

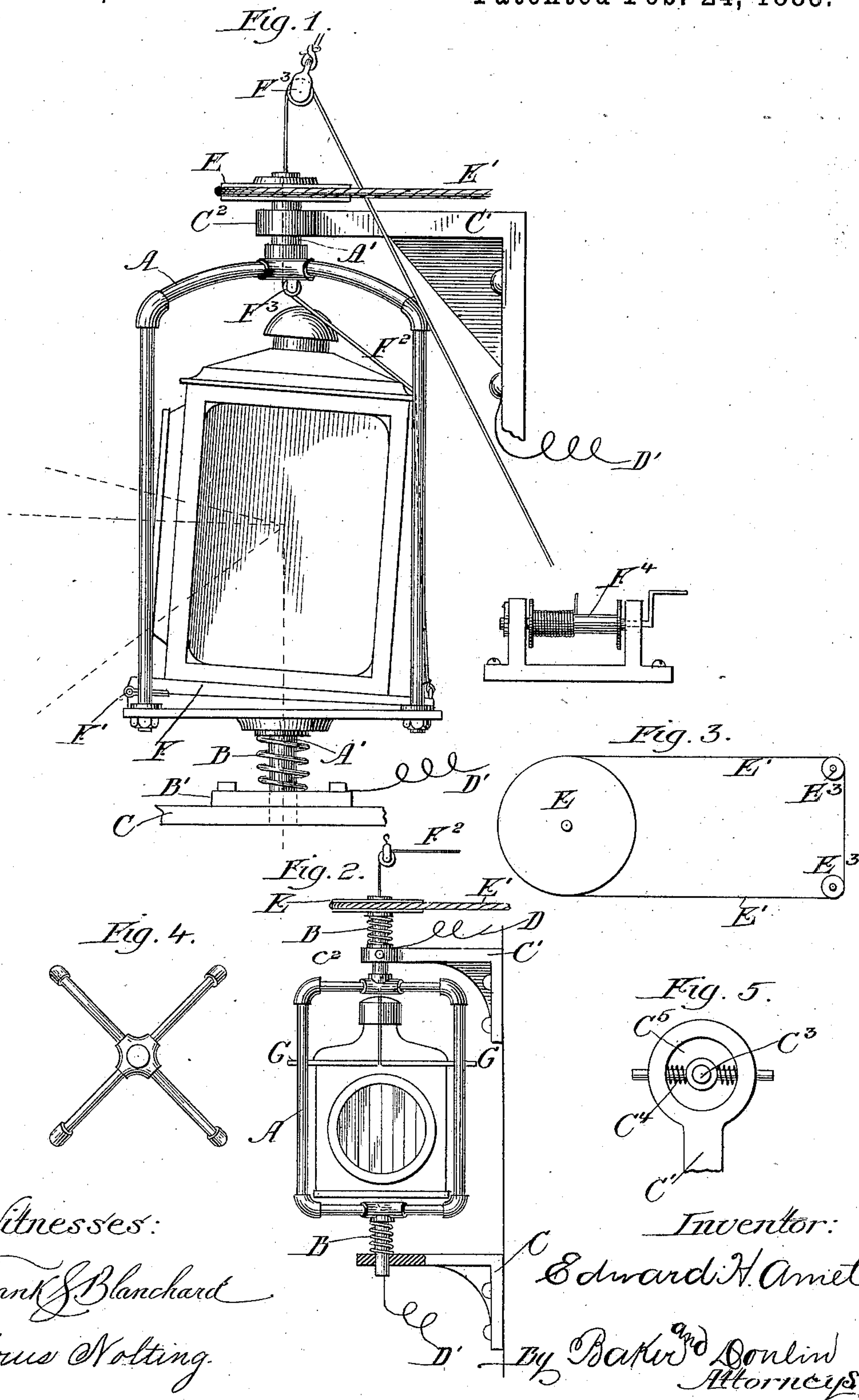
(No Model.)

E. H. AMET.

LAMP CONTROLLING MECHANISM.

