

(No Model.)

G. T. EYANSON.
ELECTRIC SWITCH.

No. 542,848.

Patented July 16, 1895.

Fig. 1.

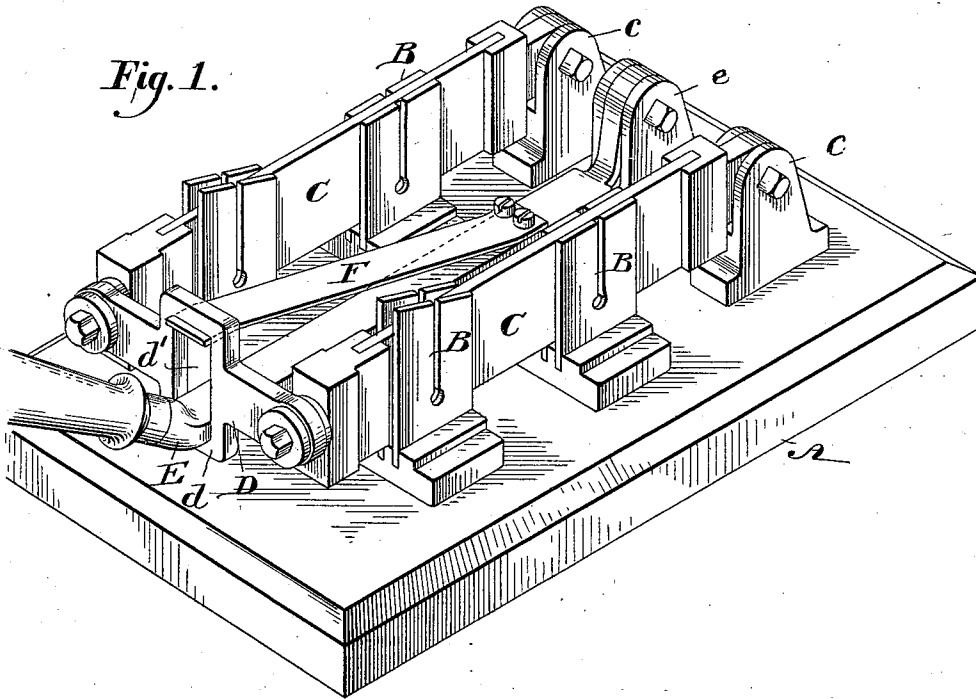
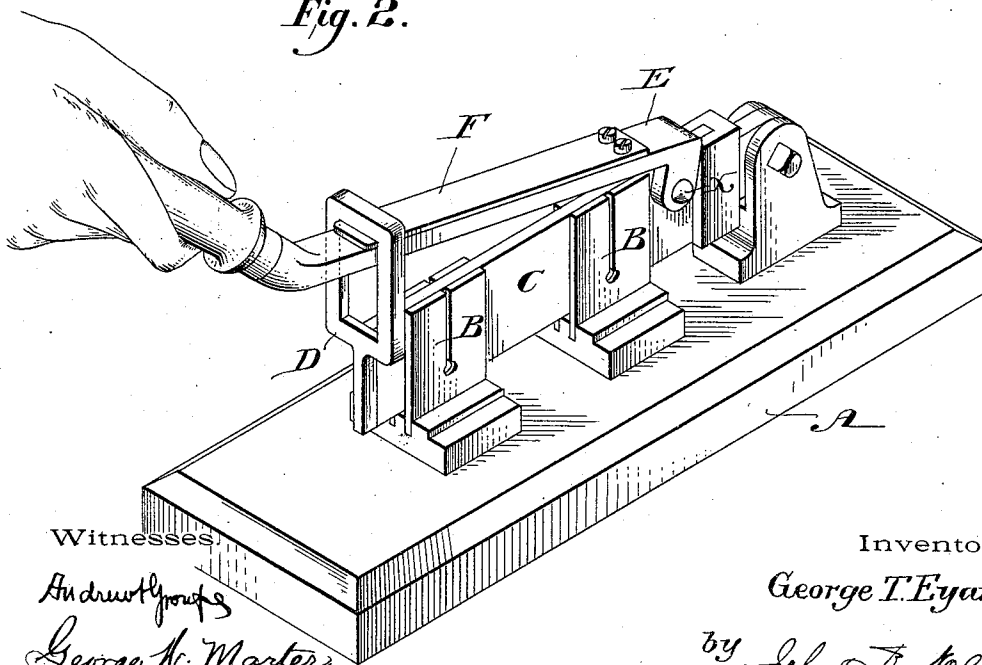


Fig. 2.



