Jan. 12, 1960 B. L. TAYLOR 2,921,182

SELF-ADJUSTING HEADLIGHTS FOR BOATS

Filed Aug. 8, 1958 2 Sheets-Sheet 1

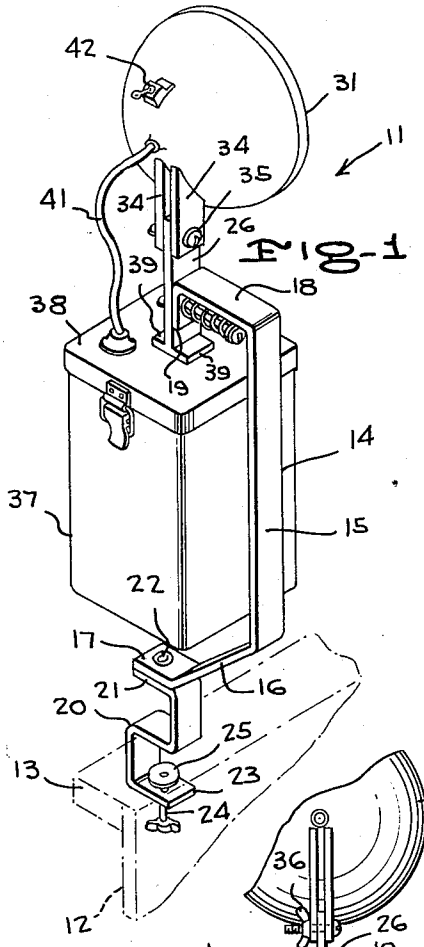


Fig-1

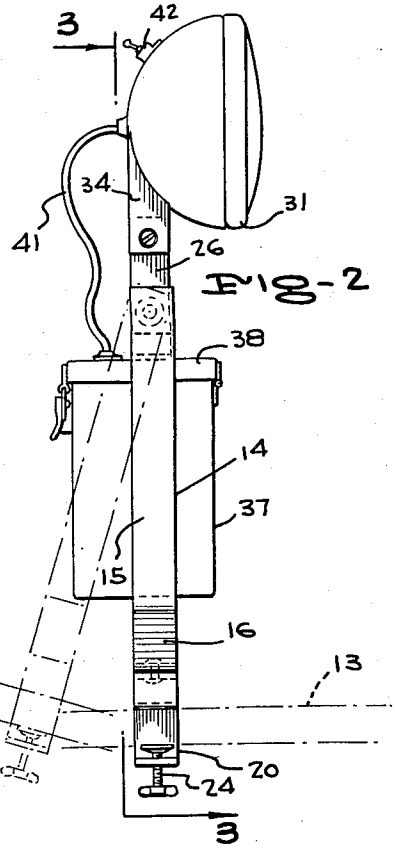


Fig-2

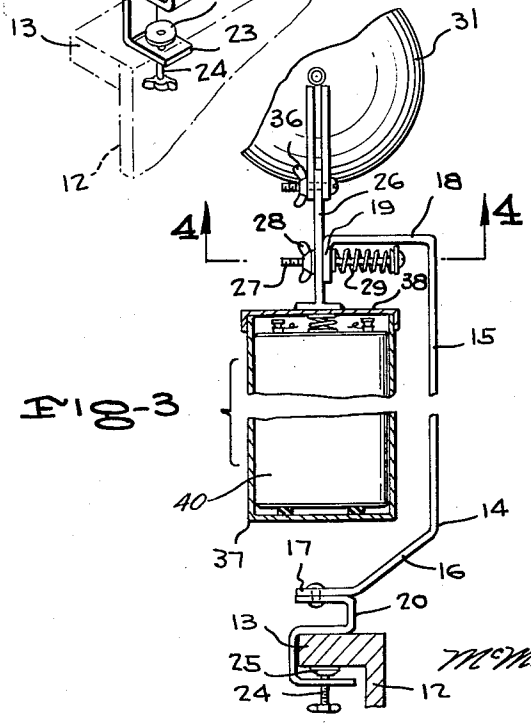


Fig-3

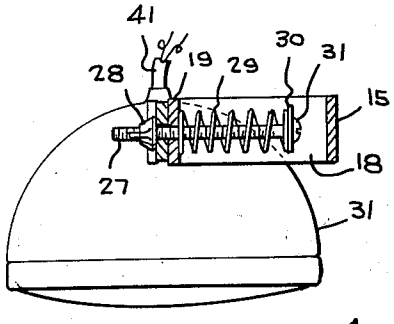


Fig-4

INVENTOR.

