No. 639,768. Patented Dec. 26, 1899.

D. QUEEN.

TELEPHONE ATTACHMENT.

(Application filed Aug. 1, 1899.)

(No Model.)

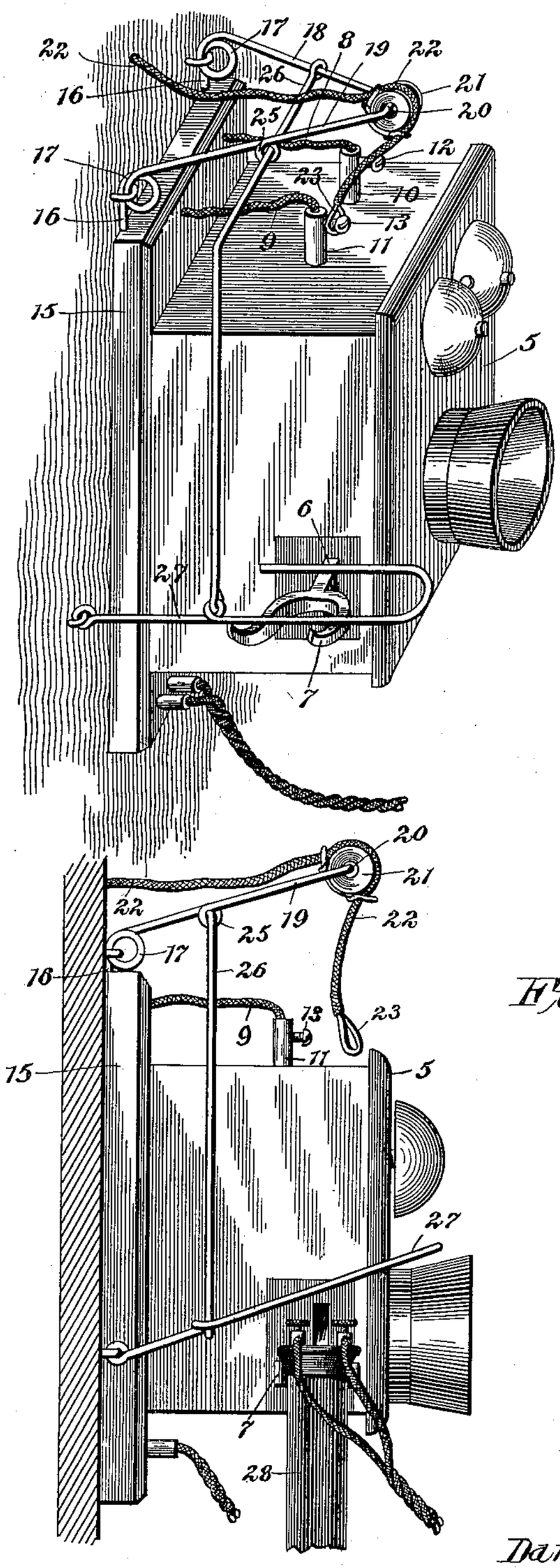

Fig. 1.

Fig. 2.

Witnesses

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DANIEL QUEEN, OF JANELEW, WEST VIRGINIA.

TELEPHONE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 639,768, dated December 26, 1899.

Application filed August 1, 1899. Serial No. 725,795. (No model.)

To all whom it may concern:

Be it known that I, DANIEL QUEEN, a citizen of the United States, residing at Janelew, in the county of Lewis and State of West Virginia, have invented a new and useful Telephone Attachment, of which the following is a specification.

This invention relates to telephone attachments, and more particularly to grounding mechanism therefor; and it has for its object to provide, in connection with a line comprising a plurality of instruments, means for cutting out the line at each side of the instrument to be operated, to reduce the resistance of the operative circuit, to reduce the disturbances in the line, and to increase the efficiency of the operating circuit in use.

The invention consists of a ground connection supported adjacent the telephone instrument and in a position for engagement with either of the line connections of the instrument. Attached to this ground connection is an extension which when said connection is in operation lies across the receiver-hook and prevents the placing of the receiver thereon, so that the subscriber must unground the line before hanging up the receiver.

In the drawings forming a portion of this specification, and in which like numerals of reference designate corresponding parts in both views, Figure 1 is a perspective view of a telephone instrument, showing the ground connection connected with one of the line connections of the instrument and the receiver removed from its hook. Fig. 2 is a side elevation showing the ground-wire disconnected and the receiver in position upon its hook.

