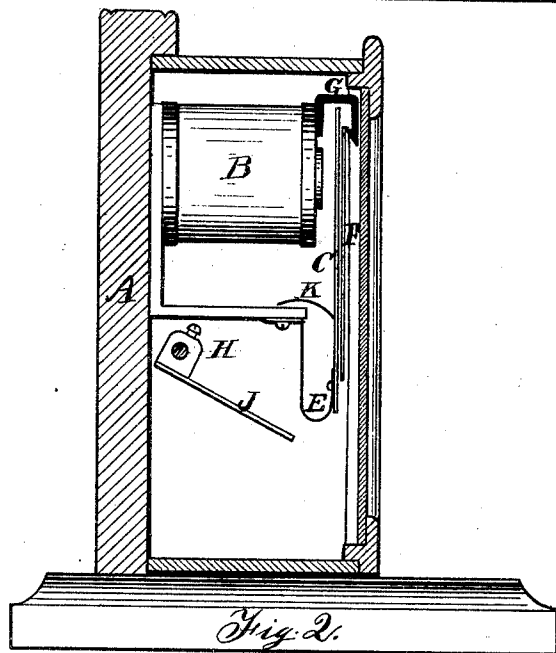
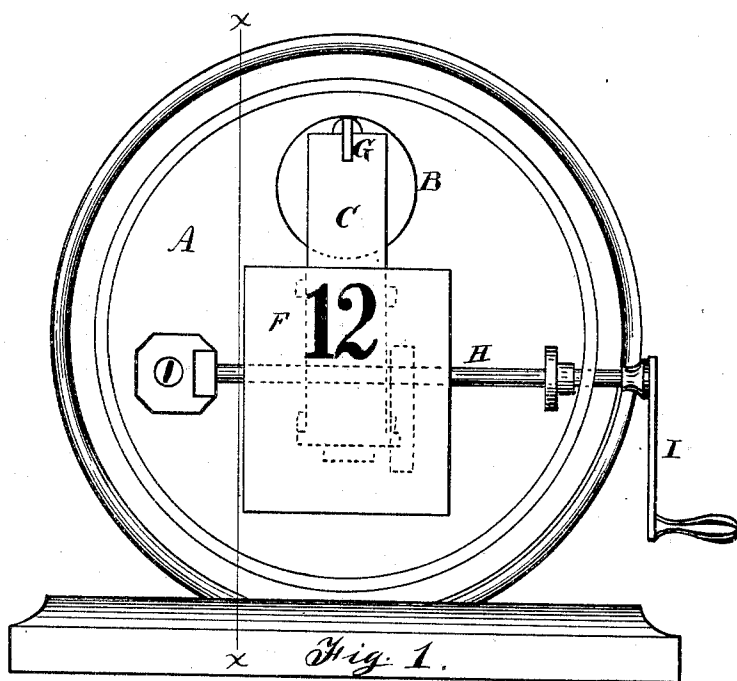


N. A. BUELL.
ELECTRIC ANNUNCIATOR.

No. 179,446.

Patented July 4, 1876.



Witnesses:
Geo. W. Tibbitts
B. S. DeForest

Inventor:
Nelson A. Buell.

UNITED STATES PATENT OFFICE.

NELSON A. BUELL, OF CLEVELAND, OHIO.

IMPROVEMENT IN ELECTRIC ANNUNCIATORS.

Specification forming part of Letters Patent No. **179,446**, dated July 4, 1876; application filed December 13, 1875.

To all whom it may concern:

Be it known that I, NELSON A. BUELL, of Cleveland, county of Cuyahoga and State of Ohio, have invented an Electric Annunciator, of which the following is a specification:

This invention relates to an electrical annunciator, in which the attractive force of the electro-magnet is employed to release a number plate or shield attached to the armature, and allow the said number-plate to fall by its own gravity for exposing or uncovering the number. The said number-plate is attached to the armature by slides, and to again elevate it out of view a rock-shaft is employed, operated by a crank on the outside of the case, and having an arm attached to it inside of the case in such a manner that the said arm lifts the said plate. Attached to the spool of the electro-magnet, over the top end of the armature, is a hook with which the number-plate engages to hold it up, but from which hook the said plate is released by the movement of the armature toward the magnet.

To enable others to fully understand my invention, I proceed to describe the same in detail with the aid of the accompanying drawing, in which—

Figure 1 is a front elevation with the glass front removed to show the working parts. Fig. 2 is a vertical section in line *x x*.

A is the case, in the back part of which is secured an electro-magnet, B, consisting of one spool. C is the armature, consisting of an upright strip of metal, attached to a bracket or arm on the frame of the magnet B by a spring or hinge, E. Upon the armature is placed a plate, F, which slides up and down thereon, said plate carrying a number. To the top edge of the spool B is attached a hook, G, overreaching the top end of the armature

C, in which a narrow flange on the top edge of the plate F engages for holding it up. H is a rock-shaft, set in bearings in the back part of the case, having a crank, I, on the outside of the case for operating it. It has an arm, J, which is used for the purpose of raising the plate F, said plate having a projection, K, on the rear side for the said arm J to lift it by.

The operation of this is as follows: When the plate F is up, it remains there by hanging in the hook G, the armature being held outward by the spring E; the number is then out of view. Now, by closing the electrical circuit, the magnet B attracts the armature toward it, which releases the plate F from the hook G, when it immediately falls, and then the number is brought into view behind the transparent opening in the front of the case. The crank-shaft is then employed for raising the plate again to its original position.

One of the great advantages of this is that the number-shield can be moved in so great a distance that a large number can be used, enabling it to be seen at a greater distance.

Having described my invention, I claim—

The herein-described electric annunciator, consisting of the electro-magnet B, the armature C, attached by hinge or spring E to the frame of magnet B, said armature carrying the sliding number-plate F, said plate being held up by hook G, and released to fall by action of the armature, and arranged to be lifted again by the rock-shaft H carrying the arm J, all substantially as and for the purpose specified.

NELSON A. BUELL.

Witnesses:

GEO. W. TIBBITTS,
JAMES QUAYLE.