

(No Model.)

C. M. O'LEARY.

AUTOMATIC BELL.

No. 383,236.

Patented May 22, 1888.

Fig. 1.

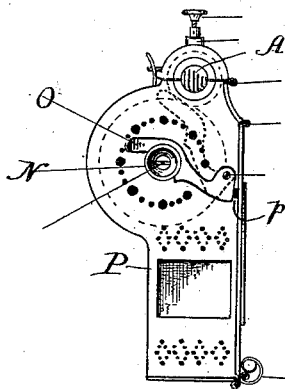


Fig. 2.

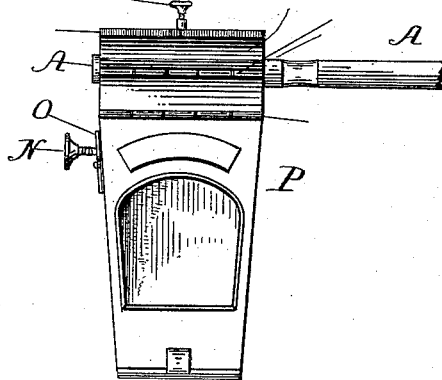


Fig. 3.

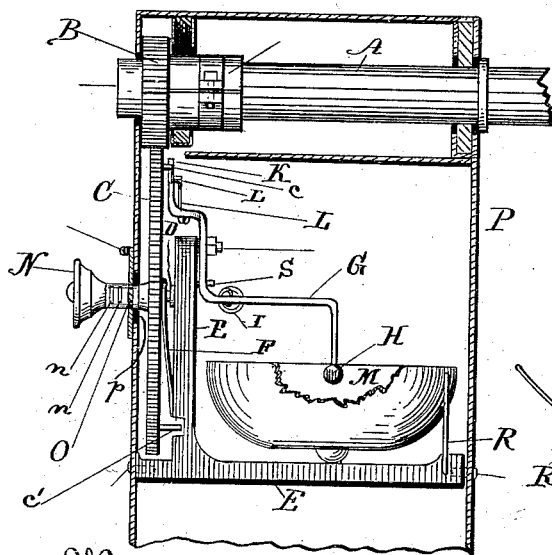
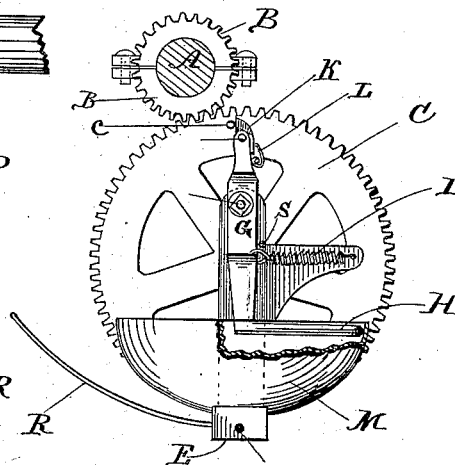


Fig. 4.



Witnesses:  
Thos. Boughton.  
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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC BELL.

SPECIFICATION forming part of Letters Patent No. 383,236, dated May 22, 1888.

Application filed January 31, 1888. Serial No. 262,580. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES M. O'LEARY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Automatic Bells; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to bells operated by the ordinary revolutions of an axle or cylindrical shaft, and its object is to enable alarms to be struck at regular intervals.

It consists in gearing the axle or shaft with appropriate mechanism for striking the bell, and being especially adapted to bicycles and tricycles. I have described and represented it as applied to the lamp usually carried upon such machines, although the bell mechanism can be just as conveniently fitted to a frame-work or case suspended upon the axle or shaft which is to supply the necessary motion to the striking mechanism.

In the accompanying drawings, wherein like letters represent like parts, Figure 1 is a side elevation of a lamp adapted to and fitted with my invention; Fig. 2, a front elevation of the same; Fig. 3, a view of the motor axle or shaft in gear with the bell mechanism, but with the latter mechanism turned upward to show it as a bottom plan, whereby certain parts are better exhibited; and Fig. 4, a side elevation of the parts shown in the preceding figure.

