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ADJUSTING DEVICE FOR ARC LAMPS.

APPLICATION FILED AUG. 5, 1912.

1,129,285. Patented Feb. 23, 1915.

Fig. 1.

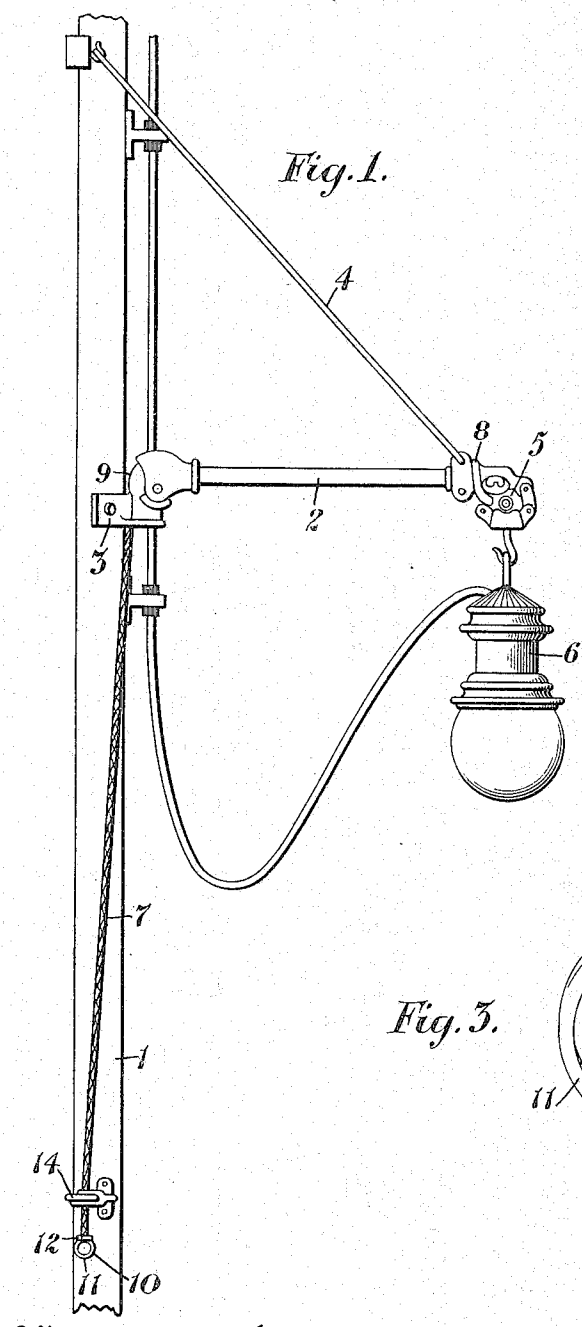


Fig. 2.

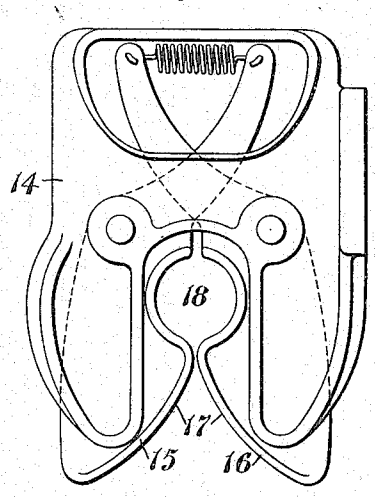
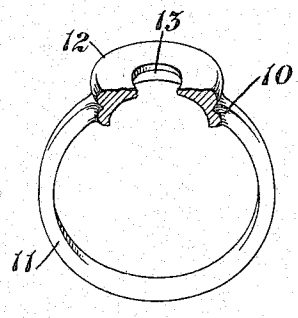


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ADJUSTING DEVICE FOR ARC-LAMPS.

1,129,285. Specification of Letters Patent. Patented Feb. 23, 1915.

Original application filed February 16, 1912, Serial No. 677,937. Divided and this application filed August 5, 1912. Serial No. 713,315.

