(No Model.)

A. T. MORRILL.

BICYCLE BELL.

No. 576,788. Patented Feb. 9, 1897.

Fig:1.

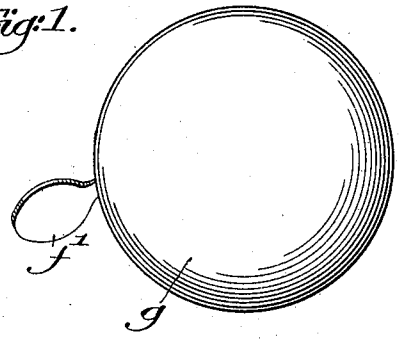


Fig:2.

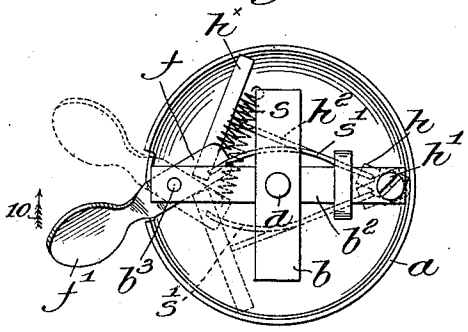


Fig:3.

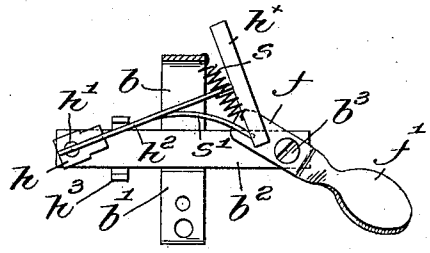


Fig:4.

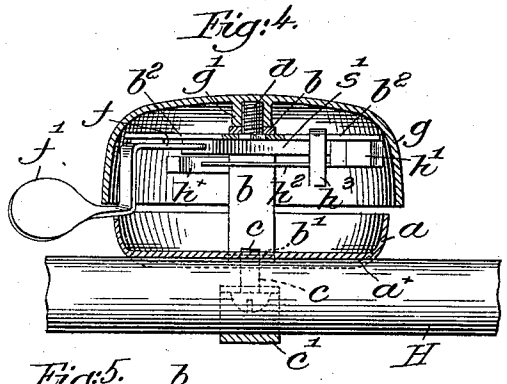
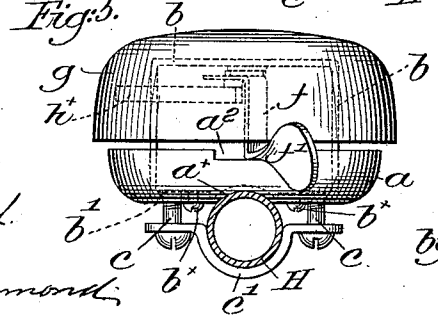


Fig:5.



Witnesses.
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UNITED STATES PATENT OFFICE.

ALVIN T. MORRILL, OF BOSTON, MASSACHUSETTS.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 576,788, dated February 9, 1897.

Application filed April 11, 1896. Serial No. 587,121. (No model.)

To all whom it may concern:

Be it known that I, ALVIN T. MORRILL, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Bells, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a very cheap and simple bell particularly adapted for use on bicycles and similar vehicles, the bell to be hereinafter described being promptly responsive to the movement of the actuator and consisting of a small number of parts.

Figure 1 is a top or plan view of the bell with the gong in place. Fig. 2 is a plan view of the base and the striking mechanism, the gong being removed. Fig. 3 is an under side view of the striking mechanism detached from the base and partly broken out. Fig. 4 is a partial vertical section of the bell shown as attached to the handle-bar of a bicycle, and Fig. 5 is a side elevation of the bell shown in Fig. 4.

The base a, of suitable metal, is preferably struck up or stamped into shape and concaved across its under side at $a^{\times}$ to partially embrace a support, such as the handle-bar H of a bicycle or the like.

A stout metal bridge b, having feet b' to rest upon the inner side of the base a, is secured thereto by rivets or screws $b^{\times}$, (see Fig. 5,) extended into the feet b', the latter also serving to afford a firmer hold for adjusting-screws c, which sustain the clamp-yoke c', retaining the bell firmly upon its support.

