

(No Model.)

H. S. PULLMAN.  
BICYCLE BELL.

No. 587,137.

Patented July 27, 1897.

Fig. 1.

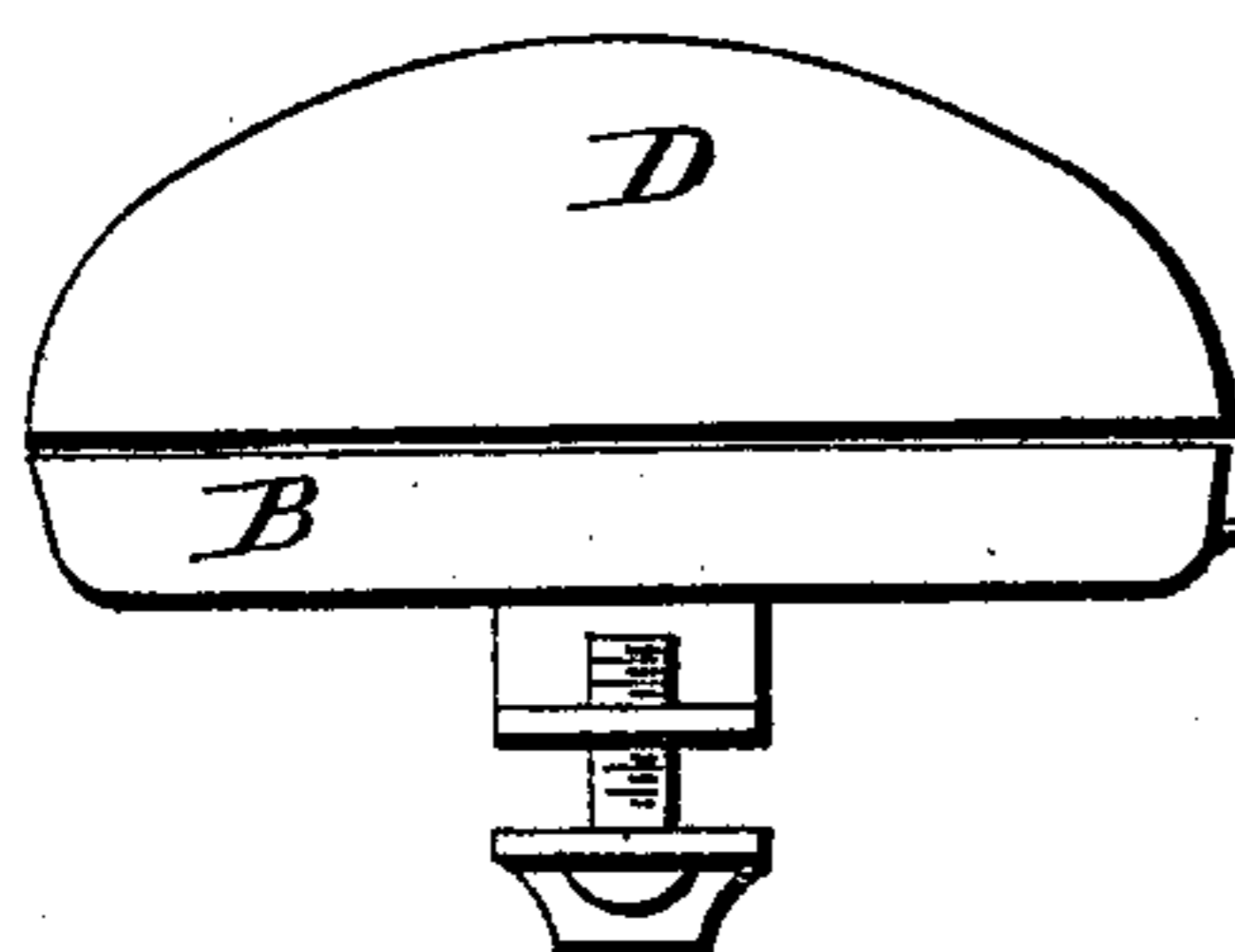


Fig. 2.

