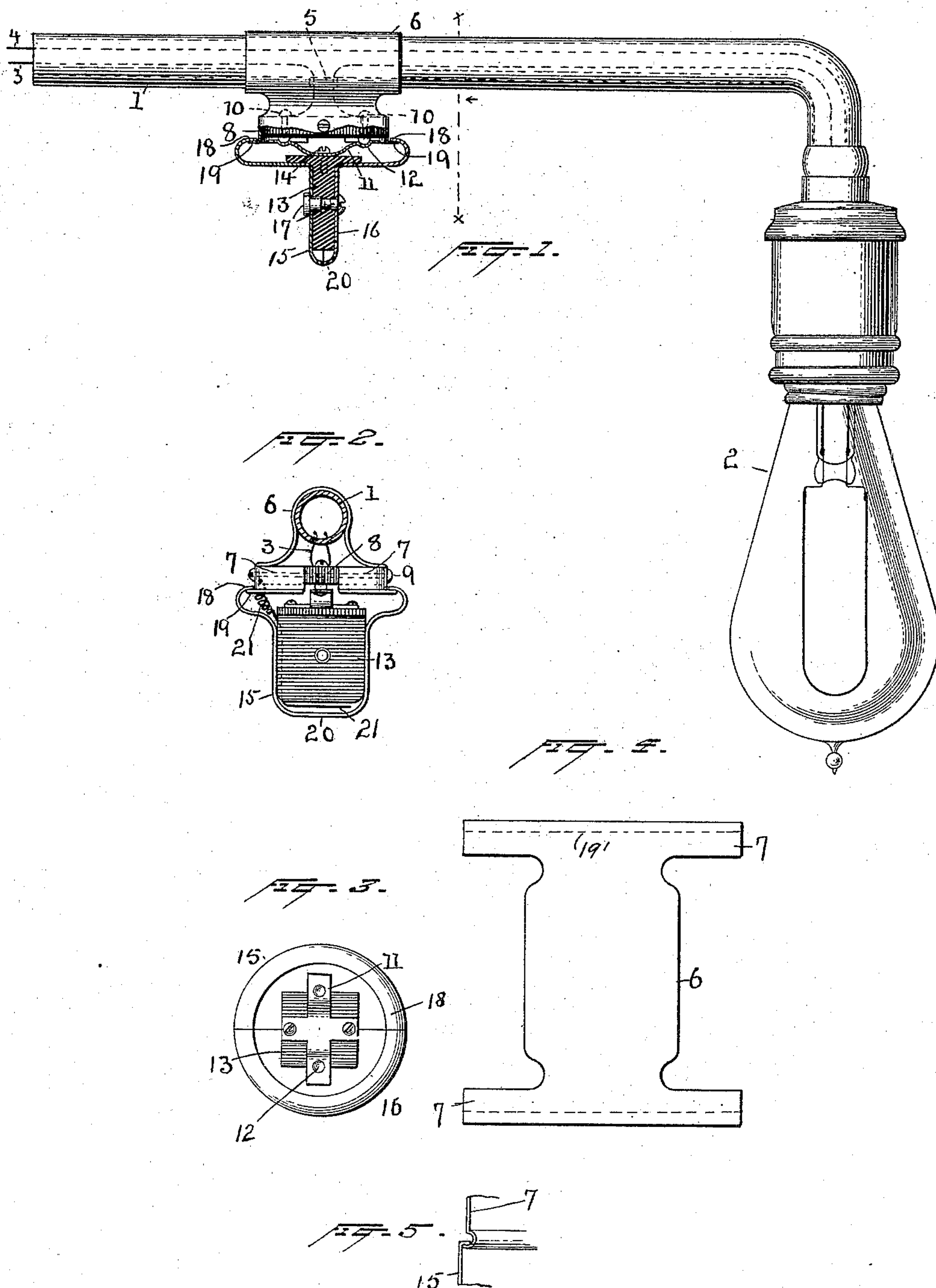


(No Model.)

J. HUTCHINSON.  
SWITCH FOR ELECTRIC LIGHT FIXTURES.

No. 493,868.

Patented Mar. 21, 1893.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSEPH HUTCHINSON, OF NEW YORK, N. Y.

## SWITCH FOR ELECTRIC-LIGHT FIXTURES.

SPECIFICATION forming part of Letters Patent No. 493,868, dated March 21, 1893.

Application filed April 8, 1892. Serial No. 428,288. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH HUTCHINSON, a citizen of the United States, residing in New York city, county and State of New York, have  
5 invented a certain new and useful Improvement in Switches for Electric-Light Fixtures, of which the following is a specification.

The present invention relates to an improved arrangement of switches for making  
10 and breaking circuits extending through tubular chandelier or bracket arms in electric light fixtures.

The main object is to provide a simple and practical way of applying switches to ordinary tubular arms, and the invention consists in the combination with such a tubular arm of a switch secured directly to the outside thereof, that is, without having a special section formed for the reception of the switch,  
20 and connected to a wire extending through the tube or tubular arm but led out through a suitable opening to the switch; and the invention consists also in the several combinations hereinafter more fully described, and  
25 set forth in the claims.

In the accompanying drawings, illustrating the improvement, Figure 1 is a side view, partly in section, of a bracket or fixture arm with the switch applied thereto. Fig. 2 is a  
30 view on line  $x-x$  of Fig. 1, a part of the lower member of the switch being removed. Fig. 3 is a plan view of the lower or movable member of the switch. Fig. 4 is view of a blank from which one part of the device is formed;  
35 and Fig. 5 illustrates a slight modification.

