

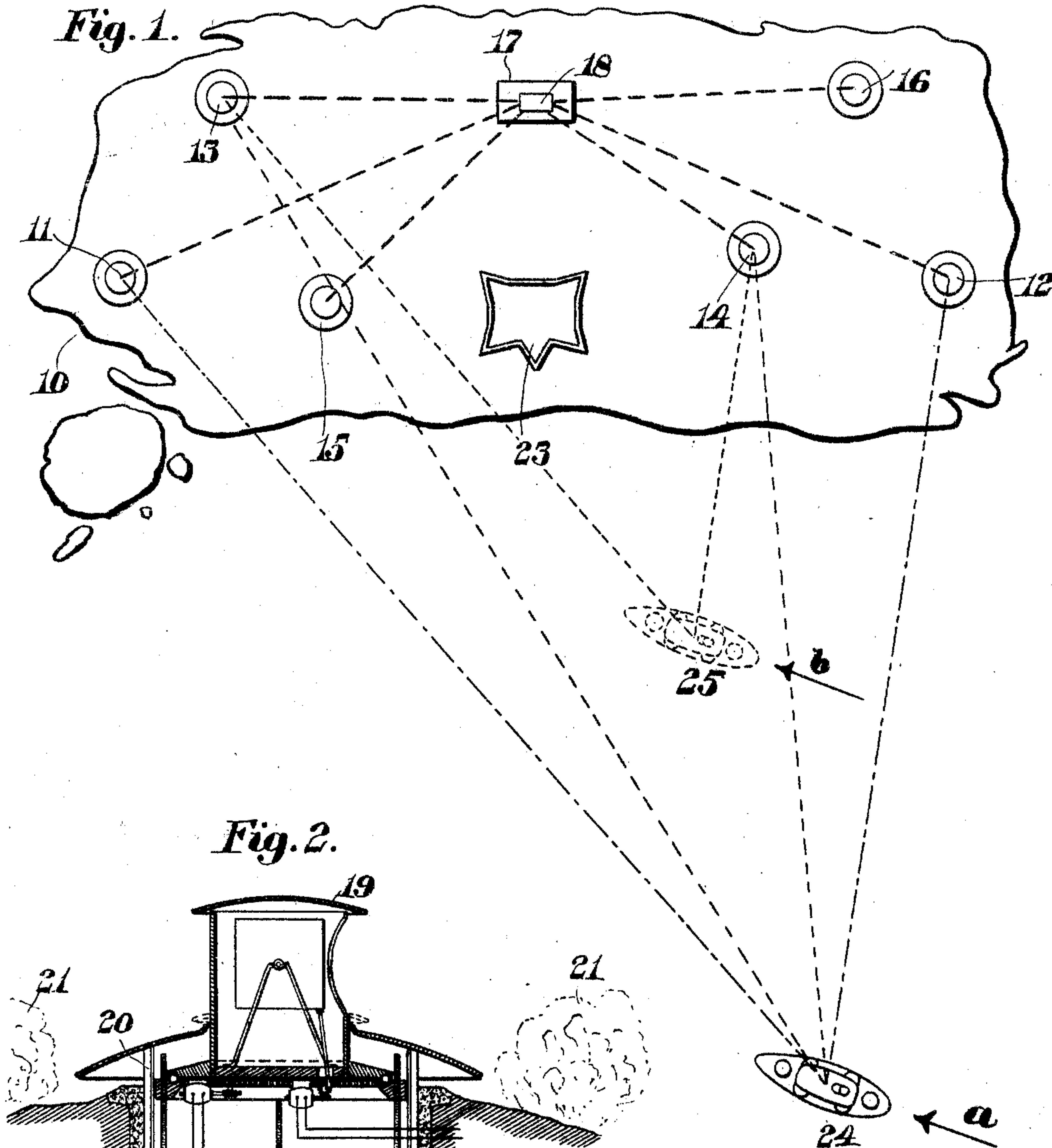
No. 776,709.

PATENTED DEC. 6, 1904.