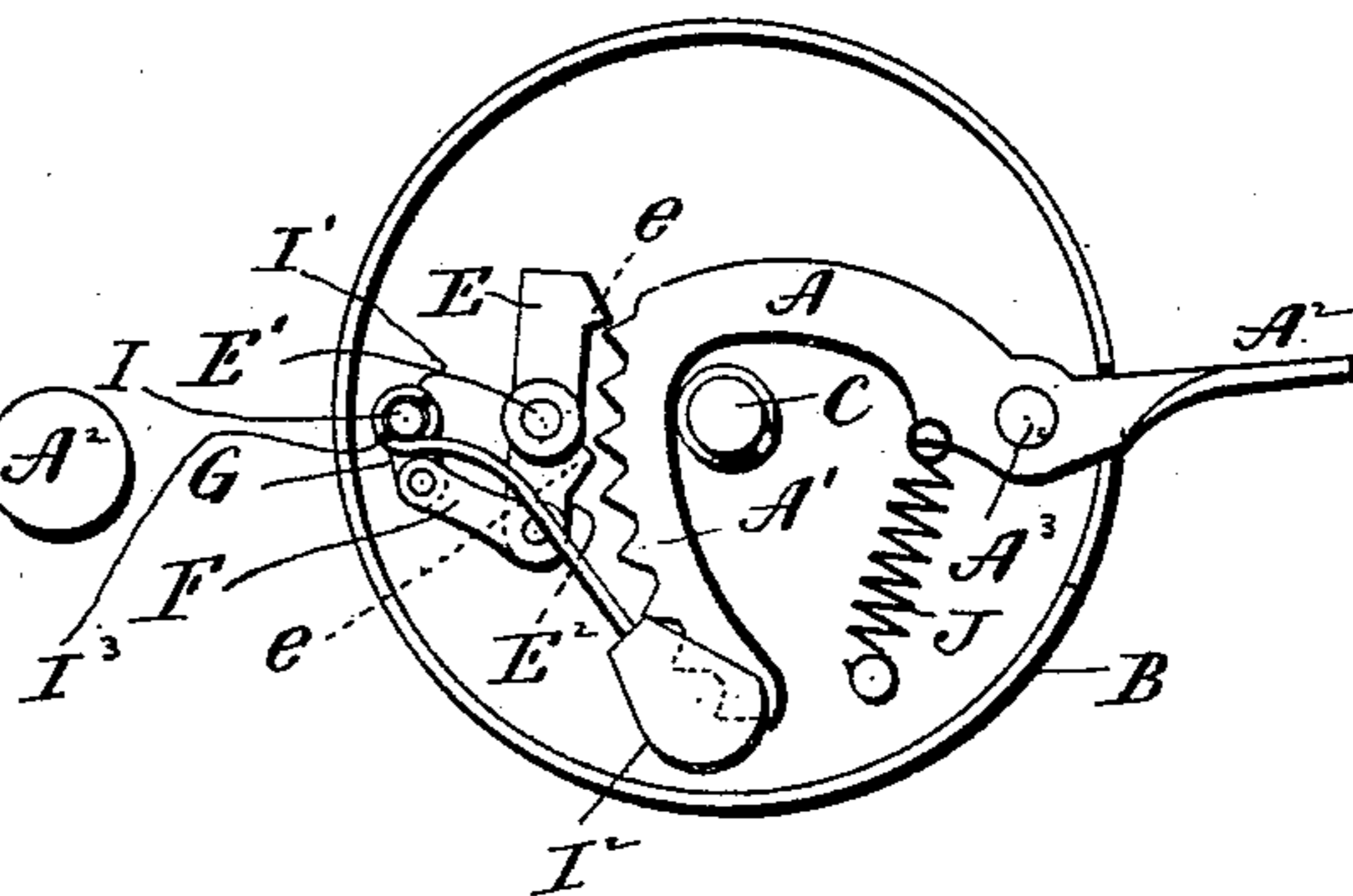


Fig. 3.

