

No. 644,147.

Patented Feb. 27, 1900.

E. D. ROCKWELL.
BICYCLE BELL.

(Application filed Dec. 11, 1899.)

(No Model.)

Fig. 1

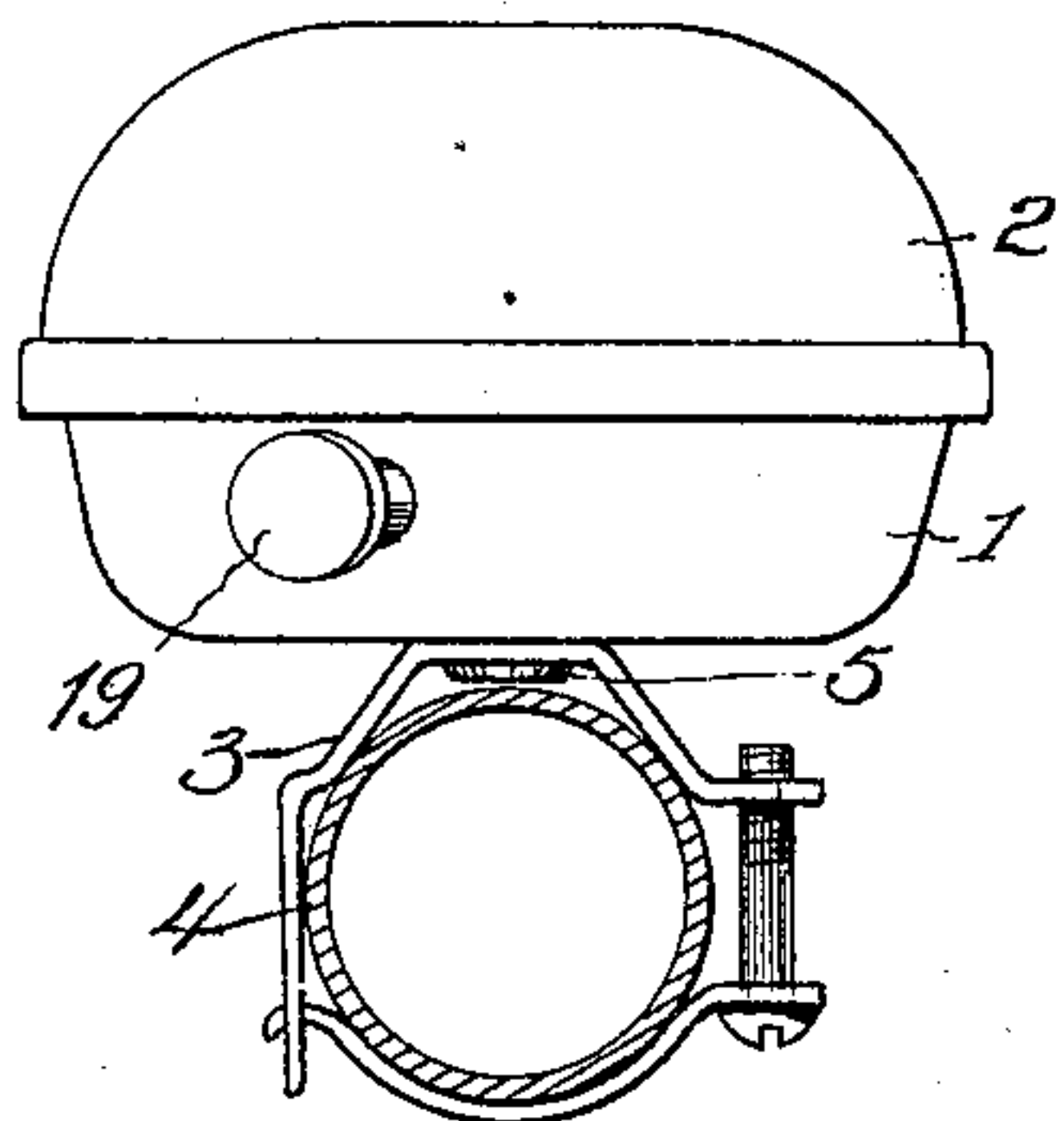