A screw d, having its head secured to a transverse arm b^2, is screwed into the top of the bridge, attaching the arm firmly thereto, the upturned projecting end of said screw d being adapted to engage a threaded boss g' on the inner side of the gong g, sustaining the latter above the base a.

One end of the arm b^2 has pivoted thereto on its under side at b^3 the actuator, shown as a bent lever f, having a finger-piece f' extended out between the gong and base, the rim of the latter preferably being slotted at a^2 for the purpose.

I prefer to use a spring s, connected at one end to the bridge b and at its other end to the actuator-lever f, to normally maintain the latter in full-line position, Fig. 2.

The other end of the arm b^2 has pivoted on its under side at h' a block h, to which is secured the springy shank or handle h^2 of the hammer $h^{\times}$, herein shown as a bar of metal of such length that one or other of its ends will strike the inside of the gong g when it is vibrated or swung about its pivot h'.

To prevent the hammer from swinging so far as to rest on the gong, I have provided a detent, shown as a bent strip of metal h^3, soldered or otherwise secured to the arm b^2, its legs straddling the arm and depending on each side of the path of the handle h^2 near its pivot, the flexibility of the handle permitting the momentum of the vibratable hammer to carry it far enough to strike a blow after movement of the handle is stopped by the detent h^3.

The upper end of the actuator-lever f is slotted, as is also the block h, to receive the ends of a leaf-spring s', which is so long that it is curved at one side or the other of the longitudinal center of the arm b^2 when the parts are at rest.

When the outer end f' of the actuator is moved in the direction of arrow 10, Fig. 2, against its spring s, the leaf-spring s' will be compressed and moved toward the center of the arm b^2, and after passing such center its curvature will be suddenly reversed, as shown in dotted lines, Fig. 2, quickly turning the block h on its fulcrum, so that the hammer $h^{\times}$ will be swung from full to dotted line position, striking the gong, release of the actuating-lever f returning the parts to full-line position and causing the other end of the hammer to strike a second blow upon the gong, the spring s being stronger than spring s', to thereby effect such return of the parts to normal position. It will thus be seen that the vibrating hammer strikes two distinct blows each time its actuator is moved by the operator.

The raised bridge b which supports the striking and actuating devices supports them in such manner that the hammer is free to

swing or vibrate without obstruction from side to side and a very strong, serviceable, and durable bell is attained. The detent h^3 also serves to restrict the spring s' from too great movement.

My invention is not restricted to the precise construction and arrangement herein shown and described, as the same may be modified without departing from the spirit and scope of my invention.

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

1. A striking mechanism for bells, comprising a gong, a vibratable hammer, an actuator, and a curved spring connecting said actuator and hammer, the movement of the actuator reversing the curvature of the spring to thereby operate the hammer, substantially as described.

2. The base, a bridge secured to the inner side of the base, a gong supported thereby, a hammer supported by said bridge, and a curved spring adapted by reversal of its curvature to operate the hammer, substantially as described.

3. The base, a bridge secured to the inner side of the base, a gong supported thereby, a vibratable hammer and an actuator, each pivotally supported by the bridge, and a curved spring connecting said hammer and actuator, movement of the latter reversing the curvature of the spring to operate the hammer, substantially as described.

4. The base, a bridge secured to the inner side of the base, a gong supported thereby, a hammer supported by said bridge, a detent to limit the movement of the hammer, and a curved spring adapted by reversal of its curvature to operate said hammer, substantially as described.

5. The base, a bridge thereon, a gong supported on the bridge, a vibratable hammer and a pivotally-mounted actuator, each supported from and below the bridge, said actuator extending beyond the base, and a curved spring connecting the hammer and actuator, the movement of the latter reversing the curvature of the spring to operate the hammer, substantially as described.

6. The base, a gong, a hammer, a curved spring adapted by reversal of its curvature to operate said hammer, an actuator to reverse the curvature of the spring, and an independent spring to return the actuator to normal position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALVIN T. MORRILL.

Witnesses:
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