

(No Model.)

E. P. SNOWDEN.

SAFETY DEVICE FOR HANDLING ELECTRIC ARC LAMPS.

No. 542,210.

Patented July 2, 1895.

Fig. 1.

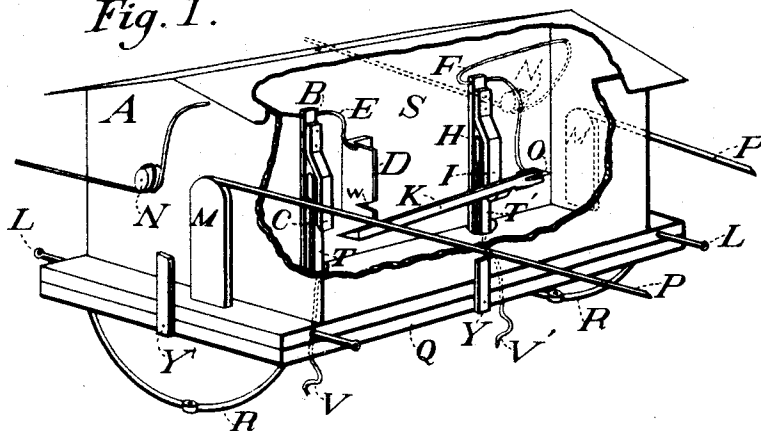
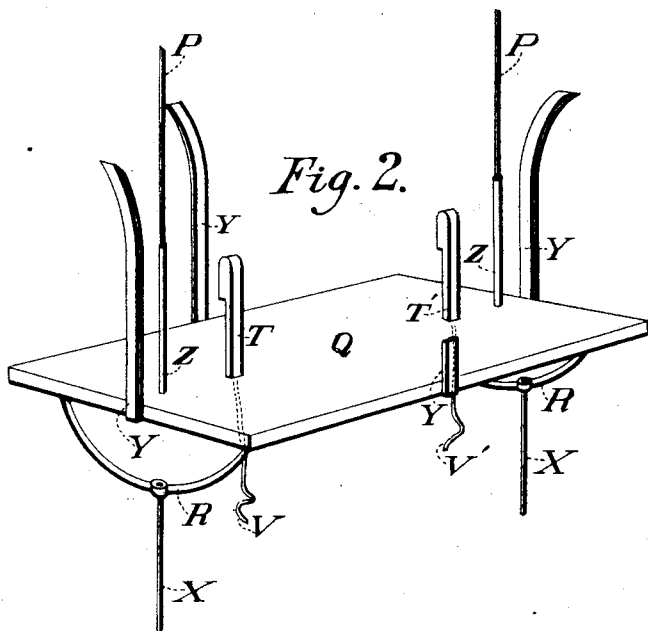


Fig. 2.



Witnesses:

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SAFETY DEVICE FOR HANDLING ELECTRIC-ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 542,210, dated July 2, 1895.

Application filed March 22, 1895. Serial No. 542,778. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. SNOWDEN, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Safety Devices for Handling Electric-Arc Lamps; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in safety devices for handling electric-arc lamps, in which the current is shifted from the lamp to a switch when the lamp is lowered for trimming, and I attain my object by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a perspective view of the entire machine with the switch broken, with box cut away to show apparatus, and Fig. II is a perspective view of the table which carries the connecting-plugs and from which the lamp is suspended.

Similar letters refer to similar parts throughout both views.

In the accompanying drawings, A represents the box which incloses the switch apparatus; B, a block-conductor attached to the switchboard; C, a spring-conductor attached to block-conductor B; D, a switch-conductor attached to the switchboard; E, a feed-wire conducting to one of the block-conductors and the switch-conductor; F, a feed-wire conducting to the other block-conductor and the switch; H, a block-conductor attached to the switchboard.

I is a spring-conductor attached to block-conductor H; K, a switch; L L, cable-rods; M M, pulleys; N N, insulator-knobs.

