(No Model.) 2 Sheets—Sheet 1.

H. A. SEYMOUR.

ELECTRIC LIGHT MAST.

No. 261,260. Patented July 18, 1882.

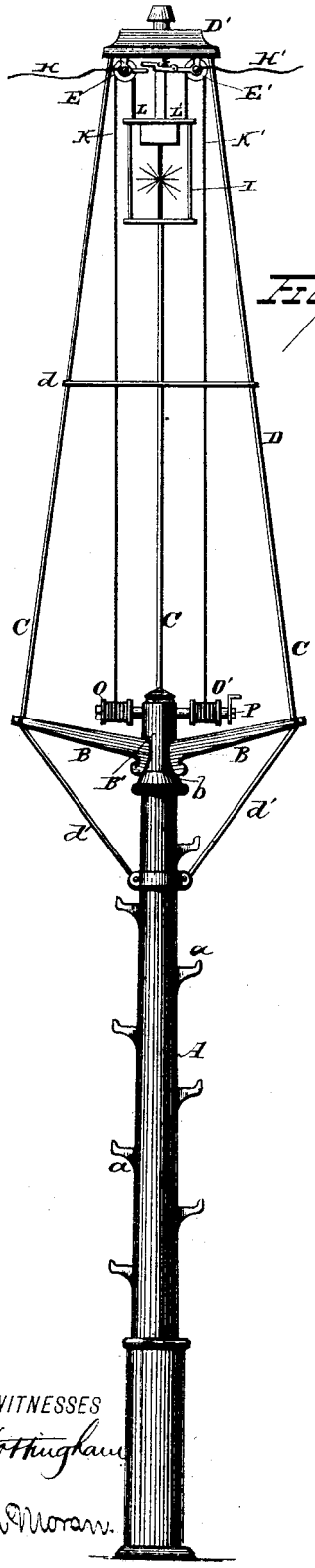

Fig. 1.

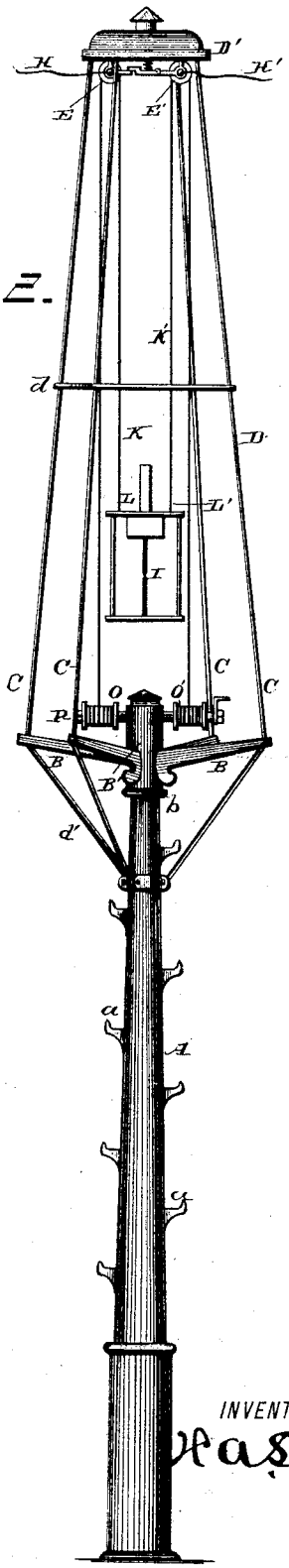

Fig. 2.

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Fig. 3.

