(No Model.)

C. A. PFLUGER.

ELECTRIC SWITCH.

No. 440,720. Patented Nov. 18, 1890.

Fig. 1.

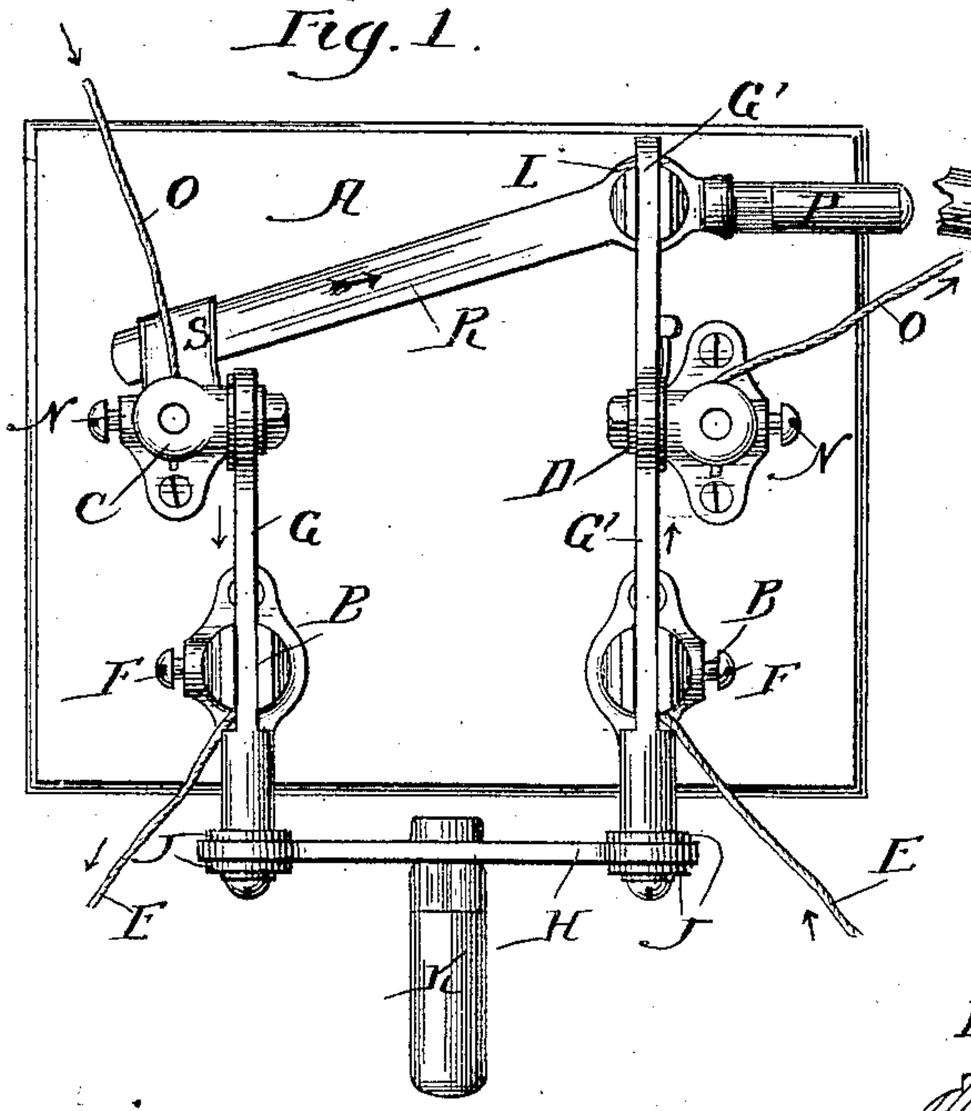


Fig. 2.

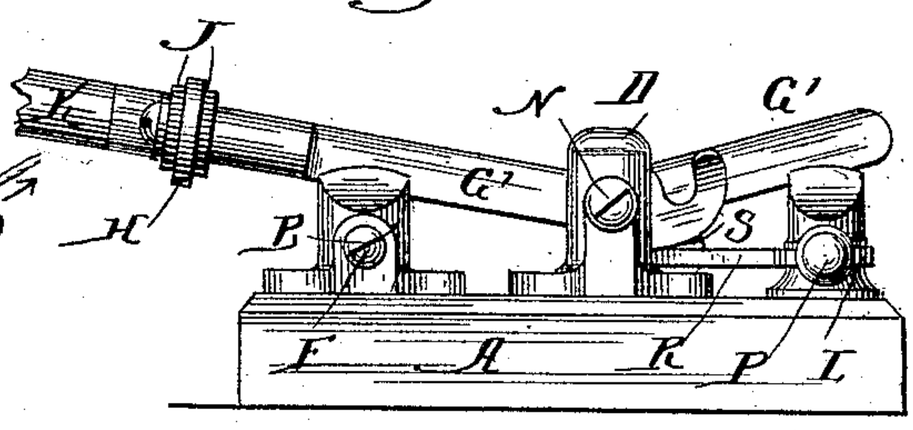


Fig. 3.

