

Nov. 9, 1943.

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2,333,875

CHIME UNIT

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2 Sheets-Sheet 1

Fig. 1

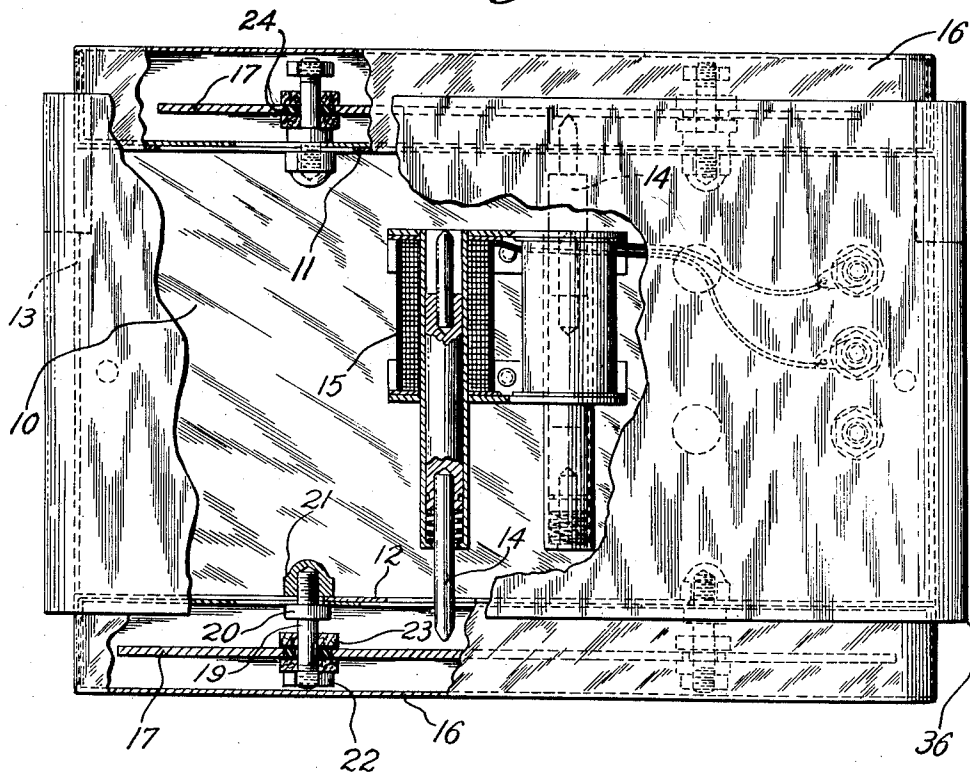
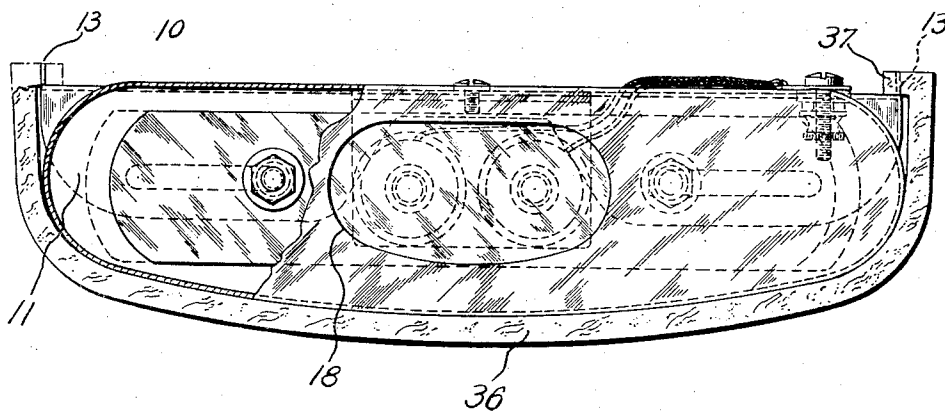