BUFORD L. TAYLOR

BY

McMorrow, Berman & Davidson

ATTORNEYS

Jan. 12, 1960 B. L. TAYLOR 2,921,182

SELF-ADJUSTING HEADLIGHTS FOR BOATS

Filed Aug. 8, 1958 2 Sheets-Sheet 2

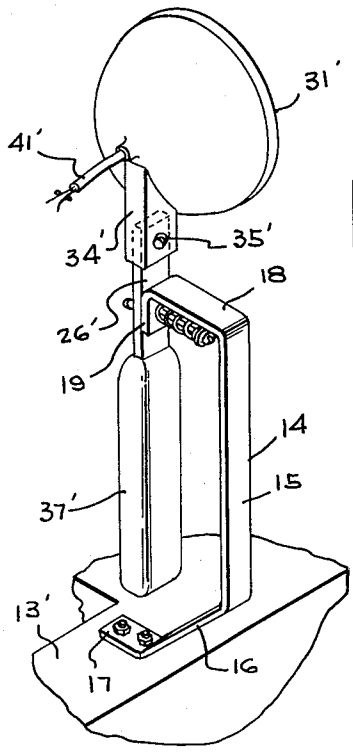


FIG-5

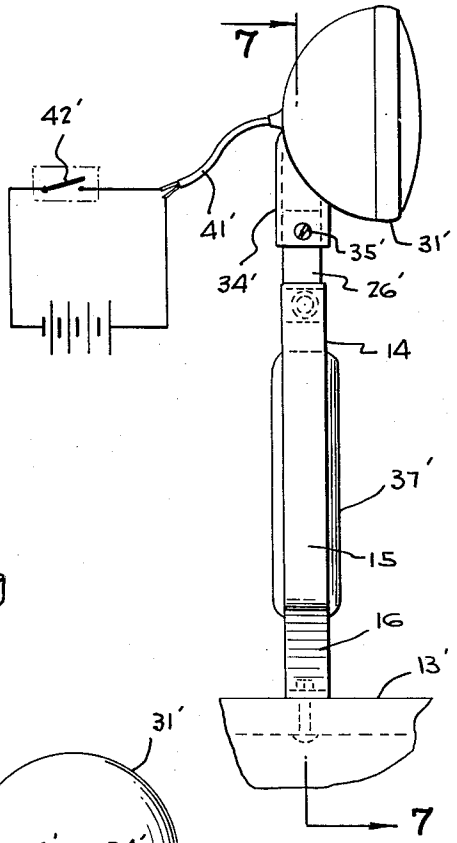


FIG-6

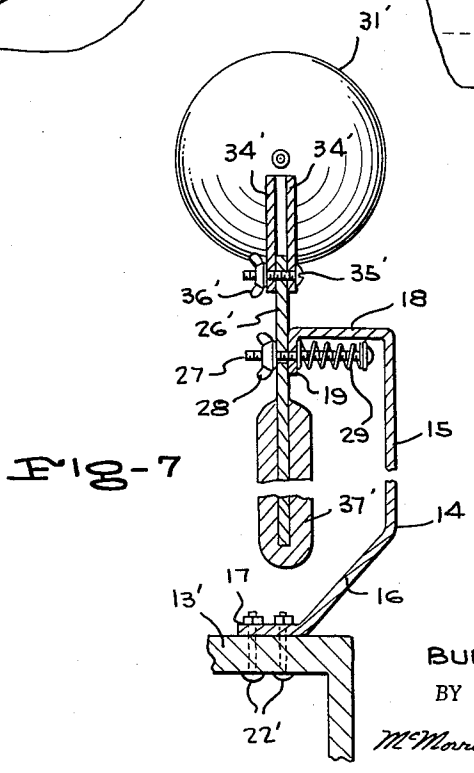


FIG-7

INVENTOR.
BUFORD L. TAYLOR
BY
McMorrow, Berman & Davidson
ATTORNEYS

United States Patent Office 2,921,182 Patented Jan. 12, 1960

2,921,182

SELF-ADJUSTING HEADLIGHTS FOR BOATS

Buford L. Taylor, Oklahoma City, Okla.

