

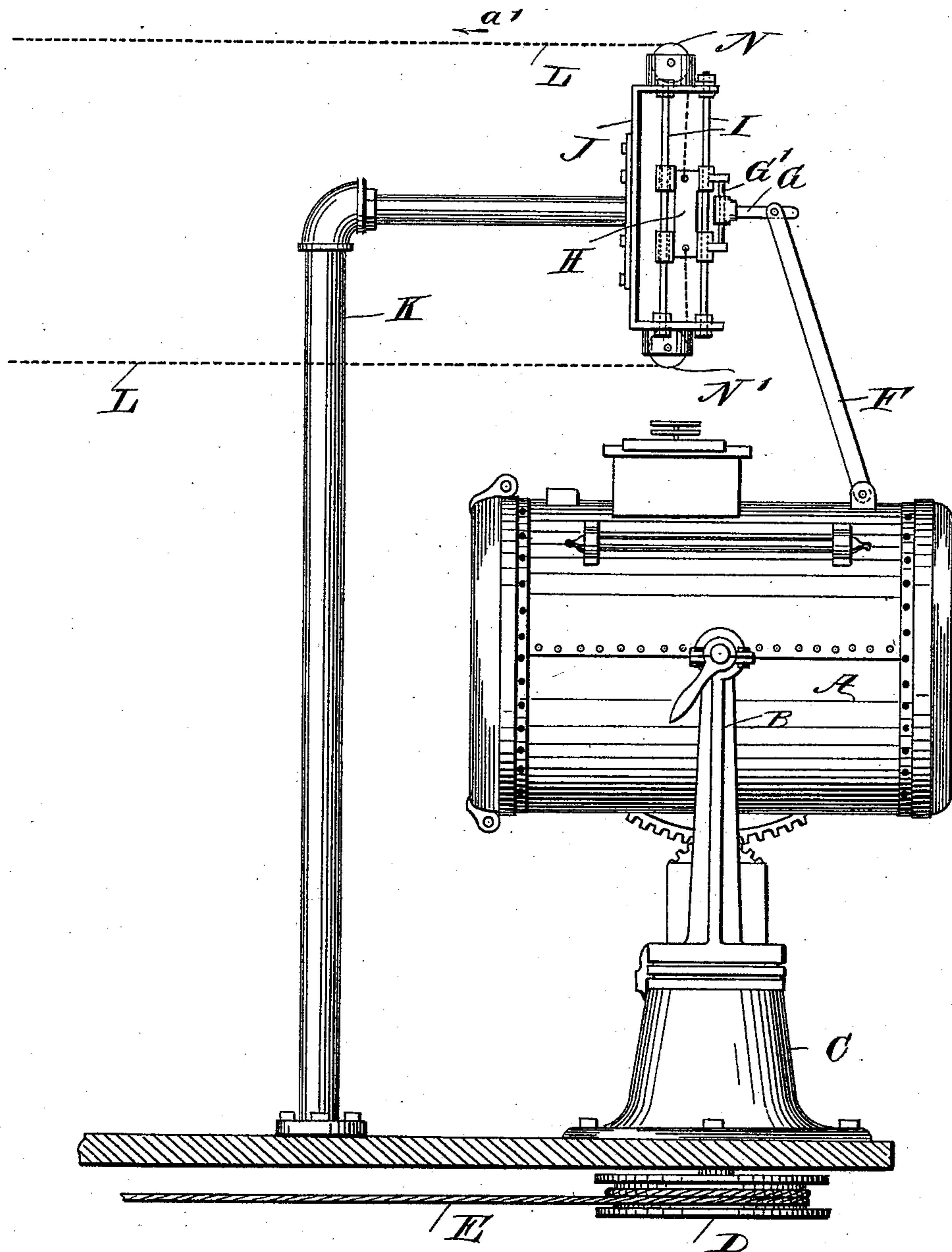
(No Model.)

P. J. DAUGHERTY & W. F. LITTEN.

TILTING DEVICE FOR SEARCH LIGHTS.

No. 525,262.

