

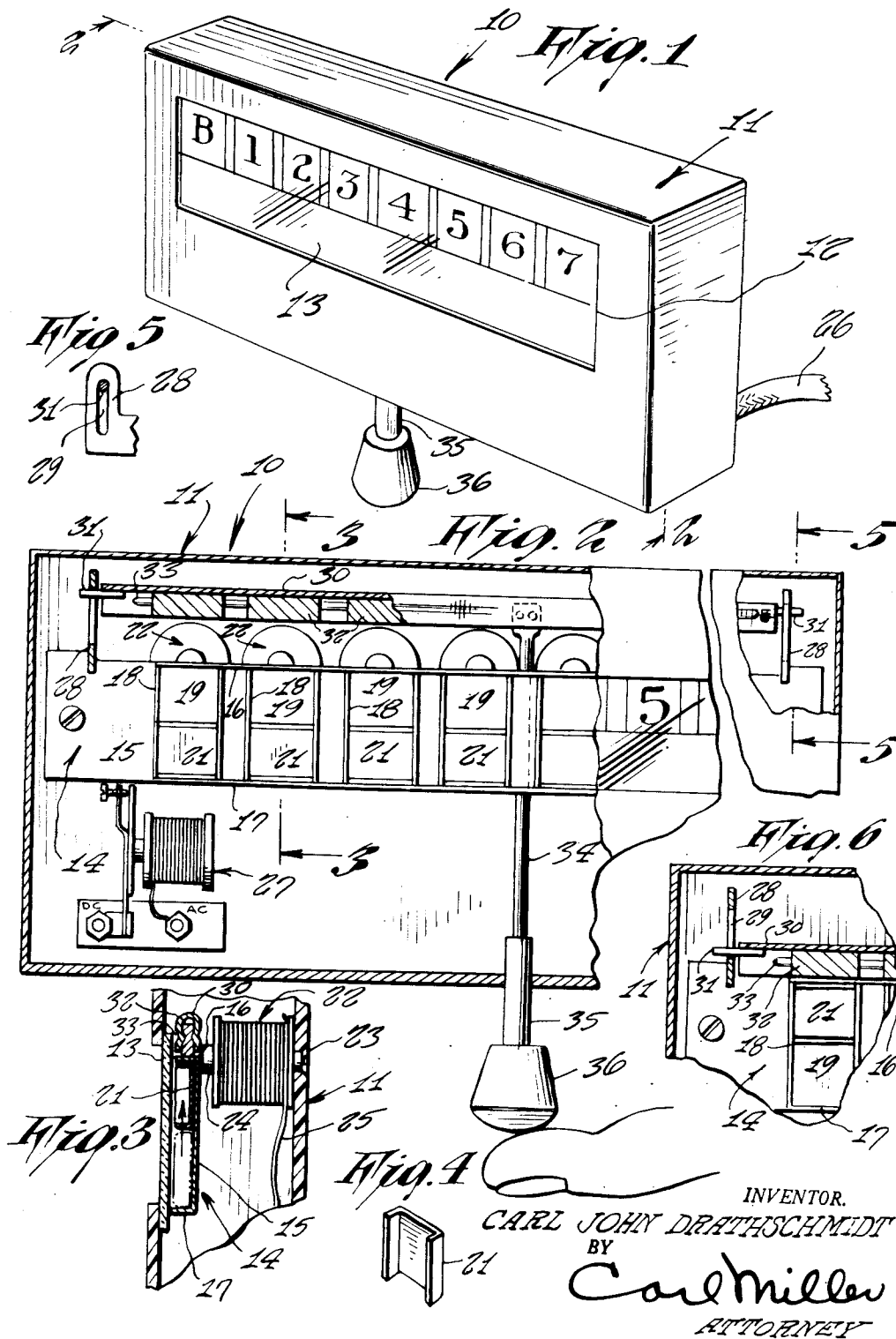
June 1, 1954

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2,680,243

GROUPED ELECTROMECHANICAL ANNUNCIATOR

Filed Feb. 27, 1953



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2,680,243

GROUPED ELECTROMECHANICAL
ANNUNCIATOR

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Application February 27, 1953, Serial No. 339,399

3 Claims. (Cl. 340—372)

1

This invention relates to annunciators of the magnetically actuated type and proposes certain improvements in the annunciator set forth in my co-pending application, Serial No. 323,280, filed November 29, 1952.

It is an object of the present invention to provide an improved annunciator wherein a plurality of signaling indicia are actuated in a vertical direction by a plurality of electric magnets, permanent magnets being provided above the electro-magnets and serving to retain the indicia in operative position after the particular electric magnet has been de-energized, these permanent magnets being movable away from the indicia manually when it is desired to clear the annunciator.

For other objects and a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of an annunciator embodying the features of the present invention;

Fig. 2 is a vertical sectional view taken along the line 2—2 of Fig. 1;

Fig. 3 is a vertical sectional view taken along the line 3—3 of Fig. 2;

Fig. 4 is a perspective view of one of the sliding indicia;

Fig. 5 is a fragmentary vertical sectional view taken along the line 5—5 of Fig. 2, and

Fig. 6 is a fragmentary view similar to Fig. 2 showing the slide in the raised or operative position.

