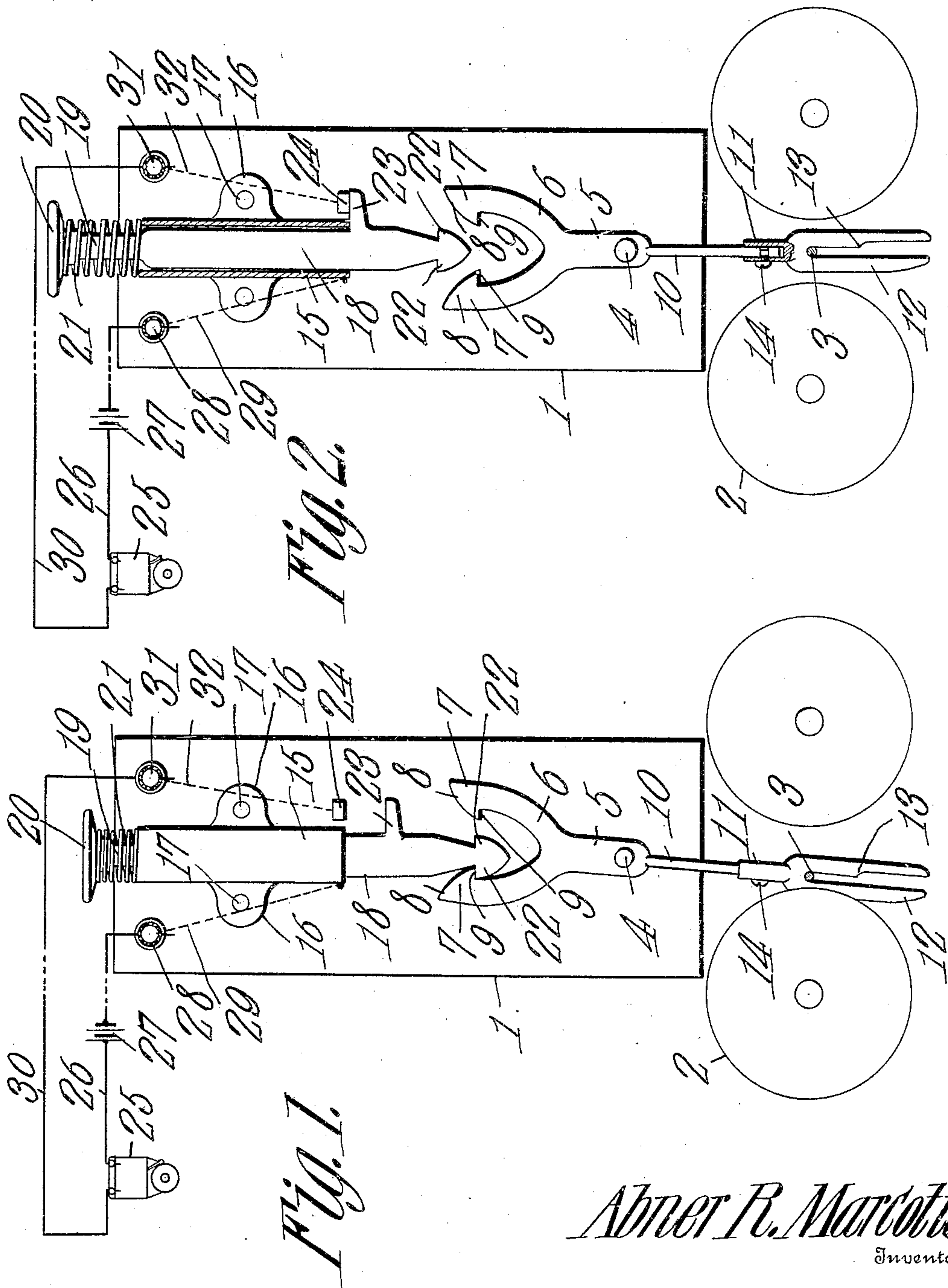


A. R. MARCOTTE.
EXTENSION CALL FOR TELEPHONES.
APPLICATION FILED MAY 1, 1908.

929,965.

Patented Aug. 3, 1909.



Abner R. Marcotte
Inventor

Witnesses
H. J. Chapman

By C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

ABNER R. MARCOTTE, OF CONCORDIA, KANSAS, ASSIGNOR OF ONE-HALF TO GEORGE A. LAYTON, OF CONCORDIA, KANSAS.

EXTENSION-CALL FOR TELEPHONES.

No. 929,965.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed May 1, 1908. Serial No. 430,427.

To all whom it may concern:

Be it known that I, ABNER R. MARCOTTE, a citizen of the United States, residing at Concordia, in the county of Cloud and State

of Kansas, have invented a new and useful Extension-Call for Telephones, of which the following is a specification.

This invention has reference to improvements in extension calls for telephones, and its object is to provide a means whereby the ordinary call mechanism of a telephone system will cause the closure of an extension call circuit, which will remain closed until purposely broken. The extension call may

be made to operate continuously until attention is attracted and the call circuit is broken.