Fig. 2

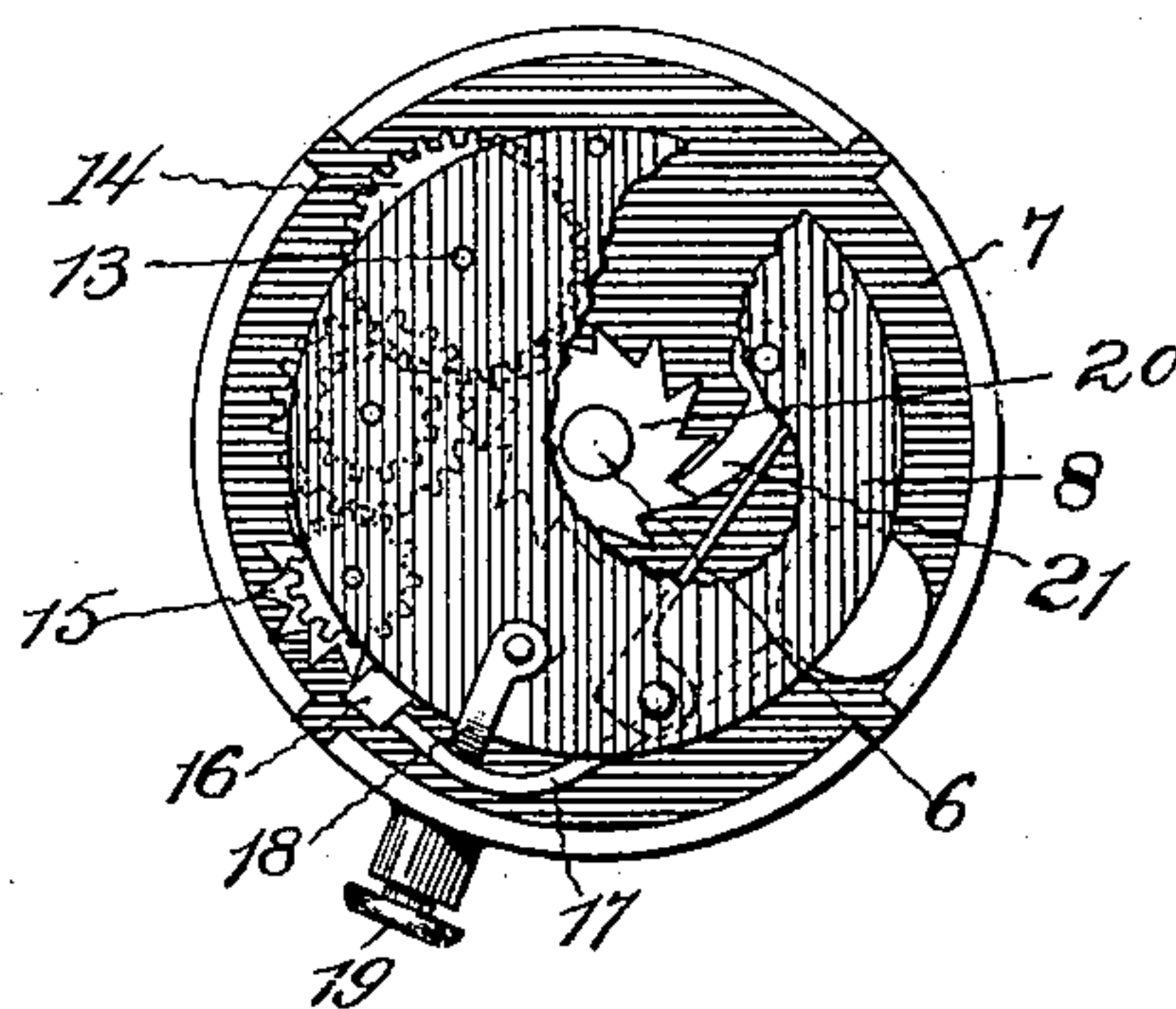


Fig. 4

