

No. 766,559.

PATENTED AUG. 2, 1904.

W. O. WEBBER & J. McGEORGE.
MOUNTING FOR SEARCH LIGHTS.

APPLICATION FILED JAN. 25, 1904.

NO-MODEL.

2 SHEETS—SHEET 1.

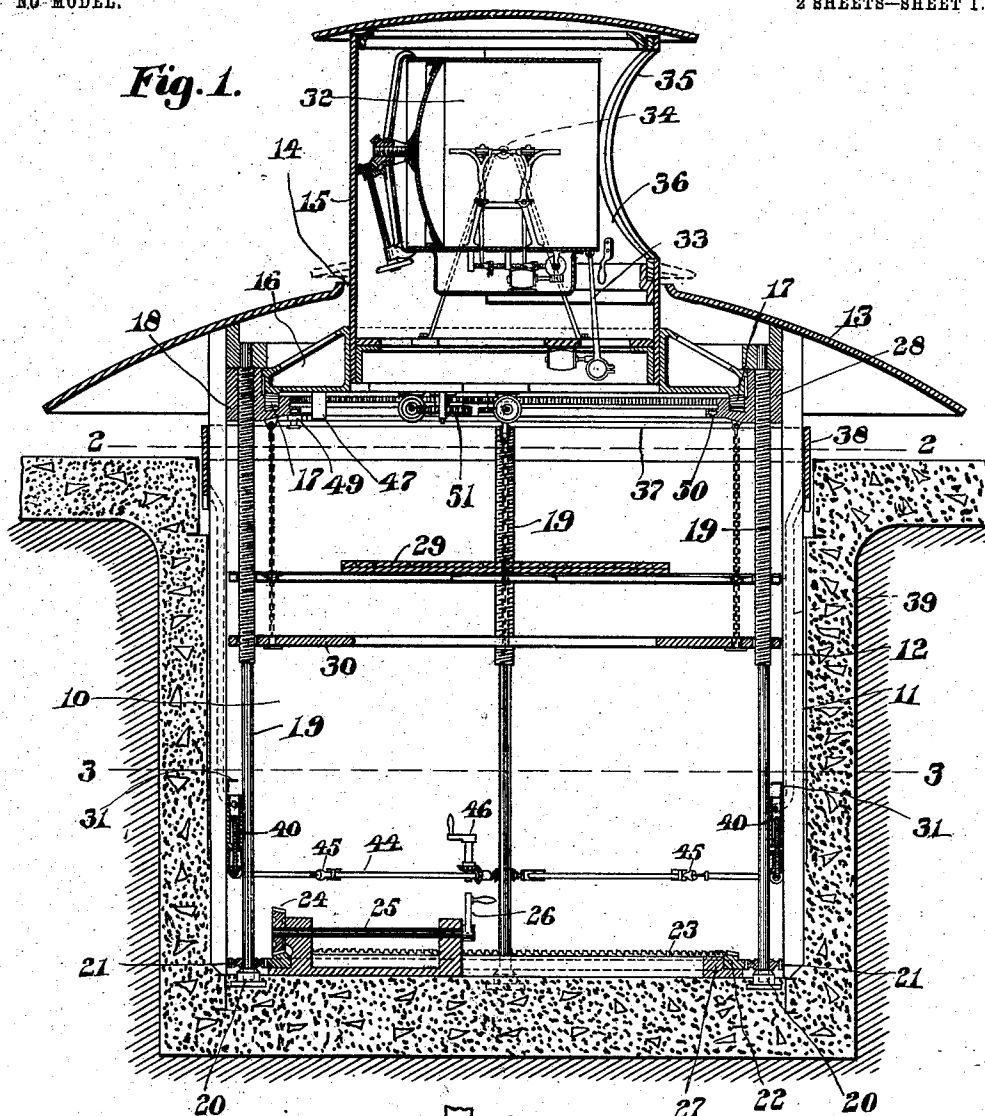
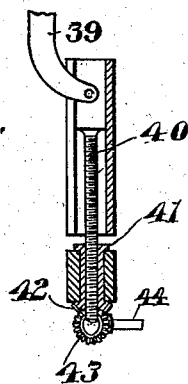


Fig. 4.