1 is a tube or hollow arm, such as a wall-bracket or an arm of a chandelier, carrying at its outer end an electric lamp 2 and containing electrical conductors 3, 4, leading to the  
40 lamp. The former conductor is interrupted or broken, and the adjacent ends of the wire are carried out of the tube through the opening 5. The wire 4 is preferably continuous to the lamp, as shown.

6 (Fig. 4) is a sheet metal strap or blank which is adapted to be bent around the tube, as shown in Figs. 1 and 2. The arms 7 of this strap are bent around an insulating plate or block 8, at one side of the tube the strap being  
50 secured to said block by one or more screws 9, the strap thus serving to cover the opening 5 and to support said block, which, in turn,

carries preferably two switch terminals or contact studs 10, to which the two adjacent ends of the broken wire 3 are connected. 55 These studs have rounded, projecting ends on the lower side of the block 8. The spring or arm 11, having depressions or notches 12, and which is carried by the insulating block 13, is adapted to be brought into or out of contact  
60 with said projecting ends. The switch arm 11 is firmly secured to the insulating block 13 by means of a screw, or screws, 14. Said block is held between two sheet metal sections 15, 16, forming a cover for the contacts. These  
65 sections are formed as shown, and are clamped against the insulating block 13 by the screw 17. The sections are provided at their upper ends with an inwardly extending bead or flange 18, which rests upon an outwardly extending flange 19 at the lower end of the  
70 strap 6 formed by bending the blank 6 on the lines 19'. Instead of having an outwardly extending flange or bead, the strap may be formed with a depression or groove, with which  
75 the parts 15, 16 engage, as indicated in Fig. 5. Evidently other means for connecting the two parts of the switch may be employed. By making the cover in two parts as described, it can be readily clamped in place, and it will  
80 be clear that when so clamped this movable member of the switch is adapted to be turned by the handle 20.

While the switch may be used when constructed as already described, it is preferable  
85 to provide a spring for opening the circuit by means of a snap movement. Such a spring is shown at 21, the upper end of the spring being connected to the upper or stationary member of the switch, while the lower end,  
90 bent at right-angles, occupies a position in the handle below block 13. The spring is so coiled that when the switch is turned to close the circuit additional tension will be given to it, but the tension will not be sufficient to  
95 move the switch spring or arm to break the circuit when the depressions 12 rest over the ends of the contact studs. When, however, the switch is partially turned to break the circuit, the force of the spring will be sufficient  
100 to throw it suddenly forward, the grasp of the fingers allowing this sudden, forward movement.

By my improvement I make it possible to



support a switch directly on an ordinary tubular bracket or fixture arm, all that is necessary to do being to make an opening in a side of the tube, avoiding the necessity of casting or otherwise forming sections of special design to receive or support the fixture switch. The opening in the tubular arm can be much smaller than would be required if the switch extended into it in the manner heretofore practiced. By placing the switch on the tubular arm, the lamp socket may be a simple one without a switch, and the switch is in a position where it will not be interfered with by the lamp shade, if one be used.

It will be evident that the form of the strap, and of some of the other parts of the switch, can be varied considerably, and other means for securing the switch to the tube can be used without departing from my invention.

What I claim is—

1. The combination of a tubular fixture arm adapted to support an electric lamp or device and to contain electric conductors and having a hole through which conductors in the tube may pass to the outside thereof, an insulating body wholly exterior to such tubular arm but secured to it adjacent to the hole therein, terminals to which the wires leading from the tubular arm may be connected, and a movable switch device for connecting the same, carried by said insulating body, substantially as described.

2. The combination of a tube, such as a bracket or chandelier arm, a body secured thereto wholly on the outside and carrying switch terminals or contacts, a switch device for making and breaking connection between them, and means for inclosing said contacts, and the tube where the switch is connected substantially as described.

3. The combination of a tube, such as a bracket or chandelier arm, having an opening in one side thereof, an interrupted circuit wire in the tube, the wire ends at the point where the wire is broken passing through the opening, a switch secured to the tube and comprising a strap surrounding the tube, an insulating plate or block supported by the strap, contacts carried thereby to which the circuit wire is connected, and a movable switch mem-

ber for making and breaking the circuit, substantially as described.

4. The combination, in a switch, of a strap having beads or flanges at its ends, an insulating plate or block carried by said strap, contacts carried thereby, and a movable switch member engaging said beads or flanges and adapted to turn thereon, substantially as described.

5. The combination, in a switch, of a strap having beads or flanges at its ends, an insulating plate or block carried by said strap, contacts carried thereby, a movable switch member engaging said beads or flanges and adapted to turn thereon, and a spring connecting said parts and so mounted as to be given increased tension when the switch is moved to close the circuit, substantially as described.

6. The combination, in a switch, of two switch members having suitable contacts, one member being fixed and one being movable, one member being provided with a flange or similar device, the other member engaging the same, the movable member being in two sections, and means for securing said sections together, whereby the movable member can be clamped onto the other member, substantially as described.

7. The combination of two switch members having suitable contacts and secured to each other by means of engaging flanges or similar devices, one member comprising an insulating block carrying the switch contact spring or arm, two sheet metal or similar sections forming a cover, and means for securing said sections and block together, substantially as described.

8. The combination of a strap 6, the insulating block 8 carried thereby and having contacts, the movable switch member comprising sections 15, 16, block 13 and spring or arm 11, substantially as described.

This specification signed and witnessed this 1st day of April, 1892.

JOSEPH HUTCHINSON.

Witnesses:

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