Referring now to the drawings, 5 represents a casing for a telephone instrument of any desired form, comprising a switch-lever 6, projecting outwardly of the casing and having a hook 7 at its outer end adapted to receive a receiver in the usual manner. Leading from the casing 5 and the instrument therein are line-wires 8 and 9, connected with binding-posts 10 and 11, involving screws 12 and 13, through the medium of which latter the terminals of the line-wires are held in their respective binding-posts. The casing 5 is mounted upon a suitable base 15, intermediate which and the wall or other support for the base are arranged and held the parallel portions 16 and 17 of a spring-wire which projects upwardly above the base 15, where they are provided with spring-loops 17, from the terminals of which the body of the wire comprising elements 18 and 19 is disposed with its elements converging and connected at their outer ends by a straight transverse portion 20, upon which is mounted an insulating-block 21, having secured thereto a ground-wire 22. This ground-wire has at its inner end a loop 23, adapted to alternately engage the screws 12 and 13, the normal positions of the elements 18 and 19 being such as to hold the block 21 at a distance from the binding-posts greater than the length of the ground connections between the block 21 and the loop 23. Thus will the loop be held normally from engagement with the screws 12 and 13. In order to engage the loop of the ground connection with the screws of the binding-posts, it is necessary to draw the loop downwardly against the action of its spring-supporting wire, the upward tendency of the loop under the influence of its wire acting to maintain a close and efficient connection between the loop and the screw with which it is engaged.

The element 19 of the insulating-block for the wire is provided with a vertically-disposed loop 25, through which is passed a wire 26, one end of which is bent around and incloses the element 18, said wire passing through the loop 25 and outwardly beyond the casing, from which point it is continued downwardly and has its lower end connected with a lever 27, pivoted at its inner end to a suitable support and extending outwardly and over the hook 7 and adapted to rise and fall with the loop 23 to such an extent as to permit, when at the limit of its upper motion, the placing of the usual receiver 28 upon the hooks 7 and when at the lower limit of its motion to lie against or adjacent the hook 7 to prevent the placing of the receiver thereon.

To prevent pressing the lever 27 in the direction of the casing to force the receiver upon the hook, the extremity of said lever is bent laterally and then backwardly in the plane of extension of the lever 6 and parallel with the outer portion of its stock, this rearwardly-extending portion of the lever 27 be-

ing adapted to engage the casing under a very slight movement of the lever 27 in the direction thereof.

The operation of the device is as follows: The instrument being in the position shown in Fig. 2 of the drawings and the subscriber having been placed in circuit with another subscriber at either side, he removes his receiver from the hook 7 and draws the loop 23 downwardly and engages it with either screw 12 or 13, which will ground that portion of the line not in use and leaving in active circuit only that portion of the line between his instrument and that of the subscriber with whom he is conversing. At this time the mechanism will be in the position shown in Fig. 1, and thus when the conversation is at an end it will be necessary for the subscriber to break the ground-circuit by removal of the loop from the screw before the receiver can be hung upon its hook. This will effectively prevent leaving the line grounded when the instrument is not in use. It will of course be understood that each instrument in the line is equipped with this mechanism, and also that the second subscriber, if he be not at the end of the line, may ground his instrument for a like purpose. The instrument at that end of the line farthest from the central, where an exchange system is involved, will of course have no use for this apparatus, and where a single line is employed with no exchange the instrument at neither end will require this apparatus.

It will, furthermore, be understood that in the manufacture of this device it may be made of material other than wire and may be constructed in such a manner as to present a neat appearance and with possibly better arrangement.

Having thus described the invention, what is claimed is—

1. In combination with a telephone instrument, comprising line-terminals, and a switch including a receiver-supporting prong, of a ground connection adapted for connection with the line-terminals alternately, a spring-support for the ground connection, a lever adapted to bridge the supporting-prongs, and a rod connected with the ground-line support and the lever and adapted to hold the latter across the prong when the ground connection is engaged with a terminal.

2. The combination with a telephone instrument comprising line-terminals, and a switch including a receiver-supporting prong, of a lever adapted to lie across the prong at the extremities thereof and having an extension lying parallel therewith to prevent lateral movement in one direction, a ground connection adapted for engagement with the terminals alternately, a spring-support for the ground connection, and connections between the spring-support and a lever for holding the latter in its inoperative position when the ground connection is engaged with a terminal.

3. The combination with a telephone instrument, comprising line-terminals, and a switch including a receiver-supporting prong, of a ground connection adapted for connection with the line-terminals alternately, a spring-support for the ground connection adapted to hold it normally from engagement with the terminals, a lever having one end bent to lie parallel with the body portion, said lever being adapted to bridge the prong with its bent end against the casing of the instrument to prevent movement of the lever in one direction, and connections between said lever and the support for the ground connection.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DANIEL QUEEN.

Witnesses:
FRANK NEELY,
GUINN NEELY.