G. R. COOLEY.

SEARCH LIGHT.

APPLICATION FILED JULY 6, 1916.

1,264,614. Patented Apr. 30, 1918.

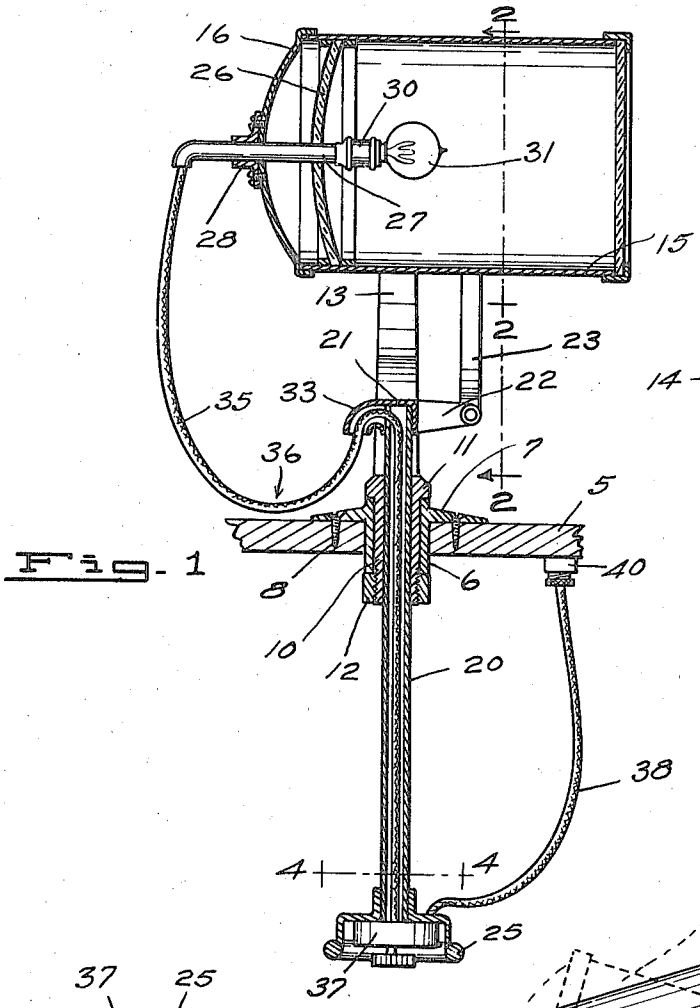


Fig. 1

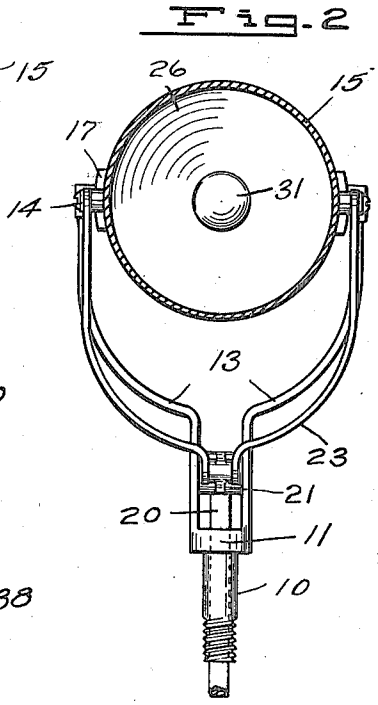


Fig. 2

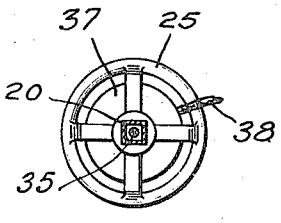


Fig. 4

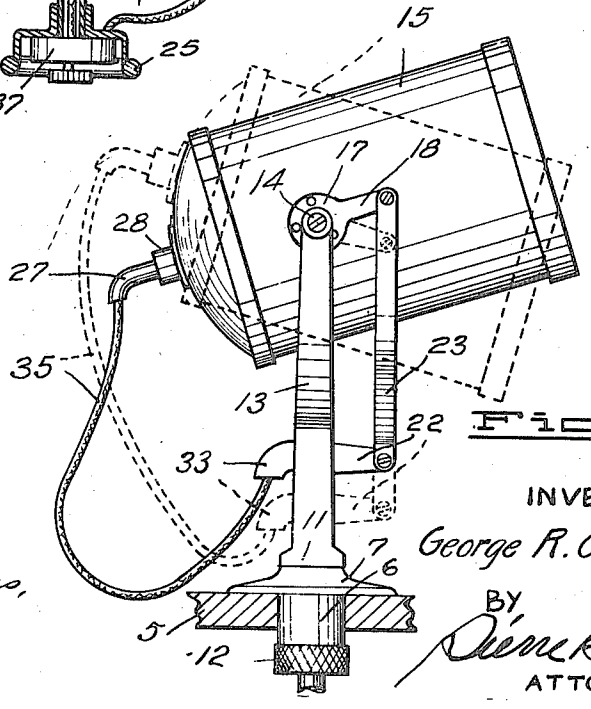


Fig. 3

WITNESSES

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SEARCH-LIGHT.

1,264,614. Specification of Letters Patent. Patented Apr. 30, 1918.

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To all whom it may concern:

Be it known that I, GEORGE R. COOLEY, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Search-Lights, of which the following is a specification.

This invention relates to search-light controlling mechanism and has for its object the provision of simplified and economically constructed devices for controlling the movements of a search-light mounted in superimposed position upon the top of a pilot house of a marine vessel, and whose movements may be readily and accurately directed by a person stationed within the pilot house.

The invention consists in the novel construction of said search-light controlling mechanism, and the adaptation and combination therewith of means for carrying the electric circuit wires and adjusting and focusing the electric light within the search-light proper, as will be fully described in the following specification, illustrated in the accompanying drawings and finally set forth in the appended claims.

In said drawings, Figure 1 is a view of a search-light apparatus embodying my invention shown in vertical section. Fig. 2 is a view in vertical cross section on line 2—2 of Fig. 1. Fig. 3 is a view in side elevation of my said apparatus showing the same in a different position by dotted lines. Fig. 4 is a view in horizontal cross section on line 4—4 of Fig. 1.

