J. Z. & L. V. TUCKER.

TELEGRAPH KEY.

APPLICATION FILED DEC. 16, 1907.

900,238.

Patented Oct. 6, 1908.

FIG. 1

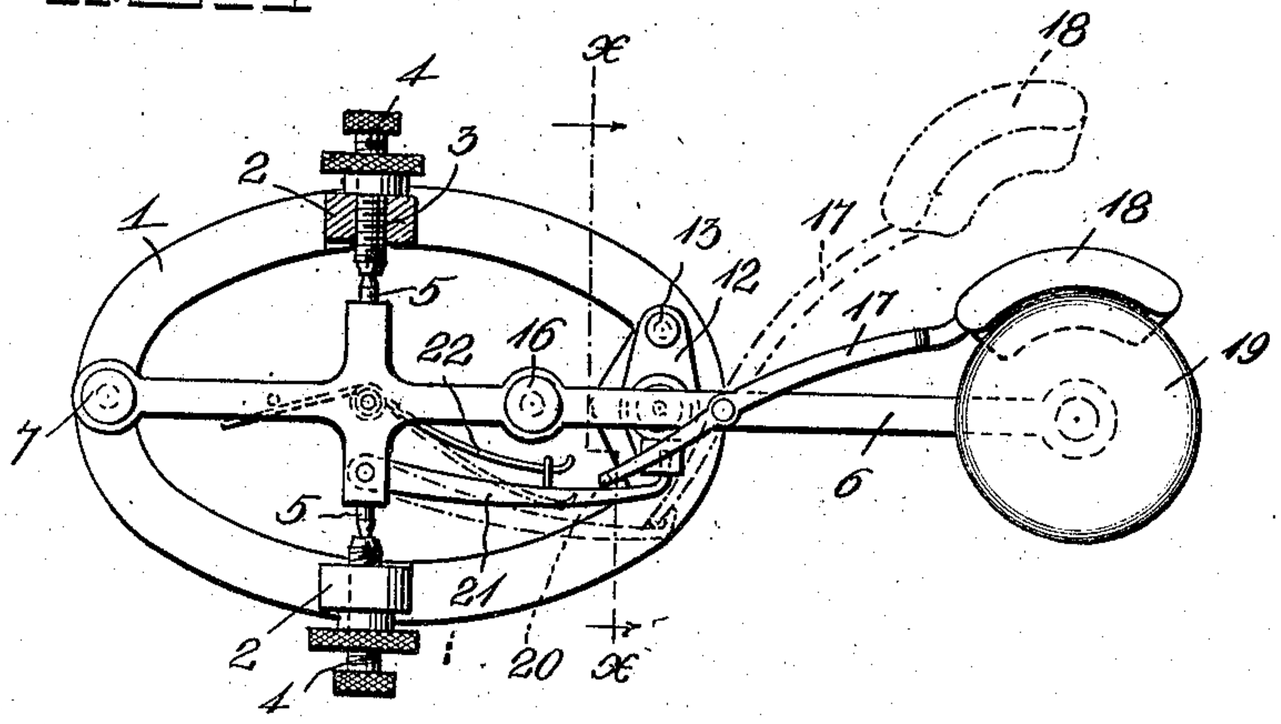



FIG. 2

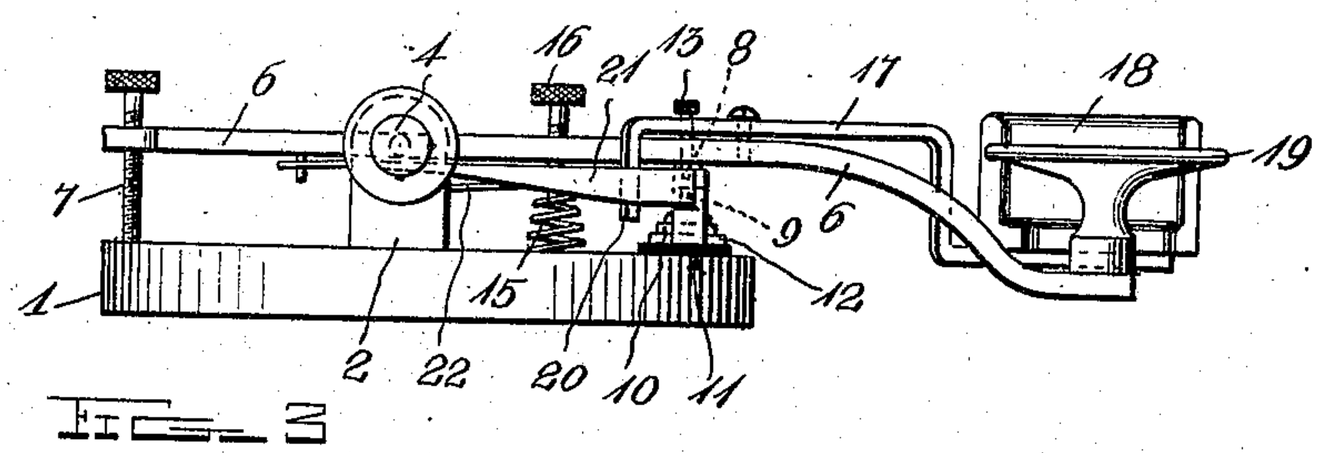



