

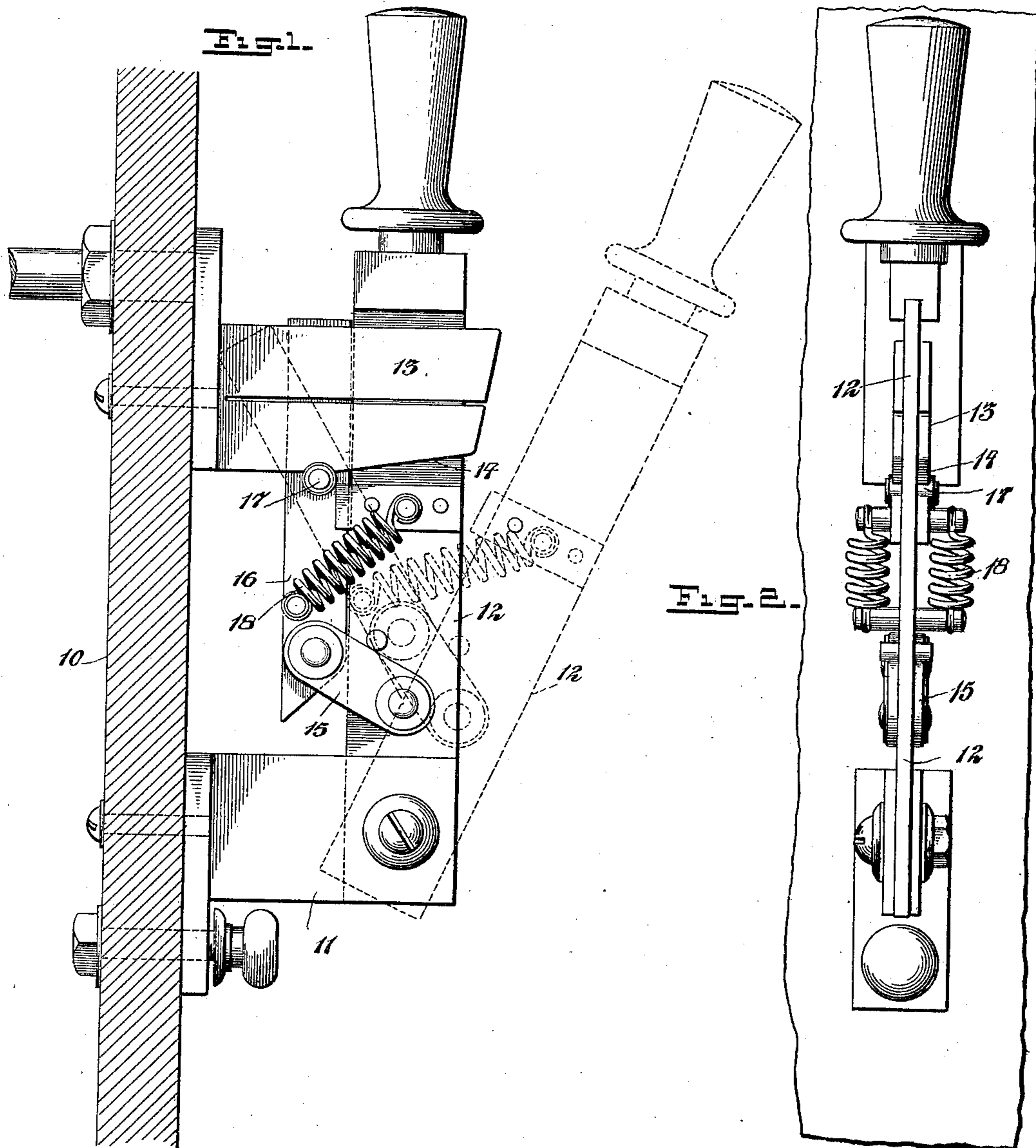
No. 693,636.

Patented Feb. 18, 1902.

H. P. BALL & L. WINTNER.
ELECTRIC SWITCH.

(Application filed Mar. 5, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY PRICE BALL AND LOUIS WINTNER, OF NEW YORK, N. Y., ASSIGNORS
TO GENERAL INCANDESCENT ARC LIGHT COMPANY, OF NEW YORK, A
CORPORATION.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 693,636, dated February 18, 1902.

Application filed March 5, 1901. Serial No. 49,742. (No model.)

To all whom it may concern:

Be it known that we, HENRY PRICE BALL and LOUIS WINTNER, citizens of the United States, residing at New York city, county and State of New York, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

Our invention combines the features of a knife and a quick-break snap-switch.

The object of our invention is to construct a switch having the general characteristics of a knife-switch and in which the contact between the knife-blade and the contact-clips will be positive and not depend upon the friction between the parts to hold the switch in engagement.

The accompanying drawings will serve to illustrate our invention, in which—

Figure 1 is a side elevation showing the switch closed in full lines and in a position to open in dotted lines. Fig. 2 is a front elevation.

In the drawings, 10 represents a supporting-plate or switchboard, made, as is usual, of insulating material; 11, plates projecting from the switchboard on which the knife-blade 12 is pivotally mounted; 13, spring-clip plates projecting from the switchboard.

The construction, so far as described, is that of an ordinary knife-switch.

It will be observed that the under surfaces of the spring-clip plates are cut away to form a downward-inclined plane 14 from without inward.

Pivoted to the knife-blade at its lower end is a link 15, and connected to this link is a second knife-blade 16. Pivotaly mounted on opposite sides of the knife-blade 16 are the rollers 17, adapted to engage with the under side of the spring-clip plates 13. The second knife-blade 16 is connected to the first knife-blade 12 by means of a spring 18.

The operation of our improved switch is as follows: When the switch is open, the knife-blades 12 and 16 are in contact through the

influence of the spring 18—i. e., they occupy the position shown in the full lines, Fig. 1. As these blades are moved toward the spring-clip plates 13 the rollers 17 take under the inclined plane 14 of the spring-clip plates 13 and through the influence of the spring 18 are held firmly in contact with such plates. When the switch is opened, the knife-blade 12 is moved outward, as shown in the dotted lines, and the knife-blade 16 and connecting-link 15 also assume the position shown in the dotted lines, with the spring 18 under tension. It will thus be seen that the knife-blade 12 may be moved through a definite arc and be separated from the spring-clip plates 13 without breaking the circuit. When the parts have reached the position shown in the dotted lines, a further movement of the knife-blade 12 will cause the knife-blade 16 to snap free of the spring-clip plates 13 and break the circuit.

Having thus described our invention, we claim—

1. In an electric switch, the combination with the spring-clip plates, of a pivoted knife-blade, a link pivoted to said knife-blade, a second knife-blade pivoted to said link, and a spring between the first and second knife-blades.

2. In an electric switch, the combination with spring-clip plates having an inclined plane formed on their lower surface, of a pivoted knife-blade, a second knife-blade pivotally connected to the first knife-blade, pivoted rollers on said second knife-blade adapted to engage said inclined planes of the said spring-clip plates, and a spring device between said first and second knife-blades.

In testimony whereof we affix our signatures in the presence of two witnesses.

HENRY PRICE BALL,
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Witnesses:

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