O is a bracket attached to switchboard, to which switch K is pivoted; P P, cables for suspending table; Q, the table, carrying hangers and plugs; R R, hangers for lamp.

S is the switchboard, and T T' are switch-plugs.

V and V' are wires connecting lamp to

switch-plugs T and T', respectively; W, a V-shaped notch in the edge of switch-conductor D for receiving the knife-edge of switch K.

X X are cables by which the lamp is suspended from hangers R R.

Y Y Y Y are guides for table D, and Z Z are cable-guides.

Assume that the current passes from E to F. When the lamp is drawn up, the current passes from feed-wire E into conductors B and C, thence into plug T, thence into feed-wire V, through the lamp, and out through feed-wire V', thence into plug T' and conductors H and I, and finally into feed-wire F. When cables P P are slacked, the weight of the lamp, which is attached to table Q by means of hangers R R, draws plugs T and T', which are also attached to table Q, out of the slot between conductors B and C and H and I, and the current through the lamp is cut out. After plugs T and T' have been drawn from under spring-conductors C and I, and before they have broken connection with conductors B and H, respectively, spring-conductor I springs back toward conductor H, carrying with it switch K, which slips into wedge-shaped notch W in switch-conductor D, thus completing the circuit from wire E into switch-conductor D, through switch K, and out into wire F. On returning the lamp to its first position plugs T and T' first come in contact with conductors B and H and a part of the current is shunted down through the lamp before the plugs reach the spring-conductors C and I and break the current through switch K.

If preferred, in the construction of my invention guides Y Y Y Y may at any time be omitted, as cable-guides Z Z will ordinarily answer the same purpose.

In the mechanism now used the handling or trimming of lamps is a constant source of danger to human life. In my invention the lamp may be let down and trimmed without danger of the current being grounded, and the necessity for use of ladders or non-conductors of any kind is wholly obviated.

In the ordinary system, in which the lamp is suspended from a cable between two poles, the lamp is drawn out of plumb by the line-

wires. In my invention, the line-wires not being directly fastened to the lamp, the lamp hangs vertical by its own weight.

5 In the ordinary electric-lighting systems it is well known to be dangerous to hang the lamp in proximity to other wires, because in lowering the lamp the line-wires are liable to complete a circuit with other wires. By my invention the line-wires remain in the air.

10 Since the lamp when lowered is cut out of the circuit, the test for clear circuit through the lamp by means of the magneto-bell is easily and safely made. Also by cutting one lamp-wire from the plug and inserting the
15 magneto-bell wire and drawing the lamp up the test for trouble on the line is made.

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

20 1. In a device for handling electric are lamps, in a combination, box A, switch board S having rigidly attached block conductors B and H, and to which spring conductors C and I are respectively attached, a switch conductor D also attached to switch board, feed wire E
25 conducting to block conductor B and said switch conductor D, feed wire F conducting to block conductor H and switch K, a table Q suspended from box A by means of cables P P passing over pulleys M M, hangers R R
30 by which, in connection with cables X X, the

lamp is suspended from table Q, plugs T and T', wires V and V', the switch K and notch N, together with bracket O, cable rods L L, insulator knobs N N, and guides Y Y Y Y and Z Z, substantially as described and for
35 the purpose specified.

2. In a safety device for handling electric are lamps the combination of block conductors B and H, spring conductors C and I, switch K, switch conductor D and notch or
40 spring switch receiver W, and bracket O, substantially as described and for the purpose specified.

3. In a safety device for handling electric are lamps the combination of plugs T and T' 45 for closing the circuit through the lamp and breaking the circuit through switch K by plug T' entering between conductor H and spring I thereby disengaging switch K and notch or spring switch receiver W, together
50 with table or frame Q and the hangers and guides carried thereby, substantially as set forth and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD P. SNOWDEN.

Witnesses:

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