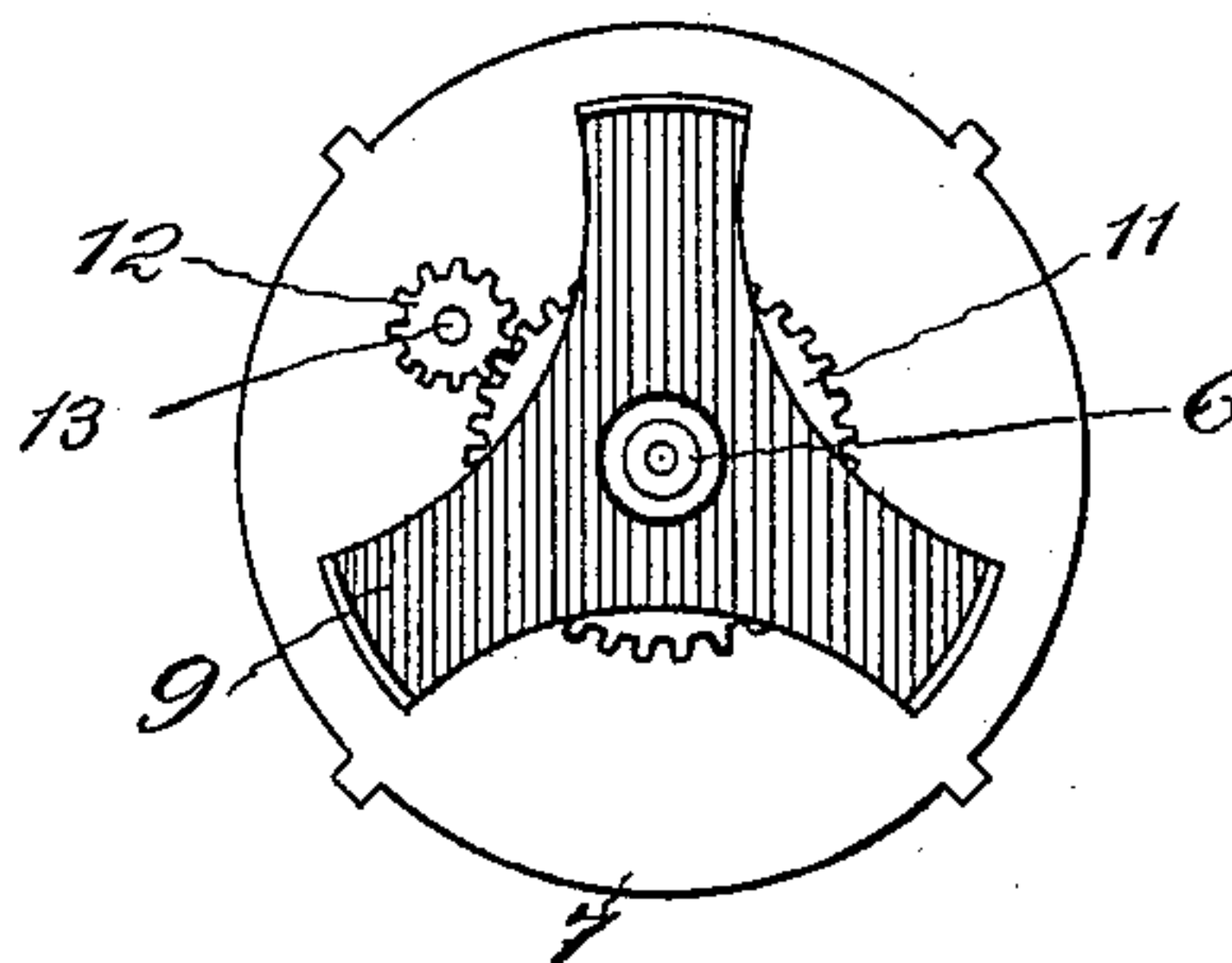
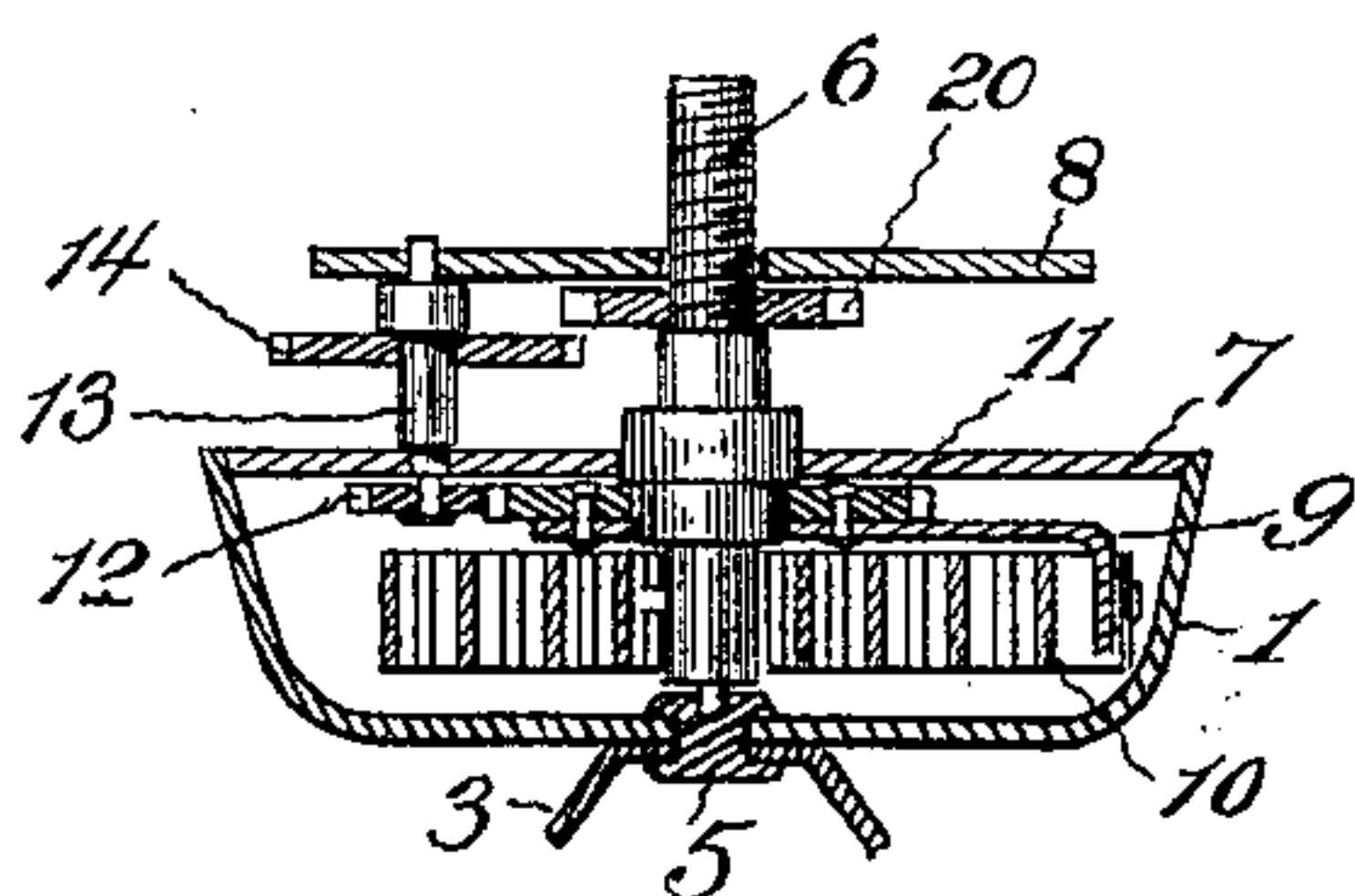