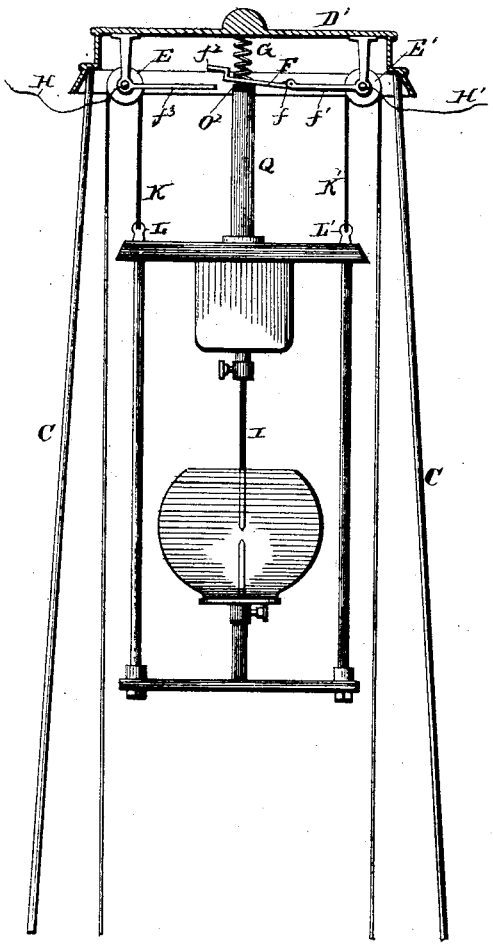
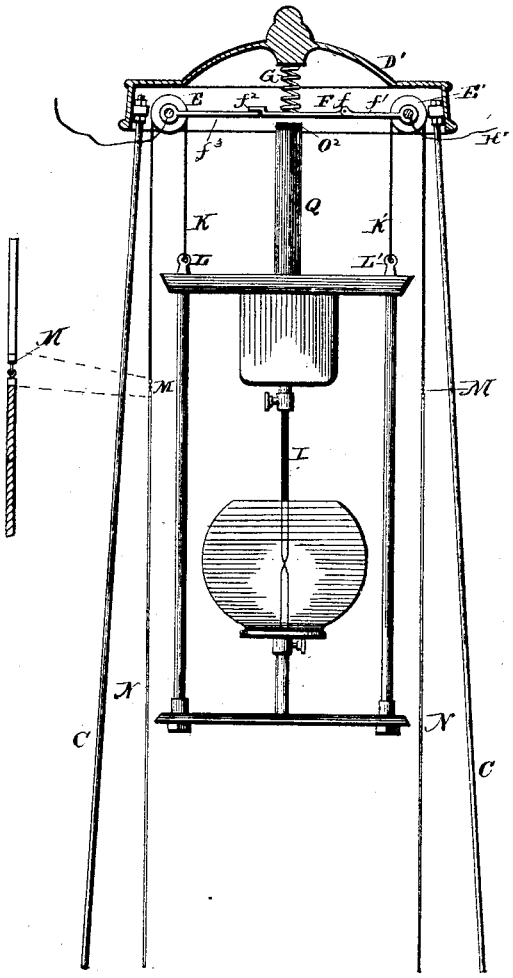


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY A. SEYMOUR, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO GEORGE W. STOCKLY, OF CLEVELAND, OHIO.

ELECTRIC-LIGHT MAST.

SPECIFICATION forming part of Letters Patent No. 261,260, dated July 18, 1882.

Application filed February 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. SEYMOUR, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Electric-Light Masts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improvement in electric-light apparatus.

The object of my invention is to provide simple and efficient means for automatically diverting the electric current through the lamp when raised to its proper position for use, and for automatically cutting the lamp out of circuit and shunting the current around the lamp when the latter is lowered.

With these ends in view my invention consists in the combination, with the main conductor of an electric lighting system, a pulley placed in the circuit of said main conductor, and a switch for opening or closing the circuit between said pulleys, of an electric lamp having the ends of short flexible conductors electrically connected at one end with the terminals of the lamp, and arranged to extend over the pulleys in the main circuit, and hemp, cotton, or other rope or cord made of fibrous material secured to the other ends of said flexible conductors.

My invention further consists in certain other features of construction and combinations of parts, as will be hereinafter described, and specified in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of one form of construction embodying my invention. Fig. 2 is a modification. Fig. 3 is an enlarged view of the upper portion of the tower or support, showing the lamp in circuit; and Fig. 4 is a similar view, showing the lamp cut out of circuit.

A represents a pole or mast constructed of wood or metal, and preferably provided with the foot-supports *a*, to enable the attendant to readily ascend the mast.