Application August 8, 1958, Serial No. 753,930

2 Claims. (Cl. 240—52.1)

This invention relates to headlight assemblies, and more particularly to a self-adjusting headlight particularly adapted for use on a boat, the headlight being provided with means to automatically maintain same in a level position.

A main object of the invention is to provide a self-adjusting headlight assembly particularly useful on a boat or similar vehicle, said assembly being simple in construction, being easy to install, and being adjustable to regulate the degree of free swinging action thereof.

A further object of the invention is to provide an improved self-adjusting spotlight assembly especially useful on small crafts, said assembly involving inexpensive components being rugged in construction, and being relatively compact in size.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of one form of self-adjusting spotlight assembly constructed in accordance with the present invention.

Figure 2 is a side elevational view of the spotlight assembly illustrated in Figure 1.

Figure 3 is a fragmentary vertical cross sectional view taken on the line 3—3 of Figure 2.

Figure 4 is an enlarged horizontal cross sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a perspective view of another form of self-adjusting spotlight assembly constructed in accordance with this invention.

Figure 6 is a side elevational view of the self-adjusting spotlight assembly of Figure 5.

Figure 7 is a fragmentary vertical cross sectional view taken on the line 7—7 of Figure 6.

Referring to the drawings, and more particularly to Figures 1 to 4, 11 generally designates a self-adjusting spotlight assembly particularly useful for mounting on a small boat, for example, a boat of the type having side walls 12 provided with outwardly extending horizontal flanges 13. The assembly 11 comprises a bracket member 14 consisting of a main vertical bar portion 15 formed at its lower end with a downwardly and laterally inclined bar element 16 terminating in the horizontal foot portion 17. At its top end the bar member 15 is formed with the horizontally extending arm portion 18 of substantial width which terminates in a depending apertured lug element 19 located substantially in vertical alignment with said foot portion 17.

Designated at 20 is a generally S-shaped anchor bracket having a horizontal top arm 21 which is fastened to the foot member 17 by a rivet 22. The anchor member 20 has the horizontally extending bottom element 23 through which is threaded the clamping screw 24 provided at its top end with the clamping disc element 25. As shown in Figure 1, the anchor member 20 is adapted to engage around the flange 13 on the top edge of a side wall or other wall of the boat, for example, the side wall 12, whereby the anchor member 20 may be rigidly secured

to the flange 13 by tightening the wing screw 24. This anchors the bracket member 14 in an upstanding position on the top flange 13, as is clearly shown in Figure 3.

Designated at 26 is a flat bar member which is pivotally connected at its intermediate portion to the apertured depending lug 19 for swinging movement relative thereto. Thus, a pivot bolt 27 closely underlies horizontal arm 21 and extends through the lug 19 and the intermediate portion of the flat bar 26, said lug being provided at its outer portion with a wing nut 28 and being provided on its inner portion with a coil spring 29 which bears between the lug 19 and a bearing washer 30 mounted on the bolt 27 adjacent its head 31. The amount of tension in spring 29 may be regulated by adjusting the wing nut 28 on the threaded shank of the bolt, whereby the degree of freedom of bar member 26 for swinging movement relative to the lug 19 may be controlled. Horizontal arm 18 overlies and protects pivot bolt 27 and friction spring 29.

Designated at 31 is a conventional headlight assembly which is provided with the spaced parallel depending supporting lugs 34, 34 which engage on opposite sides of the top end of the flat bar member 26. A transverse fastening bolt 35 extends through the lugs 34, 34 and the intervening top end portion of bar 26, said fastening bolt 35 being provided on its outer end portion with a wing nut 36. Thus, the headlight assembly 31 may be clamped to the top end portion of the bar member 26 in a desired position of angular adjustment relative thereto, for example, in a position wherein its axis extends at right angles to the bar member 26.

Designated at 37 is a rigid battery box provided with the hinged top cover 38. The bar member 26 is provided at its bottom end with horizontally extending flange portions 39, 39 which are rigidly secured to the central portion of the top cover 38, whereby the battery box 37 is supported by the bar member 26. Box 37 contains a suitable battery 40 which is electrically connected by a suitable cable 41 to the headlight assembly 31, said headlight assembly being provided with a control switch 42 located on the top of its casing and being conveniently available for manual operation.

