

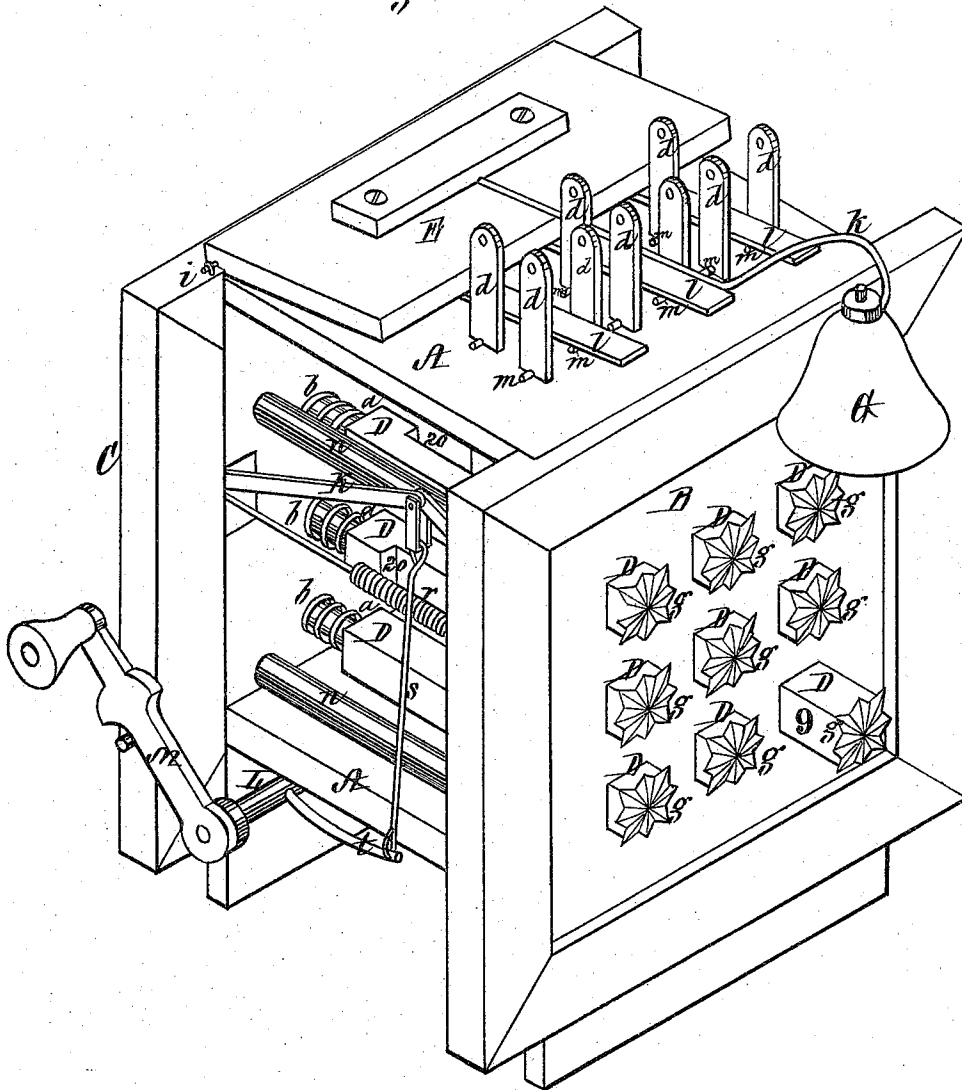
C. H. GREENLEAF.

Annunciators.

No. 141,927.

Patented August 19, 1873.

Fig. 1.