B represents the outwardly-projecting braces or supports secured to the upper end of the mast or pole. They may have their inner ends mortised into the upper end of the pole; or they may be made of cast or wrought metal, and secured to a sleeve, B′, fitting over the upper end of the pole and resting on a shoulder, *b*, formed thereon. To the outer ends of the braces or supports are secured the lower ends of the uprights C of the skeleton tower D. These uprights may be made of tubular metal or of angular iron rods, and may be braced in any desired manner. Horizontal braces *d* are shown as being secured to the uprights; but, if desired, diagonal braces may also be employed. In Fig. 1 the skeleton tower is composed of three uprights arranged in the form of a triangle, while in Fig. 2 four such uprights are employed. The braces or supports may be strengthened by the rods *d*′. To the upper ends of the uprights is secured a cap, D′, to the under side of which are journaled the pulleys E E′, which are insulated from the cap and uprights by having their bearings mounted in insulated or non-conducting supports.

F is a hinged switch, its end *f* being hinged to the metal strip *f*′, which is placed in electrical connection with the pulley E′, while its free end f^2 closes against a metal strip, f^3, placed in electrical connection with the pulley E. The switch is retained in its closed position by means of a spring, G; or a weight might be used for this purpose.

H represents one end of the main conductor, which is electrically connected with the pulley E, and H′ is the other end of the main conductor, placed in electrical connection with the pulley E′. Thus it will be observed that when the switch is closed the electric current will flow from the end H of the conductor to the pulley E, over the metal strip f^3, the switch F, metal strip *f*′, and pulley E′ to the other end, H′, of the main conductor.

I will now proceed to describe the construction and arrangement of parts for operating the lamp.

I represents an electric lamp, and K K′ are flexible metal conductors, preferably wire rope, having their ends secured in electrical connection with the terminals L L′ of the lamp. The flexible metal conductors pass over the pulley E E′ and in electrical connection therewith. The other ends of the conductors K K′ are secured by jointed couplings M to the hemp or

cotton ropes or cords N N, which extend down and are preferably attached to the winding-drums O O′, secured to a shaft, P, mounted in suitable bearings fastened to the top of the mast or pole. When the lamp is raised the non-conducting block O^2 on the chimney or tube Q strikes the switch and raises it, thereby opening the short circuit, and causing the current to pass from one of the pulleys over one of the flexible conductors to and through the lamp, and from the same through the other flexible conductor and pulley. When the lamp is lowered the switch is closed by the spring or weight, thereby short-circuiting the current around the lamp, and as the lamp continues to descend the flexible metal conductors are disconnected from their pulleys, thereby rendering it impossible for any currents to flow through the lamp when it is in its lowered position for cleansing or the renewal of the carbons. By employing the ordinary hemp or cotton ropes for raising and lowering the lamp the operation is rendered much easier than would be the case if the entire rope were made of flexible metal; and, further, the cost is reduced and the safety of the apparatus enhanced.

The complete mast or tower may be made of any desired length, the parts thereof being arranged to secure ample strength and stiffness, while it occupies but little space at the sidewalk or spot where it may be erected.

I make no claim to the tower or mast in this patent, but reserve the right to secure protection for said improvement by a separate patent.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with pulleys electrically connected with the main conductor, and a switch for opening and closing the circuit between said pulleys, said switch provided with devices rendering it self-closing, of an electric lamp having flexible conductors connected with its terminals, and carried over said pulleys and attached to non-conducting connections, said lamp being arranged to have its chimney or tube open the switch when the lamp is raised to the desired position for use, substantially as set forth.

2. The combination, with the pulleys placed in electrical connection with the main conductor, of an electric lamp having short flexible conductors electrically connected with its terminals, said conductors extending around said pulleys, and hemp or equivalent rope attached to the other ends of the short flexible conductors, substantially as set forth.

3. The combination, with pulleys placed in the circuit of the main conductor, and a switch for opening and closing the circuit between the pulleys, of an electric lamp arranged to automatically open the circuit when elevated to its proper position for use, said lamp having short flexible conductors attached to its terminals and extending over said pulleys, and hemp or equivalent rope attached to the other ends of the short flexible conductors, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY A. SEYMOUR.

Witnesses:
HERMAN MORAN,
F. O. MCCLEARY.