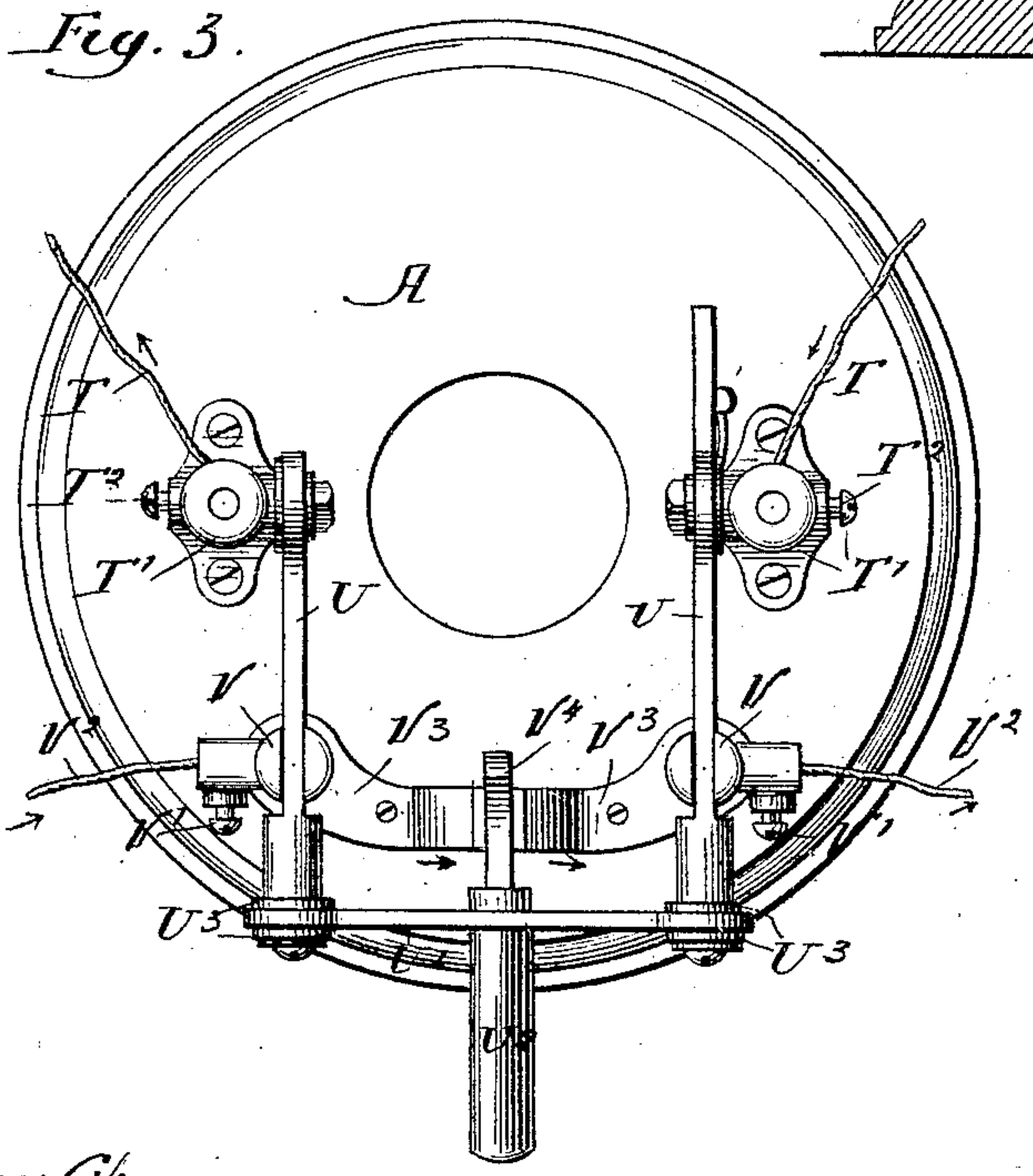
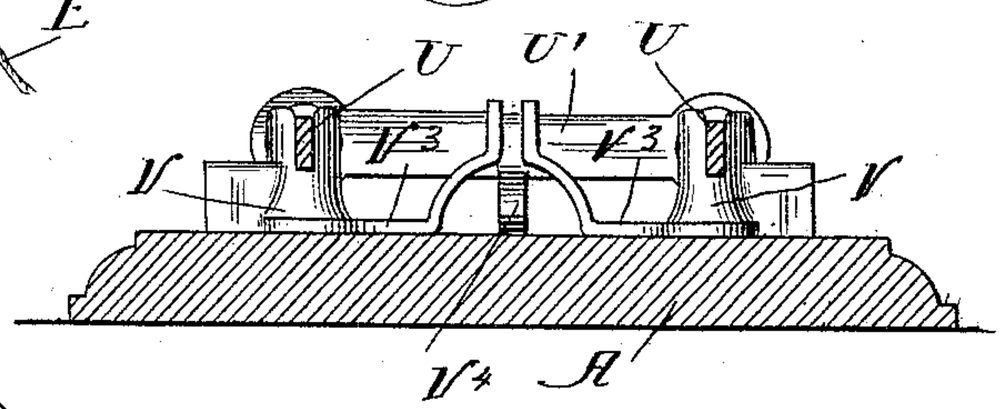


Fig. 4.



