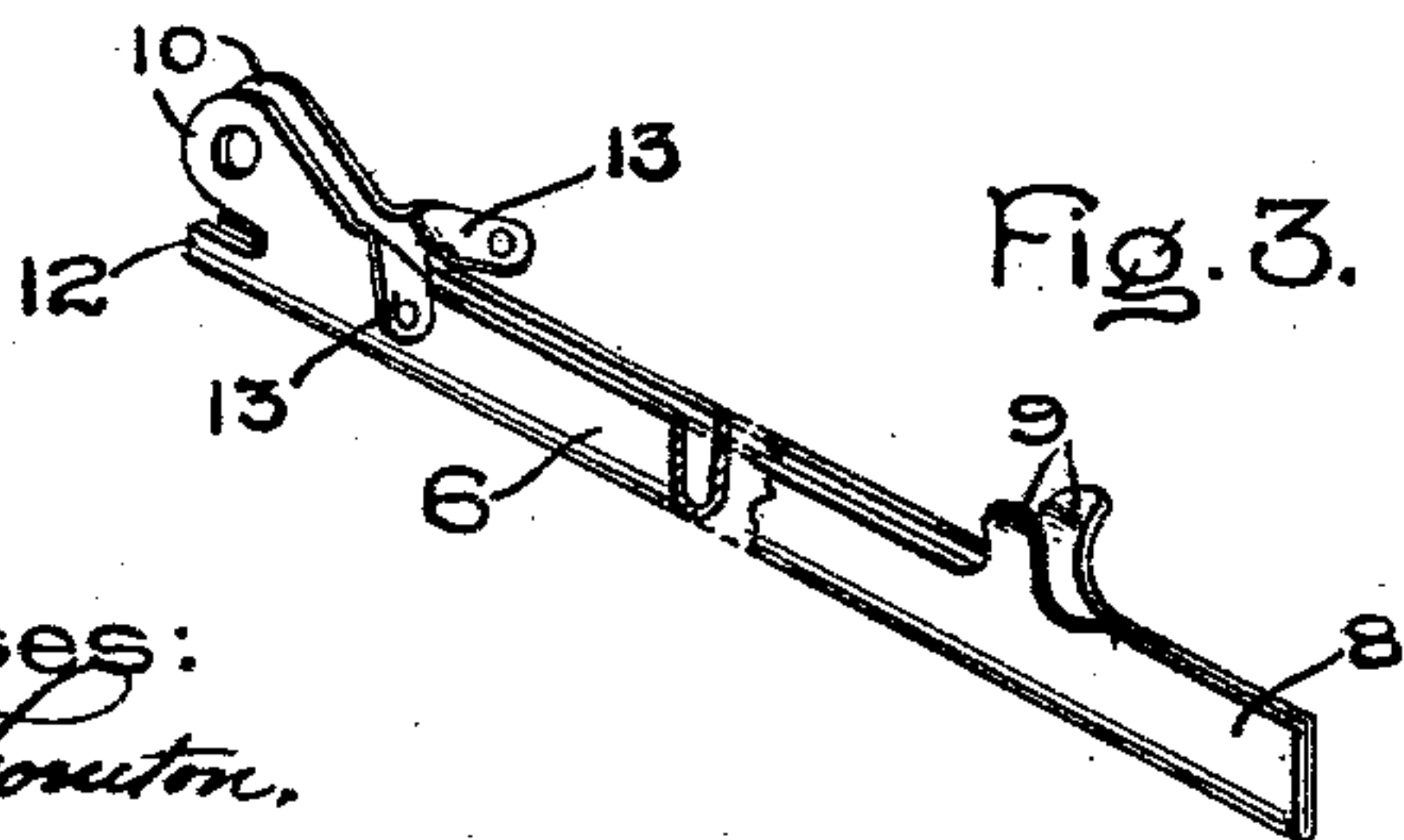
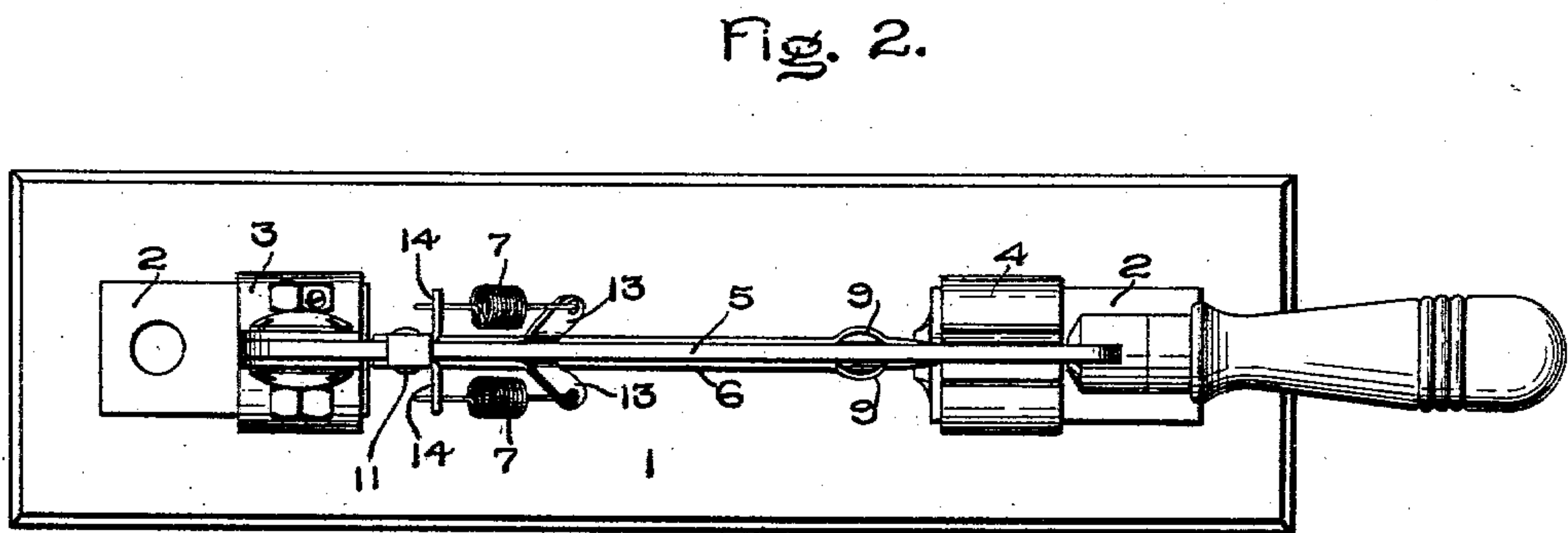