Fig. 2



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Fig. 3

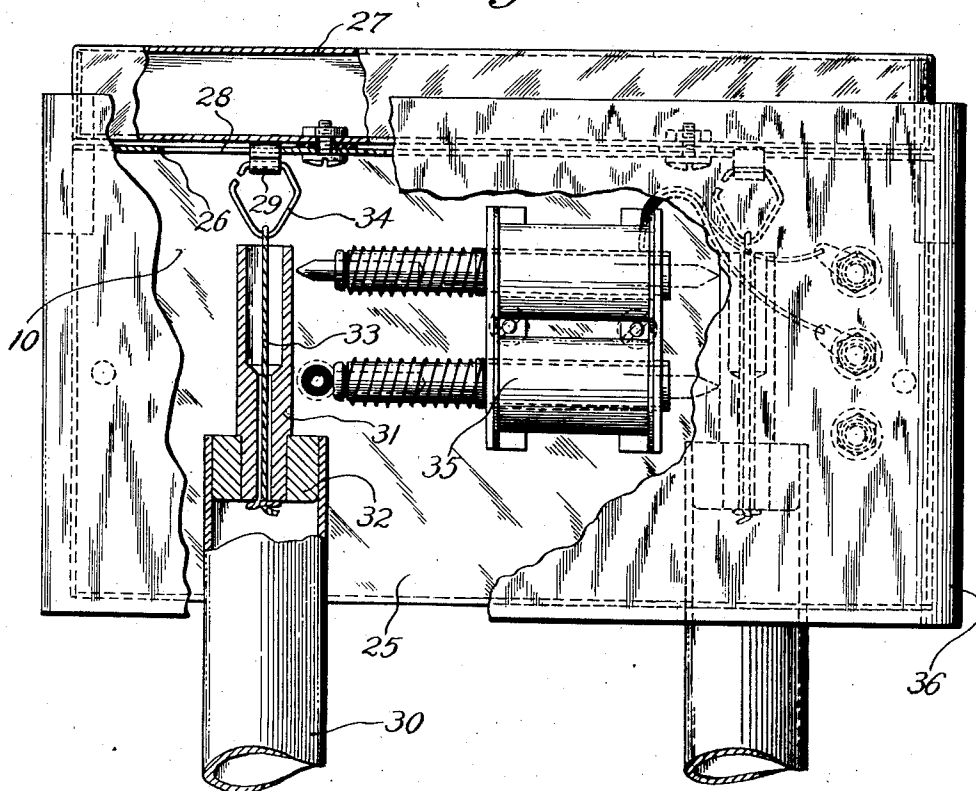


Fig. 4

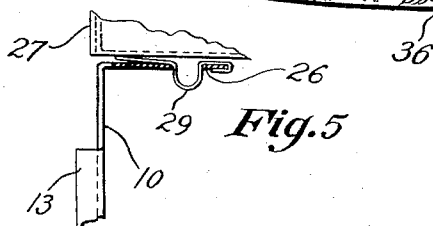
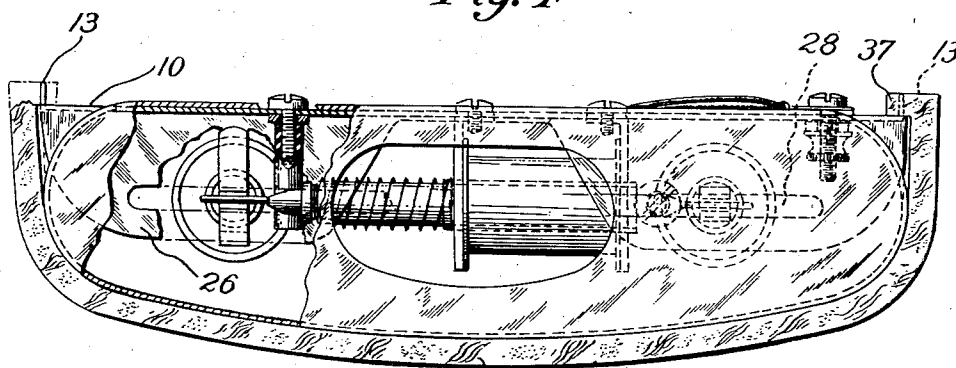


Fig. 5

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3 Claims. (Cl. 177-7)

This invention relates to annunciator chimes and more particularly to the construction of the housing and mounting unit for the tone producers.

An object of the present invention is to provide an assembly of housing, tone producers and electrically operated striking means which will be readily assembled into a compact and efficient unit and which readily may be mounted on a wall or other support.

Another object of the invention is to provide a resonator within which may be mounted a tone producer in the form of a bar, which will produce a pleasing tone of moderate volume.

A still further object of the invention is to provide improved adjusting means for tone producers of elongated tubular form so that the distance of the tubes from their striking means may be varied and maintained in any adjustment.

With the above and other objects in view the invention includes the construction and operation set forth in the following specification and illustrated in the accompanying drawings.

In the accompanying drawings annexed hereto and forming a part of this specification, the invention is shown embodied in units adapted for annunciators for private homes and offices but it will be understood that the invention can be otherwise embodied and that the drawings are not to be construed as defining or limiting the scope of the invention, the claims appended to this specification being relied upon for that purpose.

In the drawings:

Fig. 1 is a front elevation of a complete unit, parts being broken away to more clearly show its construction;

Fig. 2 is a plan view of the unit shown in Fig. 1;

Fig. 3 is a front elevation of a modified form of the invention, parts being broken away to more clearly show its construction;

Fig. 4 is a plan view of the form of the invention shown in Fig. 3, and

Fig. 5 is a detail side elevation partly in section of the tone tube support.

In the above mentioned drawings there have been shown but two embodiments of the invention which are now deemed preferable, but it is to be understood that changes and modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

Briefly, and in its broadest aspect the invention may include some or all of the following principal parts: First, a back plate; second, striker operating means mounted thereon; third, reso-

nators in the form of generally cylindrical housings mounted on the back plate; fourth, tone producers in the resonators or depending from the back plate, and fifth, a front housing mounted on the back plate and housing and enclosing the striker operating means. In the place of resonators and tone producers within the resonators there may be mounted on the upper part of the back plate a resonator form without a tone producer, and depending from adjustable supports on the back plate may be provided tone producers in the form of elongated tubes.

