

UNITED STATES PATENT OFFICE.

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ADJUSTABLE LAMP.

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To all whom it may concern:

Be it known that we, JOHN F. COURSON and PHILIP T. BRENDLINGER, citizens of the United States, residing at Pitcairn, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Lamps, of which the following is a specification.

Our invention refers to improvements in adjustable lamps of the search or "spot" light type, and has for its object to provide a simple and efficient device of this kind having a greatly amplified range of adjustment. It consists generally of a supporting base having a mounting face inclined to the longitudinal center of the base and a rotatable lamp support thereon, with means for turning the lamp support and lamp to throw a ray through a wide sweeping range, with means for actuating the same, for supplying current to the lamp, mounting the device in position, and various other features, as shall be hereinafter more fully described.

In the drawings illustrating one preferred embodiment of the invention,

Fig. 1 is a view of the device in elevation, with the lamp set for delivering a straight forward ray of light;

Fig. 2 is a similar view showing the lamp rotated to its uppermost position;

Fig. 3 is an enlarged longitudinal section showing the operative mechanism for rotating the lamp and its support upon the stationary base; and

Fig. 4 is a detail view of the operating terminal.

The lamp 2 is mounted by its base 3 in the socket 4 of the main lamp support 5. Such support is provided beyond the socket 4 with a reflector 6 and lens 7 of ordinary construction, for the purpose of projecting the rays of light outwardly in the usual way.

Within the rear portion of socket 4 is a contact member 8 for the base of lamp 3, to which current is supplied by wires 9 and 10, at any varying position of the base 5. Wire 9 is connected with the terminal 11 of section 12 of the rotating mechanism, which is coupled by the universal joint 13 with the rearwardly extending rod 14, by which base 5 is rotated axially upon the relatively stationary base or mounting support 15. The latter is adapted to be mounted in any suitable manner, as by a clevis 16,

on a bracket, fender, or other suitable support 17, so as to rigidly hold the stationary base 15 in position. As shown, the rotating base 5 and stationary base 15 are brought together by angular or beveled faces, each base having a metallic conducting plate 18—19 respectively mounted thereon, with intervening insulation 20—21 respectively, plates 18 and 19 being capable of continuous contact at whatever position base 5 may be turned to.

Conductor wire 10 from contact base 8 connects with conductor plate 18, and a wire 22 connects the contact plate 19 with any suitable source of current, as a battery or generator. A companion wire 23 is similarly connected, and leads the current through bushing 24 of rotating rod 14 to said rod, and thence by terminal 11 and wire 9, closing the circuit to the lamp, as will be readily understood.

Shaft 14 extends rearwardly through bushing 24 and is connected with a similar extended shaft 25 by a flexible coupling mechanism 26 of well known construction, enabling the operator, by turning shaft 25, to impart turning movement through shaft 14, universal joint 13, and stem 12, to the rotatable base 5 carrying the lamp and its reflector.

Shaft 25 extends rearwardly to any desired position within reach of the operator, and is provided with a terminal turning button or wheel 27, mounted in bracket 28, which may be located on any convenient adjacent support.

Shaft 25, in case of any limited longitudinal movement of base 5 in turning the lamp, is susceptible of a corresponding longitudinal movement, for which reason the interfitting terminal of the shaft is splined or squared to ensure turning engagement with the hub of wheel 27, as indicated at 29. Outward tension on the shaft is exerted by means of an inserted spring 30 within the hub of the wheel, bearing outwardly against a terminal flange 31 of the shaft, while a similar spring 32 is mounted between the bearing and the inner terminal flange 33 of the wheel hub. By such construction, the springs maintain a tension at all times on the shaft and the hub of the wheel, which is preferably tapered as shown, so as to maintain a snug operative engagement with the shaft.

A similar spring 34 is also inserted be-

tween bushing 24 and the flange coupling 26 between shaft sections 14 and 25, whereby to maintain continuous tension, tending to hold the lamp supporting base 5 backwardly against the stationary base 15, and incidentally ensure close contacting engagement between the plates 18 and 19. By such construction, it will be seen that the base 5 may be turned to any degree upon base 15, so as to locate the lamp support and the lamp reflector and lens at any desired position within the range of movement described by the center line *a-a* in its annular sweep above the main longitudinal center line *b-b* of the stationary portions of the mechanism.

The path of movement through which the lamp is capable of adjustment approximates the peripheral surface of a cone, the apex of which is at the juncture of lines *a-a* and *b-b*, as clearly shown in Fig. 2. The lamp may, therefore, be thrown upwardly at a very considerable angle, or laterally to one side or the other, to a corresponding degree, or may be located for throwing the rays straight ahead in its usual normal position, as indicated in Fig. 1.

It will also be understood that by merely changing the chamfer or slope of the meeting faces of the bases 5 and 15 respectively, as to angle, or as to location with relation to the horizontal plane of the normal center *b-b*; or by relocating the base 15 by turning it axially to one side or the other and re-clamping it, the amplitude of range of movement of the lamp may be correspondingly varied to any desired extent. The lamp is, therefore, capable of being set and adjusted to provide for practically any desired range of movement, and in either position is capable of being readily and easily operated by merely turning the terminal wheel or button 27 more or less.

The lamp is adapted to easy application to motor driven vehicles in the manner of a spot light; it may be readily utilized on vessels or boats, or mounted on a stationary frame in connection with any of the various uses to which it is readily adapted. The construction in matters of size, design, degree of angular mounting, or any other such changes, may be readily made by the skilled mechanic, but all such are to be considered as within the scope of the following claims.

What we claim is:

1. An adjustable lamp of the class

described comprising a supporting body having a continuously plane beveled bearing face thereon, a lamp carrying base movably mounted on the body having a corresponding continuously plane beveled bearing surface engaging the beveled surface of the body, and spring retracted means for rotatably holding the base against the body and for rotating it thereon so as to assume different angular positions with respect thereto.

2. An adjustable lamp comprising a supporting member having a continuously plane beveled bearing face thereon, a lamp base mounted on the member having a corresponding continuously plane beveled bearing surface for cooperation with the beveled bearing face on said member, a shaft passing through the member and joined to a movable base, a retracting spring therefor, and a universal coupling in the shaft in juxtaposition to the cooperating beveled surfaces whereby said base may assume different angles upon being rotated with respect to said member.

3. An adjustable lamp comprising a supporting member having a beveled bearing face thereon, a lamp base mounted on said member having a beveled surface corresponding to the beveled face of said member and bearing thereagainst, a shaft slidably and rotatably received in the member and connected with said base through a flexible connection, said shaft serving to hold the base on said member, a resilient means engaging the shaft for yieldably holding the coacting beveled faces in contact, and an operating handle on the shaft by means of which the base may be rotated, whereby it may be moved into different angular positions with respect to the supporting member.

4. In a lamp of the class described, the combination with a stationary base having an inclined face, of a rotatable lamp supporting base having a similar co-acting face, an operating rod extending through the stationary base and having a universal joint connection with a rotatable base, a retracting spring therefor, and means for maintaining circuit connections to the lamp base.

In testimony whereof we hereunto affix our signatures.

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