

(No Model.)

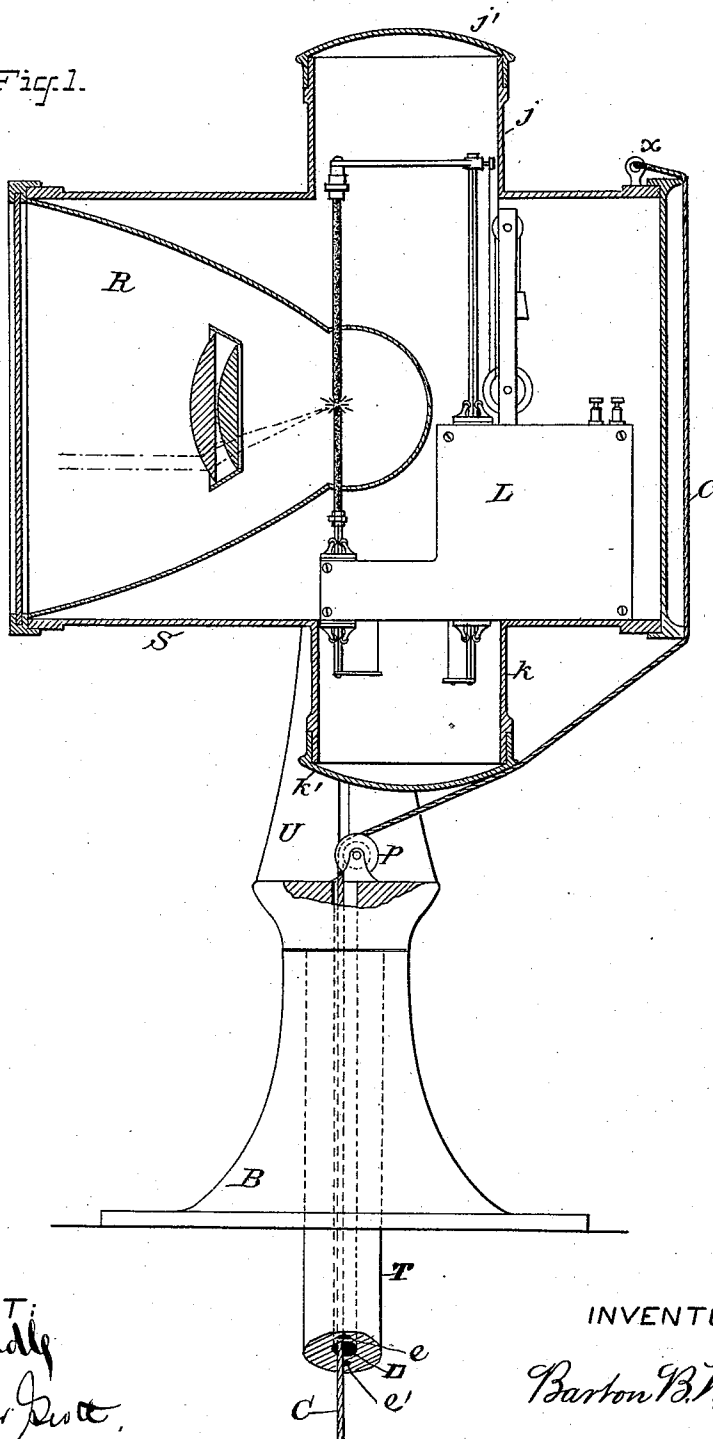
2 Sheets—Sheet 1.

B. B. WARD.
ELECTRIC SEARCH LIGHT.

No. 472,721.

Patented Apr. 12, 1892.

Fig. 1.



ATTEST:

J. H. Mundy
J. H. Mundy & Co.

INVENTOR:

Barton B. Ward

(No Model.)

2 Sheets—Sheet 2.

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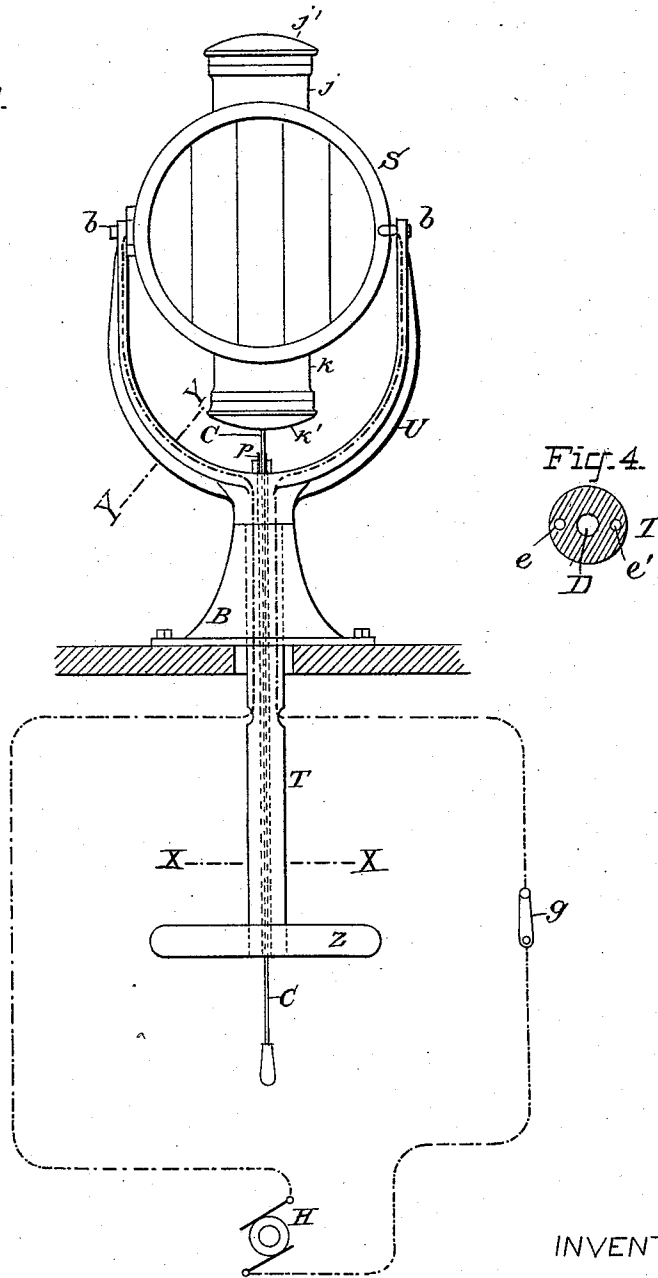
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Fig. 2.

