(No Model.)

# L. D. CASTOR.

## ELECTRIC SWITCH.

No. 457,301. Patented Aug. 4, 1891.

Fig. 1.

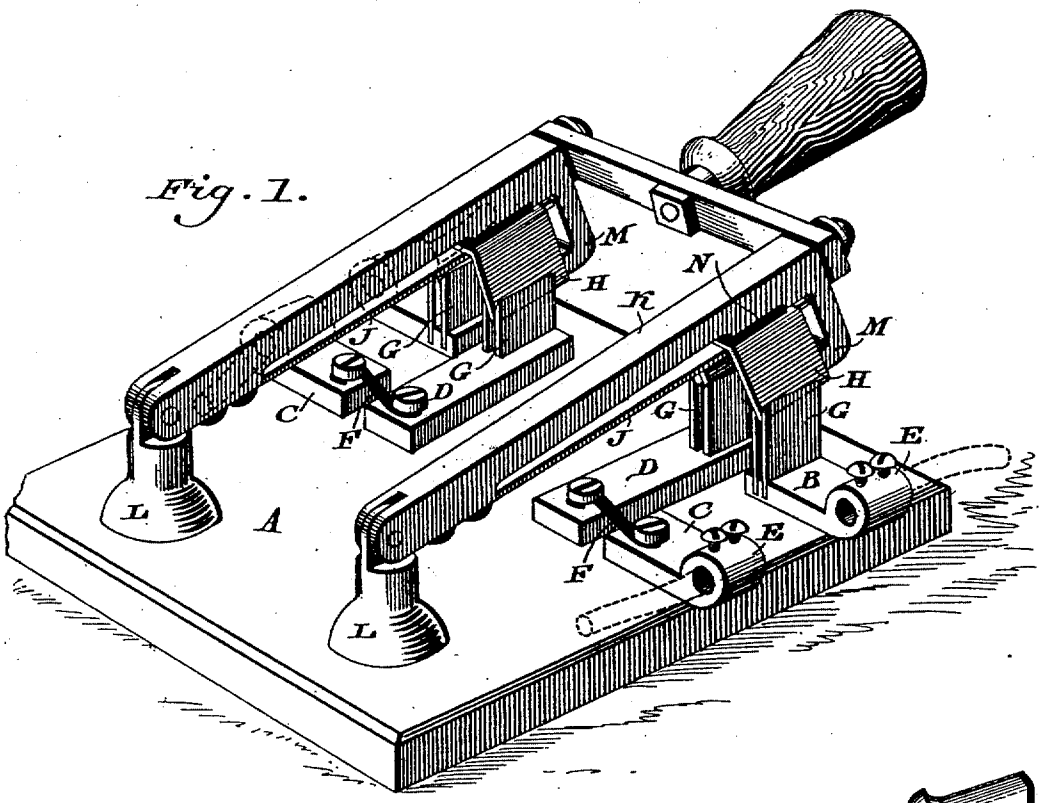
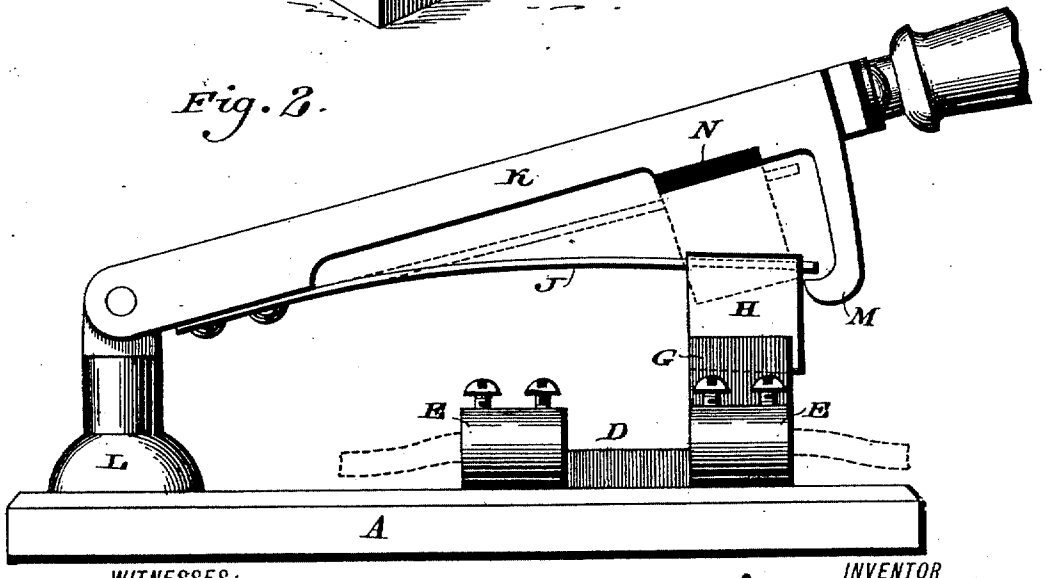



Fig. 2.




