F. S. CARTER.

ELECTRIC ANNUNCIATOR.

No. 185,294. Patented Dec. 12, 1876.

Fig. 1.

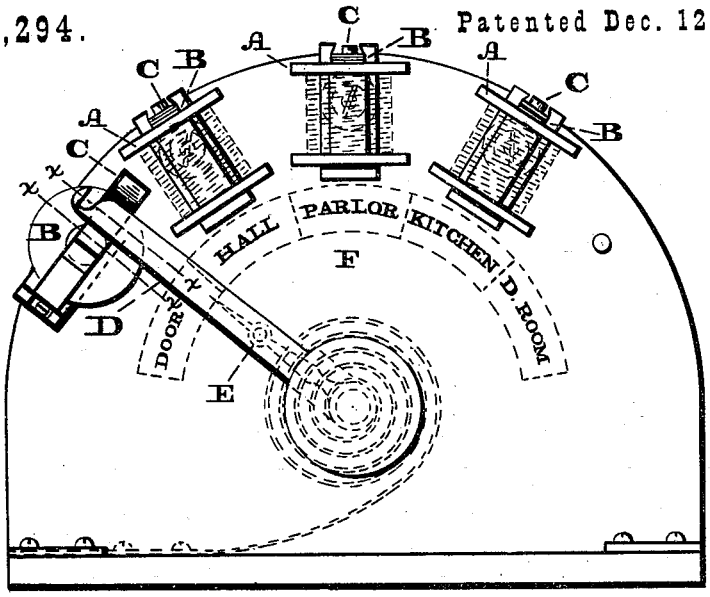


Fig. 2.

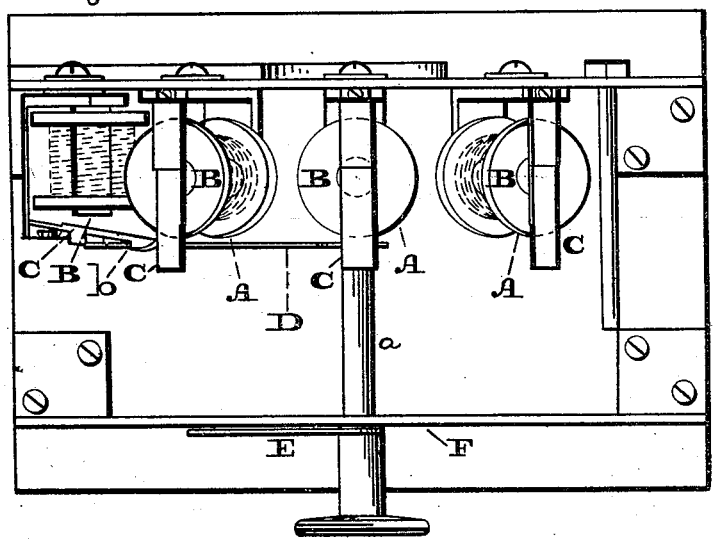


Fig. 4.

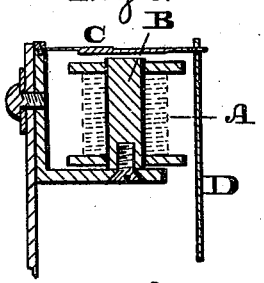


Fig. 5.

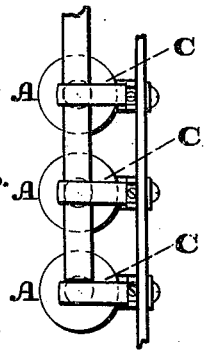
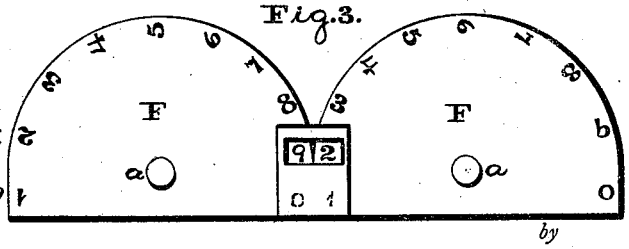


Fig. 3.



Witnesses:

Louis F. Brous.

A. P. Grant.

Inventor:

F. S. Carter,

by John A. Deedesheimer

Attorney.

UNITED STATES PATENT OFFICE.

FRANKLIN S. CARTER, OF BURLINGTON, NEW JERSEY.