The invention comprises a means which is adapted to be placed either inside or outside of the telephone box to be operated by the bell rod of the ordinary call bell of telephones.

The invention comprises circuit terminals one of which is movable from the other, and when so moved away from the fixed terminal the movable terminal is put under stress, tending to return it into contact with the fixed terminal. The movable and fixed terminals constitute the terminals of a local electric circuit charged from a battery or other source of current, and including an electro-magnetically operated alarm which may be of the ordinary trembler bell type or any other suitable type adapted to respond to the action of the charging battery when the circuit is completed at the terminals.

In connection with the movable terminal there is provided a latch mechanism capable of holding the terminal in the open circuit position, and this latch mechanism is under the control of the bell rod of the ordinary bell of the telephone set, the arrangement being such that when a signal is sent over the telephone circuit the bell rod in vibrating will cause the release of the movable terminal, which latter will immediately move into contact with the fixed terminal and thus complete the local circuit, and the extension alarm will continue to operate so long as this local circuit is closed. The local extension alarm circuit does not automatically open

but must be opened manually, so that the alarm will continue to operate until attention is attracted and the circuit is purposely broken.

While this invention is intended primarily for use in connection with telephones and for the purpose of establishing an extension alarm or call, it is to be understood that it may be used in other connections, and therefore the invention is not limited to use in the particular connection shown and described. Nor is the invention limited to the particular arrangement and construction of parts shown. These may be changed so long as the principles of the invention are adhered to.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, in which drawings—

Figure 1 is a plan view of the circuit making and breaking devices shown in connection with a telephone call bell, the latter being diagrammatically represented, and the extension call circuit is also diagrammatically represented. Fig. 2 is a view similar to Fig. 1, except that some parts are shown in section and the apparatus is shown in a different phase of operation.

Referring to the drawings, there is shown a support or base 1, which may be indicative of any type of support and may also indicate a portion of the inside or outside of the telephone box of a telephone set. The ordinary telephone bells are indicated at 2, and the bell rod is indicated at 3, the hammer being omitted. Pivoted upon the base 1 by means of a pivot pin 4 is an arm 5 having one end formed into a yoke 6, on the free ends of the legs of which are two inwardly-directed toes 7 having outwardly-directed curved faces 8 each terminating in a shoulder 9, the toes or catches 7 extending one toward the other but still spaced apart for a suitable distance. The other end of the arm 5 is reduced to the form of a stem 10. The stem 10 enters a socket 11 formed on one end of a fork 12, which latter has its two fingers suitably spaced to straddle the bell rod 3. One of the fingers 12 may be cut away to form a cam shoulder 13, for a purpose which will presently appear. The sockets 11 may be

screwed upon the stem 10, or a set screw 14 may be provided, so that the fork 12 may be rotated upon the longitudinal axis of the stem 10 so as to be placed in any relation to said stem.

Fast upon the base 1 at the end thereof remote from the bells 2, is a sleeve 15 which may be secured to the base by suitable ears 16 and pins 17 or other fastening means. Extending through the sleeve 15 is a sliding bar 18 having one end formed into a stem 19 and terminating in a head 20. Surrounding the stem 19 between the sleeve 15 and the head 20 is a helical spring 21 normally under some compression and always tending to move the head 20 away from the sleeve 15. The end of the bar 18 remote from the head 20 is notched on opposite sides to form a spear head, that is there are oppositely directed teeth 22 formed on the said end of the bar 18. The teeth 22 are adapted to engage behind the shoulder 9 of the catches 7, when the bar 18 is pushed in a direction opposed to the action of the spring 21, and when one or the other of the teeth 22 engages behind the catch 7 of the arm 5, the bar 18 is held against retrograde movement under the action of the spring 21.

Formed on one side of the bar 18 near the spear head end thereof is a lug 23, and in the path of this lug is a stop 24, the lug 23 making contact with the stop 24 when the bar 18 is retracted by the action of the spring 21.

At a suitably distant point there is located an alarm bell 25, which may be of the ordinary trembler type adapted to operate under the action of continuous currents. The bell 25, however, is to be taken as indicative of any type of alarm, preferably an audible alarm, which will serve to attract attention. The bell 25 is in a local circuit, one branch 26 of which includes a battery 27, or other suitable source of electric current, and is continued to a binding post 28 mounted on the base 1, and this binding post 28 may be in connection with the sleeve 15 through a conductor 29. The other branch 30 of the local circuit is connected to a binding post 31 on the base 1, and this binding post is in turn connected by a conductor 32 to the stop 24. The base 1 is preferably made of insulating material and the stop 24 is separated from the sleeve 15 and thus is normally insulated therefrom, but if the base 1 be made of conducting material then the stop 24 is insulated from said base and from the sleeve 15. The bar 18, however, is in electrical contact with the sleeve 15. The lug 23 and the stop 24 therefore constitute the terminals of the circuit including the bell 25 and the battery 27, and when the lug 23 is moved away from the stop 24, then the local circuit through the bell and battery is broken. When the lug 23 is moved into contact with the stop 24, then the local circuit is established and the bell 25

will ring and continue to ring so long as the local circuit remains intact.

