(No Model.)

C. W. LEWIS.

TELEPHONE SWITCH.

No. 266,374. Patented Oct. 24, 1882.

Fig. 1.

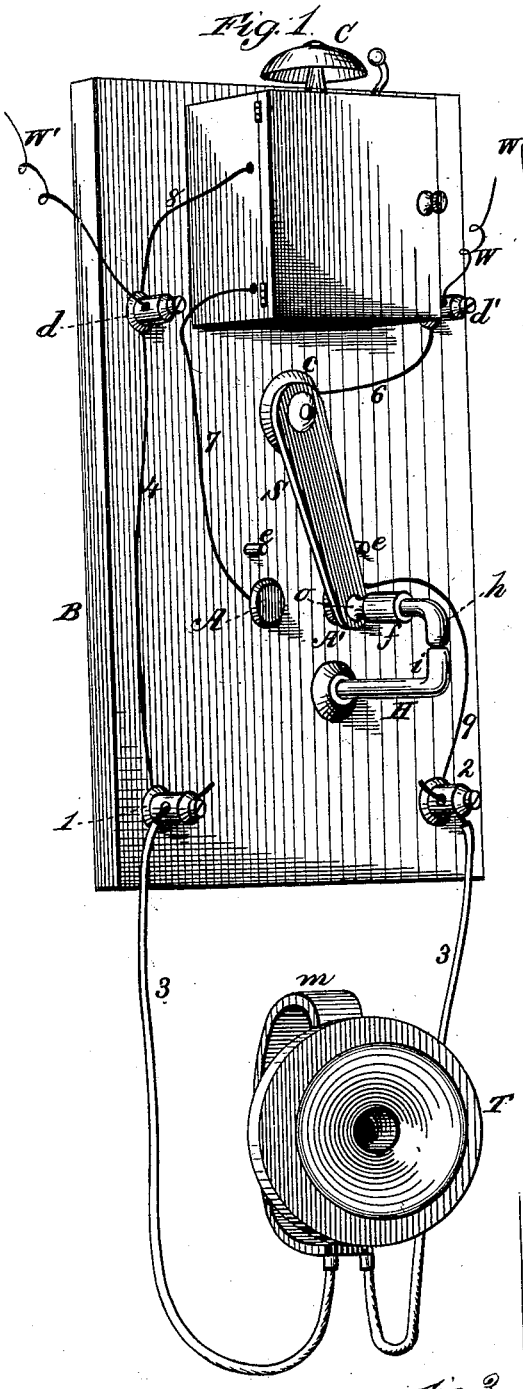


Fig. 2.

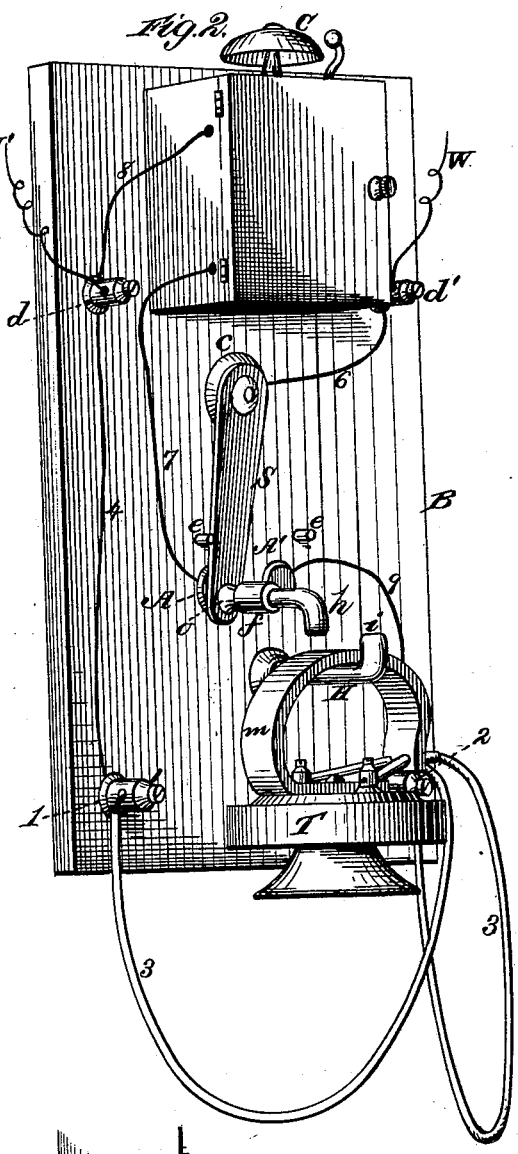
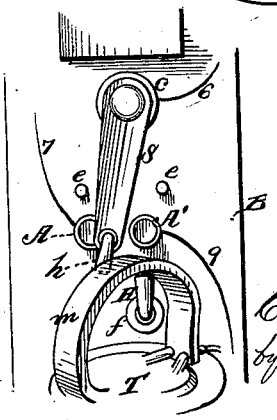


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES W. LEWIS, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE WESTERN ELECTRIC COMPANY, OF SAME PLACE.

TELEPHONE-SWITCH.

SPECIFICATION forming part of Letters Patent No. 266,374, dated October 24, 1882.

Application filed April 13, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. LEWIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Telephone-Switches; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to switches used in connection with telephones, in which the telephone must be shunted out of the main circuit of a telephone-line before it can be hung upon its supporting-arm.