IMPROVEMENT IN ELECTRIC ANNUNCIATORS.

Specification forming part of Letters Patent No. **185,294**, dated December 12, 1876; application filed October 25, 1876.

To all whom it may concern:

Be it known that I, FRANKLIN S. CARTER, of Burlington, in the county of Burlington and State of New Jersey, have invented a new and useful Improvement in Electric Annunciators; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view of an annunciator embodying my invention. Fig. 2 is a top view thereof. Figs. 3 and 5 are front views of other forms thereof. Fig. 4 is a transverse section in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to an annunciator adapted for hotels, private residences, &c., for purposes of communication, prevention of burglary, or announcement of attempts thereat, &c.; and it consists of a rotary index, dial, slide, or other proper mechanism, controlled at intervals by magnets, whereby, by the extent of motion of said mechanism, the place of communication, or location of the alarm, will be indicated, a suitable bell being provided for directing attention to the indicator, or sounding an alarm thereat.

Referring to the drawings, A represents a series of electro-magnets, which are mounted on a suitable plate or frame, arranged in circular order. Adjacent to the core B of each magnet is mounted an armature, C, which projects beyond the perimeter of the magnet, so that when the armature is attracted it may be engaged by an arm, D, which is secured to the axis *a* of an index, E, of a dial-plate, F, which, in Fig. 1, is shown in dotted lines. To the armature C of the first magnet of the series there is secured a catch, *b*, which is adapted to hold the arm D when in its normal position, and the armatures of the other magnets of the series stand sufficiently from the cores thereof to permit the arm D to pass thereunder, unless the said armatures are attracted, in which case they stop the motion of the arm, the axis *a* of the index having a spring connected to it to force it from its normal position. Each apartment or connection to be designated will be connected by a wire to its respective magnet in the annunciator; and upon the closing of the key, spring, or other suitable device in such apartment or connection, the current or circuit of elecricity will flow over the wire, passing through the magnet representing the apartment or section to which the wire is connected, attracting its armature, and, at the same time, passing through the magnet whose armature serves as a catch, or has a catch, *b*, connected therewith, releases the arm, which, owing to the spring on its axis, immediately rotates until it strikes, and is held by coming in contact with the armature of the indicating-magnet, whereby the index E will stand opposite to said magnet, and indicate on the dial the apartment or place from which the alarm has been sounded. By properly rotating the axis of the index the arm D will be restored to its normal position, engaged with the catch *b*, and ready for the next operation.

It is evident that the index E may be made to operate directly with the catch *b* of the armature of the first magnet, and also with the armatures of the other magnets, thus dispensing with the arm D, but the operation will not be varied; or the dial may be made to rotate, and the arm D connected thereto, so that by rotation of the dial the relative name of the apartment or place marked thereon may be brought around opposite to a fixed index, or to an opening in a hood or covering-plate, and thereby be exposed.

Where the annunciator is required for numerous apartments or places, I may use two rotary dials, as arranged in Fig. 3, both having numbers marked thereon, and employ a hood or covering-plate with openings therein, and through them the numbers presented by rotation of the dials may be viewed. Two sets of wires will be employed—one set for each dial—and there will be a duplication of magnets.

Suppose apartment 92 sends an alarm. One dial swings around and exposes 9 in the opening, and the other dial swings in the opposite direction, and presents in the opening the figure 2, which sets aside of the figure 9.

It is evident that the same result can be produced by the employment of two stationary dials and two rotary indices.

It will be seen in this construction of annunciators I employ one magnet for ten connections or apartments to be indicated, also saving wire in the running of the various circuits—as, for instance, all of the twos of the twenties can be connected to one wire, thus saving nine wires in running to the annunciator, thus making a saving of eighty wires in an annunciator for one hundred rooms or connections.

In lieu of the rotary index or rotary dial, I may employ one or more sliding bars or plates, having marked therein numbers or other characters of indicating nature. In this case the magnets will be arranged one above the other, and when the key, spring, or other suitable device is closed, the proper armatures will be attracted, and as the sliding bar falls, or is released from the catch of one armature, the other armature occupies such position that the bar will be stopped and held, the indicating figure or character of the latter then being presented.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an electric annunciator, indicating mechanism controlled at intervals by magnets, substantially as and for the purposes set forth.

FRANKLIN S. CARTER.

Witnesses:

JOHN A. WIEDERSHEIM,

JNO. A. BELL.