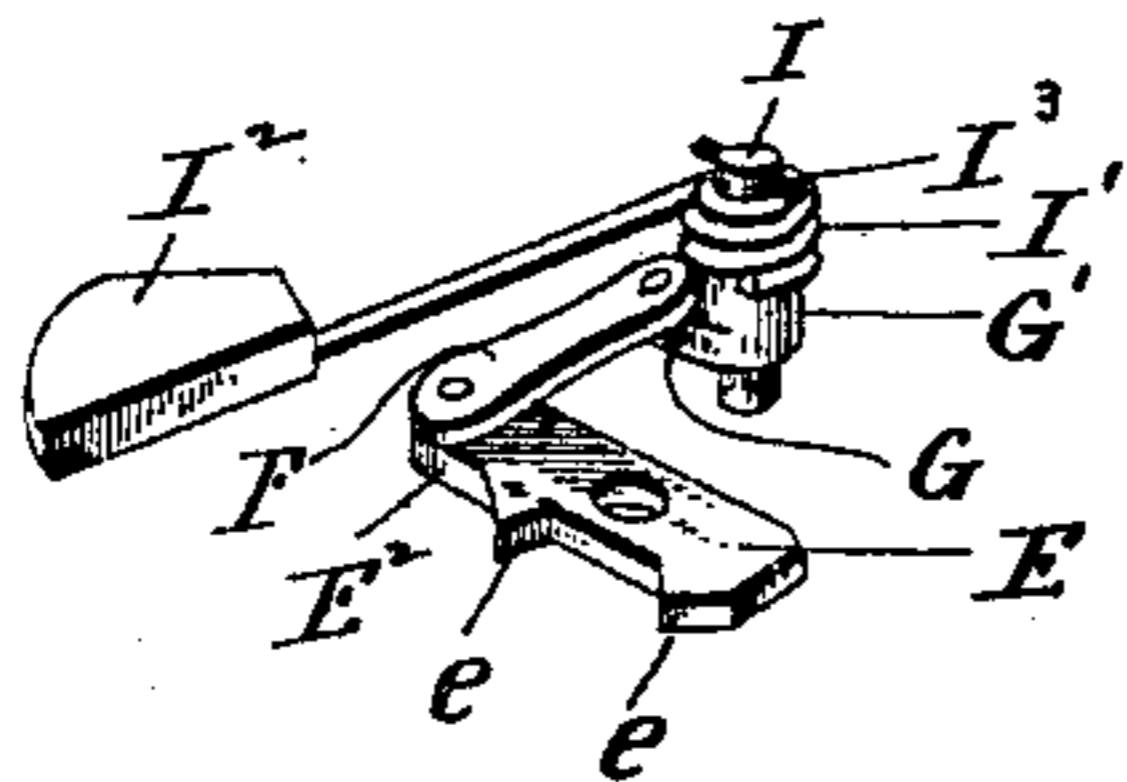
