No. 649,994. Patented May 22, 1900.

L. F. RITCHIE.

AUTOMATIC CIRCUIT CLOSING TELEGRAPH KEY.

(Application filed Oct. 12, 1897. Renewed Oct. 20, 1899.)

(No Model.)

FIG. 1.

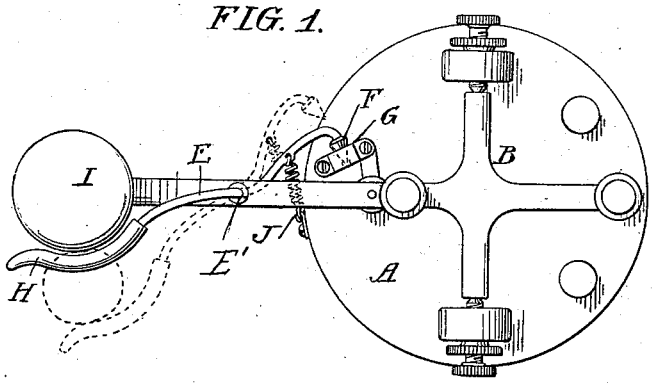
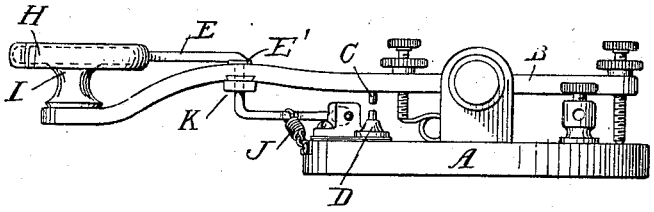


FIG. 2.



Witnesses:
F. DeWitt Goodwin
J. J. Williamson

Inventor:
Louis F. Ritchie
by Geo. H. Hoegate
Attorney

UNITED STATES PATENT OFFICE.

LOUIS F. RITCHIE, OF ELWYN, PENNSYLVANIA.

AUTOMATIC CIRCUIT-CLOSING TELEGRAPH-KEY.

SPECIFICATION forming part of Letters Patent No. 649,994, dated May 22, 1900.

Application filed October 12, 1897. Renewed October 20, 1899. Serial No. 734,268. (No model.

To all whom it may concern:

Be it known that I, LOUIS F. RITCHIE, a citizen of the United States, residing at Elwyn, in the county of Delaware and State of Pennsylvania, have invented a certain new and useful Improvement in Automatic Circuit-Closing Telegraph-Keys, of which the following is a specification.

My invention relates to a new and useful improvement in automatic circuit-closing attachments for telegraph-keys, and has for its object to provide an exceedingly simple, cheap, and effective device which will automatically and positively close the circuit when the key is not in use without any attention upon the part of the operator whatsoever, and yet when the operator grasps the finger knob or button the circuit will be opened and so remain as long as the button is thus grasped without any effort upon the part of the operator and without in any wise interfering with his proper manipulation of the key, thereby overcoming the great disadvantage which has heretofore existed in ordinary telegraph-keys in the liability of the operator at one station leaving the circuit open when his instrument is not in use, thus interfering with the use of the line.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of a telegraph-key having my improvement attached thereto; Fig. 2, a side elevation thereof.

In carrying out my invention as here embodied, A represents the base of an ordinary telegraph-key, while B is the lever, mounted thereon in any desirable manner, carrying, as usual, the striker-pin or contact-point C, adapted to close the circuit by coming in contact with the anvil or opposite contact-point D; but heretofore it has been customary to use a switch for opening the circuit when the key is to be used and closing said circuit when the key is inactive, thus leaving the line-wire in its normal condition, so that messages may be sent through each station. Now I substitute for this last-described mechanism an automatic circuit-closing lever E, which is pivoted to the key-lever, as indicated at E', by being bent to pass through the key-lever in such manner that its ends will swing horizontally when actuated, the inner end thereof being provided with a suitable contact-point F, adapted to close the circuit by entering the socket or clip G, which latter is in electrical connection with the anvil D.

The outer end of the lever E is provided with a finger-piece H, so curved as to normally lie in close proximity to the button I, and yet when the latter is to be grasped by the fingers of the operator the second finger will first have to pass between this finger-piece and the edge of the button, thereby forcing said finger-piece sidewise, as shown in dotted lines in Fig. 1, which action will carry the opposite end of this lever, with its contact-point, out of contact with the socket G and break the circuit, it being understood that when the contact-point F is in connection with the socket G the circuit is made through the inner portion of the lever E and the key B. A spring J is connected with the lever E in order to normally hold it in contact with the socket, so that when the button I is released the removal of the fingers of the operator will permit this spring to return the lever E to its normal position, which, as before stated, will close the circuit and prevent interruption upon the line-wire.

In applying my improvement to a telegraph-key the bearing for the lever E may be extended by a block K being attached to the under side of the key-lever, through which the lever E passes, as clearly shown in Fig. 2.

I am aware that a variety of constructions may be utilized for the formation of the lever. Therefore I do not wish to limit myself to these details.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination with a telegraph-key, a lever of a single piece of wire having one end bent to conform with the button and insulated, said lever being bent to pass through the key-lever from top to bottom whereby it is pivoted in place, a contact-point formed on

the inner end of the lever, a contact-socket secured on the base and electrically connected with the anvil, a block attached to the under side of the key-lever, and means for holding the contact-point of the lever normally in the socket, substantially as described.

2. In combination with a telegraph-key, a lever formed of a single piece of wire bent to produce two horizontal end sections connected by a central vertical section, said vertical section being run through an opening in the key-lever, the outer end of one of said horizontal sections being curved to conform to the contour of the key-button and the outer end of the other horizontal section being bent at right angles to the body portion, a contact on the base with which said right-angular end engages, a block on the vertical section and secured to the under side of the key-lever, and a spring secured to the wire lever and to the base drawing the right-angular end into the socket, as and for the purpose set forth.

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

LOUIS F. RITCHIE.

Witnesses:
S. S. WILLIAMSON,
R. M. PIERCE.