FIG. 3

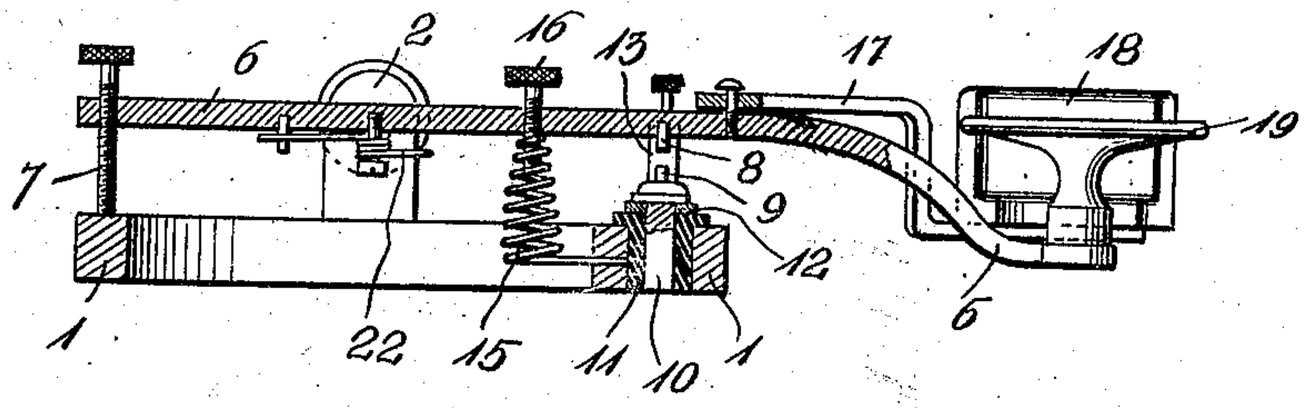
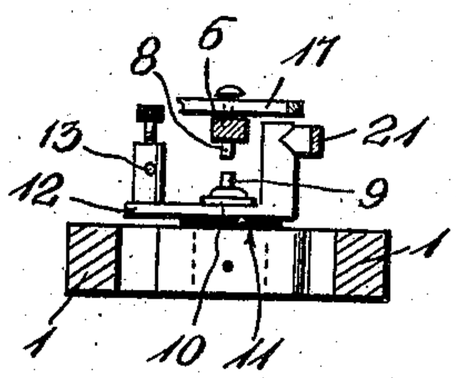



FIG. 4




Witnesses

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# UNITED STATES PATENT OFFICE.