Witnesses,
Wm. Dornmuth
W. J. Cambridge

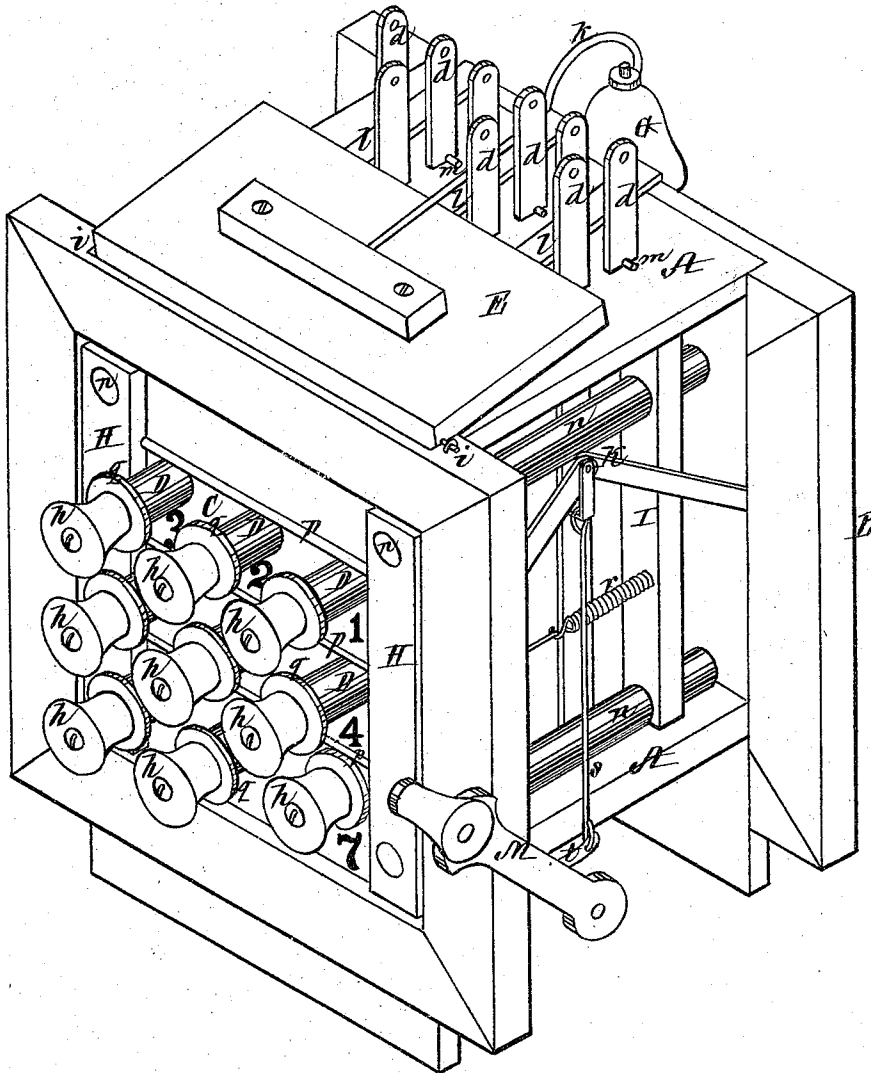
Inventor,
Charles H. Greenleaf
for his Attorneys
Sechmachers & Stearns

C. H. GREENLEAF.
Annunciators.

No. 141,927.

Patented August 19, 1873.

Fig. 2.



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Annunciators.

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Fig. 3.

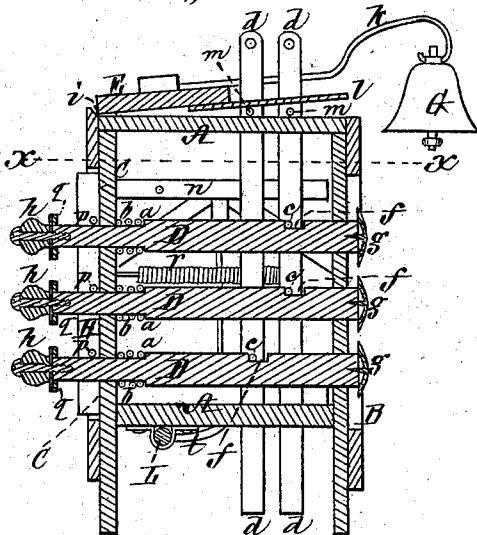


Fig. 4.

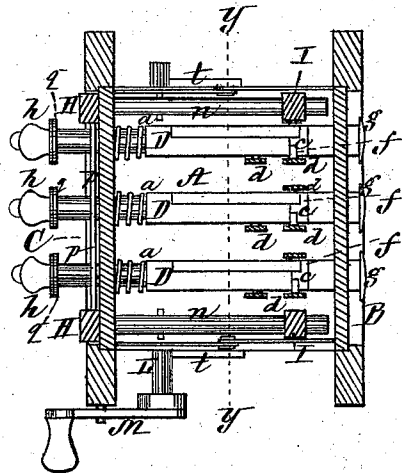


Fig. 5.

