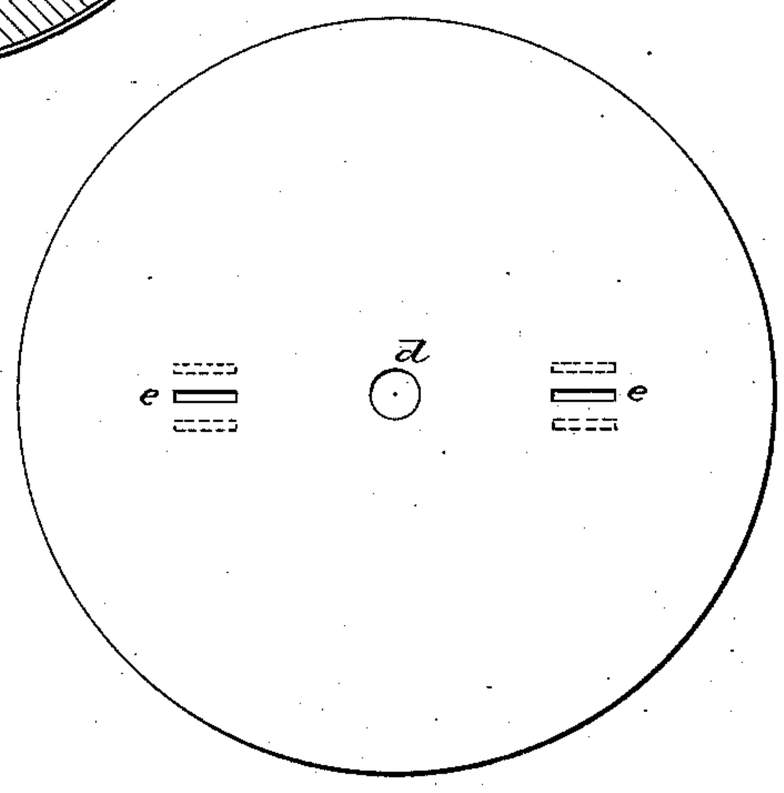


Fig. 4

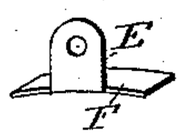


Fig. 5

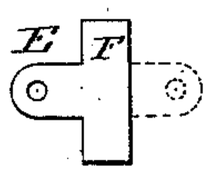


Fig. 7

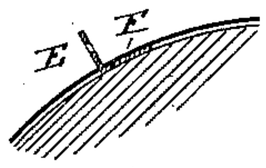


Fig. 8

Fig. 9

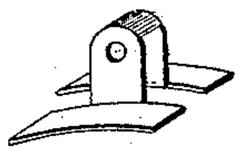
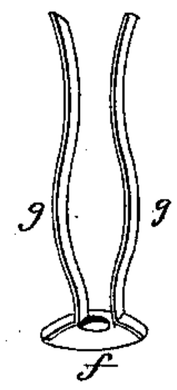


Fig. 2



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UNITED STATES PATENT OFFICE.

EDSON L. BRYANT, OF ANSONIA, CONNECTICUT, ASSIGNOR OF ONE-HALF TO WALLACE & SONS, OF SAME PLACE.

WEIGHT FOR EXTENSION-LAMPS.

SPECIFICATION forming part of Letters Patent No. 308,592, dated December 2, 1884.

Application filed June 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDSON L. BRYANT, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Weights for Extension-Lamps; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a vertical central section; Fig. 2, a perspective view of the spring detached; Fig. 3, a modification of the scalp whereby the spring is dispensed with; Fig. 4, a perspective view of one ear; Fig. 5, the blank from which the ear is cut; Fig. 6, a top view of the scalp, showing the slots for the introduction of the ears; Fig. 7, a transverse section through one ear; Figs. 8 and 9, modifications of the ears.

This invention relates to an improvement in the construction of the weight for counterbalancing extension-lamps, which, suspended from the ceiling, are made adjustable to different elevations, and particularly to that class of weights which are arranged to slide on a vertical central rod as a guide, the object of the invention being a simple and cheap construction of the weight, but yet such a construction as will give to the weight an ornamental appearance; and the invention consists in the construction, as hereinafter described, and particularly recited in the claims.

