

No. 756,608.

PATENTED APR. 5, 1904.

F. H. ELWELL.
ANNUNCIATOR.

APPLICATION FILED JULY 9, 1902.

NO MODEL.

Fig. 1.

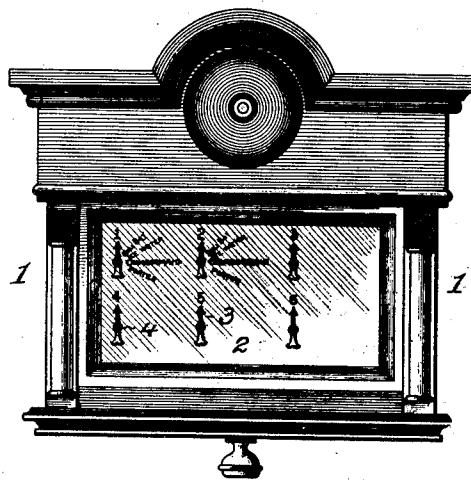


Fig. 2.

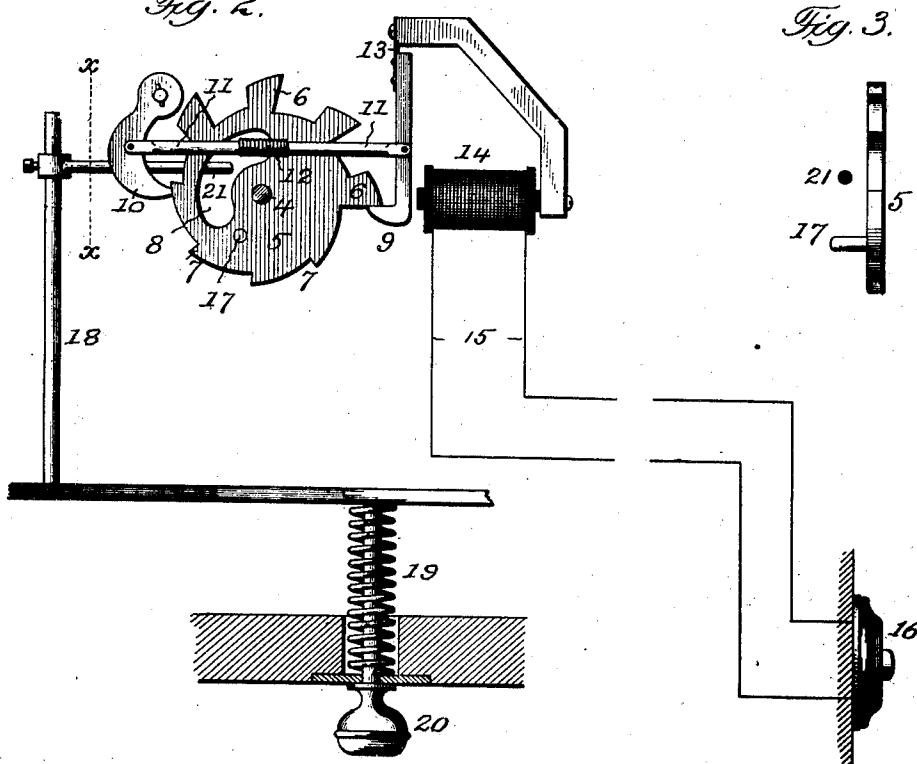
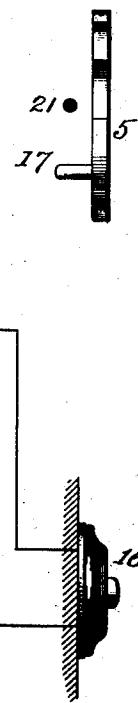


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANKLIN H. ELWELL, OF CHICAGO, ILLINOIS.

ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 756,608, dated April 5, 1904.

Application filed July 9, 1902. Serial No. 114,849. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN H. ELWELL, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Annunciators, of which the following is a specification.

The present invention relates to the step-by-step type or multidrop of annunciators for hotel and like uses, and has for its object to provide a simple, durable, and efficient operating mechanism which is capable of application to ordinary existing systems without any material change in the same and at a minimum cost, all as will hereinafter more fully appear, and be more particularly pointed out in the claims. I attain such object by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the register portion of a hotel-annunciator embodying the present invention. Fig. 2 is an enlarged detail elevation showing the face-plate of the register removed to illustrate a simple operating mechanism of the present invention; Fig. 3, a fragmentary sectional elevation at line $\alpha\alpha$, Fig. 2.

Similar numerals of reference indicate like parts in the different views.

Referring to the drawings, 1 represents the housing of the annunciator, of any usual and required size and shape and which is provided with a face-plate or dial 2, as usual.

3 represents the dial hands or pointers, arranged in front of the face-plate 2 and supported on journal-shafts 4, which project through the face-plate for operative connection with the individual operating mechanisms of the series of such dial hands or pointers.

The dial-hands are in the present invention adapted to have a step-by-step oscillatory movement in front of the dial-plate 2, and such dial-plate will be correspondingly marked in a spaced manner with words or symbols indicative of the signals transmitted—as, for instance, the words "Bell-boy," "Ice-water," "Chambermaid," and "Porter"—as in the hotel-annunciator illustrated in Fig. 1 of the present drawings.