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# UNITED STATES PATENT OFFICE.

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## ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 457,301, dated August 4, 1891.

Application filed May 20, 1891. Serial No. 393,397. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS D. CASTOR, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Electric Switches, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of an electric switch constructed of two pairs of metal clips, each pair forming a circuit-terminal, and an inverted-U-shaped blade, whose ends are adapted to enter between said clips, respectively, completing the circuit through a fusible connection on the end of one of the terminals, said blade being carried by a spring which is attached at one end to an operating-lever, and adapted to be engaged at the opposite end by a lip or projection on said lever, whereby the circuit may be broken, as will be hereinafter set forth.

Figure 1 represents a perspective view of an electric switch embodying my invention. Fig. 2 represents a side elevation thereof.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A designates a base, to which are secured the plates B C D, the plates B being formed with eyes E for attachment of the circuit-wires, and the plates C D being connected by a fusible wire F. Rising from each of the plates B D is a pair of clips G, forming the circuit-terminals, and with the same is adapted to engage the inverted-U-shaped blade H, each of whose limbs enter, respectively, the members of a pair of the clips G, as most clearly shown in Fig. 1.

J designates a spring, formed of a flat plate of steel or other suitable material, one end of which carries the blade H, and the other end is secured to the lever K near the pivotal end thereof, said lever being mounted on the standard L, which rises from the base A.

Depending from the lever K, and formed or otherwise secured thereto at the end opposite to the axis thereof, is a shoulder, lip, or projection M, which is so disposed as to occupy a position beneath the free end of the spring J, or end which carries the blade. Interposed between the top of the blade and the under side of the lever is a cushion N, which receives the impact of the blade when thrown up, thus preventing noise and battering of parts.

The operation is as follows: When the parts are in the position shown in Fig. 1, the circuit is closed or complete, owing to the projection of of the limbs of the blade H into the clips G and contact therewith. When it is desired to break the circuit, the handle of the lever K is raised, whereby the lip M is advanced toward the end of the spring J, thus raising the latter and imparting tension thereto, as the blade, owing to its friction with the clips, resists the rising motion. The resistance of the blade is, however, overcome as power on the lever continues to be exerted, whereby as the tension of the spring increases the blade quickly or suddenly leaves the clips, and thus the circuit is broken, the ascent of the lever having been finally assisted by the action of the spring. It is evident that the lever may be lowered, whereby the limbs of the blade enter between the clips, thus again closing or completing the circuit.

Owing to the fusible connection F, should the current become excessive, said connection will be destroyed or "blown out," thus breaking the circuit.

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

1. In an electric switch, the combination of two pairs of metal clips, each pair forming a circuit-terminal and an inverted-U-shaped blade whose ends are adapted to enter said clips, respectively, completing an electric circuit through a fusible connection on the supporting-plate of one terminal, and the holder of one of the circuit-wires, said blade being connected with a spring which is secured at one end to an operating-lever, and adapted at the other end to be engaged by a shoulder on said lever, substantially as described.

2. In an electric switch, a flat spring or spring-plate carrying a blade of inverted-U shape and secured at one end to a lever, the latter being provided with a depending lip which is adapted to engage with the free end of said spring, thus creating tension on the spring and raising the same from clips with

which the blade contacts, thus breaking the circuit, substantially as described.

3. In an electric switch, a lever mounted at one end on a suitable base, a flat spring connected with said lever near the axis thereof, and carrying at the other end an inverted-U-shaped blade, and clips on the base with which said blade engages, thus closing the electric circuit, said lever having a depending lip which is adapted to engage with the free end of the spring after being partially raised, thus creating tension on the spring and causing the elevation of the blade, and consequently the quick breaking of the circuit, substantially as described.

4. An electric switch having a spring, one end of which is connected with a lever, and the other end carries a blade and is adapted to be engaged by a lip or projection on said lever, in combination with a cushion interposed between said blade and lever, substantially as described.

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