Referring now more in detail to the drawing in which similar reference numerals identify corresponding parts throughout the several views, there is shown an annunciator, referred to collectively as 10 and including a hollow rectangular casing 11, substantially as illustrated. The front wall of the casing 11 is provided with a rectangular opening 12 behind which is suitably secured a glass window 13. As shown in Fig. 1, the glass window 13 carries gold numerals, longitudinally spaced from each other, and for a purpose to be hereinafter described. A channel shaped plate 14 having a main portion 15 and forwardly extending, top and bottom flanges 16 and 17 respectively, is suitably secured behind the window 13 substantially as illustrated in Figs. 2 and 3. Vertical strips 18 are welded intermediate the top and bottom flanges 16 and 17 in longitudinally spaced relation to each other, as shown in Fig. 2, providing thereby a plurality of vertical channels 19. The body portion 15 and the channels 19 are also colored gold whereby to provide

2

a light background for the gold indicia on window 13 and to normally render the latter substantially invisible.

A slide 21 is slidably disposed within each channel 19, the slide 21 being colored black for a purpose which will hereinafter become clear.

An electric magnet 22 is suitably secured at one end to the rear wall 23 of casing 11, as shown in Fig. 3, directly behind the top portion of each channel 19. Each magnet 22 includes a core 24 around which is coiled copper wire 25, the magnet 22 being connected parallel with a source of voltage by means of insulated cord 26, and in series with the manually operable switches on each floor. A buzzer 27 is also connected in series with the source of voltage so that when any one of the manually operable switches, not shown, is closed to actuate one of the electro-magnets 22, the elevator operator will be advised by sound as well as visually in a manner hereinafter to be described.

The particular indicia carried by the window 13 correspond to the location of each of the manually operable switches. Thus, when the switch or button on the seventh floor is pressed, the circuit will be closed for the electro-magnet 22 directly behind the channel 19 which is in turn directly behind the indicia "7" on window 13. This will draw the slide 21 upwardly into the position of Fig. 6, the slide 21 being formed of a magnetically permeable material such as steel. When the black slide 21 moves behind the gold number "7," the latter will be made sharply visible by the contrast between the gold and the black, thus indicating to the operator that the switch or button on the seventh floor has been pushed. Simultaneously, the buzzer 27 will sound in the manner previously described.

It will be noted that the buzzer 27 is adapted for connection to both A. C. and D. C. circuits.

As a means of retaining the slides in the raised position after the manually operable switches on the particular floors have again been opened, the ends of plate 14 on the front thereof are provided with vertical brackets 28 having vertical elongated slots 29. An elongated channel member 30 of substantially inverted U-shaped cross section slides intermediate the brackets 28 and is supported at its ends by pins 31, secured thereto, which move within the slots 29, as shown in Fig. 2. A plurality of permanent magnets 32 are supported between the sides of channel member 30, as shown in Fig. 3, the sides of member 30 being crimped as at 33, to engage corresponding grooves in the magnets 32, whereby to retain the same

3

within the member 30. The member 30 and the magnets 32 carried thereby will normally rest on top of top flange 30, as shown in Figs. 3 and 6. Thus, when the particular sliding members 21 are drawn upwardly by activation of the particular electro-magnet 22, the sliding members 21 will be retained in the raised position by permanent magnets 32 after the electro-magnets 22 have been de-activated.

As a means of "clearing" the annunciator, a rod 34 is fixedly carried at its top by the member 30 and extends downwardly through a suitable opening in the bottom of the casing, the lower end of rod 34 being provided with a sleeve 35 and knob 36. When it is desired to clear the annunciator, the knob 36 is merely pushed upward to separate the magnets 32 from sliding members 21, and to permit the latter to drop of their own weight to inoperative positions.

It is to be clearly understood that my invention can be used in many places, such as in offices, hotels, restaurants, etc., and furthermore, up to any desired number.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

Having thus set forth the nature of my invention, what is claimed is:

1. An annunciator comprising a substantially vertical elongated transparent glass carrying longitudinally spaced, colored indicia thereon, a plurality of vertical, longitudinally spaced channels behind said glass, each of said channels being aligned with one of said indicia, the color of said channels being the same as that of the indicia, a plurality of sliding members adapted to move vertically within said channels into and out of alignment with said indicia, individual electromagnetic means for moving said sliding members into alignment with said indicia, said sliding members being colored so as to contrast with the color of said indicia, a longitudinal means for retaining said sliding members in said alignment after deenergization of said electromagnetic means and means for manually returning said tabs to their lower, visually inop-

4

erative positions, said means for retaining said sliding members in their raised positions comprising a longitudinal member extending across the tops of said channels, and a plurality of permanent magnets fixedly carried by said member, each of said permanent magnets being aligned with one of said channels and adapted to retain the said sliding members in raised position, said means for manually returning said sliding members to their visually inoperative positions comprising said longitudinal member being slidable vertically away from the top of said channels, and manually operable means for raising said longitudinal member whereby to permit said sliding members to return to their inoperative positions.

2. An annunciator according to claim 1, said longitudinal member being of substantially inverted U-shaped cross section and adapted to receive said permanent magnets upwardly there-within, said permanent magnets being provided with grooves on each side, the sides of said longitudinal member being crimped into said grooves whereby to retain said magnets therewithin, a vertical bracket fixedly mounted on each end of said longitudinal member, each of said vertical brackets having an elongated vertical slot, and pins fixedly carried at each end of said longitudinal member adapted to slide vertically within said elongated slots.

3. An annunciator according to claim 2, said manually operable means for raising said longitudinal member comprising a vertical bar fixedly connected at its upper end to said longitudinal member and slidable in a vertical direction, the lower end of said bar extending downwardly below the device, and an enlarged knob carried at the lower end of said bar to facilitate movement thereof.

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