A is the axle of bicycle, upon which is clamped a cog, B. This cog gears with a toothed wheel, C, that turns upon a shaft, D, projecting, Fig. 3, from the bracket E, which carries all the mechanism except the cogged axle and a catch hereinafter described. Upon the same bracket-arm as the shaft D, but on the other side, is a lever, G, upon the long bent arm of which is a bell-striker, H. This striker, by means of a spring, I, (see Fig. 4,) is brought against the concave surface of the bell M with sufficient force to sound the bell. A stop, S, prevents the spring from pulling the striker beyond the edge of the bell and so

deranging the mechanism. This spring, Fig. 4, is connected at one end to the lever carrying the bell-striker and at the other to a standard or projection forming part of the bracket E.

Upon the inner face of the wheel C are pins *c c'*, which engage with a deer-foot, K, pivoted to the short bent arm of the lever G. These pins vary in length, and instead of two there may be three, or as many more as the wheel will carry, leaving space enough between each two pins to clear the deer-foot. By means of a thumb-nut, N, the wheel C is pressed along the shaft D and against the flat spring F till as many of the pins *c c'* as are desired are brought into position to engage the deer-foot K. If it be desired to sound the bell at long intervals only, the wheel C is adjusted so that the longer pin or pins alone engage the deer-foot, the shorter pin or pins clearing it; but if it be desired to sound at short intervals, the wheel C is pressed along its shaft till the shorter as well as the longer pin or pins engage the deer-foot.

Recesses *n n* are cut in the wrist of the nut N to receive a catch, O, pivoted to the exterior part of the casing of the lamp, so that the thumb-nut may be held to its adjustment.

By using the deer-foot K it follows that when a rider dismounts and rolls his bicycle backward to a place of rest or deposit the pins *c c'* strike the rounded upper edge of the deer-foot, which turns on its pivot and clears them, and the same result follows when the bicycle is reversed in motion for any reason. A small wire spring, L, restores the deer-foot to position when cleared by a pin in reverse motion.

The frame or case P, wherein the mechanism is contained, has a slot, *p*, to enable the mechanism to be seated in or removed from the case; also to enable the bracket E containing the mechanism to be pressed down for the purpose of engaging the wheel C with or disengaging it from the cog B. Whenever so pressed down, a spring, R, restores the bracket to proper position.

I claim as follows—

1. In automatic bells, the combination of an ordinary axle or revolving shaft, A, having a cog, B, at some convenient place on the periphery thereof, with a toothed wheel, C, geared with said cog and having pins *c c'* on the in-

terior face of said wheel, a bracket, E, having a projecting shaft, D, extending through and outside the hub of the toothed wheel aforesaid, a flat spring, F, fulcrumed to said bracket and collared upon said projecting shaft, and a bell, 5 M, a lever, G, pivoted to the bracket aforesaid and having a bell-striker, H, a spiral spring, I, one end of which is attached to the aforesaid bracket, a deer-foot, K, pivoted to 10 said lever at one end thereof, and a spring, L, connected likewise to said deer-foot, a screw-nut, N, fitted to the projecting end of the shaft D and having recesses *n* formed in a shank constituting part of said screw-nut, and 15 a catch, O, pivoted to the ordinary framework or casing inclosing the bell mechanism in such relation to said screw-nut to enable said catch to be fitted to the recesses aforementioned, all substantially in the manner 20 hereinbefore described and shown, for the purpose of adjustably and automatically sounding the bell by the forward revolution of the aforesaid ordinary axle or revolving shaft.

2. In automatic bells, the combination of an ordinary axle or revolving shaft, A, having 25 a cog, B, at some convenient place on the periphery thereof, with a toothed wheel, C, geared with said cog and having pins *c c'* on the interior face of said wheel, a bracket, E, having a shaft, D, extending through the hub of the 30 aforesaid toothed wheel, and a bell, M, and a lever, G, pivoted to said bracket and having a bell-striker, H, a deer-foot, K, pivoted to said lever at one end thereof, and a spring, L, connected likewise to said deer-foot, all substantially in the manner hereinbefore described and shown, for the purpose of automatically sounding the bell by the forward 35 revolution of the aforesaid ordinary axle or revolving shaft. 40

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES M. O'LEARY.

Witnesses:

MATTHEW McCULLY,  
A. C. BRISCOE.