To all whom it may concern:

Be it known that I, LOUIS FORT, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Adjusting Devices for Arc-Lamps, of which the following is a full, clear, and exact description, whereby any one skilled in the art may make and use the same.

The invention relates to an adjusting device which, as shown herein, is applied to an arc lamp although obviously it may be used in conjunction with numerous devices where a flexible connector is employed upon the device to be adjusted.

The object of the invention is to provide an adjustment for arc lamps or the like wherein variations in the length of the flexible adjuster will not affect the position of the lamp and wherein said lamp or other device may be adjusted and controlled by the flexible conductor in conjunction with suitable holding members.

Referring to the drawings: Figure 1 is a view illustrating the application of the invention to an electric arc lamp. Fig. 2 is a bottom plan view of a clamp device. Fig. 3 is a perspective view of the stop forming the terminal of the flexible connector.

The adjusting device herein illustrated and described is shown in conjunction with the adjusting and retaining cord or cable of an arc lamp inasmuch as such illustration shows a particularly efficient application of the invention. It is understood, however, that the device might be applied wherever there is a contraction and expansion of the adjusting cable with reference to a device to be held primarily in a fixture and subject to raising and lowering. For instance, it might be used in conjunction with a boat-davit.

In the modern practice of suspending arc lamps, they are dependent from a bracket or arm secured to a pole or are dependent from a cross-span arranged between two poles or some support through which and the medium of a flexible connector, they may be raised and lowered. In ordinary practice, the head of the lamp is fitted with a form of clutch device which will hold it in predetermined position with reference to the fixed support or bracket and by a manipulation of the flexible connector the clutch device may be released for the purpose of lowering the lamp. Where flexible connectors have been used in conjunction with clutch devices of the character referred to and where the end of the flexible adjusting means has been permanently secured to a bracket or cleat, changes in climatic conditions so vary the length of the flexible connector when contracted that the clutch devices are released and thus the lamp is permitted to swing at its full weight upon the flexible support. As the flexible connector or support expands, the lamp is unduly lowered.

It is one of the principal objects of the present invention to provide a flexible connection in conjunction with other devices which will insure a give and take of said flexible connector without liability of throwing the lamp from its clutch or placing undue strains upon the supporting means when the lamp is "close-hauled."

Referring to the drawings the numeral 1 denotes the pole forming a support for a bracket arm 2, which as illustrated herein is secured at one end as at 3 to the pole 1 and is provided with a stay 4 for trussing or holding the outer end of the arm 2. A clutch device 5 forming no part of the present invention and not specifically described herein is arranged at the outer end of the bracket for holding the lamp 6 in definite position with reference to the bracket 2. As illustrated herein, the flexible connector 7 which is attached to the lamp 6 through the clutch device passes over a head block 8 at the outer end of the bracket and about a bracket block 9 at the inner end thereof. This flexible connector extends downwardly along the pole and terminates in an abutment 10, which, as illustrated in Fig. 3 consists of a ring-like member 11, terminating in a button or disk 12 and provided with a perforation 13, through which the flexible connector passes and may be secured by knotting the end thereof.

The numeral 14 indicates a clamp more specifically shown in Fig. 2 of the drawings, but specifically forming no part of the present invention. The present application does not claim the clamp device illustrated in Fig. 2 which clamp device forms the subject matter of a co-pending application entitled Clamp and adjusting device for arc lamps, Serial Number 677,937, filed Febru-

ary 16, 1912, from which application the present invention has been divided. Any desired form of clamp device may be used although that illustrated herein consists of a bracket member 14 adapted to be secured to the pole 1 and having spring jaws 15, 16, with curved faces 17 and a central opening 18 so that the flexible connector 7 may be passed into the opening 18 or pulled therefrom by a side-wise movement of the abutment 10, and its flexible connector 7.

Although there is shown in Fig. 2 a specific form of clamp, it is obvious that any clamping device might be used in which the flexible connector 7 might have a free movement through the clamp opening 18.