Witnesses:
L. L. Osborne
W. A. Garratt

Inventors:
William O. Webber
John McGeorge
by Frank Webber
attor

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2 SHEETS—SHEET 2.

Fig. 2

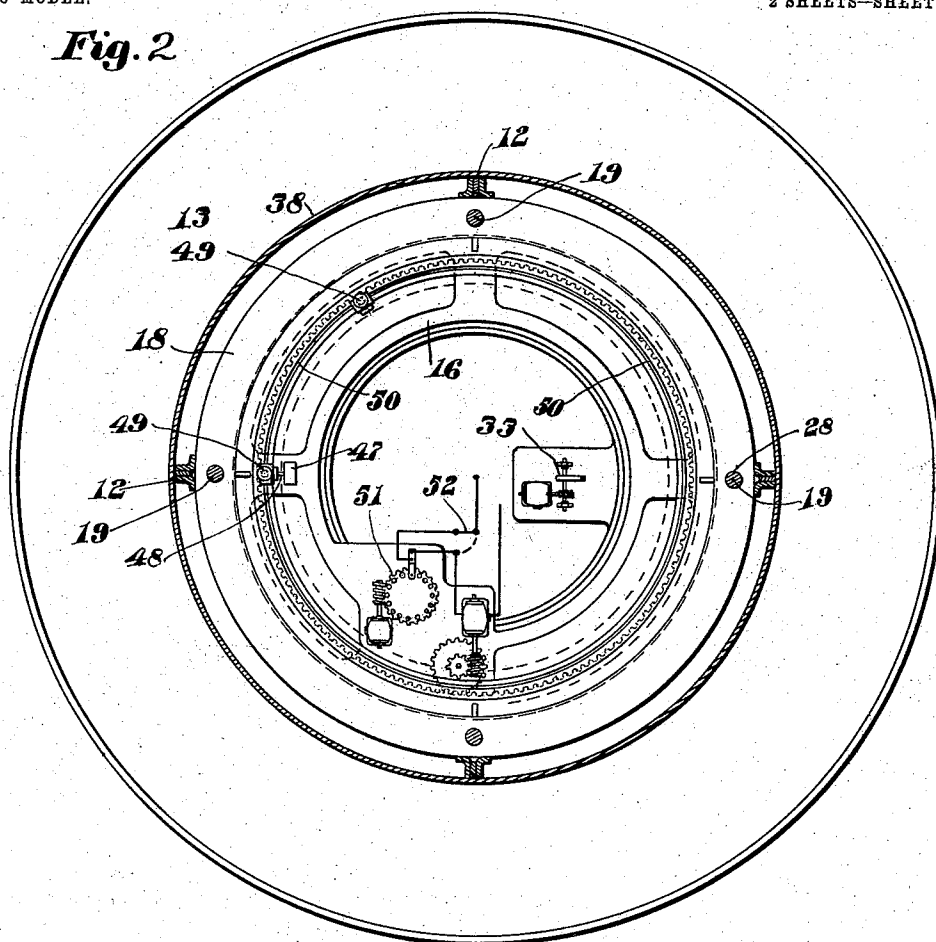
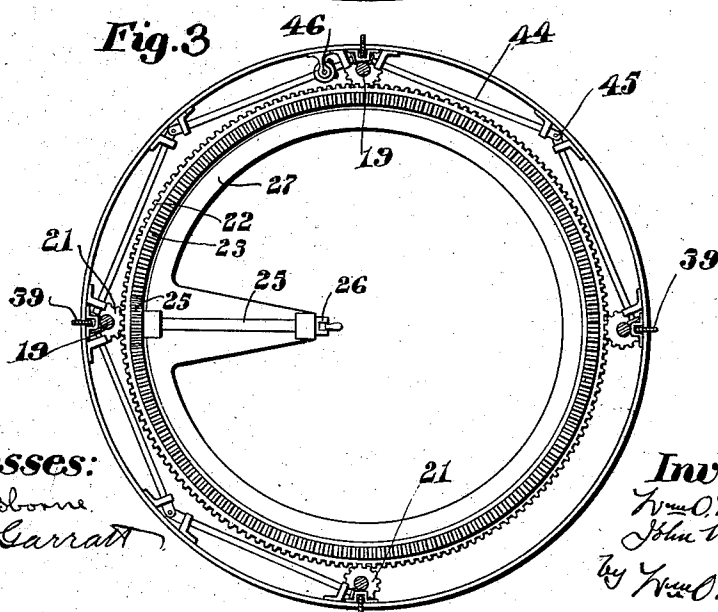