No. 312,944.

Patented Feb. 24, 1885.



UNITED STATES PATENT OFFICE.

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LAMP-CONTROLLING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 312,944, dated February 24, 1885.

Application filed May 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. AMET, a citizen of the United States, residing in the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Lamp-Controlling Mechanisms, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification, sufficient to enable others skilled in the art to make and use the same.

The object of my invention is to provide means whereby a lamp, whether electric (arc or incandescent) or any other class of lamp, may be controlled as regards the direction which the rays of light therefrom shall be caused to take, this control being from any locality at any distance from the lamp. As, for example, the merit and usefulness of my invention is apparent on shipboard, where, by it, lamps at the mast-head or any other portion of the vessel may be controlled, as to the direction in which the light shall be thrown, from the pilot-house, cabin, or any other convenient point. In the same manner elevated electric or other lamps mounted upon buildings, masts, or eminences may be controlled from the ground or at any location at any distance from the lamp.

My invention consists in certain features of construction hereinafter described, and specifically set forth in the claims.

Referring to the drawings, Figure 1 is a side elevation of a lamp-frame, with lamp and means for controlling same in accordance with my invention. Fig. 2 is a modification. Fig. 3 is a top view of the side-moving mechanism. Fig. 4 is a top view of the frame for the lamp. Fig. 5 is a plan of the upper supporting-journal.

Like letters indicate like parts in all the figures.

A represents any suitable frame-work for the lamp to rest in, and may be constructed of gas or other suitable pipe and connections. The frame is provided with pivoted bearings A' at its top and bottom, in line with each other, and adapted to support the lamp vertically and admit of its rotation. A spring-

cushion, B, is inserted between the frame-work, and a bracket, C, having a brass box, B', in which is a bearing for the pivot A'. The upper pivot passes through a bearing formed in a bracket, C', and both brackets are secured in any convenient manner to a mast of a vessel, or any other object which serves the purpose of supporting a lamp in any desired position, the means of supporting and the manner of connecting the brackets thereto being mere matters of mechanical skill, and therefore requiring no further description. When an electric lamp, either of the arc or incandescent pattern, is in use, to one of the brackets a conductor, D, is connected with the positive pole of a battery or other electrical generator, while to the brass bearing of the lower bracket is connected the conductor D' from the opposite or negative pole, and thence by suitable connections to the lamp. In the bracket C' the bearing C² for the upper pivot consists of a central collar, C³, adapted to fit the pivot, and a series of springs, C⁴, arranged in the same horizontal plane and about said collar, and bearing against the periphery thereof and against the inner walls of the chamber C⁵, formed in the bearing portion of the bracket C'. By the spring-cushion B at the lower portion of the lamp-frame a vertically-yielding support is provided, and by the peculiar bearing of the upper pivot a laterally-yielding support is provided, so that the movements of the vessel or other vehicle upon which the lamp is supported are partially compensated for or overcome, and the lamp is held practically motionless. Now, in order to direct the rays from the lamp in different directions at will, it remains to provide means for rotating the frame horizontally and inclining the lamp vertically, so that the direction of its rays may be determined to expose to view objects in depressed or elevated positions or to the right or left, as may be desired.

To produce the rotation of the lamp-frame and any lamp suitably placed therein, I secure to the upper pivot, either below the bracket C' or above the same, as desired, a pulley, E, and I conduct about the same a cord, E', or its equivalent, to the structure,

mast, or other means of support, and thence about one or more pulleys, E^3 , located, for the instance, in the pilot-house of a vessel, the lamp being supported by a mast, so that by pulling
 5 said cord in one direction and in another the lamp-frame, and the lamp contained therein, will be rotated horizontally to any desired extent. It now remains to provide for inclining
 10 the lamp bodily or oscillating it in a vertical plane, in order to elevate or depress the rays of light therefrom. I have shown two constructions for attaining this object.

