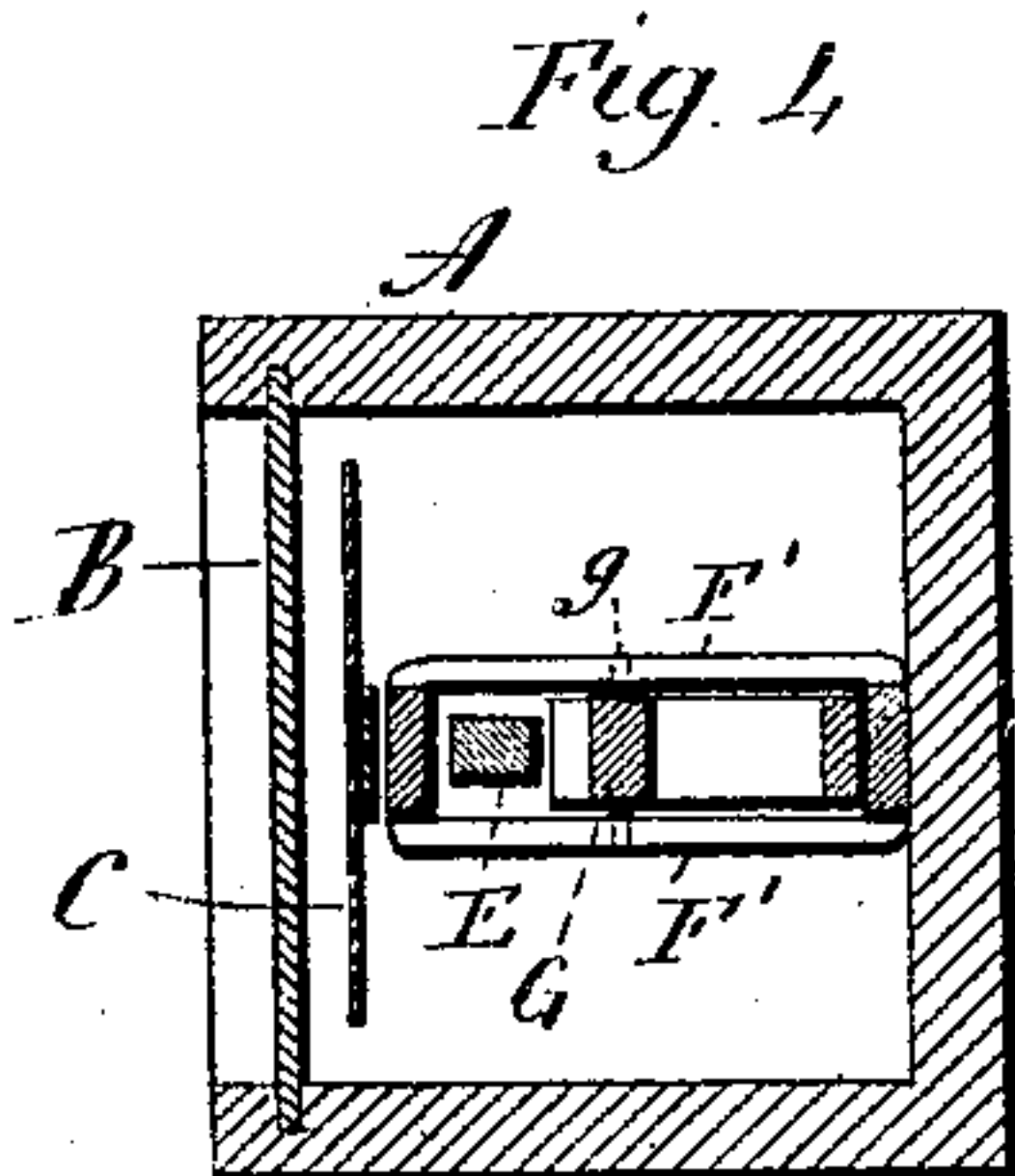