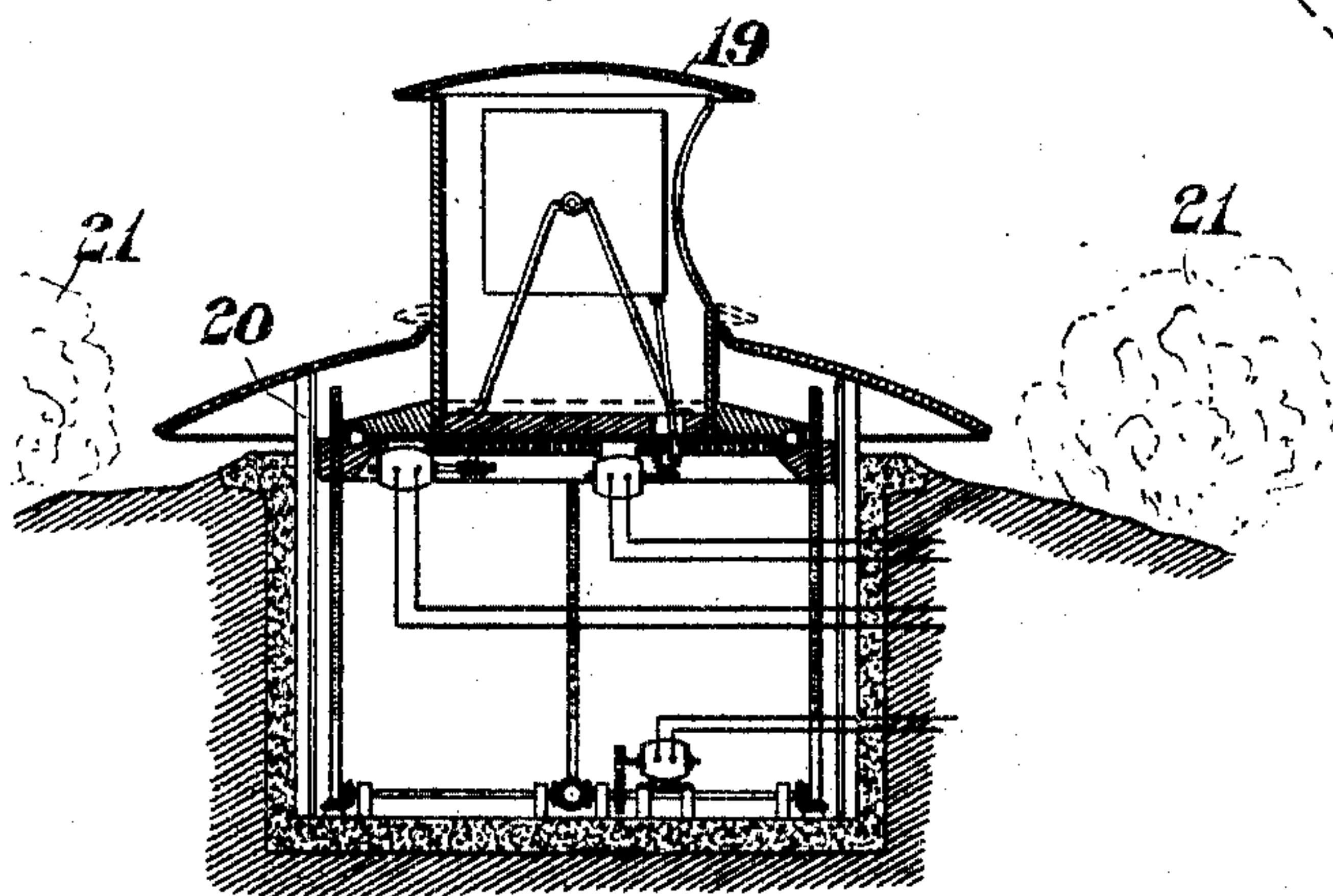
W. O. WEBBER.  
SEARCH LIGHT SYSTEM.  
APPLICATION FILED JAN. 6, 1904.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



***Witnesses:***

**Witnesses:**  
Nathan C. Lombard 2nd  
L. L. Osborne

***Inventor:***

Frau Kapber.



# UNITED STATES PATENT OFFICE.

WILLIAM OLIVER WEBBER, OF BOSTON, MASSACHUSETTS.

## SEARCH-LIGHT SYSTEM.

SPECIFICATION forming part of Letters Patent No. 776,709, dated December 6, 1904.

Application filed January 6, 1904. Serial No. 187,933. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM OLIVER WEBBER, a citizen of the United States, and a resident of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Search-Light Systems; and I 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 corresponding parts in both views.

This invention relates to a search-light system, and has for its object the production of a system in which a plurality of lights are installed in such a manner that when not in use they will be masked from view, but may readily be unmasked when it is desired to use the light for the purpose of detecting the presence of an enemy, said lights to be connected to a central station provided with a controlling mechanism, by which one or more of said lights may be exposed at a time, by which any combination of lights may be exposed alternately and intermittently with any other combination of lights to cause the enemy to lose his bearings.

Of the drawings, Figure 1 represents a diagrammatical view showing an island with this system of installation applied thereto, and Fig. 2 represents a sectional elevation of one form of search-lights which might be used in connection with the system.

Similar characters designate like parts throughout both figures of the drawings.

In the drawings, 10 represents an island on which are installed disappearing or masked search-lights 11, 12, 13, 14, 15, and 16, all electrically connected to a central station 17, in which is mounted a controlling mechanism 18, by which one or more of said lights may be unmasked and used at the same time. The search-light to be employed in connection with this system is substantially the same as has been fully described and claimed in other applications of mine of even date herewith and need not, therefore, be described in detail in this specification.

The controlling mechanism 18 may be of

any well-known form and it is unnecessary to describe the same in detail, it being understood that said controlling system shall consist of a suitable switchboard connected electrically to the various disappearing search-lights, by the operation of which any light or combination of lights may be traversed in a horizontal plane, may be elevated to unmask the light and cause it to be placed in position for use, and may be operated to change the inclination thereof.

