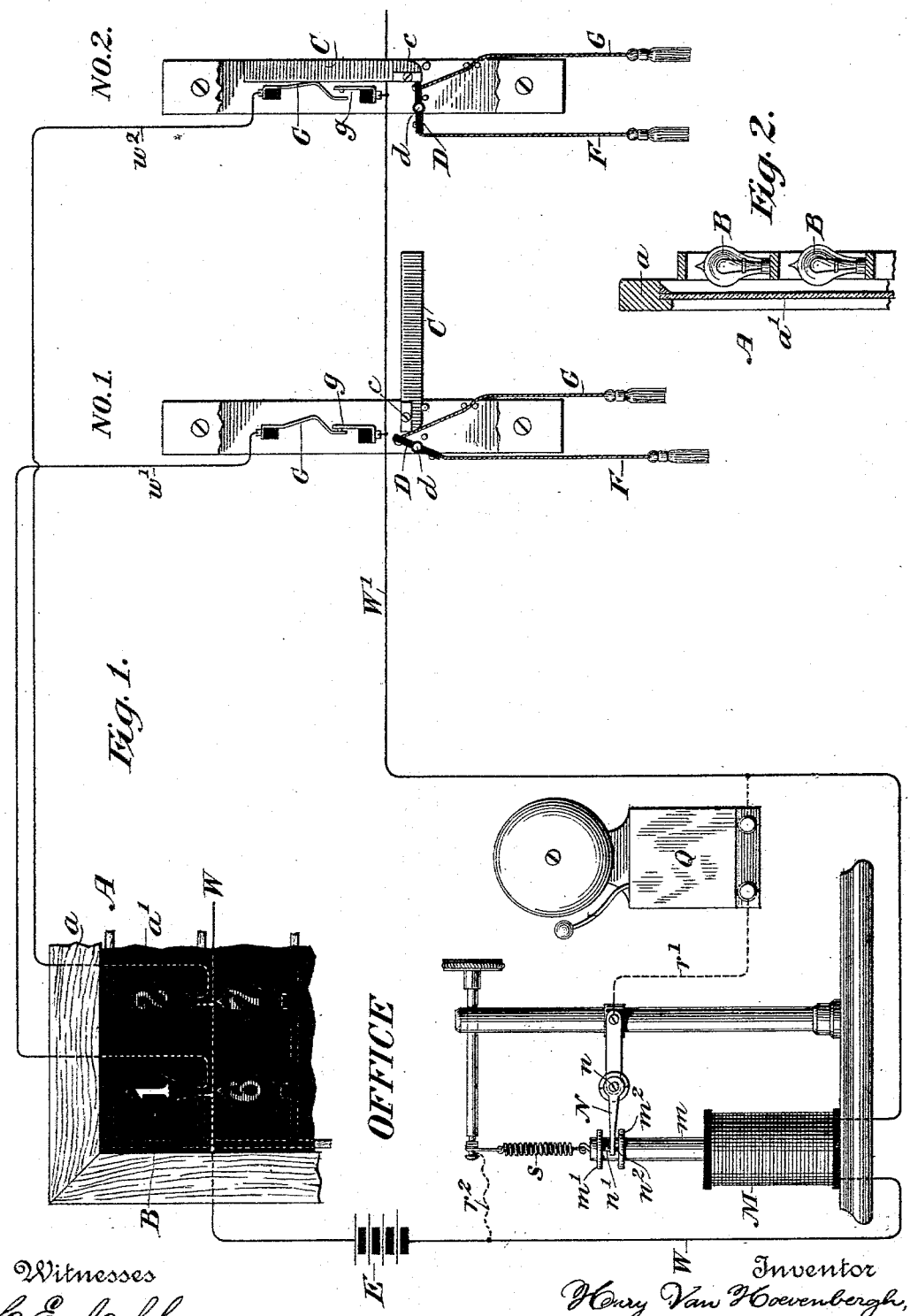
(No Model.)

H. VAN HOEVENBERGH.

ELECTRIC ANNUNCIATOR SYSTEM.

No. 490,327. Patented Jan. 24, 1893.



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UNITED STATES PATENT OFFICE.

HENRY VAN HOEVENBERGH, OF NEW YORK, N. Y.

ELECTRIC-ANNUNCIATOR SYSTEM.

SPECIFICATION forming part of Letters Patent No. 490,327, dated January 24, 1893.

Application filed March 24, 1892. Serial No. 426,240. (No model.)

To all whom it may concern:

Be it known that I, HENRY VAN HOEVENBERGH, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Electric-Annunciator Systems, of which the following is a specification.

My invention relates especially to that class of annunciators which are used in hotels for transmitting signals between the several rooms of the hotel and the office of the superintendent or manager.

In the accompanying drawings, which illustrate an apparatus embodying my improvements, Figure 1 is a diagram showing the apparatus in the office, and in two of the rooms of a hotel or other like establishment, and Fig. 2 is a detail view, being a transverse section of a portion of the annunciator tablet.

