

F. NEWHOFF.
Electrical Circuit-Closer for Hotel-Annunciators.

No. 217,397.

Patented July 8, 1879.

Fig. 1.

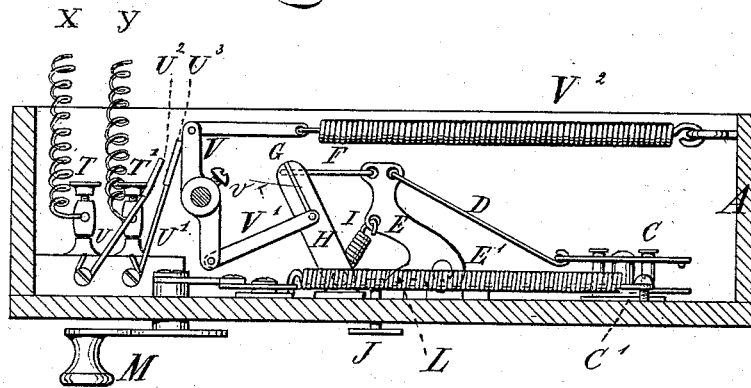
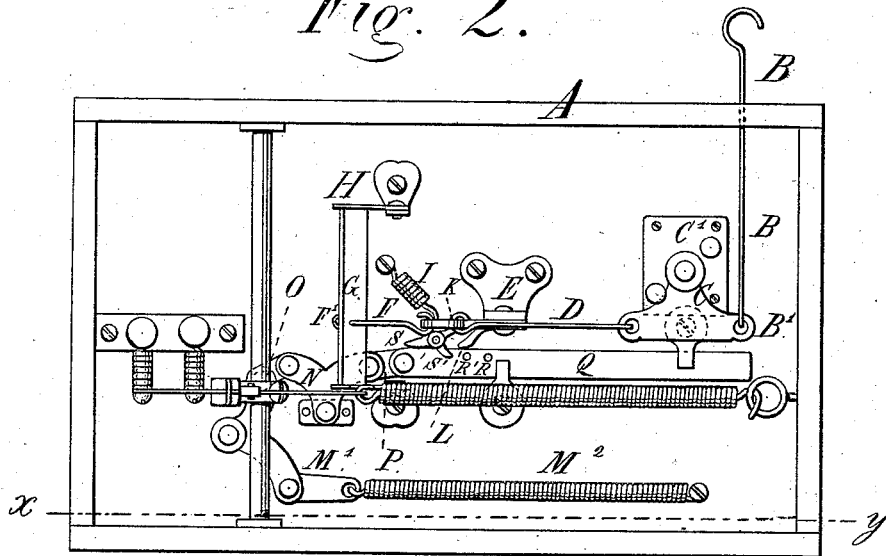


Fig. 2.



Witnesses :

*J. W. Haggerty
A. G. Brown*

Inventor :

Frank Newhoff

UNITED STATES PATENT OFFICE.

FRANK NEWHOFF, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN ELECTRICAL-CIRCUIT CLOSERS FOR HOTEL-ANNUNCIATORS.

Specification forming part of Letters Patent No. **217,397**, dated July 8, 1879; application filed January 9, 1878.

To all whom it may concern:

Be it known that I, FRANK NEWHOFF, of the city and county of San Francisco, California, have invented certain Improvements in Mechanical Hotel-Annunciators; and that the following is a clear and exact description of my invention, reference being had to the annexed drawings, in which—

Figure 1 is a top view and section through the long axis $x y$ in Fig. 2; and Fig. 2 is a back view of the improvement, showing all the machinery contained therein.

My invention relates to that class of annunciators which are in communication with the rooms or other places by means of wires, so arranged that a pull on said wire causes the indicator to show the number of the room, and also to move a common bell or the hammer of a gong, so as to attract the notice of the attendant; and the object of my improvement is to reduce the wear and tear of the wires and other parts of the apparatus.

The method I claim to have invented to attain this end is the substitution of an electric alarm in combination with a circuit breaking and closing device, actuated by a suitable part of the machine, in lieu of the heavy gong and hammer heretofore used.

A is the box containing the machinery. B is the wire connecting the room with the annunciator, and is attached at B' to the crank C, pivoted at C'. The movement given to the crank C is communicated to the lever E, pivoted at E', by means of wire D.

To the lever E is also attached the wire F, which passes through a hole in the plate G, and is provided at the end with the loop F'. The plate G is fastened at the ends of the levers H H.

By the above combination of parts the pull on the wire B is transmitted to the blade G, the reciprocating spring I setting the levers and wires back again to their place when the pull at B ceases.

The tumbler or indicator J is fastened to a bolt passing through the side of box A. At the other end of this bolt are riveted the projections K S S.

The projection K serves to rest on the branch L of lever E, so that when lever E is withdrawn by the action of wire B the in-

dicator J tumbles off and uncovers the number on the dial. It is set back again in its place by means of the crank M, bell-cranks M¹ N, rods O P Q, and pins R R engaging in the prongs S S of the tumbler, and reciprocating spring M².

The plate G is perforated with as many holes as there are wires connected with that part of the annunciator, and these wires are all provided with the loop, as in F', so that the motion of one wire has no effect on the others, as the plate G in its receding motion simply slides over them.

The above description of parts relates to the manner in which the annunciators have been for a long time and are now built for the purpose of indicating the number of the room from whence the signal is sent. The bell or gong is sounded by means of an attachment placed on the levers H H.

The power needed to raise the hammer and set it again in its place is the cause of great strain on the wire or wires B, especially in the case of long distances.

The object of my improvement is to relieve the wire and machine of all such strain by taking off the bell or gong attachment and substituting in its stead an ordinary electric alarm, and to connect it with the annunciator in such a manner that the movement of lever H breaks or closes the circuit of the battery and alarm wires.

There are several methods of accomplishing this result, and the following description shows the one I have adopted:

T and T' are the insulated buttons to which are fastened the ends of the wires connected with the battery and alarm in the usual manner.

U is a stationary flexible rod of brass, connected with button T, and having a blade of brass, U², soldered at its end. U¹ is another flexible rod of brass, provided with the blade U³.

The rod U¹ is set so as to bear lightly on the lever V, pivoted at v , and the two rods U and U¹ are placed so that the ends U² U³ sit about one-thirty-second of an inch apart. This lever V is connected with lever H by means of rod V¹, so that when the motion of the lever H, and consequent tumbling of indicator J, takes place, the two ends of rods U and U¹ are brought into contact, thus closing

the circuit and causing a common electric bell to ring an alarm.

When the pull on wire B ceases, the action of the reciprocating spring V² sets the parts back in their place, as shown in Fig. 1.

It is evident that the power needed to effect a contact between the rods U and U¹ is extremely small, and nothing in comparison with the strain brought to bear on the machinery in the gong action heretofore used, and that I have thus accomplished the object sought for in my improvement.

Now, I do not claim any invention or change in the tumbling mechanism of the annunciator; nor do I claim the exclusive use of an electric bell with an annunciator, but simply the con-

trolling of the circuit in the bell by means of the motion of lever H; and, therefore,

What I claim as my invention, and desire to secure by Letters Patent, is—

In a mechanical annunciator, the combination of the lever H with the conducting-wires X Y of an electric bell, and the circuit closing and breaking device composed of lever V, reciprocating spring V², connecting-rod V¹, and contact-rods U and U¹, or their equivalent, as described, and for the purpose specified.

FRANK NEWHOFF.

Witnesses:

J. W. HAGGERTY,
H. K. BROWN.