(No Model.)

E. D. ROCKWELL.

BICYCLE BELL.

No. 553,293. Patented Jan. 21, 1896.

Fig. I.

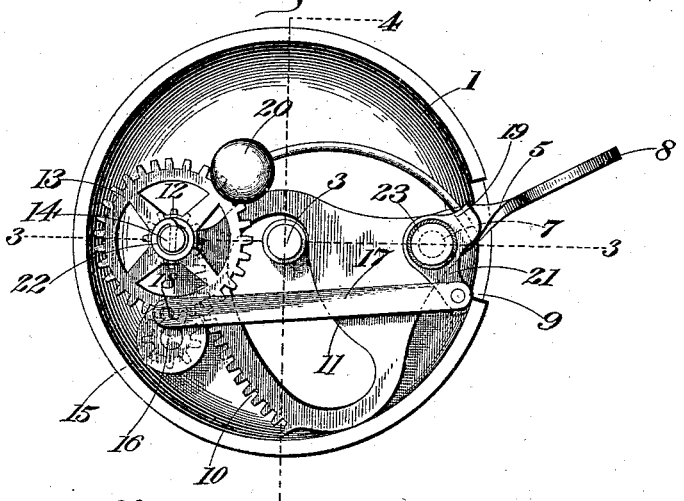


Fig. II.

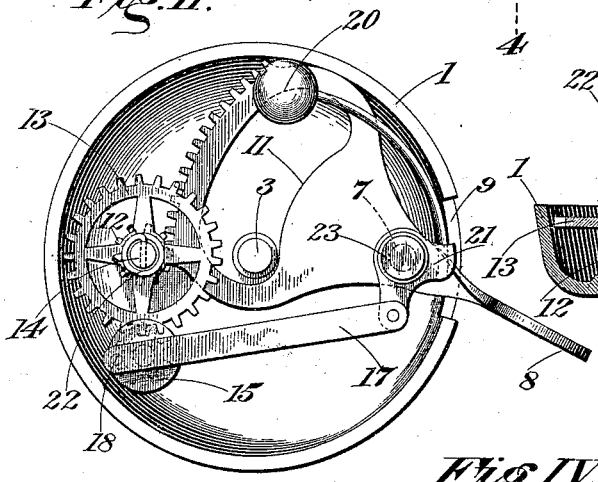


Fig. III.

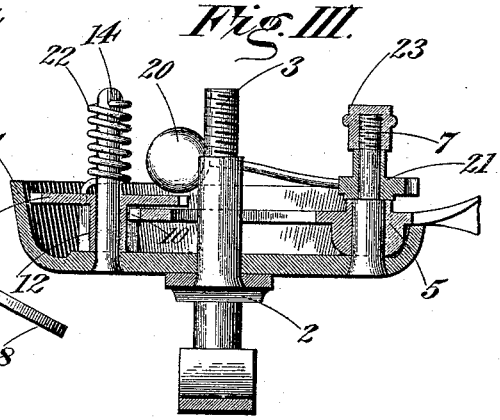
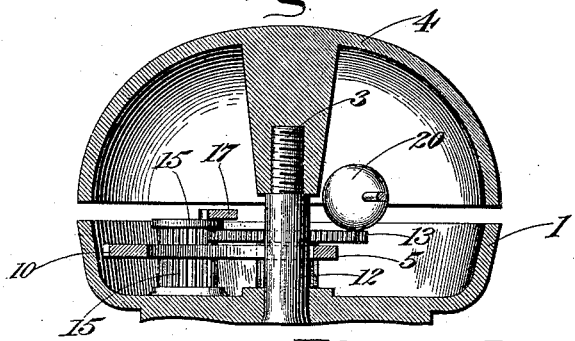


Fig. IV.



Witnesses
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EDWARD DAYTON ROCKWELL, OF BRISTOL, CONNECTICUT.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 553,293, dated January 21, 1896.

Application filed June 7, 1895. Serial No. 551,988. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DAYTON ROCKWELL, of Bristol, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Bells, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce certain improvements in bell mechanism of the vibratory-hammer class, through which a mechanical bell adapted to simulate the sound of an electric bell and one which is durable and efficient in operation may be produced at comparatively small cost.