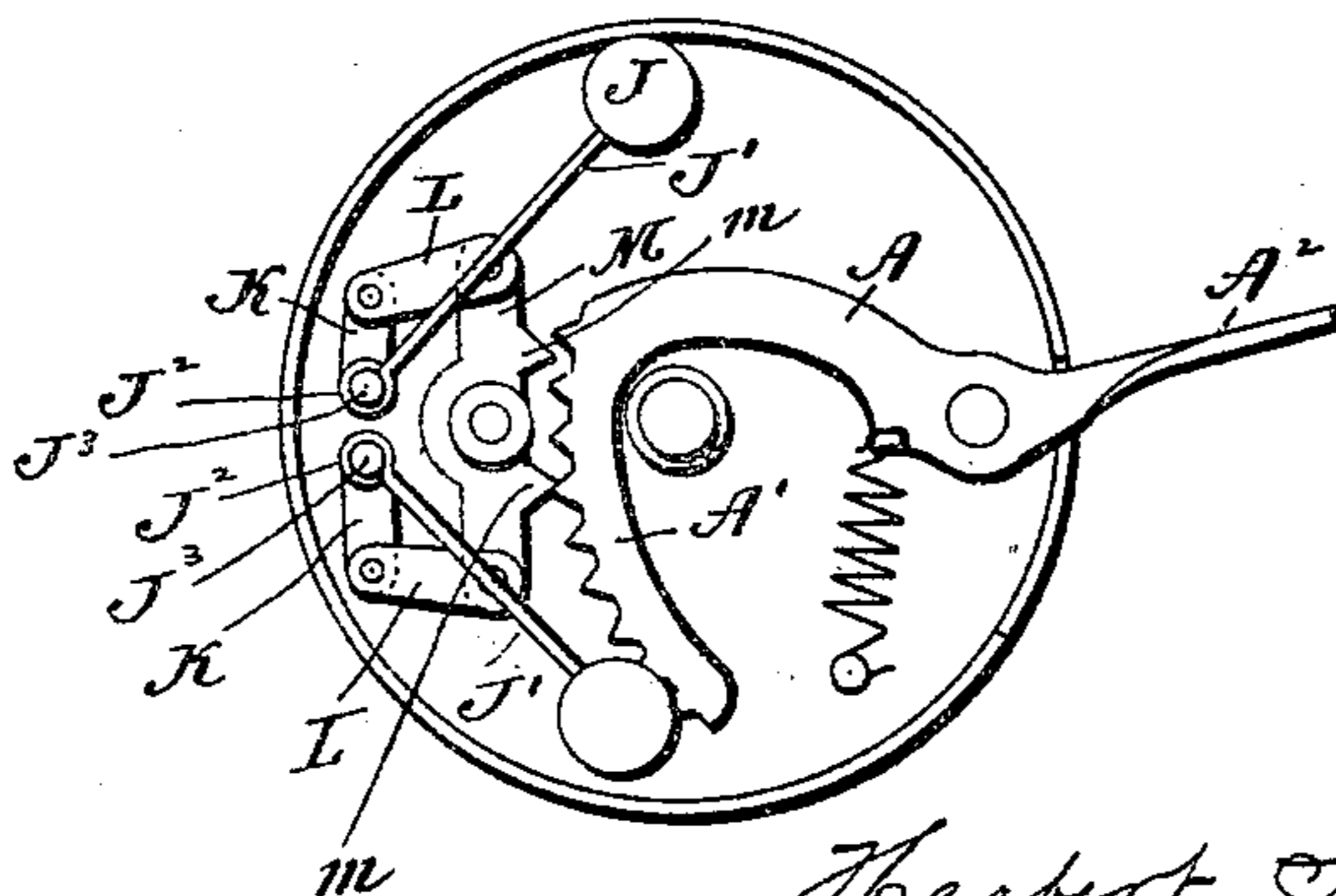


