

H. HORSFALL.

Annunciator.

No. 50,709.

Patented Oct. 31, 1865.

Fig. 1.

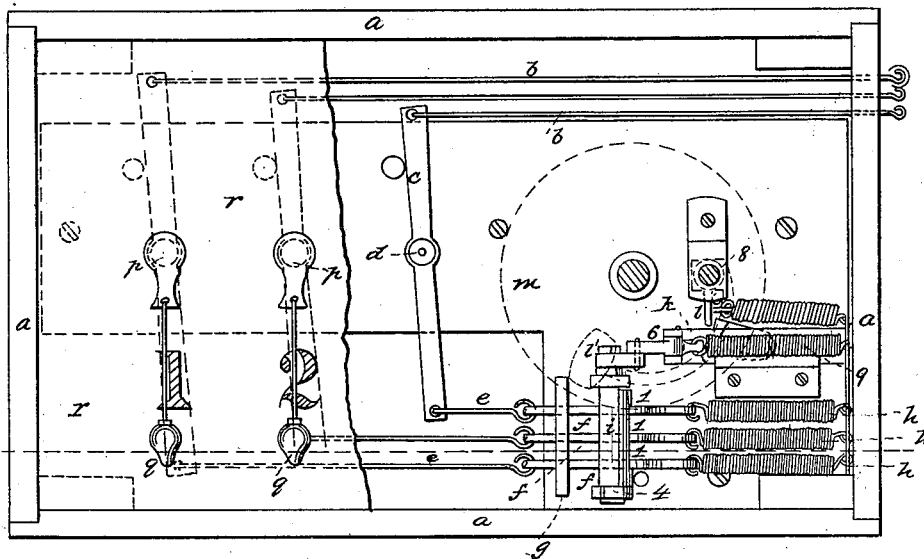


Fig. 3.

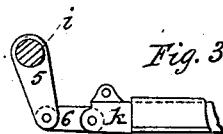
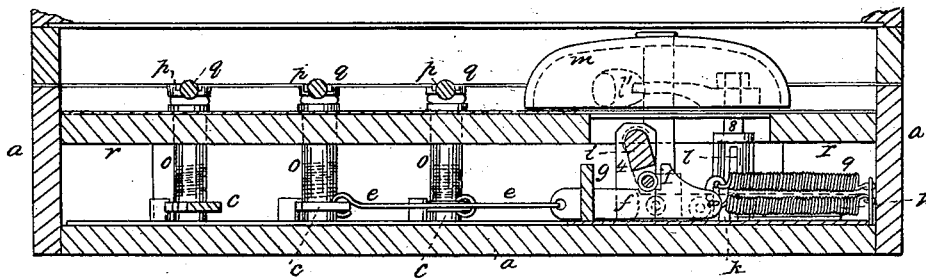


Fig. 2.



Witnesses:
Samuel W. Correll

Inventor:
Henry Horsfall

UNITED STATES PATENT OFFICE.

HENRY HORSFALL, OF NEW YORK, N. Y.

ANNUNCIATOR.

Specification forming part of Letters Patent No. 50,709, dated October 31, 1865.

To all whom it may concern:

Be it known that I, HENRY HORSFALL, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Annunciators or Signal-Bells; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an elevation of my annunciator, with a portion of the face and the bell removed to show the mechanism. Fig. 2 is an inverted sectional plan at the line *xx*, and Fig. 3 is an elevation of part of the striking mechanism.

Similar marks of reference denote the same parts.

Annunciators and signal-bells have heretofore been made in which several wires leading from different localities have been made to operate mechanism for striking one bell, and at the same time indicate which particular wire was pulled by exposing the number or other corresponding designation, and in other instances a pendulum has been fitted so as to swing near the number or other designation of the particular wire that is pulled.

The nature of my said invention consists in a crank-arm attached at the center of the lever acted upon by the wire, said crank-arm carrying a pendulum in front of the face of the annunciator and by its vibration denoting the wire acted upon. I also construct the mechanism acting upon the bell in a peculiar manner, so as to render the same compact and not liable to get out of order.

In the drawings, *a* represents the case of the instrument, which may be of any desired character or size, and contain appliances for communicating with any desired number of localities or rooms by means of wires. I have shown three.

b b are the wires in the instrument to which the aforesaid wires are connected.

c c are levers on fulcrum *d d*, receiving at one end the wires *b b*, and at the other end the wires *e e*, that are attached to the respective slides *ff*. These slides *ff* pass through a guide bar or plate, *g*, and each has a toe, *l*, and spring *h*. The toe *l* acts upon a roller or crank-pin, *3*, of the rock-shaft *i*, said rock-shaft be-

ing sustained in bearings *4 4*, and having a crank-arm, *5*, at its end, with a link, *6*, to the slide *k*, that is provided with a spring-dog, *7*, taking the toe *l* of the hammer *v*, said hammer being set on the fulcrum *8* and striking against the bell *m*, (shown also blue lines in Fig. 1.) *9* is a spring acting on the slide *k* to return it to place after the pull on the wire *b* has been released. The dog *7* is pressed down as it passes back below the hammer-toe and springs up again after it clears said toe.

The rock-shaft *i* is to be extended in length to allow for the reception of any desired number of slides *f*, according to the number of wires required, and it will be evident that the spring *9* acts in aid of the springs *h h* to insure the return of the slides *ff* to their proper position after the slide or slides have been acted on, and there is no chance of the slides becoming disconnected from and not operative on the rock-shaft.

Upon each of the levers *c c*, at their fulcrum *d*, I attach a small pillar or stud, *o*, by screwing the same on, as seen in Fig. 2, or in any other convenient manner, and on this stud *o* is an arm, *p*, from which hangs a pendulum, *q*, in front of the face *r*, upon which is marked the number or other designation of the wire connected with the particular lever *c*. It will now be seen that the pendulum by its vibration will indicate the wire pulled and the bell call the attention of the attendant. The apparatus is compact, and a large number of wires can unite in a small instrument, and each one indicate separately, and the appearance of the instrument is neat, the works being covered by the face.

My improvement obviates the difficulty experienced in most annunciators, viz., that they require attention to replace the numbers or the covers for those numbers, or else it cannot be told which wire is pulled where more than one wire is pulled before said numbers are covered.

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

1. The stud or pillar affixed to the lever *c* and projecting through the face, in combination with the pendulum that hangs in front of said face, for the purposes and as specified.
2. The arm *5* at the end of the rock-shaft *i*,

connected to the slide *k*, in which is the dog 7, in combination with the hammer *l* and bell *m*, as and for the purposes set forth.

3. The toes on the slides *f f*, in combination with the rock-shaft *i* and mechanism connecting with the bell, said toes acting against the rock-shaft to move the same, as set forth.

In witness whereof I have hereunto set my signature this 4th day of October, A. D. 1865.

HENRY HORSFALL.

Witnesses:

LEMUEL W. SERRELL,
CHAS. H. SMITH.