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DEVICE FOR RELIEVING THE PULL ON THE ROPE FOR COUPLING DEVICES FOR ELECTRIC CONDUCTORS.

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1,139,138.

Patented May 11, 1915.

Fig. 1.

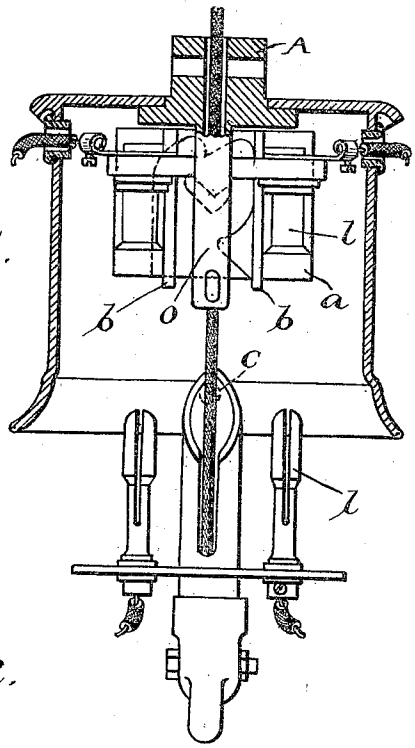


Fig. 2.

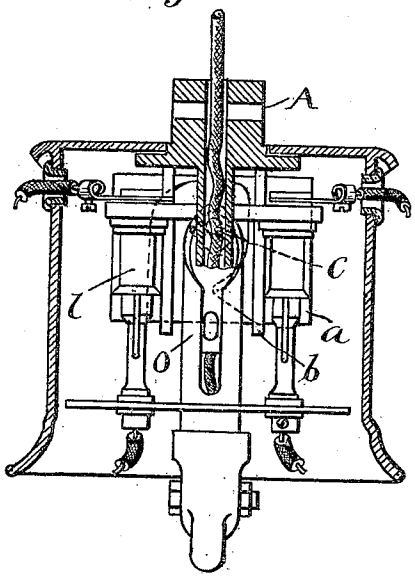
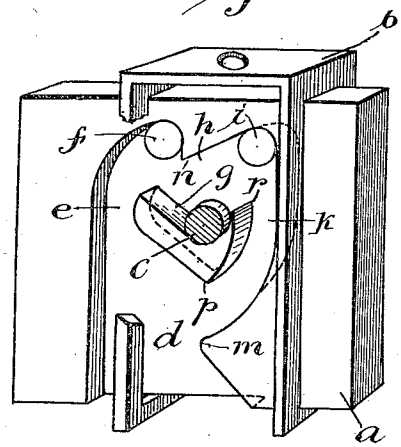


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLY SCHMIDT, OF FRANKFORT-ON-THE-MAIN, GERMANY.

DEVICE FOR RELIEVING THE PULL ON THE ROPE FOR COUPLING DEVICES FOR ELECTRIC CONDUCTORS.

1,139,138. Specification of Letters Patent. Patented May 11, 1915.

Application filed October 15, 1912. Serial No. 725,940.

To all whom it may concern:

Be it known that I, WILLY SCHMIDT, a citizen of the German Empire, residing at Frankfort-on-the-Main, in the Province of Hesse-Nassau and Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Devices for Relieving the Pull on the Rope for Coupling Devices for Electric Conductors, of which the following is a specification.

This invention relates to an improved device for relieving the pull on the rope of arc lamps and the like. There are already certain well known arrangements somewhat as follows:—

The lower portion of the lamp coupling or relieving device is drawn with the lamp suspended on it up to the height of a projection or stop whereupon the lower part of the arc lamp coupling device is connected by means of mechanism to the upper part and the rope is relieved of the weight or pull of the lamp. When the rope is pulled a second time the uncoupling takes place. Upon slackening the rope, the weight of the lamp again comes upon it and the lamp can be let down for trimming. In order to effect this coupling and uncoupling, complicated means as balls, springs, falling mechanism or mechanisms acting upon the center of gravity have been employed which make the lasting properties of the relieving device questionable.

The invention hereinafter described with reference to the drawings avoids these drawbacks completely.

Figure 1 shows an arc lamp coupling device combined with my novel relieving means in vertical section with the rope load. Fig. 2, with the rope relieved. Fig. 3, is an enlarged detail view of the coupling device shown in Figs. 1 and 2, parts thereof being broken away.