The annunciator tablet A is designed to be placed in a conspicuous position in the office, where it may easily be seen at any time by the superintendent, manager, or other attendant. It consists of a frame *a* surrounding a front preferably of one or more panes of glass as shown at *a'*. A series of numerical or other characters, corresponding to and designating the several rooms, are placed upon this tablet. I prefer in carrying out my invention, to cover the glass with an opaque coating of varnish or like material but leaving the character transparent or translucent, as shown for example by the numbers 1, 2, 6 and 7, in the figure. Behind each of the transparent or translucent characters, a small incandescent electric lamp B is mounted on a transverse bar, or in any convenient manner, the number of such lamps corresponding to the number of different characters upon the tablet A. The arrangement of the lamps is shown at B B in Fig. 2, and also in dotted lines in Fig. 1.

Connected with each room of the hotel is a visual signal consisting of an arm C pivoted at one end as shown at *c*, and normally standing in an upright position in a recess in the wall or transom near or above the door of the room, as shown in the room designated as "No. 2" in Fig. 1 of the drawings, in which position it remains concealed from the view of a person in the outer hall. The signal is ordinarily held in this position by a locking lever D, which is pivoted at its center *d*, and works in a slot formed in the wall of the room. This locking lever has a cord, or equivalent device, attached at each of its ends, one of which cords F is accessible from the interior and the other one G, from the outside of the room.

In the recess formed for concealing the signal C is an electric circuit-closer, consisting of a metal spring G, which tends to make contact with an anvil *g* but is separated therefrom by the pressure of the signal C when the latter is in its concealed position, as shown in connection with room "No. 2." Thus it will be understood that if the signal C is in its normal or concealed position, as shown in connection with room "No. 2," and the occupant desires to summon an attendant, he pulls the cord F, which depresses the outer and raises the inner end of the locking-lever D, and thus releases the signal C, which falls outwardly, projecting into the hall in a horizontal direction (as shown in connection with room "No. 1") and attracting the notice of the attendant. After answering the call, the attendant pulls the cord G in the hall, which, through the intervention of the locking lever, restores the signal C to its normal position.

From the circuit-closer of each room, a separate wire is run, as shown at w' and w^2, to the office, passing through the corresponding incandescent lamp upon the annunciator tablet, and then joining a common wire, W, in which is included a battery or other electrical generator E and an electro-magnetic helix M, from whence it extends as a return wire W', having branches to the circuit-closer of each room. A movable core *m* is suspended by means of an adjustable spring S so as to hang partly within a helix M. A contact-arm N, turning upon a frictional pivot *n* plays between two collars, m' and m^2 upon the suspended core *m*. This arm is provided with a contact-point n' and an insulating point n^2. The arm N is included with a vibrating bell or "buzzer" Q in a local circuit, here shown as a shunt or branch of the main circuit, in dotted lines r' and r^2.

Whenever a signal is shown from one of the rooms, as at room "No. 1" in Fig. 1, the circuit of the generator E is instantly closed through room-wire w^2 and the corresponding lamp (lighting up the designating number

"1" upon the tablet A) and also through the helix M. The core *m* is drawn into the helix, but its momentum carries it a little below its ultimate position of rest, when under the attractive influence of the helix, so that it rises a short distance before coming to rest, by the action of the spring S. During the descent of the core *m* the collar *m'* makes electric contact with the arm N, but when it rises again this contact is broken, and hence although the core *m* remains attracted by the helix, the local circuit of the bell Q is only momentarily closed. In case a call should be sent from a second or a third room, before the call from the first room had been answered, the corresponding lamps would be lighted, and the increase in the volume of current traversing the helix M, would cause the core *m* to be drawn farther in, thus renewing the contact with the contact-arm N, and giving a signal upon the bell Q as before. Thus it will be understood that the exhibition of the signal of any room whatever will give a momentary signal on the bell for the purpose of calling attention to the tablet, and hence the proper illuminated character upon the latter will be visible so long as the signal in any room remains displayed, and the call unanswered. In this way the manager in the office may at all times be advised as to whether the servants in different parts of the house are properly attentive to their duties.

The suspended core moving within a coil which is employed to actuate the frictional contact-arm N, may be replaced by other known forms of electro-magnetic armatures which are capable of moving past and returning to their ultimate position of rest while under the influence of a current.

I claim as my invention:—

1. In an annunciator system, the combination of an electric lamp, a circuit-closer for transmitting a current through said lamp, a visual signal which controls the action of said circuit-closer, and a frictionally mounted contact lever for momentarily actuating an audible signal, when said current is transmitted, substantially as set forth.

2. In an annunciator system, the combination of an electric lamp, a circuit-closer for transmitting a current through said lamp, a visual signal which controls the action of said circuit-closer, a device within a room for exhibiting said signal, and a device without said room for reversing said signal, substantially as set forth.

3. In an annunciator system, the combination of a helix, a core sustained upon a yielding support and movable within said helix, an electrical contact carried upon said core, or moving therewith, a contact-lever frictionally mounted upon a pivot, and an electrically actuated audible signal, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name this 22d day of March, A. D. 1892.

HENRY VAN HOEVENBERGH.

Witnesses:

ANTHONY GREF,

FRANKLIN L. POPE.