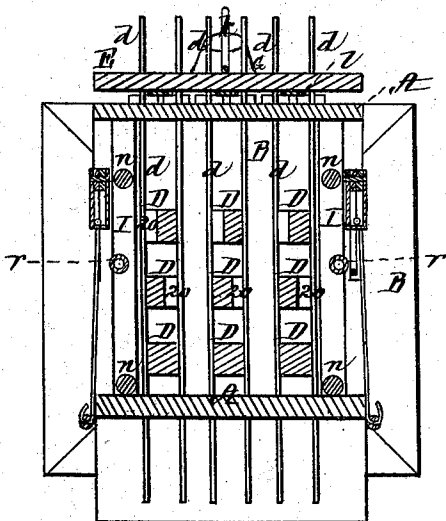
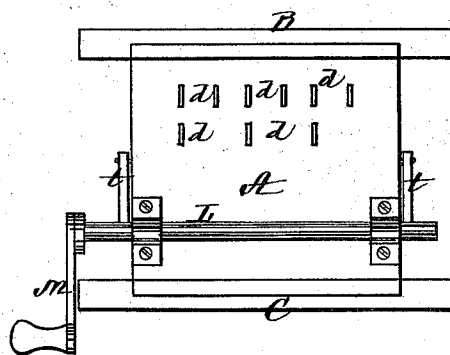


Fig. 6.



Witnesses,
Wm. Doremus
H. J. Cambridge

Inventor,
Charles H. Greenleaf
By his Attorneys,
Fessenden & Stearns

UNITED STATES PATENT OFFICE.

CHARLES H. GREENLEAF, OF FRANCONIA, NEW HAMPSHIRE.

IMPROVEMENT IN ANNUNCIATORS.

Specification forming part of Letters Patent No. **141,927**, dated August 19, 1873; application filed April 28, 1873.

To all whom it may concern:

Be it known that I, CHARLES H. GREENLEAF, of Franconia, in the county of Grafton and State of New Hampshire, have invented certain Improvements in Annunciators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a perspective view of the front side of my improved annunciator. Fig. 2 is a perspective view of the rear of the same. Fig. 3 is a transverse vertical section through the same. Fig. 4 is a horizontal section on the line *xx* of Fig. 3. Fig. 5 is a vertical section on the line *yy* of Fig. 4. Fig. 6 is a plan of the under side of the annunciator.

My present invention consists in an annunciator provided with a series of sliding bars actuated by springs, the bars being held by catches operated by wires leading from the various rooms, the numbers of which are indicated upon the bars, or upon the dial or face, in close proximity thereto. My invention also consists in the combination of two dials or faces on opposite sides of the annunciator with a series of sliding bars actuated by springs, by which construction as one end of a bar is thrown out by its spring its opposite end will be withdrawn, thus indicating the number of the room on both dials or faces simultaneously, whereby the apparatus may be made to notify persons in different rooms or positions, if desired. My invention also consists in an alarm mechanism operated by any one of the wires leading from the rooms, in combination with a series of sliding bars actuated by springs for indicating the numbers of the rooms, the mechanism being so constructed that the movement of a wire to release the bar corresponding thereto will cause the alarm to be sounded, as required. My invention also consists in a mechanism operated by a crank or handle for returning the sliding bars to their original positions after being actuated by their springs to indicate the numbers of the rooms.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the casing of the annunciator, to the front of which is secured a dial or face, B, and to the opposite side another dial or face, C. D D are a series of horizontal sliding bars (one for each room,) the opposite ends of which extend through openings in the dials B C, which thus serve as guides. The rear portion of each bar D is turned down so as to leave shoulders *a*, between which and the inner side of the dial C it is surrounded by a spiral spring, *b*, by which it is thrown forward when released in order to expose its number, as seen in Fig. 1.