Witnesses:

Davda J. Johnson.

Jean Elliott.

Inventor:

Chas. A. Pfluger

By Francis W. Parker

Attorney.

UNITED STATES PATENT OFFICE.

CHARLES A. PFLUGER, OF CHICAGO, ILLINOIS, ASSIGNOR TO DAVID P. PERRY, OF SAME PLACE.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 440,720, dated November 18, 1890.

Application filed January 15, 1890. Serial No. 336,965. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. PFLUGER, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Improvement in Electric Switches, of which the following is a full, clear, and exact specification.

My invention relates to switches for electric lights and the like, and has for its object to provide a cheap, simple, and convenient switch. This object I accomplish by means of the mechanism substantially as illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of one form of my device; Fig. 2, a side view of the same. Fig. 3 is a plan view of the modification; Fig. 4, a cross-section of the same.

Like parts are indicated by the same letter in all the figures.

A is a bed-plate on which are secured the standards B B. Each of the standards B B is hollowed out, so as to receive the conductors E E from an electric lamp. F F are binding-screws to firmly secure these conductors to the standards, each of which standards is slotted above to receive one of the pivoted arms G G′, which are connected together at their outer extremity by the cross-bar H, which is insulated from them by the insulation J.

K is the handle on the cross-bar H. The arms G and G′ are pivoted to the standards D C, respectively, and the arm G′ projects to engage the slot in the standard L.

N N are the binding-screws, whereby the line-conductors O O are connected, respectively, with the standards C D.

P is a handle, which, together with the bar R, forms a lever pivoted on the standard L, and which engages the contact-plate S on the standard C. The arm G′ is in the shape of an elbow-lever pivoted to the standard D.

In the modification, Fig. 3, the parts are to a great degree the same. The conductors T T lead to the lamp from the standards T′ T′, which carry the binding-screws T^2 T^2, and have pivoted to them the arms U U, which are connected by the cross-piece U′, having the handle U^2, and insulated therefrom by the insulation U^3 U^3.

V V are standards having the set-screws V′ V′, and from these standards lead the line-conductors V^2. Each of them is connected with a piece V^3 V^3, shaped as shown and placed so as to leave a space between them, through which passes the metallic projection V^4 on the handle U^2. These parts can of course be changed to a considerable degree without departing from the spirit of my invention. When the handle U^2 is raised so as to take the arms U U out of contact with the parts V V, the lamp is out of circuit.

The use and operation of my invention are as follows:

Referring to the device shown in Figs. 1 and 2, the use and operation are substantially as follows: The parts being in the position shown in Fig. 1, it will be seen that a circuit may be made embracing the conductor O, standard C, contact-plate S, bar R, standard L, lever G′, standard D, and conductor O, so long as the bar R is in the position shown and the lever G′ is in contact with the standard L. If now the bar R be disengaged from the contact-plate S, such made line-circuit will be broken and the line can be adjusted upon either side of the switch. The bar O can be thrown backward on its pivotal connection at L by means of the handle P. If now it is desired to pass the current through the lamp instead of onto the line, the handle K will be depressed and the extremity of the lever G′ be disengaged from the standard L and the two arms G and G′ be brought into engagement with the standards B B. The circuit will now be as follows: Conductor O, standard C, arm G, standard B, conductor E through the lamp or other translating device, back on conductor E to standard B, along lever G′, standard D, and thence out on the line-wire O, thus passing the current through the translating device. By examining Fig. 2 it will be seen that the parts are so related that in moving the lever G′, as is necessary in these manipulations, it engages its standard B, as does also the arm G, before the extremity of the lever G′ is released from the standard L. Thus no break in the circuit is made, and hence sparking is obviated.

In the modification the operation is substantially the same, the lamp being connected,

however, with the conductors T T and the line-circuit direct being made through the conductor V^2, standards V V, and strips V^3 V^3. The arms U U are brought into engagement with the standards V V, so that the circuit will never open and sparking is avoided. The arrangement of the parts is also convenient as permitting the switch to be operated by moving the handle away from the plane in which lie the major portions of the switch.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

1. In an electric switch, the combination of a main circuit with a local circuit, a moving portion adapted to alternately close the main and local circuits, the said moving portion being composed of two vertically-tilting levers insulated from each other and one being longer than the other, the said levers being pivoted the longer midway of its length and the shorter one in the same horizontal plane, but at its extremity, the said pivotal points being connected to the main-circuit binding-posts and the same levers adapted to engage contact-points connected with local-circuit binding-posts.

2. In an electric switch, the combination of a main circuit with a local circuit, a moving portion composed of two vertically-tilting levers, one longer than the other, the longer lever having a free end on the opposite side of the pivot from the contact-point connected with the local binding-post, the said free end being adapted to engage a contact-point to close the main circuit and adapted to open said main circuit when the other end, together with the shorter lever, closes the local circuit, but so arranged that before one contact-point is left the other is engaged.

CHARLES A. PFLUGER.

Witnesses:
DAVIDA J. JOHNSON,
CELESTE P. CHAPMAN.