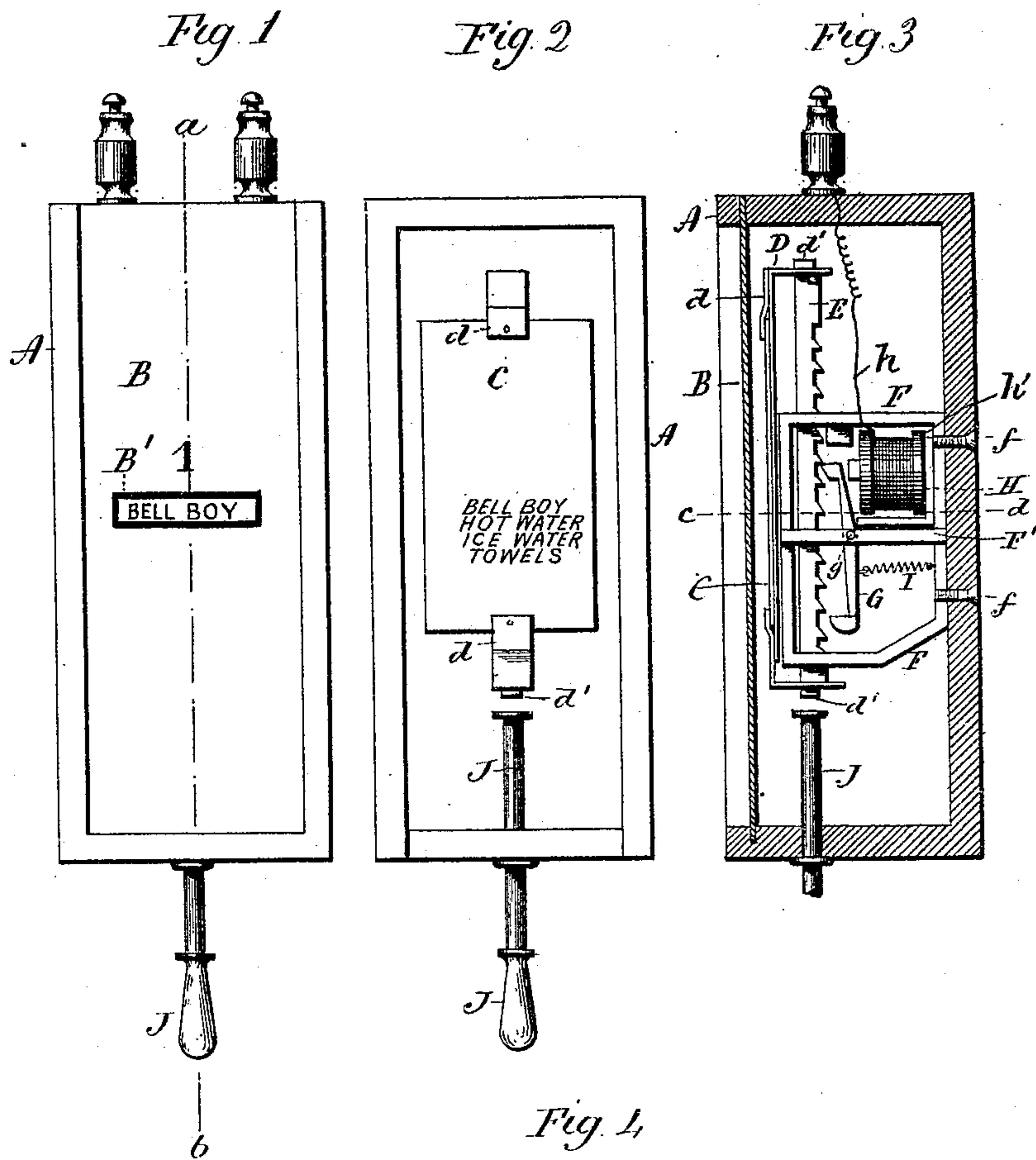