Let it be assumed that the parts are in the position shown in Fig. 1, that is with the spear or arrow head end of the bar 18 locked under one of the catches 7, and the fork or tail piece 12 straddling the bell rod 3. The spring 21 is compressed and the terminals 23 and 24 are separated. If, now, the telephone bell or signal be rocked in the usual manner, then the first vibratory movement of the bell rod 3 will cause the particular catch 7 engaging the arrow or spear head end of the bar 18 to disengage therefrom and the bar 18, released to the action of the spring 21 immediately moves away from the arm 5 until the contacts 23 and 24 are brought into engagement, and the local alarm circuit is closed so that the bell 25 begins to ring and rings continuously. When attention has been attracted by the bell 25, the ringing of the latter may be stopped by again moving the bar 18 against the action of the spring 21 until the arrow head of the bar is engaged by one or the other of the catches 7, and the parts are then ready for the reception of another signal at the telephone.

It sometimes happens that the actuating member represented by the bell rod 3 moves longitudinally with reference to the fork or tail piece 12, and in that case the movement of the arm 5 about its pivot 4 is caused by the engagement of the rod 3 or its equivalent with the cam shoulder 13, thus causing a lateral movement of the tail piece 12 sufficiently extensive to unlatch the bar 18 to the action of the spring 21.

The binding posts 28 and 31 are to be taken as indicative only of any suitable means of connecting the conductors 26 and 30, and it is evident that these conductors may be connected directly to the sleeve 15 and terminals 24, if so desired.

What is claimed is:—

1. In an extension call for telephones, a mechanically operated circuit closer, a circuit controlled thereby, and a pivoted latch member for locking the circuit closer in the open circuit position, said latch member having at one end a rotatable forked tail piece adapted to straddle the bell rod of the telephone call bell, said tail piece having one fork plain, and the other formed with a cam shoulder.

2. In an extension call for telephones, means for automatically completing the extension call circuit comprising a longitudinally movable bar formed at one end with a manipulating head and at the other end with laterally extending teeth, a sleeve in which said bar is mounted, a spring surrounding the bar between the manipulating head and the sleeve, a pivoted latch having at one end separated opposed teeth cooperating with the teeth on the bar, and at the

other end adapted to straddle the bell rod of a telephone call bell, and means carried by the bar for causing the closing of the extension call circuit by the movement of the bar under the action of the spring when released from the pivoted latch.

3. In an extension call for telephones, means for automatically completing the extension call circuit comprising a longitudinally-movable bar carrying a circuit terminal, said bar being formed at one end with a manipulating head and at the other end with laterally-extending teeth, a sleeve in which said bar is mounted, a spring surrounding said bar between the manipulating head and the sleeve, another circuit terminal in the path of the first circuit terminal, a pivoted latch having at one end separated opposed teeth cooperating with the teeth on the bar, and a forked tail piece on said latch for straddling the bell rod of a telephone call bell.

4. In an automatic extension call for telephones, means for completing the extension call comprising a longitudinally-movable bar carrying a circuit terminal said bar being formed at one end with a manipulating head and at the other end with laterally-extending teeth, a sleeve in which the said bar is mounted, a spring surrounding the bar between the manipulating head and the sleeve, another circuit terminal in the path of the first circuit terminal, a pivoted latch having at one end separated opposed teeth cooperating with the teeth on the longitudinally-movable bar, and a rotatable forked tail piece on said latch for straddling the bell rod of a telephone call bell said rotatable tailpiece having one

fork plain and the other formed with a cam shoulder.

5. In an extension call for telephones, means for automatically completing the extension call circuit comprising a longitudinally-movable bar formed at one end with a manipulating head and at the other end with laterally-extending teeth and at an intermediate point with a laterally-extending lug constituting one circuit terminal, another circuit terminal in the path of the first-named circuit terminal, a sleeve for receiving and guiding the bar, a spring surrounding the bar between the sleeve and the manipulating head on said bar, a pivoted arm having one end forked and there formed with separated teeth cooperating with the teeth on the bar, and a rotatable forked tail piece on the arm for straddling the bell rod of a telephone call bell.

6. In an extension call for telephones, means for completing the extension call circuit comprising circuit terminals for the circuit, one of said terminals being movable, a spring constraining the movable terminal toward the other terminal, a pivoted latch for the movable terminal, and a forked tail piece for the latch shaped to straddle the bell rod of the telephone call bell and having one fork plain and the other formed with a cam shoulder.

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

ABNER R. MARCOTTE.

Witnesses:

J. W. NEILSON,
E. P. LA ROEQUE.