(No Model.)

W. E. GARD.

BICYCLE BELL.

No. 588,820. Patented Aug. 24, 1897.

Fig. 1

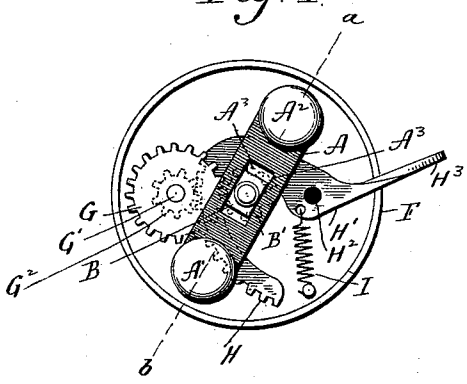


Fig. 2

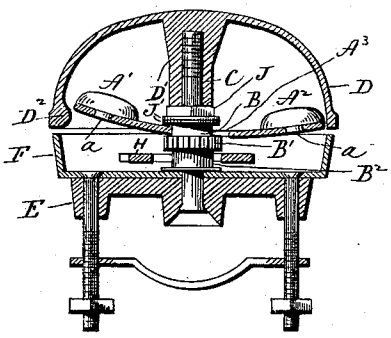


Fig. 3

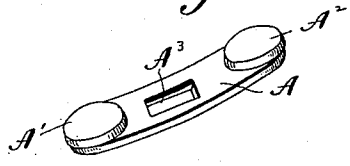


Fig. 4



Witnesses.
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Ellen Scarborough

William E. Gard,
Inventor.
By Attys Earle & Seymour

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM E. GARD, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE MERIDEN BRONZE COMPANY, OF MERIDEN, CONNECTICUT.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 588,820, dated August 24, 1897.

Application filed March 1, 1897. Serial No. 625,477. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. GARD, of Brooklyn, in the county of Kings and State of New York, have invented a new Improvement in Portable Bells; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a sectional view of a bell constructed in accordance with my invention; Fig. 2, a view thereof with the gong removed; Fig. 3, a detached perspective view of one form which the double-ended longitudinally-movable striker may assume; Fig. 4, a view of the striker in central longitudinal section.

My invention relates to an improvement in portable bells, designed, primarily, to be used as bicycle-bells, but capable of use in a great variety of other situations, the object being to produce an extremely simple and compact bell composed of few and durable parts and constructed with particular reference to sounding a quick, clear, and penetrating alarm.

With these ends in view my invention consists in a bell having a longitudinally-bowed double-ended striker having positive longitudinal movement and gravity locking or tilting movement and coacting with a striking-lug formed upon the inner face of the gong, with which its rotation is substantially concentric.

My invention further consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention as herein shown I employ a longitudinally-bowed double-ended plate-like striker A, furnished at its ends with independently-formed but fixed hammers A′ A^2, having short integral rivets *a a*, by means of which they are secured to the ends of the plate, which is formed with a central longitudinally-arranged slot A^3, having straight side walls. This slot adapts the striker to be set down over an oblong coupling-lug B slightly narrower than the said slot A^3, considerably shorter than the same, and formed upon the upper face of a pinion B′, which has a depending hub B^2 and is mounted for rotation upon the centrally-arranged gong-stud C, which supports the gong D and which is rigidly secured to a cast clip-frame E, which has the cup-shaped sheet-metal bell-base F secured to it. The pinion B′ is meshed into by a wheel G, mounted upon a stud G′ and furnished with a pinion G^2, which is meshed into by the rack H of the finger-lever H′, which is hung upon a stud H^2 and formed with an outwardly-projecting finger-piece H^3. A spring I, connected with the finger-lever and with the bell-base F, provides for actuating the finger-lever in one direction. By reference to Fig. 2 it will be seen that the finger-lever is formed with a wide segmental clearance-slot, which permits it to clear the hub B^2 of the pinion B′. A fibrous washer J and two metal washers J′ J′ are interposed between the upper face of the double-ended striker and the inner end of the hub D′ of the gong, the said hub and washers holding the striker in position without interfering with its freedom of movement.

It will be clear from the foregoing description when taken in connection with the drawings that when the finger-lever is operated and the train actuated the double-ended striker will be rapidly revolved and thrown outward by centrifugal force until one of its hammers strikes the inwardly-projecting striking-lug D^2 of the gong, when the striker will be positively pushed longitudinally in the opposite direction, after which it will immediately rock or tilt under the action of gravity, and the hammer A′, which has just hit the striking-lug D^2, being lifted virtually above the same, as shown in Fig. 2, and the hammer A^2 at the opposite end of the striker being depressed, so that its outer edge comes over near the inner periphery of the gong D, as shown in the same figure. The rocking of the striker in the manner stated causes the hammer which has just hit the striking-lug to be lifted and cleared from the same, and the other hammer to be brought into position to strike the lug a sharp square blow as soon as the striker has made another half-revolution, when the striker will be again pushed longitu-

dinally and again locked, with the effect of lifting the hammer A^2 and depressing the hammer A'. It will thus be seen that every time one of the hammers is brought into engagement with the striking-lug that the striker will be moved not only longitudinally, but also rocked or tilted, and that these movements of the striker not only facilitate the clearance of the hammers from the striking-lug after the bell has been sounded, but also bring the hammers into the positions in which they strike the lug to the best advantage for securing a clear and penetrating alarm. I may point out also that the formation of a coupling-lug integral with the pinion B' provides a simple and effective mode of coupling the striker with the actuating-train.

I would have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention. Thus instead of applying independently-formed hammers to the ends of the striker-plate the hammers may be made integral therewith, in which case they would virtually constitute weighted or heavier ends for the striker.

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

1. A bell having a longitudinally-bowed, double-ended striker arranged to rotate concentrically with the gong of the bell and adapted to impinge upon a striking-lug formed upon the inner face thereof, the said striker being constructed to have longitudinal movement in opposite directions imparted to it by the impact of its ends upon the said lug, and on account of its said bowed form having rocking or tilting movement imparted to it by the action of gravity.

2. A bell having a longitudinally-bowed, double-ended striker consisting of a plate, and two hammers formed independently thereof and applied to the upper faces of its ends, the said striker being arranged to rotate concentrically with the gong of the bell for the impingement of its hammers upon a striking-lug formed upon the inner face thereof, and being constructed to have positive longitudinal movement in opposite directions imparted to it by the said impact of its hammers with the striking-lug, and on account of its bowed form having rocking or tilting movement given to it by the action of gravity.

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

WM. E. GARD.

Witnesses:
FRED. C. EARLE,
GEORGE D. SEYMOUR.