Heretofore search-lights when permanently mounted have been exposed to view, so that an enemy might readily secure the range of said lights and place them out of action when not in use. In the present system, however, those lights would be thoroughly masked in the day-time, so that their location could not be determined by an enemy. This masking would be done by means of the depression of the turret 19 in the armored tower or pit 20. The top of the tower 20 might be further masked by temporarily surrounding the same with cut brush 21 or similar material. By this means during the day-time the positions of the various lights could not be determined by the enemy. At night, however, an enemy approaching a search-light system where the lights are permanently fixed by means of range-finders could secure bearings upon a light permanently exposed and having secured the range would probably be able to put the light out of action in a short time. Should two lights be permanently exposed, the difficulty of securing the range of lights would be lessened. In this case in addition to the vertical base-line already secured by the depression range-finder the enemy could also secure a horizontal base-line and determine accurately the exact position of each light thus exposed and having determined this could secure his bearings by which to sail his course. To prevent this and confuse the enemy by causing him to take a false course is the object of this present system.

This system includes a plurality of search-lights diversely scattered and connected to a central control-station, in which an observer is located, who may control the unmasking of any one or more of the plurality of lights. It



is contemplated that no light should be exposed for any considerable length of time, the object of the invention being to have the lights intermittently operated and alternately exposed, and it is contemplated that when the change occurs for a brief period all lights will be masked from view, so that when a new light is exposed the enemy will believe that it is the same light formerly exposed, and thereby lose his bearings.

Should an enemy located at 24 (see Fig. 1) in the absence of lighthouses endeavor to secure his bearings from the exposed search-lights, in order to sail his course by means of position-finders he would secure an angle on said search-lights—say 11 and 12—and endeavor to sail his course from the bearings thus obtained in a direction, for instance, indicated by the arrow *a*. Should, however, the lights 11 and 12 be masked and after a short duration the lights 13 and 14 be unmasked, the enemy being in ignorance of the plurality of search-lights located in the system and believing that the lights 11 and 12 have been again unmasked, would endeavor to secure the same bearings on these lights. It is obvious that when the enemy had secured the same angle on the new lights exposed to view which he had previously secured on the lights which has been masked he would have been brought into the position indicated in dotted lines at 25 and would be sailing in the direction of the arrow *b*, which would lead him directly upon the rocks to be wrecked. Many combinations of lights may be derived from the system, and by a proper manipulation by the operator in the central station the lights may be displayed in such a manner to mislead the enemy and lead him to his own destruction by causing him to lose his bearings and either wreck himself upon the rocks or cause him to sail into shallow waters, where he would be at the mercy of the guns in the fort 23.

It is believed that with this description the operation of the system will be thoroughly understood and the advantages to be obtained from such a system will be perfectly obvious without any further description.

Having thus described my invention, I claim—

1. As a strategical measure for shore defense, the installation of a plurality of masked lights in one or more groups, and means for alternating, and exposing a minimum number of lights in each group.

2. As a strategical measure for shore defense, the installation of a plurality of masked lights in two or more groups remote from each other, and means for alternately exposing different lights in each group.

3. As a strategical measure for shore defense, the installation of a plurality of masked lights in two or more groups remote from each other, one light in each group occupying such position in relation to the other lights in the

same group, as to be readily mistaken for another light, when exposed in the same relative combination.

4. As a strategical measure for shore defense, the installation of a plurality of masked lights in two or more groups remote from each other, one light in each group occupying such position in relation to the lights in another group, that different lights in each group can be exposed in the same relative combination with other groups.

5. As a strategical measure for shore defense, the installation of a plurality of masked lights in one or more groups, and means for exposing a minimum number of lights in each group in the same combination, with lights in another group, but in different locality.

6. As a strategical measure for shore defense, the installation of a plurality of masked lights, in a plurality of groups, a central station controlling said lights so as to expose a combination of lights one in each group, and alternately with them a similar combination of other lights in each group, differently located.

7. As a strategical measure for shore defense, the installation of a plurality of masked lights in a plurality of groups remote from each other, one light in each group occupying such position in relation to the lights in another group, that different lights in each group can be exposed alternately in the same relative combination with the lights in another group, differently located.

8. As a strategical measure for shore defense, the installation of a plurality of masked lights in a plurality of groups remote from each other, one light in each group occupying such position in relation to the lights in another group, that the same combination of lights can be exposed alternately, by exposing different lights in each group.

9. As a strategical measure for shore defense, the installation of a plurality of masked lights, means for exposing alternately, similar combinations of such lights, but differently located so as to prevent true bearings from being obtained from such lights.

10. As a strategical measure for shore defense, the installation of a plurality of masked lights, means for exposing alternately similar combinations of such lights, but differently located, so that bearings obtained upon a combination of lights exposed in one locality will be in error when compared with bearings obtained from a similar combination when exposed in another locality.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM OLIVER WEBBER.

Witnesses:

EDWIN D. SIBLEY,  
C. L. OSBORNE.