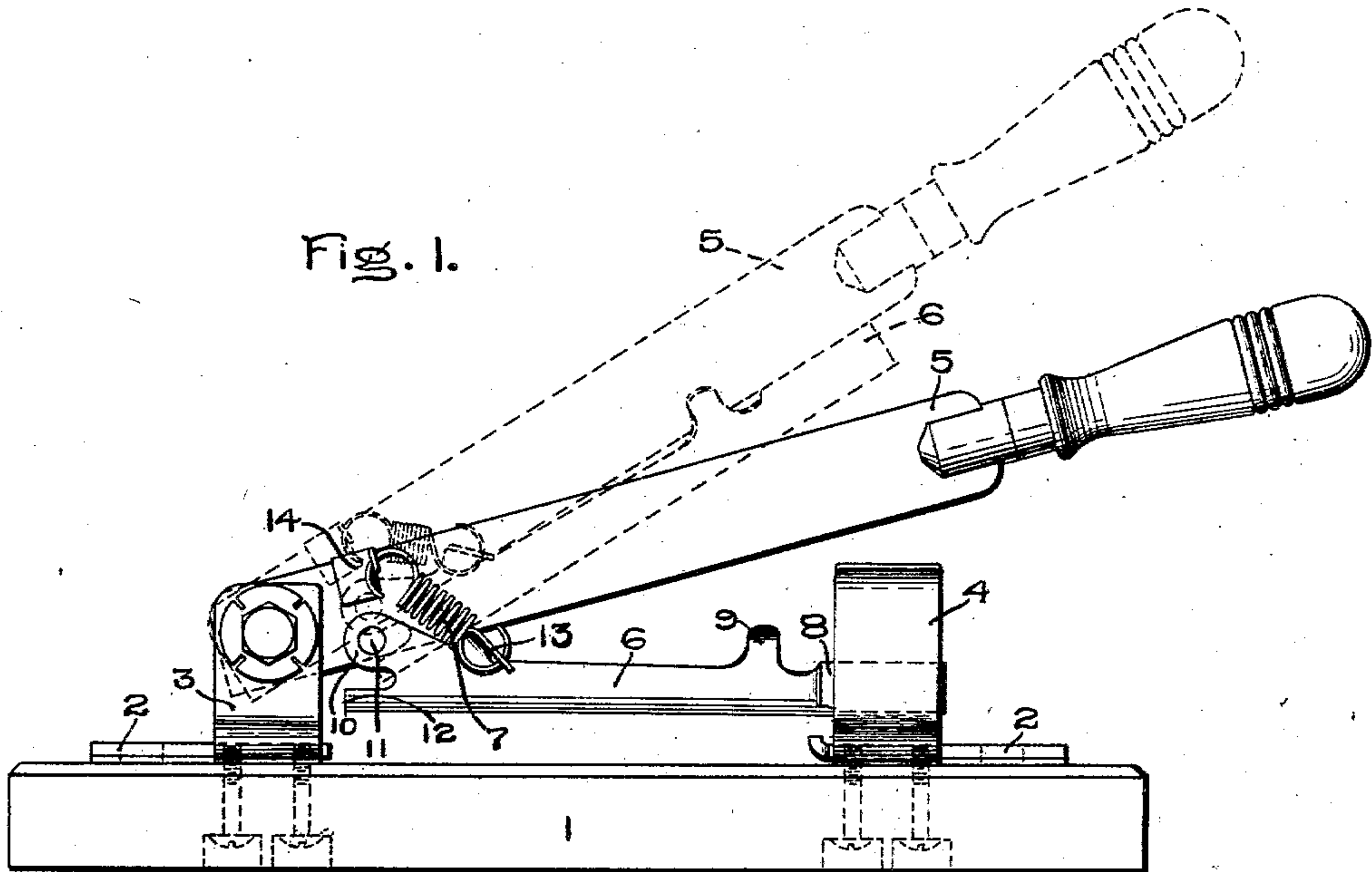


