

(No Model.)
B. McCABE, C. R. SWAIN & J. T. SUTTON.
SWITCH FOR GROUNDING TELEPHONE OR TELEGRAPH LINES.
No. 263,554. Patented Aug. 29, 1882.

SWITCH FOR GROUNDING TELEPHONE OR TELEGRAPH LINES.

Patented Aug. 29, 1882.

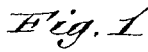


Fig. 2

C. Neveu
C. Sedgwick

B. McCabe
C. R. Swain
J. T. Sutton
Munn &c.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

BENJAMIN McCABE, CHARLES R. SWAIN, AND JAMES T. SUTTON, OF
PEEKSKILL, NEW YORK.

SWITCH FOR GROUNDING TELEPHONE OR TELEGRAPH LINES.

SPECIFICATION forming part of Letters Patent No. 263,554, dated August 29, 1882.

Application filed May 27, 1882. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN McCABE, CHARLES R. SWAIN, and JAMES T. SUTTON, of Peekskill, in the county of Westchester and State of New York, have invented a new and useful Improvement in Switches for Grounding Telephone and Telegraph Wires, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a front elevation of our improvement. Fig. 2 is a sectional side elevation of the same, taken through the line *x x*, Fig. 1.

The object of this invention is to prevent telephone and telegraph instruments from being injured by electricity discharged from the clouds during thunder-storms.

The invention consists in a switch for grounding telephone and telegraph wires, constructed with a series of conductors and springs connected with the ground-wire, a series of conductors and springs connected with the instrument-wires, and a series of conductors attached to a sliding bar and connected with the line-wires, whereby the line-wires can be connected with the ground-wire or the instrument-wires, as set forth.

A represents a frame, of wood or other suitable material. The frame A is secured to the wall of a room or other suitable support, and to its lower bar is attached a bar, B, of copper or other conducting material, with which the ground-wire C is connected. With the bar B are connected the ends of as many strips or narrow plates D, of copper or other conducting material, as there are line-wires E entering the office. Each of the strips D is provided with a spring, F, of brass or other suitable material, so arranged as to press a strip, G, of copper, that may enter between the copper plate D and the spring F, down closely upon the said plate D, and thus make a true contact. The outer ends of the plates D and springs F are so formed as to guide the ends of the approaching strips G into the space between the said plates and springs. The line-wires E are attached to the middle parts of the strips G, and the said strips at their middle parts are attached to a bar, H, of wood or other suitable material, the ends of which slide in grooves in

the side bars of the frame A or in other suitable ways.

To the upper bar of the frame A are attached narrow copper plates or strips I and springs J, similar to the plates D and springs F, and similarly arranged. With each plate I and spring J is connected a wire, K, leading to a switch-board or telephone or telegraph instrument.

With this construction, when a storm occurs the bar H is moved downward, bringing the strips G into contact with the plates and springs D F, and connecting the line-wires E with the ground-wire C, so that the current will pass directly into the ground without passing through the instruments. When the storm has passed the bar H is moved upward, bringing the strips G into contact with the plates I and springs J, and connecting the line-wires E with the wires K, leading to the switch-board or instruments. The bar H can be moved by hand or by means of a rack-bar and pinion operated by a crank, or by a lever or other convenient means.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A switch for grounding telephone and telegraph wires, constructed substantially as herein shown and described, and consisting of the frame A, a series of conductors and springs, D F, connected with a ground-wire, and a series of conductors and springs, I J, connected with the instrument-wires, and the sliding bar H, provided with a series of conductors, G, connected with the line-wires, as set forth.

2. In a switch for grounding telephone and telegraph wires, the combination, with a series of conductors and springs, D F, connected with the ground-wire C, and a series of conductors and springs, I J, connected with the instrument-wires K, of a series of conductors, G, attached to a sliding bar, H, and connected with the line-wires E, substantially as herein shown and described, whereby the line-wires can be connected with the ground-wire or the instrument-wires, as set forth.

BENJAMIN McCABE.
CHARLES R. SWAIN.
JAS. T. SUTTON.

Witnesses:

ELBERT P. JAMES,
GEO. D. McCUTCHEEN.