Fig. 3



Witnesses:

L. L. Osborne
W. A. Garratt

Inventors:

Wm O. Webber
John McGeorge
by Wm O. Webber
att'y

UNITED STATES PATENT OFFICE.

WILLIAM O. WEBBER, OF BOSTON, MASSACHUSETTS, AND JOHN
McGEORGE, OF CLEVELAND, OHIO, ASSIGNORS TO WELLMAN-
SEEVER-MORGAN CORPORATION, OF CLEVELAND, OHIO.

MOUNTING FOR SEARCH-LIGHTS.

SPECIFICATION forming part of Letters Patent No. 766,559, dated August 2, 1904.

Application filed January 25, 1904. Serial No. 190,627. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM O. WEBBER, a resident of the city of Boston, in the county of Suffolk and State of Massachusetts, and JOHN McGEORGE, a resident of the city of Cleveland, in the county of Cuyahoga and State of Ohio, citizens of the United States, have invented certain new and useful Improvements in Mountings for Search-Lights; and we hereby declare that the following is a clear, full, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which similar characters represent the corresponding parts in all the views.

This invention relates to the installation of search-lights, and has for its object the production of an armored protection for such lights and the operating mechanism therefor and the provision of means for masking said light when not in use and the unmasking of said light when it is desired to direct the rays therefrom upon surrounding objects; also, to provide a protected position for an observer beneath the rays of the said light and shielded from the direct rays of said light when in operation.

It consists in certain novel features of construction and arrangement of parts, which will be readily understood by reference to the description of the drawings and to the claims to be hereinafter given.

Of the drawings, Figure 1 represents a central vertical section through an apparatus embodying the features of this invention. Fig. 2 represents an inverted sectional plan on line 2 2 on Fig. 1. Fig. 3 represents a sectional plan on line 3 3 on Fig. 1. Fig. 4 represents a detail of the shutter-adjusting mechanism.

In the drawings, 10 represents a pit formed in a bed 11, of concrete or similar material. In the sides of said pit 10 are secured uprights 12, on the upper end of which is mounted an armored conning-top 13, provided with a central opening 14, through which projects a turret 15. The turret 15 is secured to a ring 16, mounted on conical rolling members 17, running in a groove in a supporting-ring

18. Threaded to said supporting-ring 18 are a plurality of rods or screws 19, having bearings in the armored conning-top 13 and stepped in bearings 20 in the bottom of said pit 10. Each of the screws 19 has secured to its lower end a gear 21, meshing with a ring 22, the upper surface of which is also provided with bevel gear-teeth 23, said teeth 23 meshing with a bevel-pinion 24 on a shaft 25, mounted in suitable bearings and provided with a handle 26, by which the shaft 25 may be turned to move the gear 22 on its guide 27. This movement of the gear 22 will cause all of the pinions 21 to be operated in unison to turn the screws 19 in the threaded nuts 28 in the ring 18, upon which the turret 15 is mounted. The turning of the screws 19 in the threaded nuts 28 will cause the ring 18 to be raised and lowered at the will of the operator.

To the under side of the supporting-ring 18 chains or other flexible connectors depend, supporting-platforms 29 and 30, which are limited in their downward movement by the stops 31. In the turret 15 is mounted a search-light 32, provided with mechanism 33 to adjust the inclination thereof on the trunnions 34. In front of said search-light the turret 15 is provided with an aperture 35, through which the rays of light may be projected upon surrounding objects. This aperture is provided with a shutter 36, by which the opening may be closed when it is desired to cut out of action the search-light without shutting off the light. Between the armored conning-top 13 and the top of the pit-walls 11 and between the uprights 12 is a suitable sighting-space 37. Surrounding the uprights 12 is a ring or cover 38. This ring 38 has secured thereto and depending therefrom rods 39, having secured to the lower end thereof screws 40. Threaded to the screws 40 are nuts 41, having secured thereto bevel-pinions 42. Each pinion 42 meshes with a gear 43 on a shaft 44. The shafts 44 are connected by universal joints 45 and one operated by a handle 46, by which the nuts 41 may be turned in unison to adjust the height of the ring or cover 38 to close or par-