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## TELEGRAPH-KEY.

No. 900,238. Specification of Letters Patent. Patented Oct. 6, 1908.

Application filed December 16, 1907. Serial No. 406,742.

*To all whom it may concern:*

Be it known that we, JAMES Z. TUCKER and LAWRENCE V. TUCKER, citizens of the United States, residing at St. Louis, in the county of St. Louis City and State of Missouri, have invented certain new and useful Improvements in Telegraph-Keys; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to telegraph keys, and especially to automatic circuit-closing attachments therefor.

Heretofore railway and telegraph companies have experienced considerable trouble on account of operators leaving their keys open by mistake. These errors sometimes cause serious accidents and frequently cause much delay to trains and messages. As is well known, almost all telegraph systems are rung with their instruments in series, and when one key is open, the instruments beyond on the line are all cut out.

It is the object of our invention to provide a key of this character which will automatically close and prevent delays and accidents resulting therefrom.

With this object in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be described hereinafter and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top plan view of a key showing in dotted lines the position when in use and in full lines the position when closed; Fig. 2 is a side elevation; and Fig. 3 is a longitudinal sectional view thereof. Fig. 4 is a transverse section on line X—X of Fig. 1.

Referring more especially to the drawings, 1 represents a suitable frame which has projecting from its sides a pair of ears, 2, having threaded apertures, 3, through which the adjusting screws, 4, are adapted to pass. The adjusting screw is provided with a lock nut, as is common in all such constructions, and the ends of the adjusting screws are hollowed out to receive the pintles or stub shafts, 5, of the lever, 6. This lever is preferably of a type used in ordinary keys and has at one end an adjusting screw, 7, and at the other end a platinum point contact, 8, which is adapted to engage a similar contact, 9, carried by a metallic stud, 10, which is passed through an insulating bushing, 11, mounted in the frame and through a contact plate, 12, which has a binding post, 13, thereon formed in the opposite terminal of the circuit. A suitable spiral spring, 15, is carried by the frame and engages an adjusting screw, 16, threaded in the lever 6, forward its pivotal point.

Pivoted on the upper side of the lever 6 is a lever, 17, having at one end a finger piece, 18, which normally lies adjacent the button, 19, carried by the lever, 6, and at its opposite end is provided with a downwardly projecting arm, 20, which engages the forward hooked end of a terminal member, 21, which is normally thrown into contact with the notched end of the member, 12, by a spiral spring, 22, carried on the underneath side of the frame and having an eye-bolt connection with said terminal member. When the lever is closed, the circuit is from the binding post, 13, through the member, 12, terminal member 21, lever 6 on the frame 1, and out to line.

In operation, the operator grasps the button 19, and presses the finger piece, 18, away therefrom by the middle finger. This operation carries the terminal member, 21, away from the notched end and thus breaks the circuit and to complete the circuit it is necessary to work the lever and contact the platinum points before described. As soon as the middle finger is released from the finger piece, or the operator's hand removed from the button, the terminal member, 21, is forced back into engagement with its contact, and the circuit again completed onto the next station. The end of the member, 21, is hooked so as to prevent the depending arm from slipping off of it and thereby displacing the parts.

Having thus described our invention, what we claim as new, and desire to secure by Letters-Patent, is:

In a telegraph key, the combination with a frame, an operating lever pivoted thereon, a spring-pressed terminal member pivoted to said lever and having a hooked end, a contact piece secured to but insulated from the frame of the key, a lever pivoted to the operating lever, a finger piece carried by said lever at one end adapted to be engaged by a

finger of the operator to operate the same, a depending arm from the other end of the lever adapted to slidably engage said terminal member to throw the same out of engagement with the contact piece, and means for adjusting the operating lever.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JAMES Z. TUCKER.
LAWRENCE V. TUCKER

Witnesses:
HENRY R. PICKER,
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