Fig. 4.



Witnesses  
J. H. Sherman  
Ellen Scarborough

Herbert S. Pullman.  
Inventor.  
By atty. Earle Hymour

# UNITED STATES PATENT OFFICE.

HERBERT S. PULLMAN, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE  
SCOVILL MANUFACTURING COMPANY, OF SAME PLACE.

## BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 587,137, dated July 27, 1897.

Application filed March 1, 1897. Serial No. 625,529. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT S. PULLMAN, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Bicycle-Bells; and I do hereby declare the following, when taken in connection with the 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 view thereof with the gong removed; Fig. 3, a detached view of the vibrating plate, the link, the oscillating hub, and the hammer and hammer-arm; Fig. 4, a view of one of the modified forms which my improved bell may assume, this being a double-stroke bell.

My invention relates to an improvement in bicycle-bells, the object being to produce a simple and durable bell composed of few parts, and those not liable to derangement, and constructed with particular reference to sounding a quick 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, as shown in Figs. 1 to 3, inclusive, of the drawings, I employ a finger-lever A, having a segmental escapement-tooth rack A' at its inner end, a finger-piece A<sup>2</sup> at its outer end, and pivoted by means of a pivot A<sup>3</sup> to the bottom of the cup-shaped base-plate B of the bell, the said finger-lever having bearing upon the bottom of the base-plate and being cut away to clear the rigid gong-stud C, which rises from the center of the said plate and supports the removable gong D. The teeth of the rack A' aforesaid engage with two verge-like teeth e e, formed upon the inner face of a vibrating verge-like plate E, pivotally secured to the base-plate B at a point close to the rack by means of a headed pivot E'. One end of this vibrating plate is extended to form a lug E<sup>2</sup> for the attachment of the inner end of a link

F, the outer end of which is pivotally attached to an arm G, formed at the lower end of a hub G', mounted for oscillation upon a stud or post I, rigidly secured to the base B. The said hub G' has rigidly secured to it the coiled inner end I of the wire hammer or striker I<sup>2</sup>. A pin I<sup>3</sup>, passing through the upper end of the stud, holds the hub G' in place thereupon. A spring J, connected with the finger-lever A' and also with the base B, is employed to operate the finger-lever in one direction.

It will be understood that the operation of the finger-lever effects the rapid vibration of the vibration-plate E, the vibrations of which are communicated by means of the link F to the oscillating hub carrying the hammer, which is thus caused to deliver a rapid blow upon the gong D.

The bell above described is a single-stroke bell; but my invention is also adapted to the production of double-stroke bells, a bell of that type being shown by Fig. 4 of the drawings as illustrating the application of my invention to double-stroke bells. In the bell shown by Fig. 4 of the drawings I employ two strikers J J, mounted upon striker-arms J' J', attached at their inner ends to hubs J<sup>2</sup> J<sup>2</sup>, arranged to oscillate upon studs or posts J<sup>3</sup> J<sup>3</sup>, the lower ends of the said hubs being formed with arms K K, connected at their outer ends, by means of links L L, with the opposite ends of a vibrating plate M, having verge-like teeth m m, which coact with the escapement-like teeth of the finger-lever A, which corresponds to the finger-lever of the bell first described.

It is apparent from the modifications shown and described and suggested that in carrying out my invention some other changes than those set forth may be made. I would therefore have it understood that I do not limit myself to the exact construction shown, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

I am aware, however, that it is not new to employ in bicycle-bells a vibrating verge-like plate adapted to be thrown into vibration by a finger-lever and having a hammer or striker connected with it.

I am also aware that it is old to interpose a lever between the finger-lever and the hammer or striker of a bicycle-bell.

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

1. In a bicycle-bell, the combination with the base and the gong thereof, of a finger-lever provided with a rack, a verge-like vibrating plate set into vibration by the rack, the  
10 teeth of which coact with its verge-like teeth; one or more hammers or strikers, and one or more links between the said verge-like vibrating plate and the said hammers or strikers, whereby the vibrating motion of the  
15 plate is transmitted to the hammers or strikers for the actuation thereof.

2. In a bicycle-bell, the combination with the base and the gong thereof, of a finger-lever provided with a segmental rack, a verge-like vibrating plate acted upon by the said  
20 rack, the teeth of which coact with the verge-like teeth of the plate for setting the same into rapid vibration; a link connected with

the said vibrating plate, an oscillating hub 25 connected with the said link, and a hammer or striker connected with the said hub which is oscillated by the vibrating plate through the medium of the said link.

3. In a bicycle-bell, the combination with 30 the base and gong thereof, of a finger-lever formed with a segmental rack, a verge-like vibrating plate provided with teeth coacting with those of the rack, whereby the plate is thrown into rapid vibration by the movement 35 of the lever, a link connected with one end of the said plate, an oscillating hub having its lower end furnished with an arm which is pivotally connected with the outer end of the said link, and a striker or hammer having a  
40 hammer-arm which is secured to the said hub.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HERBERT S. PULLMAN.

Witnesses:

M. L. SPERRY,  
A. LOUISE OBIATT.