In the present invention each individual op-

erating mechanism for a dial hand or pointer 3 will comprise a construction as follows: 5 is a disk mounted on the carrying-shaft 4 of a dial-hand and which in the present construction is provided at one side of its periphery with a series of elongated detents 6, and at the side of the periphery diametrically opposed to such detents 6 are a secondary series of detents 7. The arrangement of said detents is such that the projecting and elongated series of detents 6 overweight the side of the dial at which they are located, so that the tendency of such side of the disk is to descend by gravity, and such tendency is preferably increased in the present construction by forming one or more orifices 8 in the opposite side of the disk, as shown in Fig. 2 of the drawings.

9 and 10 are a pair of opposed pallets or pawls journaled at their upper ends in any suitable manner and connected together, so as to move in unison, so that when one pawl is moved out of the path of its next adjacent detent the other pawl will be moved into the path of its next adjacent detent, and in consequence an intermittent step-by-step turning movement of the disk 5 will take place in manner similar to an ordinary clock-escape-ment.

In order to prevent a binding movement of the points of the pallets against the surfaces of their respective detents 6 and 7, it is preferable to form the connection by such means that the pallets are caused to have simultaneous oscillatory movement of a yielding nature, so that either one may be capable of a slight movement when so desired independent of the other, and this I accomplish in a ready and simple manner by forming such connection of two sectional links 11 11, connected together at their meeting ends by means of a section of closely-wound spiral spring 12. With such particular construction the connection is capable of the slight extension required beyond its normal length, but is incapable of any compression from such normal length.

The pallet or pawl 9 is preferably pivoted at its upper end by means of a spring hinge or plate 13, the tendency of which is to yieldingly hold such pallet in engagement with an adjacent detent 6 of the disk 5, and such pal-

let is preferably formed of iron or like magnetic material, so as to constitute the armature of the electromagnet by which the operating mechanism of the dial hand or finger is actuated. It is, however, within the scope of this part of the present invention to employ a separate armature in connection with such pallet where the circumstances or the judgment of the constructor may indicate such 10 substitution.

14 is an electromagnet which when energized by a suitable signaling-circuit is adapted to attract the armature on the pawl 9 to disengage said pawl from its engagement 15 with a particular detent 6.

With the described release of the detent 6 the disk 5 is adapted to turn upon its axis by the gravitation of such side of the disk as heretofore described, and such turning action 20 continues until the same is arrested by the companion pawl 10 engaging with the next adjacent detent 7, into the path of which the said pawl 10 moves automatically as the pawl 9 moves out of the described engagement with 25 the detent 6. Such operation imparts a partial rotation to such disk 5 and through the shaft 4 of the same to the hand or pointer 3, and accordingly such hand or pointer will be moved to a fresh indication on the repetition 30 of the above-described operation or actuation of the parts.

15 is a battery line-circuit, of which there is one for each set of such mechanisms, and such circuit is adapted to extend from the 35 room of the hotel or other like sending-point to the office of the hotel or other like receiving-point. Such arrangement of the local circuit may be of any usual and approved form now in general use.

40 16 is a push-button or other like circuit-closer arranged in the described battery-circuit 15 and located at the room of the hotel or other sending-station.

With the described arrangement of parts 45 as shown in the drawings a single push of the push-button 16 is adapted to move the hand or pointer 3 to the call marked "Bell-boy," a second push to the call marked "Ice-water," a third push to the point marked "Chamber- 50 maid," and a fourth push to a point marked "Porter." It is within the province of this part of the present invention to employ a lesser or a larger number of such indications, with a corresponding modification of the operating parts of the operating mechanism to 55 suit any particular use to which the present invention may be applied.

17 is a pin or stud projecting from one side of the disk 5, at the side of the same in which 60 the series of detents 7 are formed.

18 is a vertically-movable frame arranged back of the face-plate 2 and adapted to be returned to an upward or raised position by a spring 19 after having been pulled down manually by the hotel clerk or other person 65 in charge.

20 is a handle by which convenient manipulation of the frame 18 can be effected by the operator.

21 is an arm of which there will be one 70 for each indicating mechanism employed in the annunciator and which is located in the line with the pin, the arrangement being such that as the operator pulls down the vertically-movable frame 18 in the manner described 75 the said arm 21 will engage the stud or pin 17 and with the final downward movement of said frame will return and reset the disk at its original and normal position of rest, with the hand or pointer 3 in a position away from 80 any of the described indications.

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

1. In an annunciator of the character herein described, the combination of a dial; an oscillating pointer arranged in front of same, a shaft carrying said pointer, a disk carried by said shaft, opposed series of detents on the periphery of such disk, a pair of opposed pallets or pawls pivoted separately at opposite sides of the carrying-shaft aforesaid and adapted to have engagement with said detents, an elastic connection imposing simultaneous movement on said pallets, and means for imparting oscillation to said pallets, the same comprising an electromagnet, a battery-circuit and a circuit-closer, substantially as set forth.

2. In an annunciator of the character herein described, the combination of a dial, an oscillating pointer arranged in front of same, a shaft carrying said pointer, a disk carried by said shaft, opposed series of detents on the periphery of such disk, a pair of opposed pallets or pawls pivoted at their upper ends and adapted to have engagement with said detents, a connection imposing simultaneous movement on said pallets, the same consisting of two sections or bars and a closed coil-spring connecting the same, and means for imparting oscillation to said pallets, the same comprising an electromagnet, a battery-circuit and a push-button, substantially as set forth.

Signed at Chicago, Illinois, this 1st day of July, 1902.

FRANKLIN H. ELWELL.

Witnesses:

ROBERT BURNS,
HENRY A. NOTT.