The invention will now be more particularly described with reference to the accompanying drawings, which form a part of this specification, and in which like reference letters denote like parts in separate views.

In said drawings A represents a standard adapted to be secured to the ceiling or any desired place, to which is secured an inverted U-shaped guide *b* having apertures in its parallel sides through which a plate *a* is adapted to slide back and forth. At the top of this guide is an opening through which the lamp supporting rope is adapted to be passed. One of the faces of this plate *a* is provided with a passage-way or cut out portion *d*, *e*, *k*, as is shown in Fig. 3, a V-shaped abutment or stop *g* being left on said plate for a purpose which will be described later.

The letter *l* denotes the hanging lamp itself upon the upper end of which is provided a stop or abutment *c*. This abutment *c* projects from the lamp about as far as the depth of the track *d*, *e*, *k*, in the plate *a*, within which it is adapted to run, and should lie as nearly as possible in line with the supporting rope of the lamp, so as to properly balance the lamp. This abutment is held from lateral or endwise displacement from the track by means of a guide *o* which forces the lamp to travel in a straight up and down line when being raised or lowered.

The operation of the device is as follows: Upon raising the lamp, the abutment *c* rises therewith directly up in line with the supporting rope, and strikes the slidable plate *a*, first at about the point *m;* on being further raised it shifts the slidably mounted plate *a* to the right, passes upward until it meets the left under side of the stop *g*, and by contact therewith further shifts the plate to the right until the abutment *c* is thrown against the left-hand wall of the track *e* where on its further movement it will be guided to the position shown at *f*, having meanwhile during its passage from *e* to *f* shifted the plate *a* slightly to the left; the lamp has now been raised to its highest position and upon lowering it the abutment *c* strikes the upper side of the stop *g* and further shifts the plate *a* to the left until the abutment rests in the V-shaped bottom of the stop *g* when all strain on the rope is relieved.

To lower the lamp, it is raised until the abutment *c* assumes the position indicated at *i*, shifting to the left in its passage the plate *a;* the lamp is then lowered, the abutment *c* following the passage *k* and passing out through the entrance opening *d*, the stop *g* having been thrown out of the way of the descending abutment, by means of the shifting of the plate *a* to the left.

It will be observed that in this arrangement of parts, the point *p* of the V-shaped bottom of the stop *g* must be slightly to the

right of the point *m* of the track and the point *n* must also be so situated as to be slightly to the left of the resting place of the abutment *c* on the stop *g* so that the abutment *c* when raised will be forced to slide the plate *a* along till said abutment assumes the position *f* in its upward movement and the position *i* in its downward movement, which position must be to the right of the right-hand side *r* of the stop *g* in order for the apparatus to work correctly.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A device of the character described consisting of a support, an inverted U-shaped guide carried by said support and having alined apertures in its opposite sides, a longitudinally slidable plate mounted in said apertured guide, a track within said plate, means carried on the article to be raised adapted to travel in said track, and means on said plate adapted to serve as a rest for said article carried means, substantially as described.

2. A device of the character described consisting of a support, an inverted U-shaped guide carried by said support and having alined apertures in its opposite sides, a longitudinally slidable plate mounted in said apertured guide, a track in said plate, an abutment carried by the article to be raised and adapted to travel on said track, a stop on said plate, said track being so arranged as to guide said abutment at a certain point in its passage over said stop, said stop being so arranged as to force said plate sidewise when said abutment is lowered thereto whereby a different portion of the track is presented to the abutment when it is again raised, substantially as described.

3. A device of the character described consisting of a support, a guide carried by said support, a longitudinally slidable plate mounted on said guide, a track in said plate, means carried by the article to be raised adapted to travel in said track, and a stop provided on said plate adapted to serve as a seat for said traveling means after it has passed over a certain predetermined portion of said track, substantially as described.

4. A device of the character described consisting of a support, a guide carried by said support, an apertured longitudinally slidable plate mounted in said guide, an abutment carried by the article to be raised, said apertured plate being adapted to serve as a guide for said abutment, a V-shaped stop on said apertured plate adapted to serve as a catch for said abutment, and means for releasing said abutment from said track, substantially as described.

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

WILLY SCHMIDT.

Witnesses:
FRIEDRICH CARL WENTZEL,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."