

(No Model.)

I. H. ABELL.
BELL.

No. 505,284.

Patented Sept. 19, 1893.

Fig. 1.

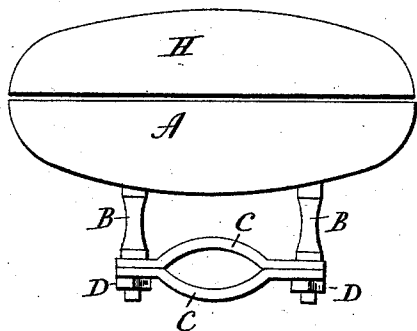


Fig. 2.

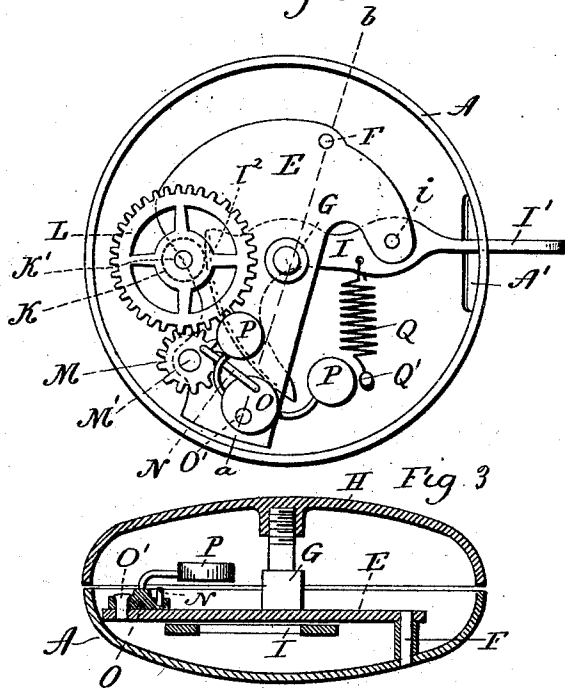
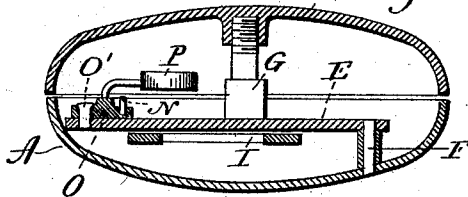


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

IRVIN H. ABELL, OF EAST HAMPTON, CONNECTICUT, ASSIGNOR TO THE
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BELL.

SPECIFICATION forming part of Letters Patent No. 505,284, dated September 19, 1893.

Application filed March 31, 1893. Serial No. 468,440. (No model.)

To all whom it may concern:

Be it known that I, IRVIN H. ABELL, of East Hampton, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Bells; and I do hereby declare the following, when taken in connection with 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 view in side elevation of a bell constructed in accordance with my invention; Fig. 2, a plan view thereof with the bell proper removed; Fig. 3, a view of the bell in vertical section on the line *a-b* of Fig. 2.

My invention relates to an improvement in bells, particularly designed for use upon bicycles, or other kindred vehicles, the object being to produce at a low cost for manufacture a simple, compact, durable and effective bell, composed of few parts, not liable to derangement, and giving a clear and penetrating alarm.

With these ends in view, my invention consists in a bell having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention, I employ a circular cup-shaped base A, to which I attach posts B B, adapted to receive two sheet-metal centrally bowed clips C C, and having their outer ends threaded for the application of nuts D D, by means of which the said clips are clamped onto the handle-bar of a cycle. But so far as the adaptation of the base to be secured to a cycle or other object is concerned, the base may be provided with means for that purpose of any suitable character. A movement-plate E, located within the base below the upper edge thereof, is supported by means of short pillars F, or in any equivalent manner. A post G, secured to the said plate, has its upper end threaded for the attachment of the bell H, which conforms in diameter to the diameter of the base A. An operating-lever I, hung on a pivot *i*, and located in the space between the movement-plate E, and the bottom of the base A, is furnished at its outer end with a finger-piece I', which projects

through an opening A', formed in the said base, and at its inner end with a segmental rack I². The said rack meshes into a pinion K, mounted upon a shaft K', journaled in the said plate and base, and furnished at its projecting upper end with a wheel L, which in turn meshes into a pinion M, mounted on a stud M', fixed to the said plate. A link or pitman N, connected with the pinion M, is also connected with the inner end of a bell-striker O, attached by a pivot O' to the upper face of the movement-plate, very near to one side of the bell and furnished with two bell-hammers P P, extending inwardly from the edge of the base, and away from the said side of the bell but arranged so as to strike the bell on opposite sides of the pivot or stud O', in the oscillation of the striker O. A spiral spring Q, attached to the lever I, and to a stud Q' mounted in the base A, operates the train in one direction, the train consisting of the pinion K, the wheel L, and the pitman N. It will be understood that when the lever is turned on its pivot against the force of the spring Q, the train will be operated in one direction, whereby a very rapid oscillating movement will be imparted to the striker by means of the link connecting it eccentrically with the pinion M. Then when pressure upon the finger-piece I, is relieved, and the spring Q, allowed to pull the lever back, the train will be rotated in the opposite direction, and the striker again oscillated. The bell is thus struck very rapidly, for the bell-hammers hit it alternately as the striker oscillates.

It is obvious that in carrying out my invention the train might be changed, as well as other features of the device, provided only that the striker is oscillated by means of a link or equivalent device connecting it eccentrically with a rotary member of a train. I would therefore 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.

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

1. In a bell, the combination with the base

- and the bell thereof, of a train, means for actuating the same, a pivotal bell-striker located near one side of the bell in the chamber formed between the base and the bell and a pitman 5 or link connected eccentrically with the said striker and with a revolving member of the said train, substantially as described, and whereby the striker is oscillated when the train is actuated in either direction.
- 10 2. In a bell, the combination with the base and the bell thereof, and a movement plate, of a train, means for actuating the same, a pivotal bell-striker adapted to oscillate upon the face of the movement plate within the 15 chamber formed by the base and bell and comprising two hammers extending inward, away from one side of the bell and a pitman attached to the striker inside of its pivot, and also connected with a rotary member of the 20 said train, substantially as described.
3. In a bell, the combination with a circular cup-shaped base, a movement-plate located therein, a threaded post secured to the said

plate, a bell applied to the said post, a lever located between the said plate and the bottom 25 of the base, and having its inner end furnished with a segmental rack and its outer end with a finger-piece, a spring attached to the said lever for actuating it in one direction, a train mounted in the said base and plate, a 30 striker pivoted to the plate, and oscillating on the face thereof and a pitman having eccentric connection with the striker and directly with a pinion of the train, substantially as described, and whereby by the operation of the 35 lever the train is caused to oscillate the striker, all of said parts being contained within the base and bell.

In testimony whereof I have signed this specification in the presence of two subscrib- 40 ing witnesses.

IRVIN H. ABELL.

Witnesses:

GEORGE W. GOFF,
MAUDE E. BARTON.