(No Model.)

S. BERGMANN.

MEANS FOR SUSPENDING AND CONTROLLING ELECTRIC LAMPS.

No. 457,573. Patented Aug. 11, 1891.

Fig. 1

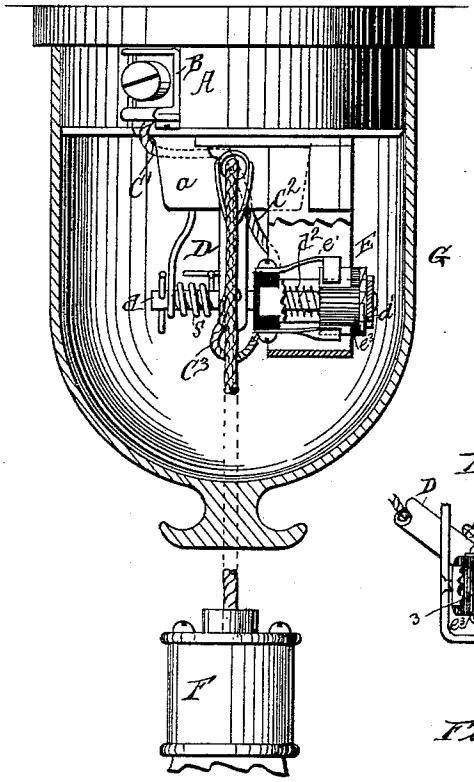


Fig. 2

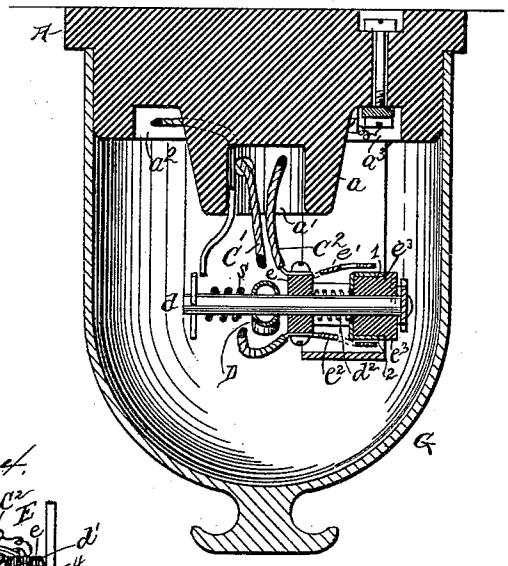


Fig. 4.

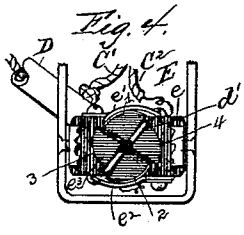
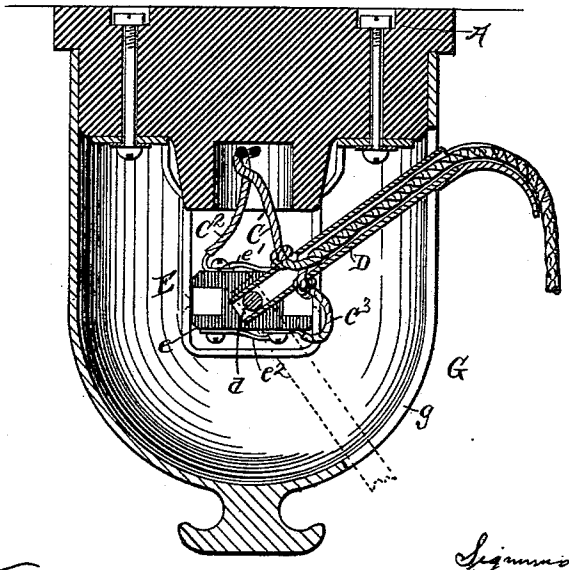


Fig. 3



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SIGMUND BERGMANN, OF NEW YORK, N. Y., ASSIGNOR TO THE BERGMANN MANUFACTURING COMPANY, OF SAME PLACE.

MEANS FOR SUSPENDING AND CONTROLLING ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 457,573, dated August 11, 1891.

Application filed February 25, 1891. Serial No. 382,694. (No model.)

To all whom it may concern:

Be it known that I, SIGMUND BERGMANN, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Means for Suspending and Controlling Electric Lamps, of which the following is a specification.

My improvement relates particularly to means whereby incandescent electric lamps may be suspended, lighted, and turned out.