(No Model.)

J. H. ELFERING.
ANNUNCIATOR.

No. 496,192.

Patented Apr. 25, 1893.



Witnesses
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Lillian D. Kellogg

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UNITED STATES PATENT OFFICE.

JOHN H. ELFERING, OF MILFORD, CONNECTICUT.

ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 496,192, dated April 25, 1893.

Application filed October 3, 1892. Serial No. 447,654. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. ELFERING, of Milford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Annunciators; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in front elevation of an annunciator constructed in accordance with my invention; Fig. 2, a similar view thereof with the glass slide closing the open front of its case removed; Fig. 3, a view of the device in vertical central section on the line *a—b* of Fig. 1, showing its mechanism in side elevation; Fig. 4, a view of the device in transverse section on the line *c—d* of Fig. 3.

My invention relates to an improvement in that class of annunciators which are adapted to be operated to select and display one of a number of signals or "wants" chosen with reference to the messages which occasion most frequently demands the sending of to a central point, and is particularly designed for hotel annunciation, the object of the present invention being to produce a device which shall be very simple to construct and keep in repair, reliable in use, and require only the simple wiring of an ordinary drop-annunciator, which it may, if desired, replace.

With these ends in view, my invention consists in an annunciator having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claim.

As herein shown, the device is adapted for use in hotel annunciation, although it is apparent that it is not limited to such use, but may be employed in a great variety of situations where annunciators are used, by simply suiting the "wants" to the character of messages to be sent by it. As herein shown, also, the case A, of the device is designed to contain only one mechanism although it is obvious that a number of mechanisms may be included in one case, if desired. The case A has the form of an oblong rectangular box, having its open front closed by a movable

slide B, of glass, which is painted so as to be opaque, except for a single opening B', over which is placed a number 1, which we will assume indicates that this particular device is electrically connected with room No. 1 of the hotel, in the office of which the device is located. Directly back of, and close to this glass slide B, is located a vertically movable tablet C, displaying upon its outer face a vertical series of "wants," which will be chosen with reference to the most frequent calls of guests from their rooms. These "wants" are printed in parallel horizontal lines at equal distances apart, so that as the tablet is dropped step by step, and for an equal distance each time, the "wants" will be successively brought into alignment with and display through the opening B', in the slide B. The upper and lower ends of this tablet are secured by short sheet-metal leaves *d*, under which its edges are introduced, to a sheet-metal carrier D, consisting of a strip of sheet-metal, having its upper and lower ends bent rearward at a right angle, and attached by means of screws *d' d'* to the upper and lower ends respectively of a vertically movable rack E, having its rear edge toothed, and having bearing in the upper and lower members F and F', of an open metal frame, which is attached by screws *f f* to the back of the case A. The teeth of the said rack are alternately engaged by the opposite ends of a double-acting pawl G, hung in substantially a vertical plane, on a horizontal pivot *g*, the opposite ends of which are supported by the horizontal, intermediate members F' F', of the frame, as shown by Fig. 4 of the drawings. The upper end of the said pawl is located in the presence of one of the poles of a small magnet H, placed in an electric circuit, represented by the wires *h* and *h'*, which are connected with a battery of suitable construction, and also with some form of circuit-breaker, which is situated we will say, in room No. 1 of the hotel, and may be an ordinary push-button, or a substitute therefor. A light coiled spring I, connected with the lower end of the said pawl G, is arranged to exert a constant effort to pull the said end of the pawl away from the rack, and therefore to throw the upper end of the pawl into engagement therewith.

In the normal condition of the apparatus above described, the circuit through the magnet H, being open, the spring I, will operate to keep the upper end of the pawl in engagement with the rack, which will normally be lifted to the limit of its upward movement. Then when the circuit is closed, and the magnet energized, the upper end of the pawl will be attracted by the same, causing the pawl to swing on its pivot so as to disengage its upper end from the rack, and throw its lower end into engagement therewith against the tension of the said spring. This movement of the pawl allows the rack to drop less than the distance represented by one tooth, but sufficiently to permit the tooth last engaged by the upper end of the pawl to pass below the said end of the same, and also to permit the tooth that previously stood just above the level of the lower end of the pawl to engage therewith and support the rack. When the circuit is broken and the pawl allowed to return to its normal position, the spring I, acts and strikes the upper end of the pawl into engagement with the tooth of the rack next above the tooth thereof last engaged by the said end of the pawl, the rack now falling enough more to make a total movement represented by one tooth. For one making and breaking of the circuit through the magnet H, the rack is therefore allowed to fall only through the distance represented by one tooth. The tablet will have a corresponding downward movement and the lowest "want" on the list of "wants" displayed upon its outer face, will be brought into view through the opening in the glass slide of the case. If it is desired to bring the fourth "want" in the list, counting from the lower end thereof upward, the circuit must be made and broken four separate times, thus allowing the rack to drop through the distance represented by four of its teeth.

It is thought that the foregoing will sufficiently illustrate the operation of the apparatus in selecting the "wants" upon its tablet. After the apparatus has been operated and the message brought in by it noted, it is

restored to its normal condition by means of a restoring-rod J, which consists of a simple rod provided with a handle J', at its lower end, and mounted in the bottom of the case A, in line with the rack E. To restore the apparatus to its normal condition, the rod is pushed upward until the rack has been lifted to the limit of its upward movement.

I would have it understood that in carrying out my invention I may make some slight changes from the construction herein shown and described, and I would therefore have it understood that I do not limit myself to the particular form and arrangement of parts set forth, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

I am aware, however, that it is old to provide an annunciator with a double-acting pawl having its respective ends arranged to co-operate with the rack carrying a want-tablet, and a magnet. I do not therefore claim that combination broadly, but only my particular construction.

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

In an annunciator, the combination with a frame, of a vertically movable rack mounted therein and projecting above and below the same, a want-tablet attached to the projecting upper and lower ends of the said rack, and displaying several wants arranged one above the other, a magnet mounted in the said frame, a double-acting pawl hung in the said frame with its ends respectively arranged to co-operate with the magnet and with the pawl, and a spring connected with the pawl and tending to move it away from the rack against the pull of the magnet, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN H. ELFERING.

Witnesses:

FRED. C. EARLE,
GEO. D. SEYMOUR.