Referring more in detail to the figures there is shown at 10 a back plate or support on which the operative elements of the unit shown in Figs. 1 and 2 are mounted. This plate 10 is formed with forward extending flanges 11 and 12 along its upper and lower edges. Also upon the vertical side edges of the plate 10 are rearward extending short flanges 13. Mounted substantially centrally of the plate 10 are striker operating members 14 adapted to be actuated by suitable solenoids 15. As these striking members are similar to those now used in electric annunciators and form no part of the present invention further description is not thought to be necessary.

Secured to the upper and lower flanges 11 and 12 of the plate 10 are resonators 16 similar to each other and within each of which is a tone producer in the form of a metal bar 17. The lengths of the bars in the resonators 16 of any single unit are preferably different to give consonant or pleasing tones of different pitch. The resonators 16 as shown in these figures are made up of metal and are generally cylindrical but with curved ends. Centrally of the upper and lower surfaces of the resonators is an opening 18 so that the strikers 14 can contact their tone producer 17 and the sound produced thereby may reach the outside in sufficient volume to be effective.

To secure the resonators 16 and their tone bars 17 in position pairs of screws 19 are employed for each resonator. Each screw 19 has an intermediate flange or head 20 and screw threaded portions at its opposite ends. As shown in Fig. 1, the shorter end of the screw 19 passes through a wall of the resonator 16 and through a flange 11 or 12 to securely hold the resonator 16 in position by means of nut 21. On the longer end of each screw 19 is a short threaded portion adjacent the end over which is tightly screwed a nut 22. The bars 17 fit over this end of the screws 19 and are free to vibrate or move slightly up or down. Spacing washers 23 preferably of felt may be provided to hold the bars 17 from contacting

the metal of the screws 19. Also the openings within the bars 17 may have inserts 24 of non-metallic composition so that no part of the bars 17 contacts the metal part of the supporting means.

Referring to the embodiment of the invention shown in Figs. 3 and 4, the back plate 25 along its upper horizontal edge is provided with a forwardly extending flange 26. To this flange 26 may be attached as shown a resonator 27. This resonator may be similar in form to that shown in Figs. 1 and 2 but is without a tone bar.

The flange 26 is provided with elongated slots 28 on either side extending in a direction parallel with the plane of the back plate 25. Within these slots 28 are looped hanger members 29 by means of which the tone tubes 30 may be supported. Preferably and as shown in these figures, the tubes 30 are provided with an extension 31 fitting tightly within a plug 32 held frictionally within the upper end of the tube 30. By means of a cord 33 and a wire link or loop 34 engaging one of the hanger members 29 the tubes 30 may be individually supported for free swinging movement. Mounted on the back plate 25 are striker operating means 35 similar to that described in connection with Figs. 1 and 2. By adjusting the members 29 along their slots 28 in the flange 26 the position of the tubes 30 can be adjusted toward or from their strikers to give the desired volume and quality of tone.

In each of the embodiments of the invention illustrated in the drawings there is provided a front panel 36 substantially covering the back plate 10 or 25 and exposing only a portion of the resonators 16 or a resonator 27 and the tubes 30. The striker mechanism 15 or 35 is completely enclosed. This front panel 36 may as shown be made of ornamental material removably supported in position by engagement with or over the upper ends of the rearward extending flanges 13 on the back plate. The panels 36 at either side are bent backward so that they will extend to the back panel 10 or 25 and enclose the sides of the unit as well as the front. The rearward extending

flanges 13 extend only partially upward along the side edges of the plates 10 or 25 and the edge of the panel 36 engages over their upper ends. For this purpose the upper portions of the side portions of the panel 36 has inwardly extending flanges 37. To remove a front panel 36 it is only necessary to lift it free of the back panel whereupon the panel may be completely removed.

I claim as my invention:

1. An annunciator chime unit comprising in combination, a back plate, a horizontal forwardly extending flange thereon, a tone producer supported on said flange, striker operating mechanism supported on said back plate, rearwardly extending flanges formed on the vertical side edges of said plate, and a front housing enclosing said striker operating mechanism supported upon said last mentioned flanges.

2. An annunciator chime unit comprising in combination, a back plate, forwardly extending flanges formed along the upper and lower horizontal edges of said plate, tone producers supported on said flanges, striker operating mechanism mounted on said plate, rearwardly extending flanges formed along the vertical side edges of said plate, and a front housing enclosing said striker operating mechanism, said housing engaging over the upper ends of said last mentioned flanges.

3. An annunciator chime unit comprising in combination, a back plate, forwardly extending flanges formed along the upper and lower edges of said plate, resonators supported on said flanges, tone producers within said resonators and supported from said flanges, striker operating mechanism mounted on said plate and disposed between said resonators, rearwardly extending flanges formed along the vertical side edges of said plate, and a front housing enclosing said striker operating mechanism, said housing being removably supported over the upper ends of said last mentioned flanges.

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