Each of the sliding bars D is held back against the resistance of its spring *b*, by a pin, *c*, projecting from one of a series of flat rods, *d*, which slide in narrow apertures in the top and bottom of the casing A, each one of these rods having secured to its upper end a wire leading to one of the rooms of the hotel or other building. These rods *d* are entirely independent of each other, and when the wire of a room is pulled by the occupant the rod *d* connected therewith is raised, withdrawing its pin *c* from a notch, *f*, in the corresponding bar D, which is then thrown out by its spring to indicate the number of the room as desired. The rods *d*, after being raised by their respective wires, drop to their original positions by their own gravity. Each of the bars D above the lower row is cut away at 20, so as to allow of the free passage of the pins *c* below them, if the rods should be raised to an unusual height by the pulling of the wires. To the front ends of the bars D are attached ornamental plates *g*, and to their rear ends knobs *h*, and it will be seen that when the front end of a bar is thrown out from the dial B by its spring *b* to expose its number, its opposite end is drawn in toward the dial C, on which the numbers are placed immediately under their respective bars, and by thus providing the annunciator with two dials or faces on opposite sides it may be used to notify persons in different rooms or positions, and its utility thereby greatly increased.

If preferred the numbers may be placed on the dial B, or on the plates *g*, instead of on the sides of the front portions of the bars D, and instead of being on the dial C they may be placed on the knobs *h*.

I will now describe the mechanism by which the alarm is given simultaneously with the release of each bar, D. E is a broad plate, which is pivoted to the top of the casing A at *i*, and to this plate is secured a spring-arm, *k*, carrying at its outer end a bell, G. *l l* are a series of arms secured to the plate E, and projecting over a series of pins, *m*, attached to the rods *d*, so that the raising of any one of the rods *d* to release its bar D will move the plate E, causing the bell-arm *k* to vibrate and produce an alarm to call the attention of the attendant as required, immediately after which the bar D may be returned to its normal position against the resistance of its spring *b* by pressing with the hand against its plate *g*, or pulling on the knob *h* at the opposite end, or by a mechanism now to be described. H is a frame, which rests against the outside of the dial C, and is supported by rods *n* which slide in openings in the dial, and in the vertical posts I between the top and bottom portions of the casing A. Secured to the vertical portions H of the frame, and extending from one to the other, are a series of rods or wires, *p*, against which elastic washers *q* placed between the rear ends of the bars D and the knobs *h* strike when the bars are released, and thus when the frame H is thrown out from the dial C by the movement of the toggle-joints K, connected therewith, one of the wires *p* is caused to bear against the washer *q* of any bar D which may have been released, and force it back until it is caught by one of the pins *c* dropping into its notch *f*, after which the frame is returned to its original position by springs *r*, attached thereto and to the posts I. The toggle-joints K are operated by wires *s*, connected therewith, and with arms *t*, projecting from a horizontal shaft, L, which is rocked by a crank, M, placed in a convenient position to be operated by the attendant.

This mechanism does not interfere with the return of the bars by hand, which may sometimes be found desirable when several bars are released at once, as in such case one person can take one or more numbers and press back the corresponding bars, leaving the others for another person, and so on, the bars not returned showing what calls have been

unanswered; and it will thus be seen that the mechanism for returning the bars D to their original positions can be entirely dispensed with, without impairing the efficiency of the apparatus.

The notches *f* in the bars D are of greater width than the diameter of the pins *c*, which insures the catching of the bars by their pins when forced back by the wires *p*.

The frame H and wires *p* may be actuated by any suitable mechanism other than that shown operated by a crank-lever or other device.

A very slight movement of one of the rods *d* is sufficient to release its bar D and ring the bell, which is a great advantage when the wires leading to the rooms are of considerable length, as in such case they are liable to stretch, and only slightly move the rods *d*, on account of the loss of motion, while no extra amount of motion of the rods caused by long or frequent pulling of the wires will in any way injure the mechanism, but will only cause the bell to be rung with greater force.

It is evident that the rods *d*, instead of being placed vertically, as shown, may be arranged horizontally; but in such case they would require to be provided with springs, to return them after being operated by the wires.

The above-described annunciator is of exceedingly simple construction, and can, consequently, be furnished at a very low cost, while it is not liable to get out of order, as is the case with the complicated apparatus now in general use.

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

The combination of two dials or faces on opposite sides of the annunciator, with a series of sliding bars, D, actuated by springs, whereby the movement of a bar will indicate the number of a room on both dials simultaneously, substantially as and for the purpose described.

Witness my hand this 23d day of April, A. D. 1873.

CHARLES H. GREENLEAF.

In presence of—

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.