

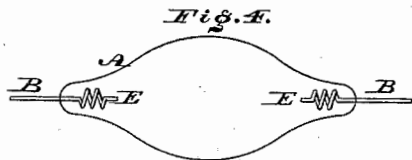
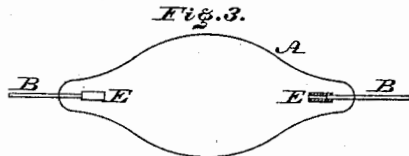
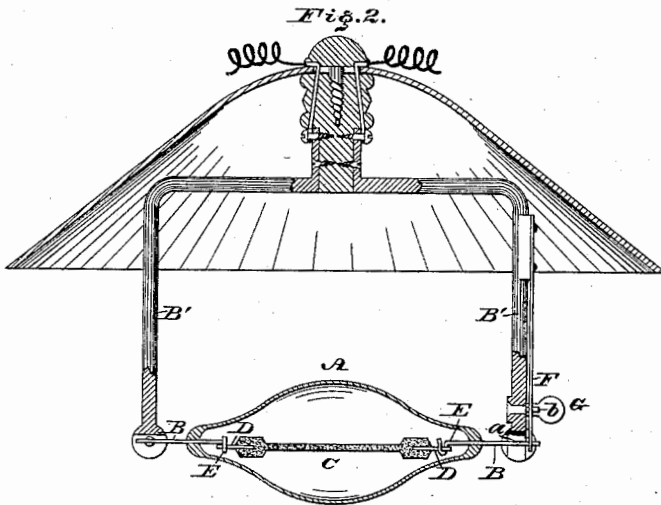
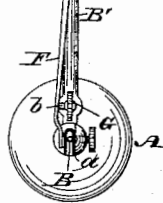
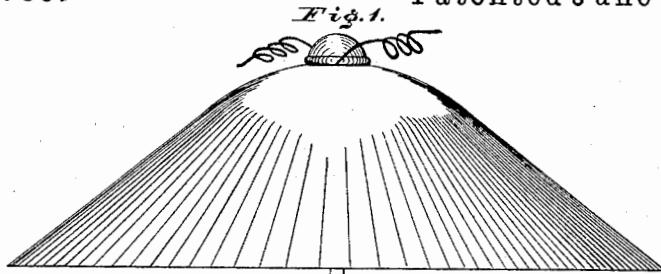
(No Model.)

J. A. YUNCK & J. STUERTZ.

INCANDESCENT LAMP.

No. 320,739.

Patented June 23, 1885.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 320,739, dated June 23, 1885.

Application filed March 26, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. YUNCK, of Sharon Hill, county of Delaware, State of Pennsylvania, and JOHN STUERTZ, of the city and county of Philadelphia, State of Pennsylvania, both citizens of the United States, have invented a new and useful Improvement in Incandescent Lamps, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of an incandescent lamp embodying our invention. Fig. 2 is a partial side elevation and partial vertical section at a right angle to Fig. 1. Figs. 3, 4, and 5 are views of modification of the carbon-holders of the lamp.

Similar letters of reference indicate corresponding parts of the several figures.

Our invention consists in so supporting the carbon of an incandescent lamp that it may readily expand, thus preventing breaking of the carbon and cracking of the globe.

It also consists of a novel switch.

Referring to the drawings, A represents the globe of an incandescent lamp, the same being supported on the wires B, which are connected with the metallic arms or frame B'.

C represents the carbon, which has attached to its ends the platinum wires D; and E represents eyes which are formed in the ends of the wires B, which are within the globe A, and sustain the carbon C by means of the wires D resting in said eyes.

When the carbon is in circuit and incandescent it expands, and the wires D yield and move outwardly on their free connection with the bearing or supporting eyes E of the wires B, and thus the carbon is not restrained, whereby both the carbon and glass are prevented from being broken or cracked.

In Fig. 3 the inner ends of the wires B are provided with small tubes E, which receive the ends of the wires B and project freely into the ends or bulbs of the carbon.

In Figs. 4 and 5 the inner ends of the wires B are formed into springs E, the points of the wires entering the bulbs or ends of the carbon. When the carbon expands, these springs yield and allow such expansion without injury to anything.

In practice the ends or bulbs of the carbon are not entirely of incandescing nature, so that the contiguous portions of the wires or bearings of the carbon will not be burned when the carbon is incandescent.

One of the end supports B of the globe, in the present case the wire which passes through the globe and sustains the carbon, is insulated from the arm B', the insulating material therefor being shown at *a*, and the said wire or support B projects beyond said material, so as to be engaged with a switch, F, the latter consisting of a metallic bar secured to the arm B', and in electric communication therewith, said bar being elastic in its nature, of the form of a spring; or it may be hinged or pivoted to the arm and have a spring suitably connected, whereby it is held in contact with the projecting end of the wire or support B, whereby the carbon is in electric communication with the switch.

Pivoted to the arm B' is a button, G, which has a swell cam-face or rib, *b*, on its side, so disposed that when the button is turned it presses against the bar or switch F, thus forcing the latter from the wire or support B and breaking the circuit, so that the carbon is cut out of electric communication.

By again turning the button the bar or switch F returns to its normal position in contact with the wire or support B, whereby the carbon is again placed in electrical circuit.

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

1. An incandescent lamp having its carbon mounted loosely on supporting-wires and provided with supporting-arms, and means attached to one of said supporting-arms for electrically connecting said supporting-arms and one of said supporting-wires, the said arm and wire being normally insulated from each other, substantially as and for the purpose set forth.

2. The arms B', in combination with the carbon C, the intermediate wires, B D, the insulator *a*, interposed between one of said arms B' and its wire B, the laterally-movable external spring, F, attached to said arm B', and normally closing circuit by contact with said wire B, and the rotatable button G, attached to said

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arm B' and provided with a cam, which, on the turning of said button, forces said spring away from said wire B and breaks the circuit, substantially as set forth.

5 3. The carbon C and wires D, extending from the ends thereof, in combination with the wires B, supporting-arm B', insulator *a*, and means attached to said arm B' for electrically connect-
10 B, substantially as and for the purpose set forth.

4. The carbon C, having wire D, in combination with wire B, having a curved end, which serves as a direct support for the wire D, arm B', and means for electrically connecting said 15 arm B' and wire B, substantially as and for the purpose set forth.

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Witnesses:

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