The battery box 37 and the battery 40 contained therein are of substantial weight and serve as a biasing means for maintaining the bar member 26 substantially in a vertical position. As shown, the battery box 37 is disposed in the space between the horizontal top arm 18 and the inclined floor portion 16 of the main bracket member 14, and ample clearance is provided for allowing the box 37 to swing in said space. Thus, the battery box will serve to bias the headlight assembly 31 toward a desired normal position, for example, to a position wherein the beam from the headlight will be directed horizontally. By adjusting the wing nut 28 the sensitivity of response of the biasing means may be regulated in accordance with prevailing conditions, for example, with accordance with the roughness of the water in which the craft is traveling.

In the form of the invention illustrated in Figures 5, 6 and 7, the headlight assembly, shown at 31′ is provided with a depending tubular supporting sleeve 34′ which receives the top end of a vertical bar member 26′ whose intermediate portion is pivotally connected to the depending lug 19 of the main bracket member 14 in the same manner as illustrated in Figures 1 to 4. Molded on the lower portion of the flat bar member 26′ is a mass of relatively heavy material, such as lead, or the like, shown at 37′, acting as the weighting means for biasing the bar member 26′ toward a vertical position. The embodiment of Figures 5, 6 and 7 is particularly intended as a permanent installation on a somewhat larger craft than the type for which the form of the invention of Figures 1 to 4 is intended, for example, a craft provided with a storage battery. Thus, the headlight assembly 31′ is connected

by suitable cable 41' to the storage battery of the boat through a suitable control switch 42' schematically illustrated in Figure 6 and located in any convenient location, for example, on the instrument panel of the boat.

The top portion of the bar member 26' is received in the tubular sleeve 34' and is fastened therein by any suitable means, for example, a transversely extending bolt 35' provided at its outer end with a wing nut 36'. The bottom foot portion 17 is fastened directly to any convenient horizontally extending surface portion of the boat, for example, the horizontally extending wall 13', by means of any suitable means, for example, a pair of fastening bolts 22'.

While certain specific embodiments of an improved self-adjusting spotlight assembly have been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. In a self-adjusting spotlight assembly of the character described, a bracket member of substantial vertical height, laterally offset anchoring means on the lower end of said bracket member constructed and arranged to secure said bracket member in an upstanding position on an underlying support, a horizontal arm of substantial width on the top end of said bracket member extending over and terminating substantially in vertical alignment with said anchoring means, a depending lug element extending vertically from the end of said arm, a bar member adjacent said lug element, a horizontal pivot bolt closely underlying said horizontal arm and extending through and pivotally connecting the intermediate portion of said bar member and said lug element, a friction spring on said bolt, bearing between one end portion of the bolt and said lug element said spring urging said bar member against said lug element and retarding swinging movement of said bar member relative to said bracket member, a horizontally directed lamp unit secured to the top end of said bar member, and a weight secured to the lower end of said bar member and biasing said bar member to a substantially vertical position.

2. In a self-adjusting spotlight assembly of the character described, a bracket member of substantial vertical height, laterally offset anchoring means on the lower end of said bracket member constructed and arranged to secure said bracket member in an upstanding position on an underlying support, a horizontal arm of substantial width on the top end of said bracket member extending over and terminating substantially in vertical alignment with said anchoring means, a depending lug element extending vertically from the end of said arm, a bar member adjacent said lug element, a horizontal pivot bolt closely underlying said horizontal arm and extending through and pivotally connecting the intermediate portion of said bar member and said lug element, a friction spring on said bolt, said spring bearing between one end portion of the bolt and said lug element, said spring urging said bar number against said lug element and retarding swinging movement of said bar member relative to said bracket member, means to adjust the tension of said spring, a lamp unit secured to the top end of said bar member, and a weight member secured to the lower end of said bar member and biasing said bar member to a substantially vertical position, said weight member comprising a battery case and a battery in said case electrically connected to said lamp unit.

References Cited in the file of this patent

UNITED STATES PATENTS

1,904,248	Pixley et al.	Apr. 18, 1933
1,971,757	Nerem	Aug. 28, 1934
2,623,158	Crumrine et al.	Dec. 23, 1952