The weight A, I preferably cast in two hemispherical parts, the division being horizontal; but it may be cast in one piece. Vertically through the weight is an opening, *a*, through which the rod may freely pass, this opening being considerably larger than the rod. This weight is made from cast-iron or other cheap heavy metal, and is inclosed by a scalp of sheet metal of corresponding shape made in two parts, C D, the division being in a horizontal central plane. The two parts of the scalp are joined by a lap or closing joint, *b*, which forms a bead around the weight at the largest diameter. At the center of the scalp—say at the top, and corresponding to the hole *a*—the metal of the scalp is turned inward, as at *d*, the metal entering the hole in the weight, and so as to form a bushing, and this bushing works against the surface of the rod and protects it from contact with the body of the weight. At the same time it serves to hold the weight in its central position within the scalp or shell, and so that the hole through the weight must coincide with the corresponding holes in the shell. Bushing also avoids the introduction of a tube through the weight, as has been done in other constructions of similar weights. If the weight be left free to move up and down and simply counterbalancing the fixture, any considerable variation in the weight of the fixture thus counterbalanced will cause it either to overcome the counter-balance or yield to it, as the case may be—that is, in a change of shade from one to another, the one being well counterbalanced, the other heavier or lighter, the action of the weight will be in accordance with such variation, either to cause the fixture to rise or permit its descent. Again, if the weight be sufficient to just counterbalance the fixture with a certain style of fount, a change of that fount for another which is heavier or lighter will produce the same result. Again, if the fixture be drawn down with a pull which leaves the fixture moving, its momentum will carry the weight upward, so as to bring it to a sudden stop, with a liability of breaking or deranging the fragile part of the fixture, and in raising the fixture the same difficulty arises. To prevent this freedom of the weight I apply springs within it, which will bear against the rod with slight friction, yet enough to overcome the possible variations in the weight of the fixture.

The spring is best made as seen in Fig. 2, and consists of a disk, *f*, constructed to set between the weight and its scalp. From this disk on opposite sides a tongue, *g*, extends. This tongue is bent back upon the disk, so that the two may pass into the opening in the weight, as seen in Fig. 1. The tongues above are bent into irregular shape, so as to take a bearing both upon the inside of the opening through the weight and upon the rod, creating friction between the two, and as seen in Fig. 1. These springs will yield in placing the

weight upon the rod, and while the weight will slide with great freedom and smoothly upon the rod the springs will create sufficient friction to avoid the difficulties which I have described. It will be understood that there is a central hole through the disk somewhat larger than the rod. The springs at the bottom may be dispensed with, the metal of the scalp at that end turned inward, the same as the top, and as seen in Fig. 3. The weight is usually suspended by two chains coming down over pulleys from above. This necessitates some device upon the weight to which the chains may be attached. If it be a single chain, I construct the ears as seen in Fig 4. These are made from a blank cut from sheet metal, as seen in Fig. 5, of T shape, then the ear E is bent up at right angles to the cross F, and the cross F is curved corresponding to the internal shape of the scalp. Through the scalp at points equidistant from the center *d* I cut slots *e* (see Fig. 4) corresponding to the width and thickness of the ears, then introduce the ear from the inside outward through the slot *e*, bringing the T part F against the inner surface of the scalp, as seen in Fig. 7. The weight stands against this part F and supports the ears in their respective slots, and so that the chains may be attached thereto, the ear perforated for the purpose. In some cases a double run of chain is provided at each side. In this case I construct the ear double, as seen in broken lines, Fig. 5, and also as seen in Fig. 8, with the pulley between the ears; and for the introduction of this device I make two slots corresponding to the two ears E E, and, as indicated in broken lines, Fig. 6, the ear part is first introduced from the inside outward through the two slots and then the pulley set in place.

Instead of making the ear-piece of U shape, as seen in Fig. 8, the bend of the U to take its bearing upon the inside of the scalp, it may be of inverted-U shape, as seen in Fig. 9, a flange turned at each side from the end of the legs and curved corresponding to the interior of the scalp. In that case the slot through the scalp is made sufficiently large for the double ears to pass through and bring the two flanges to bear upon the inside.

I am aware that weights for chandeliers have been made from a cast-metal body inclosed by a sheet-metal scalp, and therefore do not claim, broadly, such a construction.

I am also aware that elastic frictional bearings have been arranged at the end of the opening in the weight, so as to take a frictional bearing upon the rod, such frictional bearings having been introduced in the form of a ring-shaped disk into a cavity at the respective ends of the opening through the weight. I therefore do not wish to be understood as broadly claiming a frictional bearing to support the weight without contact with the rod in the opening through the weight.

I claim—

1. A weight for extension-lamps, consisting of substantially a spherical body and a sheet-metal scalp having slots therein, and constructed to inclose said body, in combination with ears E, constructed with a flange, F, said ears passing through the slots in the scalp, so that the flange F rests between the inside of the scalp and the body of the weight, substantially as described.

2. A weight for extension-lamps, constructed with a vertical central opening through it of greater diameter than the rod upon which it is to slide, combined with spring-tongues arranged vertically in the opening through the weight, the said spring-tongues curved longitudinally, substantially as described, and so that the said tongues will bear upon the rod on which the weight rests, substantially as described.

3. A weight for extension-lamps, constructed with a vertical central opening through it of greater diameter than the rod upon which it is to slide, combined with the disk *f*, of larger diameter than the opening in the weight, and constructed with tongues *g g*, extending therefrom, turned inward upon the weight and extending into the opening in the weight to form springs between the surface of the opening and the rod, the said disk also constructed with a central opening through it of greater diameter than the rod, substantially as described.

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Witnesses:
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