Patented Aug. 28, 1894.



WITNESSES:

*H. M. Ardlie.*  
*C. Sedgwick*

INVENTORS

*P. J. Daugherty*  
*W. F. Litten*  
BY *W. F. Litten*  
*Munn & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

PATSEY J. DAUGHERTY AND WILLIAM FRANK LITTEN, OF BELLAIRE, OHIO.

## TILTING DEVICE FOR SEARCH-LIGHTS.

SPECIFICATION forming part of Letters Patent No. 525,262, dated August 28, 1894.

Application filed March 13, 1894. Serial No. 503,426. (No model.)

*To all whom it may concern:*

Be it known that we, PATSEY J. DAUGHERTY and WILLIAM FRANK LITTEN, both of Bellaire, in the county of Belmont and State of Ohio, have invented a new and Improved Tilting Device for Search-Lights, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved tilting device for search lights, which is comparatively simple and durable in construction, and more especially designed for use on steamboats, to enable the pilot to manipulate the search light from the pilot house or other place to throw the rays of light in any desired direction.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure is a side elevation of the improvement, parts being in section.

The search light A of any approved construction is journaled in the brackets B, so as to permit the search light to swing up and down, the said brackets being mounted to turn vertically in a suitable bearing C attached to a support of the steamboat or other vessel or building on which the device is applied. The brackets B are adapted to be turned in the usual manner and for this purpose, the brackets are provided on a central shaft with a pulley D, over which passes a belt or rope E under the control of the operator. Thus, by pulling on the rope E, the brackets B carrying the search light A can be turned horizontally, so that the rays of the search light can be thrown forward or to the right or to the left, as the case may require. Now, in order to impart a vertically swinging motion to the search light A, from the pilot house or other place on the vessel we pivotally connect the front end of the search light A by a link F with an arm G, having a vertically-disposed pivot G' mounted to turn in suitable bearings in a slide H, fitted to slide vertically on suitable rods or other guideways I, arranged in a frame J, supported from an arm

K attached to the vessel or other place on which the search light is placed. The slide H is connected at the top and bottom with the ends of a chain or rope L, extending to the pilot house or other place, so that the operator can conveniently pull either run of the said chain or rope so as to pull the slide H upward or downward. As illustrated in the drawing, the chain L passes over suitable pulleys N, N' journaled in the top and bottom of the frame J. Now, it will be seen that when the operator pulls on the chain L in the direction of the arrow  $a'$ , then the slide H will move upward and thereby carry the pivoted arm G in the same direction, so as to exert a pull on the link F to cause the front end of the search light A to swing upward, thus changing the angle in which the rays of light are thrown from the search light.

When the operator pulls the chain L in the inverse direction of the arrow  $a'$ , then the slide H moves downward and the search light A is caused to swing downward at its front end, so as to throw the rays of light close up to the front end of the vessel on which the search light is located.

By making the connection between the search light A and the slide H by the link F and pivoted arm G, the search light can be swung from right to left by manipulating the rope E, as previously described, so as to throw the rays of light from one side to the other, but at the same time the operator can change the angle, up or down, of the search light A by manipulating the rope L in the manner above described.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination with a horizontally turning bracket provided with a pulley having an operating cord or cable extending therefrom to the place from which the light is to be operated, and a search light pivoted to swing vertically in the bracket, a slide or cross head mounted in vertical guide-ways above the search light, and a link or rod pivoted to the search light to one side of its pivots and having a universal connection with said slide or cross head and cords or cables



extending in opposite directions from the said slide or cross head, and thence to the place of operation, substantially as described.

2. A tilting device for search lights, comprising a slide having vertical movement and under the control of the operator, an arm having a vertically-disposed pivot journaled in the said slide, and a link pivotally-connect-

ing the said arm with the search light to impart an up and down swinging motion to the latter, substantially as shown and described.

PATSEY J. DAUGHERTY.  
WILLIAM FRANK LITTEN.

Witnesses:

J. N. BRIDGMAN,  
FRANK S. MANN.