W. S. CLAY.

FIRE ALARM BELL ACTUATOR.

APPLICATION FILED JUNE 21, 1919.

1,374,432. **Patented Apr. 12, 1921.**

Fig. 1.

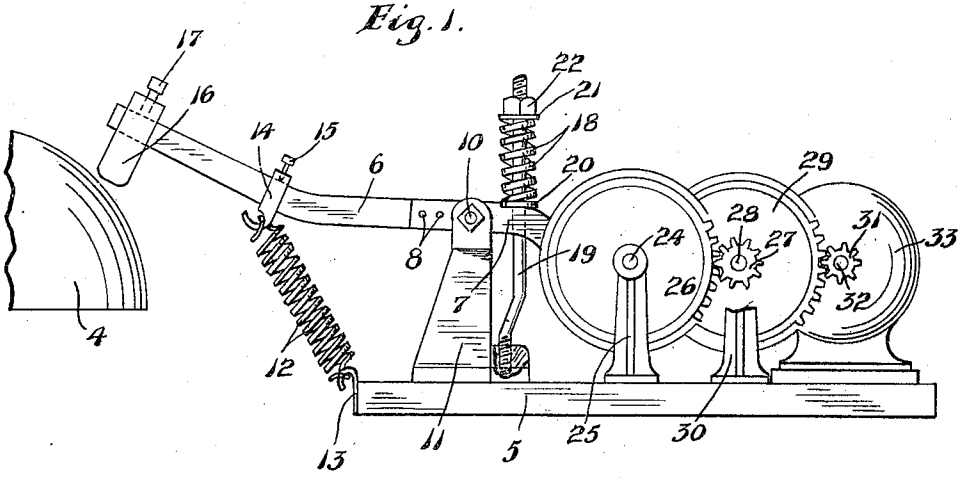


Fig. 2.

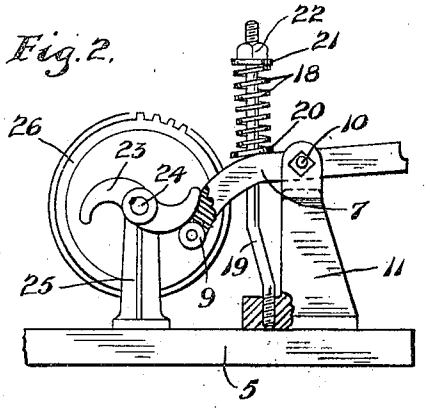
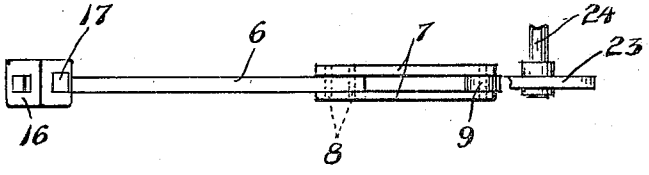


Fig. 3.



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FIRE-ALARM-BELL ACTUATOR.

1,374,432. Specification of Letters Patent. Patented Apr. 12, 1921.

Application filed June 21, 1919. Serial No. 305,851.

To all whom it may concern:

Be it known that I, WELLINGTON S. CLAY, citizen of the United States, residing at Hutchinson, in the county of McLeod and State of Minnesota, have invented certain new and useful Improvements in Fire-Alarm-Bell Actuators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has for its object the provision of a simple and highly efficient mechanism for operating or sounding large bells or gongs for various purposes, such for instance, as for sounding a fire alarm in small towns or communities. Generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In accordance with this invention, a hammer carried by a suitable lever is operated through suitable gear mechanism, from an electric motor. This electric motor may be operated through a circuit controlled from a telephone station or from any other suitable station; but this feature of operating the motor has not to do with the present invention.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Figure 1 is a side elevation of the improved gongs or socalled actuated mechanism, some parts being broken away;

Fig. 2 is a fragmentary view in side elevation of similar parts shown in Fig. 1 viewing the same from opposite side; and

Fig. 3 is a plan view showing the hammer and its operating lever and associating parts.

A portion of the gong or bell as shown in Fig. 1 is indicated by a numeral 4. The mechanism of the bell or gong actuating device is mounted on a suitable bed plate 5. The hammer carrying lever is made up of a main member 6 and laterally spaced flat bars 7. These members are rigidly secured together by rivet, or the like, at 8. A roller or small wheel 9 is located between and journaled to the ends of the lever bars 7. The lever made up of the parts 6 and 7, is intermediately pivoted at 10 to a pedestal 11, rigidly secured on the bed plate 5.

The hammer equipped lever 6—7 is downwardly pulled by a spring 12 attached to the bed plate 5 by an anchoring hook 13, and its upper ends to a hook-equipped bracket 14 that is longitudinally adjustable on the lever section 6, and is adapted to be rigidly secured thereto, by a set screw 15.

The bell or gong striking movement of the hammer is cushioned by a coil buffer spring 18. This spring 18 surrounds the upper end of a rod 19, which, at its lower end, is screwed, or otherwise, rigidly secured into the base of pedestal 11. Spring 18 reacts against washers 20 and 21, the former of which is seated against the laterally spaced bars of lever 6 and the latter of which are seated against a nut 22 on the threaded upper end of said rod.

Roller 9 of lever 6—7 is arranged to be engaged by cam acting tappets 23 carried by a short shaft 24, journaled in a pedestal 25 on base 5. Shaft 24 carries a large gear 26 that meshes with a small gear or pinion 27 of a counter shaft 28. This shaft 28 carries a large spur gear 29 and is journaled in a pedestal 30 on base 5. Gear 29 meshes with a pinion 31 that is carried by the armature shaft 32 of a small electric motor 33 mounted on base 5.

Operation.

Motor circuits are of course, adapted to be closed at a distant point so as to throw the motor into action at will. When motor is thrown into action the tappets 23 will be moved at a relatively slow speed and in succession will come into action on the roller 9 of the hammer lever 6—7. Each time a tappet 23 acts on rollers 9 it raises the hammer equipped end of lever, against projection of spring 12, and when the tappet runs out of engagement with said roller, the hammer lever will be suddenly relieved, and under the action of spring 12, the hammer 16 will be thrown against the bell or gong 4. The bell striking movement of the hammer, however, is cushioned by frame 18. In fact, it is highly important that spring 18 should be so set that, normally, it will

overcome spring 12 to such an extent that hammer 16 will be held normally out of contact with bell or gong.

What I claim is:

1. The combination with a bell, of a base support having pedestals thereon, a lever intermediately pivoted on one of said pedestals and provided at its long end with a bell striking hammer, and provided at its short ends with a roller, a main spring connecting the long end portion of said lever to said base support, a fixed post rising from said base and extending by the short end of said lever, a coiled spring on said post reacting against the short end of said lever and against an adjustable abutment on the upper end of said post, and a motor actuated tappet operative on the roller of said lever to intermediately retract said lever and to release the same.

2. The combination with a bell, of a base support, having pedestals thereon, a striking lever having one end composed of laterally spaced bars, a roller journaled to the end of said bar, a main spring adjustably anchored to the long end portion of said lever and to said base, a fixed post rising from said base between the laterally spaced member of said lever, an adjustable nut on the end of said post, and spring on said post reacting against said nut and against short end of said lever, said latter spring operating to overcome the main spring to such an extent as to hold said hammer so that it will be normally disengaged from said bell and a motor actuated tappet operative on the roller of said lever, to intermediately retract said lever and to release the same.

In testimony whereof I affix my signature in presence of two witnesses.

WELLINGTON S. CLAY.

Witnesses:

M. PETERSON,

ALICE SORENSON.