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD D. ROCKWELL, OF BRISTOL, CONNECTICUT, ASSIGNOR TO THE
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BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 644,147, dated February 27, 1900.

Application filed December 11, 1899. Serial No. 739,865. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. ROCKWELL, a citizen of the United States, residing at Bristol, in the county of Hartford and State of Connecticut, have invented a new and useful Bicycle-Bell, of which the following is a specification.

My invention relates to improvements in bicycle-bells in which the operating mechanism is actuated by means of power stored within the bell, suitable devices being employed to allow the mechanism to act at the will of the operator; and the objects of my improvement are to provide a bell having the operating mechanism compactly arranged in a manner to provide extreme strength and durability and to insure the operation of the parts at all times. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of a bicycle-bell embodying my invention. Fig. 2 is a top or plan view with the gong removed and the upper plate broken away to show construction. Fig. 3 is a view in longitudinal section through the device with the gong and a portion of the works removed. Fig. 4 is a detail bottom view of the bottom plate, showing the spring-case, the spring removed.

In the accompanying drawings the numeral 1 denotes the base, 2 the gong, 3 the clamp, and 4 the handle-bar, of a bicycle to which the bell may be secured, all these parts being of any usual and well-known construction.

A stud 5, secured in an opening in the base, provides means for attachment of the clamp 3 and also serves as a step-bearing for a gong-post 6, that is rotatably mounted in the structure. A bottom plate 7 is secured to the base, and a top plate 8 is supported on posts secured to the bottom plate, these two plates and the step-bearing affording a firm support for the gong-post 6. The gong 2 is secured to the post in any preferred manner, interengaging screw-threads providing a convenient means of attachment.

A spring-case 9, preferably formed in the shape of a spider, as shown in Figs. 3 and 4 of the drawings, is mounted on the gong-post 6, and a mainspring 10 is located in the spring-case, with its inner end secured to the gong-

post and its outer end secured to the spring-case. A gear-wheel 11 is secured to the spring-case and is in mesh with a pinion 12, secured to the lower end of the arbor 13 and underneath the bottom plate 7. This arbor has a bearing at each end in the top and bottom plates 7 and 8 and bears a gear-wheel 14, in mesh with another member of an operating-train, that includes an escapement consisting of a scape-wheel 15, in engagement with the teeth of a verge 16, to which is secured a hammer-lever 17, bearing on its end a hammer adapted in the vibrating movement of the verge to sound the gong.

A spring 18 is secured to the upper plate and projects in position to hold the hammer-lever from vibrating movement. The end of the spring lies in the path of movement of a push-button 19, that in its inward movement releases the spring from engagement with the hammer-lever and allows the mechanism to act under the force of the mainspring 10.

A ratchet 20 is secured to the gong-post 6, and a spring-actuated pawl 21 is secured to the upper plate 8 and is in engagement with the teeth of the ratchet-wheel to hold it against backward movement under the force of the mainspring 10.

As a result of the improvement it will be seen that an extremely-strong, cheap, and effective device is obtained, the gong remaining stationary during the ringing of the bell and rotating only during the winding operation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination in a bicycle-bell, a cup-shaped base, a bottom plate, forming a cover for the base, a gong-post extending through the bottom plate, a spring-case mounted on the post, a mainspring with one end secured to the post and the other end secured to the spring-case, a gear-wheel secured to the spring-case, a top plate, an arbor mounted in said plates and projecting through the bottom plate, a pinion secured to the arbor under the bottom plate, a gear-wheel secured to said arbor between the plates, a vibrating hammer-lever operatively connected with said last-mentioned gear-wheel and bearing a hammer, a spring resting against the hammer-lever, a

push-button adapted to engage the spring, means for holding the gong-post against backward movement, and a gong secured to the upper end of the post.

5 2. In a bicycle-bell, in combination, a cup-shaped base, a bottom plate forming a cover for the base, a gong-post extending through the bottom plate, a spring-case rotatably
10 mounted on the post, a mainspring with its inner end secured to the post and its other end secured to the spring-case, a gear-wheel secured to the spring-case and engaging a
15 pinion on an arbor extending through the bottom plate, the arbor bearing a gear-wheel located above the bottom plate, a vibrating
hammer-lever operatively connected with said pinion and bearing a hammer, a spring
20 normally holding the hammer-lever against movement, a push-button adapted to disengage the spring, whereby the hammer-lever is released, means for holding the gong-post against backward movement, and a gong secured to the upper end of the post.

3. In a bicycle-bell, in combination, a cup-

shaped base, a bottom plate forming a cover 25
for the base, a gong-post extending through the bottom plate, a spring-case located in the chamber under the bottom plate and rotatably mounted on the gong-post, a mainspring 30
with its inner end secured to the post and its other end secured to the spring-case, a gear-wheel secured to the spring-case and engaging a pinion on an arbor extending through the bottom plate, the arbor bearing a gear-wheel located above the bottom plate, a vi- 35
brating hammer-lever operatively connected with said pinion, a pawl on the top plate with its free end engaging the teeth of said ratchet and bearing a hammer, a spring resting 40
against the hammer-lever, means for releasing the spring from engagement with the hammer-lever, a ratchet secured to the gong-post underneath the top plate, and a gong secured to the upper end of the gong-post.

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Witnesses:

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