No. 744,115.

PATENTED NOV. 17, 1903.

H. R. SARGENT.  
QUICK BREAK SWITCH.  
APPLICATION FILED APR. 18, 1902.

NO MODEL.



Witnesses:  
*George F. Houston,*  
*Helen Crawford*

Inventor:  
Howard R. Sargent,  
by *Amos S. Sargent*  
Att'y.



# UNITED STATES PATENT OFFICE.

HOWARD R. SARGENT, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## QUICK-BREAK SWITCH.

SPECIFICATION forming part of Letters Patent No. 744,115, dated November 17, 1903.

Application filed April 18, 1902. Serial No. 103,531. (No model.)

*To all whom it may concern:*

Be it known that I, HOWARD R. SARGENT, a citizen of the United States, residing at Schenectady, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Quick-Break Switches, of which the following is a specification.

This invention relates to switches for electric circuits, and especially to those which open with a quick-snap action to instantly break any arc that may form when the switch-blade separates from the contact-clip.

The invention consists in certain improvements in the construction of such switches which simplify and cheapen their manufacture.

It has been proposed heretofore to make a quick-break switch in which the main blade has hinged to it or near it an auxiliary blade, the two being independently movable within certain limits, but so connected that after the main blade has been opened to a certain angle it lifts the auxiliary blade out of its clip, and a spring which has been put under tension by the opening of the main blade snaps the auxiliary blade wide open. My invention aims to simplify inventions of this kind with respect to the construction and attachment of the auxiliary blade.

In the accompanying drawings, Figure 1 is a side elevation of a switch of the class described embodying my improvements. Fig. 2 is a top plan view of the same, and Fig. 3 is a perspective view of my improved auxiliary blade.

The switch is mounted on the usual base 1, provided with line-terminals 2, to which are connected the contact-clips 3 4. The main switch-blade 5 is hinged to the clip 3 and closes into the other clip 4 in the usual manner. An auxiliary blade 6 is hinged at one end to the main blade near the clip 3, and its other end is adapted to enter the other clip 4 under the main blade. One or more helical springs 7 connect the main and auxiliary blades and are put under tension when the main blade is opened. As soon as the main blade rises to such an angle that it strikes the rear end of the auxiliary blade it forcibly

lifts the latter out of the clip 4 and the springs quickly snap the auxiliary blade open.

I construct the auxiliary blade from a single punching of sheet metal, preferably copper, bent into U shape, the sides of the blade standing apart, as shown in Fig. 3, except at one end, where they are closed together to form a contact-blade 8 to enter the clip 4. Near this end are two slightly-flaring guide-lugs 9, which straddle the lower edge of the main blade and keep the two blades in line when they are closed together. At the other end of the blade 6 are two ears 10, which fit upon opposite sides of the main blade and are perforated to receive a hinge-pin 11, passing through them and the main blade. Below these ears the rear end 12 of the blade 6 extends to the right point to be engaged by the main blade when it is opened to the proper angle to insure the quick opening of the blade 6. Near the ears 10 are two flaring arms 13, to which the ends of two helical springs 7 are attached, their other ends being hooked into lugs 14 on the main blade.

My invention provides a simple and cheap construction of the auxiliary blade for this class of switches, involving but few parts and a minimum of material well disposed to perform the work required.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a quick-break switch, an auxiliary blade to be hinged to the main blade, consisting of a single piece of metal having integral ears fitting the main blade and integral guide-lugs to engage therewith.

2. In a quick-break switch, an auxiliary blade to be hinged to the main blade, consisting of a U-shaped piece of sheet metal whose upper edges have perforated ears at one end.

3. In a quick-break switch, an auxiliary blade to be hinged to the main blade, consisting of a U-shaped piece of sheet metal whose upper edges have perforated ears at one end and slightly-flaring guide-lugs at the other end.

4. In a quick-break switch, an auxiliary blade to be hinged to the main blade, consisting of a U-shaped piece of sheet metal whose upper edges have perforated ears at one end,

flaring arms near said ears, and guide-lugs near the other end.

5 In a quick-break switch, an auxiliary blade to be hinged to the main blade, consisting of a sheet-metal punching bent into U shape, with its sides standing apart except at one end, where they are closed together to form a contact-blade.

10 6. An auxiliary blade for a quick-break switch, consisting of the U-shaped piece of

sheet metal 6, having a closed end 8, guide-lugs 9, perforated ears 10, extended end 12, and flaring arms 13.

In witness whereof I have hereunto set my hand this 16th day of April, 1902.

HOWARD R. SARGENT.

Witnesses:

BENJAMIN B. HULL,  
HELEN ORFORD.