Fig. 3.

Fig. 4.



ATTEST:

J. H. Hurdle
J. Graham & Co.

INVENTOR:

Barton B. Ward

UNITED STATES PATENT OFFICE

BARTON BREWER WARD, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE SCOTT ELECTRICAL MANUFACTURING COMPANY, OF NEW JERSEY.

ELECTRIC SEARCH-LIGHT.

SPECIFICATION forming part of Letters Patent No. 472,721, dated April 12, 1892.

Application filed January 13, 1890. Serial No. 336,791. (No model.)

To all whom it may concern:

Be it known that I, BARTON BREWER WARD, a citizen of the Dominion of Canada, residing at the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric Search-Lights, of which the following is a specification.

My invention relates to improvements in search-lights in which an arc lamp and parabolic reflector are used and contained in a metal cylinder arranged so that the whole may be revolved around a center, depressed, or elevated to any angle from a horizontal position, the object being to provide facilities to tilt and turn the projector from a position beneath its base. I attain these objects by the apparatus illustrated in the accompanying drawings, in which—

Figure 1 is a side sectional elevation of the search-light. Fig. 2 is an end view of the same. Fig. 3 is a section of frame supporting the cylinder. Fig. 4 is a section of the turning shaft.

Similar letters refer to similar parts in the different views.

The base B and the frame U, pivoted on the base and held in position by the turning shaft T with the bearings *b* and *b*, constitute the main frame-work.

The cylinder S, with hinged doors at each end and with upper and lower projections *j* and *k*, provided with removable caps *j'* and *k'*, constitute the frame-work for holding and protecting the parabolic reflector R and lamp L. The projections *j k* afford a space for the working up and down of the rods which carry the carbons of the lamp.

In Fig. 1, Sheet 1, is shown the position of the lamp L in relation to the reflector R and the cylindrical cover S. The cylinder is pivoted at bearings *b* and *b*, Fig. 2, Sheet 2, and is free to swing in a plane at right angles to the base from a position below the horizontal to a vertical position. This is accomplished by pulling downward on the cord C, attached to the cylinder at X and passing across its end over the pulley *p* and through the turning shaft T. This motion of the cord imparts to the cylinder a motion concentric with

its bearings, thus allowing the ray of light to be projected in any angle on the line of its motion. The face of the cylinder, or the end opposite to which the cord is attached, is made the heavier, so that it will turn back to a horizontal position when the cord is slackened.

In tilting the cylinder in the manner described gives an almost free from friction rapid movement, and it can be locked in any desired position by fastening the cord C to the shaft T.

In Fig. 2, Sheet 2, the base B is shown fastened to the floor and the turning shaft T (shown in dotted lines) passing through it to the frame U and rigidly fastened to it, or, in reality, forming part of it. This turning shaft is provided with hand-wheel Z and fastened to the frame U, as described, and is free to turn in base B, and it is used to impart a rotating motion to the frame U, carrying the cylinder S, thus affording facilities for moving the face of the projector in any desired point of the circle.

The construction of the turning shaft T is shown in Fig. 4, Sheet 2, which is a section at point X X, the center hole D being for the cord C and the outer holes *e* and *e'* the ones through which the electric conductors pass.

The hole D in the shaft T, through which the cord C passes, runs the entire length of the shaft in its center, while the holes through which the conductors pass start at a point common with hole D and surface of frame U and extend downward and come out of the shaft, as shown, at any desired point.

The current furnished to the search-light passes from the generator H by a continuous conductor, insulated as desired, which passes by way of switch *g* up through the turning shaft on one side by way of hole *e* into a groove *a* (see Fig. 3, section Y and Y, Sheet 2) on one side of the frame U, thence into the cylinder by way of a hole in cylinder-shaft to the lamp L, and from the lamp L out of the cylinder on the other side by the hole in the shaft down the groove in the frame U and through the other side of the turning shaft by the hole *e'* and back to the generator, as indicated by the dotted lines, thus completing the circuit.

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

In a search-light, the cylinder S, provided with doors at each end and projections *j* and
5 *k*, with removable caps *j'* *k'*, in combination with reflector R and lamp L, frame U, base B, and shaft T, cord C, and pulley *p*, all arranged

as described, with electrical connection, substantially as and for the purposes set forth.

BARTON BREWER WARD.

Witnesses:

J. GRAHAM SCOTT,
THOS. J. MCLEOD.