In Fig. 1 an inclined movable bottom, F , is provided in a frame upon which a lamp is
 15 supported, and said bottom is hinged, as at F' , to the true bottom of the frame. A cord, F^2 , is secured to the free edge of said inclined bottom, and passes through the pivot A' over a pulley or pulleys, F^3 , to any suitable reel, as
 20 F^4 , located adjacent to the pulley or pulleys E^3 , so that both cords for controlling the movements of the lamp and frame shall be within easy access of the operator. The highest point of the lamp and its rays being when the
 25 platform F is at rest upon the true platform, it follows that in order to direct the lamp's rays to any point of declination, it is only necessary to raise the platform by means of cord F^2 .

In order to prevent the lamp from going too
 30 far forward, it may be secured by a short chain or other flexible connection to the bottom F .

In Fig. 2 I have provided for inclination in vertical planes by simply supporting the lamp upon the trunnions G within the frame A . The
 35 cord F^2 in this modified construction will be connected to the lamp-body at the bottom. The gravity of the lamp may be depended upon to retain it in a vertical position, or counteracting-springs may be employed, which
 40 shall normally hold the lamp in such a position as to direct its rays in an upwardly-inclined direction, and it may be held so that the rays shall project therefrom in a horizontal line by means of the cord operating in op-
 45 position to the spring, and so hold the lamp, or to hold it in such a position as to direct its rays in a downwardly-inclined direction. The flexibility of the connection—that is, the cord—admits of the horizontal rotation of the lamp-
 50 frame and its contained lamp to any practically-required distance.

Various modifications will suggest themselves to persons skilled in the construction of lamps and lamp-supports, and I do not limit
 55 my invention to the exact details herein shown and described; but I may alter the same to any extent and in any manner within the skill of persons of the class mentioned, and although I may specify the element or elements
 60 of construction by which my lamp-support is adapted to be used in connection with electric lamps, I do not confine myself in that respect, as it is evident that any light-giving de-

vices at present known or used may be substituted for the electric lamp and be controlled
 65 as to the direction in which its rays shall fall or proceed by the same means which would be employed to so control the rays of light from an electric lamp.

Having thus described my invention, what
 I claim is—

1. The combination of a lamp frame or support, a bracket, a trunnion mounted in the bracket and connected with the lamp-frame, and a pivoted lamp-support and devices, substantially as shown and described, for inclin-
 75 ing the lamp and rotating the lamp-frame or support, substantially as specified.

2. The combination of a bracket, a lamp-frame having a pivot or trunnion mounted in
 80 bearings in the bracket, a lamp-holder pivotally supported in the frame, a pulley secured to the pivot or trunnion, and means for rotating the pulley, substantially as specified.

3. The combination of a bracket, a lamp-
 85 frame pivotally mounted therein, a lamp pivotally supported in the frame, means for inclining the lamp, and means for rotating the lamp-frame, substantially as specified.

4. The combination of a lamp-bracket, a
 90 lamp-frame supported therein by a vertical pivot or shaft, a lamp vertically supported in said frame for inclination, and a cord arranged for inclining the lamp or its pivotal support, and a cord for rotating the frame, substantially
 95 as specified.

5. The combination, with a lamp-frame having vertical trunnions or pivots, of horizontally-pivoted lamp-supporting devices, a pulley mounted upon one of the vertical trun-
 100 nions, and cords arranged to operate said pulley and to incline said lamp-supporting devices, substantially as specified.

6. In combination with a lamp-supporting frame having a vertical pivot, a bracket pro-
 105 vided with a bearing for said pivot, yieldingly supported in lateral directions to said pivot, substantially as specified.

7. The combination of the frame A with the vertical pivot A' , the bracket C' with the col-
 110 lar C^3 , and springs C^4 , substantially as shown and described.

8. The combination of the frame A , provided with the vertical pivot A' , of the brackets C and C' , inclined hinged lamp-support F ,
 115 cord F^2 , pulleys E and E^3 , and cord E' , substantially as shown and described.

9. The combination, with a lamp-frame provided with vertical pivots, of cushioning mechanism surrounding said pivots, substantially
 120 as shown and described.

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Witnesses:

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