tially close the sighting-space 37, it being understood that means are employed to prevent endwise movement of said nuts 41. It is obvious that by this means the sighting-space may be adjusted to accommodate itself to the eyes of observers of various heights. The armored conning-top 13 shields the eyes of the observer from the rays from the search-light, which is obviously a great advantage. The position of the sighting-space beneath the rays of light is the position in which the object can be best seen when the search-light is being used, and it is a great advantage to provide means by which this may be accomplished.

In search-lights as now installed it is generally impossible for an observer to secure a position where he can observe the objects brought out by the rays of the search-light from a position beneath and shielded from said rays, as may be done with this invention.

The turret 15 is provided with a switch-box 47, having projecting therefrom a lever 48, which in the traversing of the turret 15 comes in contact with stops 49, adjustably secured at predetermined positions in the slot 50 to limit the arc in which the search-light may be moved in a horizontal plane. When the lever 48 of the switch-box 47 reaches the end of a predetermined arc of traverse, it will come in contact with the stop 49 and be moved into its opposite position to reverse the traversing mechanism and cause the search-light to move in the opposite direction until the lever 48 strikes the opposite stop 49, when it will be again operated to reverse the traversing mechanism to cause the light to be traversed in the first direction.

51 is a make-and-break device in the traversing-circuit arranged to cause the light to be traversed intermittently. This make-and-break device may be cut out of action by means of a switch 52, when desired, which will cause the search-light to be moved continuously in either direction.

Having fully described the construction and operation of this invention, what we desire to claim and secure by Letters Patent is as follows:

1. The combination of an armored turret, a search-light therein, a sighting-space shielded from the direct rays of said light by a conning-top surrounding said turret and means for closing said sighting-space.

2. The combination of an armored turret, a search-light therein, a sighting-space located beneath a conning-top surrounding said turret, and means for adjusting the height thereof to the eyes of the observer.

3. The combination of a pit, an armored top

thereto, a search-light located therein, means for elevating said light above said top, a sighting-space beneath said top, a cover for said space, and gear mechanism for raising and lowering said cover.

4. The combination of a pit, an armored top thereto, a search-light located therein, means for elevating said light above said top, a sighting-space beneath said top, a cover for said space, and gear mechanism for raising and lowering said cover, threaded rods depending from said cover, nuts upon said threaded rods, means for preventing endwise movement to said nuts, and means for turning the same.

5. The combination of a pit, an armored top thereto, a search-light located therein, means for elevating said light above said top, a sighting-space beneath said top, a cover for said space, gear mechanism for raising and lowering said cover, threaded rods depending from said cover, nuts upon said threaded rods, means for preventing endwise movement to said nuts, gears for turning said nuts, gearing inter-connecting said gears, and means for operating said gearing.

6. In a search-light mounting, a support for said light, means for elevating said support, platforms for search-light observers depending therefrom, flexible connectors between said platforms and said search-light support.

7. In a search-light mounting, a support for said light, means for elevating said support, platforms for search-light observers, flexible connectors between said platforms and said search-light support, and stops to limit the movement of said platforms.

8. The combination of a turret, a search-light therein, means for elevating said turret, traversing mechanism for said turret, a reversing mechanism therefor, a reversing-lever and stationary stops to limit the traverse of said turret and operate said reversing mechanism.

9. The combination of a turret, a search-light therein, means for elevating said turret, traversing mechanism for said turret, a reversing mechanism therefor, a reversing-lever, stationary stops to limit the traverse of said turret and operate said reversing mechanism, and means for adjusting the position of said stops.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

WM. O. WEBBER.
JOHN McGEORGE.

Witnesses:

EDWIN D. SIBLEY,
GERTRUDE A. WOLFE.