Referring to said views, the reference numeral 5 indicates the upper deck of a steamer or marine vessel lying immediately above the pilot house. Extending through an aperture in said deck is a flanged sleeve 6 whose circular flange 7 is secured to the deck by means of screws 8. Rotatably mounted within the circular bore of said sleeve is a bushing 10 having an external circular surface and a rectangular inner passage. Said bushing is provided with an enlarged upper end 11 bearing upon the top of said sleeve, and is screw-threaded at its lower end to receive a knurled nut 12 whereby the sleeve and bushing may be secured together to provide against rotary movement of the bushing. Extending upwardly integral of said bushing are branched arms 13 provided at their upper ends with trunnion bearings 14.

15 indicates the cylindrical casing of a search-light and 16 its concavo-convex rear wall. Said casing is provided with oppositely disposed rigidly connected trunnion plates 17 from which the trunnions 17^1 extend for reception within the bearings 14. Said plates are also provided with forwardly extending arms 18.

Slidably mounted in the rectangular interior bore of said bushing 10 is a rectangular tube 20. Rigidly mounted over the upper end of said tube is a cap 21 serving to close the upper end of said tube to prevent the entrance of water or dirt and formed with a forwardly extending arm 22. To the forward extremity of said arm are connected links 23 which extend upwardly and whose opposite ends are pivotally connected to the arm 18 of said trunnion plate.

At the lower extremity of said tube 20 a hand wheel 25 is rigidly socketed, whereby said tube may be given rotary movements, the bushing turning in said sleeve 6, and the arms 13 communicating said movement to the search-light. The movement of said search-light in vertical planes is accomplished by moving the tube 20 up or down through manipulation of the hand wheel 25, the link 22 upon the opposite end of tube 20 communicating such vertical movements of the tube to the trunnion arm 18 which, being relatively short, causes a comparatively wide range of elevation of the search-light beam relative to the vertical movement of the arm 22.