It is believed the operation of the clamp device is apparent from the drawings, which show jaws, the curved faces 17 of which permit the insulation of the flexible connector within the central opening 18 and the resilient holding members of the jaws, likewise permitting the withdrawal of the flexible connector from the central opening upon the application of sufficient pressure exerted through the member 10. It is apparent that the flexible connector may pass freely through the opening 18 as said connector shrinks or expands and as the abutment 10 is located some distance below the bracket or clamp member 14, the contraction or expansion of the flexible connector 7 will not affect the position of the lamp 6 nor will it place undue strain upon the supporting device. On the other hand, the abutment will prevent the dropping of the lamp through any accidental unfastening of the clutch devices as the pull of the flexible connector 7 will be directly against the bracket member and its jaws 15, 16.

The operation of the device is as follows:—With the lamp in position and held by the clutch devices, the operator may apply a hook to the ring member 11 and by pulling upon the flexible member, release the clutch. By then pulling side-wise, the flexible connector is released from the bracket member or its jaws and the lamp may be lowered to the desired degree. After trimming, the same hook with a staff connection may be used for raising the lamp and by swinging the flexible connector inwardly between the curved faces 17, it will assume a position within the opening 18. Provided the clutch device holds the lamp against the bracket, the lower end of the cord is free to move backward and forward through the opening 18, without placing such strains upon the lamp or fixtures as will unfasten the clutch device. In case of accidental dislodgment of the parts and release of the clutch, the abutment 10 will securely hold the lamp practically in "close-hauled" position.

The advantages of the device are apparent. With any ordinary form of clutch device holding the lamp in definite position with reference to the bracket 2, said clutch device may be actuated in its locking and releasing actions by the flexible connector 7. Obviously, should the flexible connector 7 be tightly held at its extremity and attached to the pole about a cleat or other device, variations in climatic conditions might cause a sufficient variation in the length of the cord to so tighten it that it would release the clutch of the lamp. Thereupon, the lamp would swing directly from the end of the cord instead of being held by the clutch. If the end of the flexible connector were tightly bound to the pole, the shrinkage might cause a distortion of the supporting parts and a breakage of the cleats or other holding devices which would permit the lamp to fall to the ground.

In the device as herein described, the flexible connector may be left with a reasonable amount of slack between the abutment 10 and the bracket 14, when the lamp is held by the clutch to its supporting bracket 2. This slack would permit shrinkage of the connector, without releasing the clutch or putting undue strain upon the supporting parts or fastening means. It is practically impossible for re-action of the parts to loosen the clutch and release the lamp and at the same time, the device permits the use of ordinary supporting parts in the form of clutches, brackets, etc.

Obviously, the exact details of the device might be varied to a considerable extent without departing from the spirit or intent of the invention and modifications in the arrangement of parts might be made in the device.

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

1. A device for supporting and adjusting arc lamps consisting of upright and transverse supporting members, a clutch device for holding the lamp with reference to the transverse supporting member, a flexible cable for raising and lowering said lamp with reference to its supports and the clutch device, a bracket member provided with jaws arranged upon the supporting member, said bracket member serving as an abutment, its jaws serving to permit introduction and removal of the flexible cable for raising and lowering the lamp and permitting free movement of the cable therethrough upon expansion and contraction of the cable and a stop secured to the cable below the abutment and adapted to engage said abutment and hold the lamp in suspended position upon accidental release of said lamp from the clutch devices.

2. A device for supporting and adjusting arc lamps consisting of a support and clutching means for holding a lamp with reference

to the support and a flexible cable for raising and lowering said lamp with reference to its support and clutching means, a bracket member arranged upon the support and provided with jaws, said bracket member serving as an abutment, a stop secured to the cable below the bracket member to abut thereagainst and prevent falling of the lamp upon accidental disengagement of the clutching devices, the jaws of said bracket member permitting free longitudinal movement of the flexible cable therethrough and permitting engagement and disengagement of the cable with reference to the bracket member.

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