Witnesses.

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GEORGE T. EYANSON, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 542,848, dated July 16, 1895.

Application filed May 10, 1895. Serial No. 548,800. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. EYANSON, a citizen of the United States, residing at the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to electric switches of the class termed "quick-break switches," by which a sharp breaking of the circuit is effected with the view of reducing to a minimum the sparking incident to the operation of separating the contacts, my aim herein being to improve the construction of such switches, to the end that a more direct and efficient operation shall be had, as will hereinafter appear.

In the annexed drawings, Figure 1 is a perspective view of a double-pole switch embodying my improvements, and Fig. 2 is a similar view of a single-pole switch.

Referring to Fig. 1, A marks the base of a double-pole switch; B, the spring-clips thereon, arranged in pairs to constitute the terminals of the circuit-wires; and C, the pivoted blades adapted to be engaged with and disengaged from said clips for the purpose of making and breaking the circuits, respectively. These blades are pivoted at their rear ends to brackets or lugs *c*, mounted on the base, the opposite ends of said blades being extended forwardly of the clips and being connected by means of a yoke D, whereby the two blades may be raised and lowered as a unit for the purpose of controlling the respective circuits simultaneously. This yoke comprises a transverse bar provided with an expanded middle portion *d*, in which is formed an elongated slot or opening *d'*. Extending through this slot or opening is the forward or free end of an arm E, to which a handle is secured, the rear end of the arm being pivoted to a bracket *e*, mounted on the base intermediate the brackets *c*, as shown, whereby the act of raising or lowering said arm will effect the operation of the connected blades,

a dwell occurring during the play of the arm in the slot or opening, for a purpose hereinafter explained. Secured to the arm E forward of its fulcrum is one end of a flat spring F, the forward or free end thereof extending through the slot in the yoke-bar and bearing normally against the upper edge of the slot in a manner to maintain the arm against the lower edge of the slot. Hence, assuming the arm to be depressed and the blades in consequence engaged with the respective clips to complete the circuits, if the handle be grasped and forcibly raised, the spring will be pressed under considerable tension while the arm is traversing the slot, and in the continued upward stroke of the arm the yoke and there- with the blades will be raised. When the blades approach the mouths of the clips, the tension of the compressed spring, overcoming the grasp of the clips upon the blades, will suddenly project the yoke and the connected blades upward, and thereby effect a quick breaking of the circuits.

In Fig. 2 the invention is shown as applied to a single-pole switch—that is, a construction wherein a single switch-blade is employed. In this form the operating-arm E is pivoted to the blade, as at *x*, while the yoke-piece D, through which the arm extends, is an open rectangular frame secured to the forward end of the blade. One end of the spring is secured to the arm similarly to the spring in the first-described construction, while the other end of the spring extends into the yoke for a like purpose.

I claim as my invention—

1. In a switch, the combination of circuit terminals, a blade adapted to be engaged with and disengaged from the same, a yoke or open frame piece connected with said blade, a pivoted operating arm extending freely through said yoke or frame piece so as to have vertical play therein, and a spring co-acting with said arm and yoke or frame piece, substantially as described.

2. In a switch, the combination of circuit terminals, a pivoted connecting blade therefor, a yoke or open frame piece on the free end of said blade, a pivoted operating arm

extending freely through said yoke or frame
piece, a flat spring one end of which is secured
to the arm and the other end thereof is ex-
tended into engagement with the yoke or
5 frame piece, substantially as described.

3. In a switch, the combination of two pairs
of circuit terminals, pivoted connecting
blades therefor, an open yoke bar connecting
the blades, an intermediate operating arm
10 extending through said yoke bar, and a flat

spring connected with the arm and engaged
with the yoke bar, substantially as described.

In testimony whereof I have hereunto
affixed my signature in the presence of two
subscribing witnesses.

GEORGE T. EYANSON.

Witnesses:

JOHN R. NOLAN,
IRA S. HELLER.