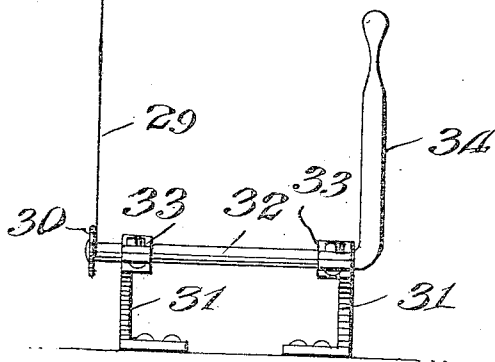
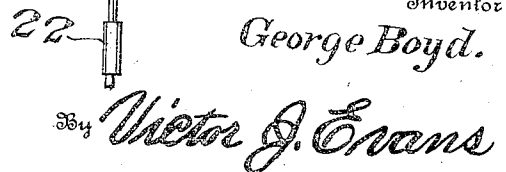


960,067.

2 SHEETS—SHEET 2.



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Attorney

UNITED STATES PATENT OFFICE.

GEORGE BOYD, OF WINONA, MISSISSIPPI.

BELL-RINGING MECHANISM.

960,067.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed May 25, 1909. Serial No. 498,319.

To all whom it may concern:

Be it known that I, GEORGE BOYD, a citizen of the United States of America, residing at Winona, in the county of Montgomery and State of Mississippi, have invented new and useful Improvements in Bell-Ringing Mechanism, of which the following is a specification.

This invention relates to bell ringing mechanism, and one of the principal objects of the same is to provide simple and efficient mechanism for operating two bell clappers pivoted within the bell and connected to a walking beam operated by a lever.

Another object of the invention is to provide simple mechanism for alternately actuating two pivoted resilient bell clappers mounted within the bell and connected to an operating lever provided with a walking beam upon the lower floor of the building in which the bell is located.

Still another object of the invention is to provide means for ringing the bell which will strike the bell at regular measured intervals and in which the mechanism may be operated to accelerate the movement of the clappers.

These and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which,—

Figure 1 is a vertical section of a bell in which the bell ringing mechanism is mounted in accordance with my invention. Fig. 2 is a side elevation of the bell ringing mechanism removed from the bell. Fig. 3 is a vertical section taken through the bell and through the supporting post at one side of the center thereof to illustrate the ringing mechanism in elevation. Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 3, looking in the direction indicated by the arrow. Fig. 5 is a detail view, showing the manner of connecting one of the springs to the clapper-operating bar.

Referring to the drawing, the numeral 1 designates a bell of any suitable size or contour adapted to be supported upon a post 2, said post being connected to a suitable base 3 connected to a floor 4 of a belfry. The bell 1 is preferably provided with an aperture through which a stud 5 on the post projects, and a suitable screw 6 extends into a threaded socket 7 in the boss 5 to hold the bell firmly in place. The post 2 is provided with a central recess 8 within which a portion of the ringing mechanism is mounted. Pro-

jecting outward from each side of the post 2 is a supporting lug 9, there being two such lugs disposed in parallel position, as shown in Fig. 2. Pivoted between these lugs 9 at opposite sides are the bell clappers 10, said clappers being pivoted at 11 and provided each with a pin 12 extending through a slot 13 in each of the lugs 9. The clappers 10 are each formed of a spring bar, and each bar is provided with a pin 13' which projects upon opposite sides of the clappers. On the lower ends of the clappers are the heads 14 connected to the ends of the resilient portions 15 of the clappers.

Pivoted near the upper end of the post 2 and between the parallel members thereof is an oscillating lever 16 pivoted at 17. Pivoted to the lever 16 at 18 is a clapper-operating bar comprising parallel members 19, one pivoted upon each side of the lever 16 upon the pin 18. Spanning the two members 19 are pins 20 and springs 21 connected by means of a loop 22 to the lever 16, said springs having their upper ends curved outwardly to engage the pins 20. Parallel members 19 are provided upon one of their ends with a notch 23 upon the lower side thereof, while the opposite ends of the members 19 are provided with a notch 24 upon the upper side of the members 19. Springs 25, one secured to each side of each member of the post 2 extend upwardly and engage the pin 12 to hold the clappers in their outermost positions with the heads 14 in proximity to the inner wall of the bell. Connected to the lower end of the lever 16 are the operating chains 26, said chains passing over grooved pulleys 27 mounted in the base 3. The chains 26 extend through holes 28 in the floor of the belfry, and connected to the chains may be suitable wires or cables 29, said cables being connected to the opposite ends of a walking beam 30 pivotally mounted upon a suitable frame 31 located upon one of the lower floors of the building. The walking beam 30 is connected to a shaft 32 mounted pivotally in the frame 31 by means of keepers 33, and formed on the opposite end of the shaft 33 is an angularly disposed lever 34.

The operation of my invention may be briefly described as follows: As the lever 34 is oscillated from side to side, the lever 16 is swung from one side to the other upon its pivot 17, said lever carrying the clapper-operating bar. As the bar 19 is moved toward the right in Fig. 3, it engages the stud

or pin 13' in the notch 23. The upward movement of this end of the clapper-operating bar releases the pin from the notch 24 on the opposite end of the bar. When the lever 34 is moved in the opposite direction the clapper is pulled against the tension of the springs 25, and when the opposite end of the clapper-operating bar is about to engage the pin 13' on the opposite clapper, the first mentioned clapper is released and by the stress of the spring 25 is thrown outwardly until the head 14 strikes the inner wall of the bell and immediately retracts to permit of the vibrations.

It will be obvious that by oscillating the lever 34 the clappers may be operated as rapidly as desired and that there will naturally be a uniformity of operation owing to the fact that each clapper will be actuated at uniform intervals and that each clapper will strike the bell with a uniform force. Either rapid or slow strokes may be readily utilized.

My invention is of comparatively simple construction, will operate efficiently, reliably and uniformly, can be readily connected to any bell and can be installed without great cost.

I claim:—

1. A bell ringing mechanism comprising a post, a bell supported upon the post, clappers pivoted to the post, springs for throwing said clappers outward toward the inner

wall of the bell, a lever pivoted to the post, a clapper-operating bar pivoted to the lever, flexible connections attached to the lower end of said lever, a walking beam, and a lever for operating said walking beam for actuating the flexible connections and the ringing mechanism.

2. Bell ringing mechanism comprising a post, a bell supported upon the post, spring clappers pivoted upon the post, springs for throwing the clappers outward, a lever, a clapper-operating bar pivoted to the lever and provided with notches at its opposite ends and upon its opposite sides, pins upon the clappers to be engaged by the clapper-operating bar, and means for oscillating said lever.

3. A bell ringing mechanism comprising a post, a bell secured to the post, a plurality of clappers pivoted to the post, said clappers having resilient portions, an operating lever pivoted between the clappers to the post, and a clapper-operating bar pivoted to the lever, and means connected to the lever for oscillating the same and actuating the ringing mechanism.

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

GEORGE BOYD.

Witnesses:

GUS. MARSHALL,
HENRY NABOES.