In the accompanying drawings, Figure I is a top plan view of a bell embodying my invention and showing the hammer at the inner end of its vibration. Fig. II is a similar view showing the hammer as in the act of delivering a blow against the gong. Fig. III is a section on the line 3 3 of Fig. I. Fig. IV is a similar wiew on the line 4 4 of Fig. I, showing the gong in place.

Referring to the figures on the drawings, 1 indicates a base or frame for operatively assembling the operative parts of my bell. The form in which it is illustrated shows it as constituting a part of a bicycle-bell with a split collar 2 for fastening it to a handle-bar of a bicycle; but this is not a part of my present invention, and my invention is not restricted in its application to a bicycle-bell.

3 indicates a stud screw-threaded at its extremity 4 and designed to support a gong 4.

5 indicates an operating-lever pivoted, as indicated, to a stud-pin 7. Its outer extremity 8 projects through a recess 9 in the base and affords means for working the lever upon its pivot-pin. Upon its other extremity, between the base and the gong, the lever carries a segmental gear 10. The lever 5 is preferably provided with a slot 11 to permit the post 3 to pass through it without impeding the sweep of the lever. The movement of the lever may be limited by impact of the ends of the segmental gear against the sides of the base 1.

12 indicates a pinion secured to a gear 13 and both carried on a stud-pin 14 projecting from the base. The segmental gear meshes with the pinion and drives the gear 13, which in turn meshes with a pinion 15 mounted upon a pin 16 projecting from the base. The head of the pinion 15 is flush with or a little elevated above the end of the pin 16, and is finished off to accommodate the movements of a pitman 17, which at one end is pivoted to an eccentric wrist-pin 18 secured to the head of the pinion 15 and at the other end to a hammer-arm 19 that carries upon its outer extremity a hammer 20.

I prefer to construct the hammer arm, as illustrated, of a thin elastic part secured to a bell-crank lever 21 that is pivoted to the same stud-pin 7 that carries the lever 5. Such an arrangement affords economy of space, and the employment of the bell-crank lever provides means for regulating the play of the hammer and the force of its blow. The lever 5 may be positively operated in either direction to actuate the hammer; but I prefer to render it spring-actuated in one direction, which may be accomplished by prolonging the pin 14, as illustrated, and securing to it at one end a helical spring 22, which surrounds it, and securing it at the other end to the gear 13 and the pinion 12. Through the intermeshing of the pinion 12 with the segmental gear 10 the lever is held normally in a position to be retracted by the force of the spring, thereby sounding the bell by manipulation in one direction and by the retroactive power of the spring moving it in the opposite direction. The stud-pin 7 is preferably provided with a cap-nut 23 for securing the hammer-arm and lever 5 to it.

What I claim is—

1. In bell mechanism, the combination with a frame, recess therein, and gong, of a pin adjacent to the recess, a lever pivoted to the pin and projecting through the recess at one end, a bell crank lever, and vibratory hammer secured to the pin which carries the first named lever, and actuating mechanism operatively connecting the said first named lever and the bell crank lever, substantially as set forth.

2. The combination with a frame, recess therein and gong, of a pin adjacent to the recess, a lever pivoted thereon and projecting through the recess at one end, a segmental gear at the other end of the lever, a pinion operatively connected with the segmental gear, a pitman eccentrically pivoted at one

end to the pinion, a hammer arm pivoted in the pin which carries the first named lever and operatively pivoted to the pitman, substantially as set forth.

3. In bell mechanism, the combination with a frame, recess therein and gong, of a pin adjacent to the recess, a lever pivoted thereto, and projecting through the recess at one end, a gear operatively connected to the lever, and a hammer arm operatively connected to the gear and pivotally attached to the aforesaid pin, a pin secured to the base and supporting the gear thereon, and a helical spring secured at one end to the pin, and at the other end to the gear to actuate it, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

EDWARD DAYTON ROCKWELL.

Witnesses:

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