With these simple connections, the operator within the pilot house has complete control of the movements of the search-light and can place the beam of light therefrom upon any spot and move it to maintain it upon the same with great ease and accuracy. The search-light being mounted in balanced condition, the amount of pressure required to move the tube 20 upward or downward upon the hand wheel 25 is relatively small.

Internally of said search-light, it is provided with a reflecting mirror 26 of suitable form, which is formed axially thereof with an aperture through which extends a

tubular shaft 27. Said shaft extends outwardly through the rear wall 16 through a bearing collar 28, and upon the inner end of said shaft a lamp socket 30 is mounted with which an electric lamp 31 may be operatively connected.

At the outer extremity of said shaft 27 a downwardly turned elbow is deflected or bent downwardly to prevent the entrance of water or dirt therein.

The cap 21, at its end opposite from the arm 22, is provided with a tubular downwardly turned outlet 33 which is communicatively connected with the tubular passage within the rectangular tube 20.

A flexible cord 35 containing electric circuit wires extends from said lamp socket 30 through said tubular shaft 27, and is thence looped downwardly, as indicated at 36, and passes through the outlet 33 into the rectangular tube 20 and thence to a switch 37 of ordinary or suitable construction which is mounted within the hand wheel 25 which is suitably cupped to provide a receptacle therefor.

Electric circuit wires extend from said switch through a flexible cord 38 to a socket 40 wherefrom electric circuit wires, not shown, will lead to a source of electric current. The provision of the downwardly turned outlet 33 to receive and direct the looped cord 35 is a very advantageous construction, as the wear and tear upon said cord is greatly reduced and the entrance of dirt and water is thereby prevented from getting within the tubular cord passage.

The focusing of the light rays from the electric lamp 31 may be readily accomplished by pushing in or out the tubular shaft 27 to thereby increase or decrease the distance between the source of light and the reflective surface of the mirror 26.

When the search-light is not in use, it may be secured against rotary movement in a horizontal plane by screwing the nut 12 firmly against the lower shoulder of the sleeve 6. The said nut being positioned within the pilot house allows the operator within the same to secure and release the search-light against such rotary movement with great convenience.

What I claim as my invention is—

1. In a searchlight, a casing having side trunnions provided with a longitudinally directed projection, an axially disposed tubular shaft extending through the rear wall of said casing provided with a lamp socket at its inner end and a downwardly turned opposite extremity, a rotatable sleeve provided with standards in which said casing is trunnioned, a tube slidable in said sleeve and caused to rotate therewith, said tube having a closed upper end and a side outlet having a downwardly turned elbow, a handle upon the lower end of said tube whereby the tube may be raised or lowered and the sleeve rotated, an electric switch mounted within said handle, and a flexible cord containing electric circuit wires extending from said switch through said tube and looped downwardly through the downwardly directed outlets of said tube and said shaft.

2. A searchlight for marine vessels, including a rotatably mounted sleeve, a tube slidably mounted in said sleeve provided with a cap at its upper end and a handle at its lower end whereby the tube may be slidably raised and lowered and the sleeve rotated, and electric circuit wires extending through said tube and protruding through said cap.

3. A search light for marine vessels, including a casing, an axially arranged tubular shaft extending through the said casing, a rotatably mounted sleeve supporting said casing, a tube slidably mounted in said sleeve provided with a cap at its upper end, and a handle at its lower end whereby the tube may be slidably raised and lowered and the sleeve rotated, an electric switch mounted on said handle, and electric circuit wires extending through said tube and through said tubular shaft.

4. In a searchlight including a casing, an axially disposed tubular shaft extending through the rear wall of said casing provided with a lamp socket at its inner end and a downwardly turned opposite extremity, a rotatable sleeve provided with standards in which said casing is trunnioned, a tube slidable in said sleeve and caused to rotate therewith, said tube having a closed upper end and a side outlet having a downwardly turned elbow, and a flexible cord containing electric circuit wires extending through said tube and looped downwardly through the downwardly directed outlets of said tube and said shaft.

Signed at Seattle, Washington, this 22nd day of June, 1916.

GEORGE R. COOLEY.

Witnesses:

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