

(No Model.)

S. GOULDEN.
BICYCLE BELL.

No. 507,804.

Patented Oct. 31, 1893.

Fig. 1.

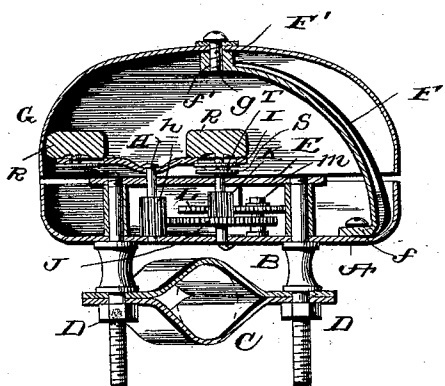


Fig. 2.

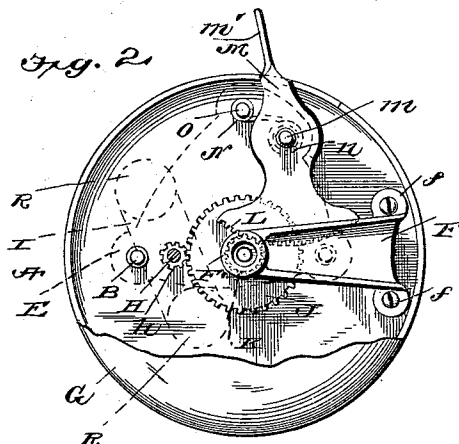


Fig. 3.

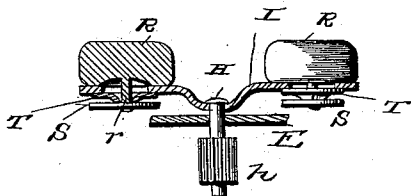


Fig. 4.

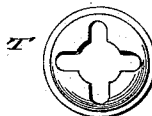


Fig. 6.

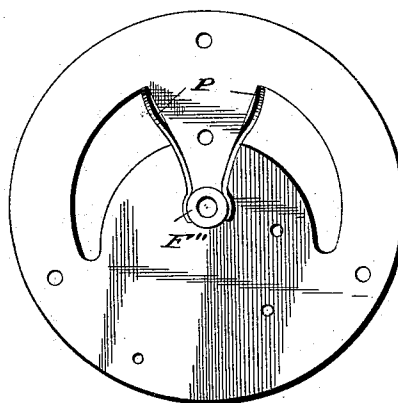
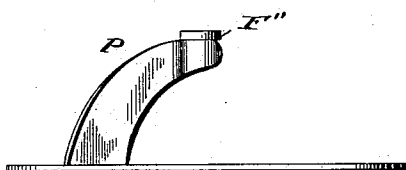


Fig. 5.



Witnesses
John Danine
Thos. E. Robertson.

Inventor
Samuel Goulden
By J.W. Robertson
Attorney

UNITED STATES PATENT OFFICE.

SAMUEL GOULDEN, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE
HARDWARE SPECIALTY COMPANY, OF SAME PLACE.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 507,804, dated October 31, 1893.

Application filed February 2, 1893. Serial No. 460,728. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL GOULDEN, a subject of the Queen of Great Britain, residing at Newark, Essex county, New Jersey, United States of America, have invented certain new and useful Improvements in Bicycle-Bells, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that style of bells shown in United States Patent No. 428,198, and is designed more particularly to adapt said bell to the use of bicyclers and others.

The invention consists in the peculiar construction, arrangement and combinations of parts hereinafter more particularly described and then definitely claimed.

In the accompanying drawings—Figure 1 is a central vertical section. Fig. 2 is a plan of the same with parts broken away. Fig. 3 is an enlarged central vertical section of one of the hammers and its immediate connections. Fig. 4 is a plan of a friction washer on a similar enlarged scale. Fig. 5 is a side view of an alternate form of the top plate. Fig. 6 is a plan of the same.

Referring now to the details of the drawings by letter—A indicates the base, provided with threaded studs B, having clamping plates C and nuts D by which the bell may be clamped to the bicycle handle (indicated in dotted lines). The upper ends of these studs may be continued upward so as to receive the top plate E, which may be either riveted down upon the top of the studs, or it may be fastened by screws passing through the base and top plate.

F indicates a standard provided with two feet *f* for riveting it to the base A and a hub F' which has a threaded hole *f'* which receives the screw *g* holding the gong G in its place.

Between the base A and the plate E is arranged the gearing for giving motion to the hammers. This comprises a spindle H, having a pinion *h* and carrying the hammer-arms I, which pinion is driven by the gear wheel J, on the shaft of which is a pinion K, driven

by a segment rack L, formed on a lever M, working on a pivot *m*, and provided with the thumb piece *m'*, by which the lever may be operated in one direction against the power of a spring N, which operates it in the other direction, when the pressure on the thumb-piece is removed. Said spring may be of any suitable form, but I prefer to make it as shown in the drawings, that is to say, coiled around the pivot *m* and having one end engaging with a pin O that forms one of the supports of the plate, and its other end engaging with the lever as shown at *n*.

I may sometimes make the top plate as shown in Figs. 5 and 6 by cutting out the arms P from the body of the plate and bending them upward to receive the hub F' for supporting the gong, which hub may be soldered to the arms.

The hammers R have shanks *r* which work in slots in the hammer arms and are secured therein by the burrs S riveted on the hammer shanks. Between the burrs and the hammer arms are set convex friction washers T made of thin spring brass, by which all rattling is avoided.

By this construction a cheap and durable bell is produced, in which the anti-rattling devices being all of metal will last as long as the bell, instead of quickly giving out, as is the case where rubber or other non-metallic material is employed for this purpose.

What I claim as new is—

1. In a bell, the combination with the slotted hammer-arms, of the hammers provided with studs projecting through the slots in said hammer-arms, burrs on the end of said studs, and sliding friction-washers between the burrs and the hammer-arms, substantially as described.

2. The combination in a bell, of the base A, the plate E, the slotted hammer carrier I, mounted in said base and plate, a lever, intermediate gearing, and a spring for operating said hammer carrier, with the hammers R, having shanks *r* working in the slots of the carrier and held by burrs therein, and conical sliding friction washers T between

the burrs and the arms, substantially as described.

3. The combination in a bicycle bell, of the base A, top plate E, threaded studs B secured
5 to said base and top plate, clamping plates C and nuts D for securing the bell to the bicycle, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses, this 31st day of January, 1893.

SAMUEL GOULDEN.

Witnesses:

JAMES L. SMITH,
HENRY HAHN.