In telephone-switches in general use the telephone is suspended from one end of a pivoted lever, the weight of the telephone causing the opposite end of the lever to be raised and make contact with electrical contact-points arranged to exclude the telephone from the main circuit. When said lever is in the position described, and when the telephone is removed from the lever, it automatically makes contact with other electrical contact-points arranged to shunt the telephone into the main-line circuit. One disadvantage of this system of switches is that the lever often makes imperfect metallic contacts at the different circuit-closing points, thus introducing a high resistance into the main line or entirely breaking continuity. I overcome this disadvantage by providing a switch and telephone-supporting arm so combined that to use the telephone the switch is required to be moved by hand to a contact-plate, which act throws a guard over the telephone-supporting arm, thus compelling the person using the telephone to restore the switch to its normal position, thereby removing the guard before he can replace the telephone, the said switch making a rubbing and firm contact in each position.

In the drawings accompanying this specification, Figure 1 is a perspective view showing the telephone removed from its supporting-arm, the movable guard being thrown over said arm. Fig. 2 is the same view, with the telephone resting on its supporting-arm. Fig. 3 is the same view, showing the act of placing the telephone on its arm, the guard being forced to one side.

Similar letters refer to like parts in the several views.

The letter B represents a suitable base, preferably of wood, supporting the different parts.

H represents an arm fixed to the base B, having a right-angled extension, *i*, adapted to support the telephone when it is not in use.

The letter S represents a switch-lever of ordinary construction, having limiting stops *e e*, and pivoted to and in metallic connection with the stud *c*, said stud having a wire connecting it with a binding-post, *d*, and to the main line W. To the free extremity of the switch S is fixed a handle, *o*, curved at its end *h*, and of such length that when in the position shown in Fig. 1 the end *h* coincides with the end *i* of the supporting-arm H, as shown in Fig. 1, a portion of the handle *o* being covered by an insulating-sheath, *f*.

The letter T designates a magneto-telephone of well-known construction, having a curved handle, *m*, said telephone being connected by its wires 3 3 to binding-posts 1 and 2, binding-post 1 being connected to the main-wire binding-post *d* by wire 4. From binding-post 2 a wire, 9, leads to a metallic contact-plate, A′.

The letter C represents an ordinary electric call-bell, having one terminal of its coils connected to the metal plate A by wire 7, the other terminal being connected to the main line by wire 8.

The operation of this apparatus is as follows: In their normal position the telephone and switch are as shown in Fig. 2, the main-line current passing by the way of wire 6, switch S, plate A, wire 7, thence through the call-bell coils and wire 8 to the main line outside of the telephone. When it is desired to use the telephone it is taken from its supporting-arm H, and in order to bring the telephone into the main circuit the switch S must be moved from contact with plate A to plate A′, thereby throwing the telephone into the main-line circuit outside of the coils of the call-bell, at the same time bringing the end *h*

of the switch-handle *o* immediately over the end *i* of the supporting-arm H, thereby throwing a guard over said arm; and it is evident that this guard must be removed before the telephone can be replaced on its appropriate arm. This can only be done by moving the switch to its normal position in contact with plate A, thus breaking the main-line circuit through the telephone and restoring it through the coils of the call-bell.

What I claim is—

1. The combination, in a telephone apparatus, with the telephone-supporting arm, of a swinging switch-lever adapted to switch the telephone and signal alternately in or out of circuit, and provided with a handle the end of which is arranged to be brought in coincidence with the end of said supporting-arm when the telephone is in circuit and form a guard, which must be removed before the telephone can be placed upon said supporting-arm and switched out of circuit.

2. In a telephone-station apparatus, the combination, with the signal-bell circuit, telephone-circuit, and telephone-supporting arm, of a combined signal and telephone switch-lever provided with an arm or guard adapted to be brought close to or cover the end of said telephone-supporting arm when the telephone is in circuit and the signal out of circuit in such manner that the telephone cannot be hung upon its supporting-arm until the said arm of the switch is moved away from said supporting-arm, the telephone being thereby switched out of and the signal into the circuit, substantially as described.

3. The combination of the telephone-circuit plate A′, forming one terminal of said circuit, the telephone-supporting arm and the switch-lever S, provided with arm *o*, arranged to be brought close to and form a guard for said supporting-arm when the switch is in contact with said plate A′, substantially as described.

4. The combination of the signal-circuit, telephone-circuit, plates A and A′, forming terminals of said circuits respectively, the telephone-supporting arm, and the switch-lever S, provided with arm *o*, arranged to be brought close to and form a guard for said supporting-arm when the switch is in contact with said plate A′, and to be swung away from said arm when the switch is in contact with plate A, substantially as and for the purpose set forth.

5. The combination of the contact-plates, swinging switch-lever making rubbing or friction contacts with said plates, and a hook or supporting-arm for the telephone, so placed with reference to said switch-lever that the latter must be moved to break the circuit through the telephone before the telephone can be hung upon its said hook or support, substantially as described.

6. The combination, with the telephone-circuit, call-bell circuit, and supporting arm or hook for the telephone, of a swinging switch-lever provided with a guard-arm which, when the said lever is so turned as to bring in the telephone, will cover the point or close the opening of said hook or supporting-arm, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. LEWIS.

Witnesses:

C. SILET,

C. D. CRANDALL.