I will describe an apparatus embodying my improvement, and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a sectional side elevation of an apparatus embodying my improvement. Fig. 2 is a central vertical section of the same. Fig. 3 is a central vertical section of the same, taken in a plane at right angles to that of Fig. 2. Fig. 4 is a sectional side elevation taken in a plane at right angles to the plane of Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

A designates a block of insulating material, here shown as made of cylindric form and having formed at its central portion a downwardly-extending projection *a*. In this projection is a cavity *a'*, and around it in the under side of the main portion of the block A are recesses a^2 a^3.

In the sides of the body of the block are diametrically-opposite notches, in which are fitted plates of metal B, to which the line-wires of an electric-lighting system may be connected. With these plates B insulated wires C' C^2 electrically communicate. They extend along the recesses a^2 a^3 and thence into the cavity *a'*. The wire C' extends from the cavity *a* directly into an oscillating tube or arm D, which is affixed to the rock-shaft *d*. The wire C^2 is, however, electrically connected with the contact-piece *e'* of a switch E, having a body *e* of insulating material. The contact-piece *e'* is fastened to the body of insulating material by means of a screw, which also serves to unite the wire C^2 with it. This contact-piece coacts with a rotary switch-wheel e^3, which is mounted upon the shaft *d*. The wheel is not rigidly affixed to the shaft, and will derive motion from the shaft when the shaft is moved in one direction only. The shaft *d* near one end is provided with a pin *d'*, and this is free to engage with ratchet-teeth formed on the adjacent end of the switch-wheel. A spring d^2, coiled around the shaft in rear of the switch-wheel, presses the switch-wheel toward the said pin *d'*, but allows it to yield lengthwise of the shaft to permit of the ratchet-wheel passing by the pin. On the opposite side of the switch-wheel e^3 from the contact-piece *e'* a contact-piece e^2 impinges. This is fastened by a screw to the switch-body *e*, of insulating material, and the same screw may fasten a wire C^3. Both the contact-pieces *e'* e^2 are made of metal and are resilient, so as to impinge against the switch-wheel, and will be free to yield to suit different positions of the wheel.

The switch-wheel is of a well-known form, having its periphery made up of four segments of circles eccentric to the axis of the wheel and radial portions extending between the end of each segment and the beginning of the next. Two opposite segments 1 2 are faced with pieces of metal, which are in electrical communication; but the other two segments 3 4 are not faced with metal. Each time the wheel is rotated it will be rotated far enough to move one pair of opposite segments away from the contact-pieces *e'* e^2 and the other pair of segments into impingement against said contact-pieces *e'* e^2. Obviously, therefore, each time the wheel is rotated it will either establish an electrical connection between the contact-pieces *e'* e^2 or sever the electrical connection between the same. The contact-pieces *e'* e^2 prevent the switch-wheel from moving in the wrong direction. The wire C^3 passes from the contact-piece e^2 into the tube D, and it and the wire C' may be twisted into a cable. I have shown the outer extremity of the tube D as open on the upper side and rounded outwardly and downwardly on the lower side to serve as a guide for the cable formed of the two wires C' C^3. To the lower end of the wires C' C^3 an electric-lamp socket or other translating device F is attached. Around the shaft *d* is coiled a spring S, which at one end extends into the cavity *a'* of the block A and at the other end bears against the under side of a pin extending laterally from the tube D. This spring will

elevate the tube D after its depression by a pull upon the wires C′ C², and in doing this will rotate the shaft *d* in the reverse direction from that in which it is rotated by a pull upon the wires C′ C².

I have shown a shell G as fitted to the block A and extending downwardly therefrom around the switch. It has a vertical slot *g*, through which the tube or arm D may work.

It will be seen that by my improvement I provide a simple device whereby an electric lamp will be suspended and may be lighted and extinguished by simply pulling upon the means whereby it is suspended.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with an electric switch having a movable part from which extends a tube or arm, of wires or conductors extending along the tube or arm and depending therefrom and electrically communicating with one part of the switch, whereby the wires or conductors may be made to adjust the switch, substantially as specified.

2. The combination, with an electric switch having a rotary part or wheel having its faces at certain points made of electric conducting material and at intermediate points of insulating material, of a shaft upon which said rotary part or wheel is mounted, means whereby motion is transmitted from said shaft to said rotary part or wheel, a tube or arm extending from the shaft, and wires or conductors connected with one of the parts of the switch and extending along said tube or arm and depending therefrom, substantially as specified.

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

SIGMUND BERGMANN.

Witnesses:

P. H. KLEIN, Jr.,

JNO. F. GUIDEL.