

(No Model.)

R. M. BEATTY.
BICYCLE BELL.

No. 543,419.

Patented July 23, 1895.

FIG. 1.

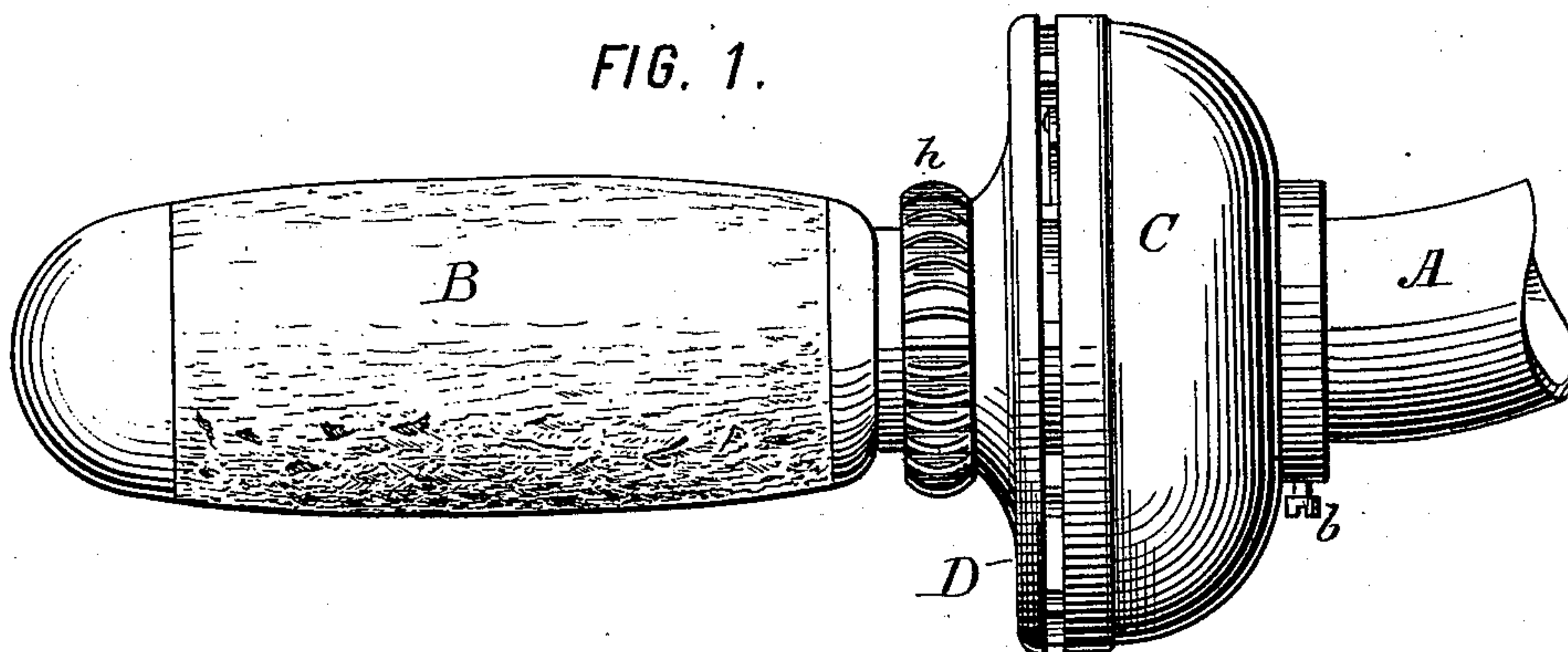


FIG. 2.

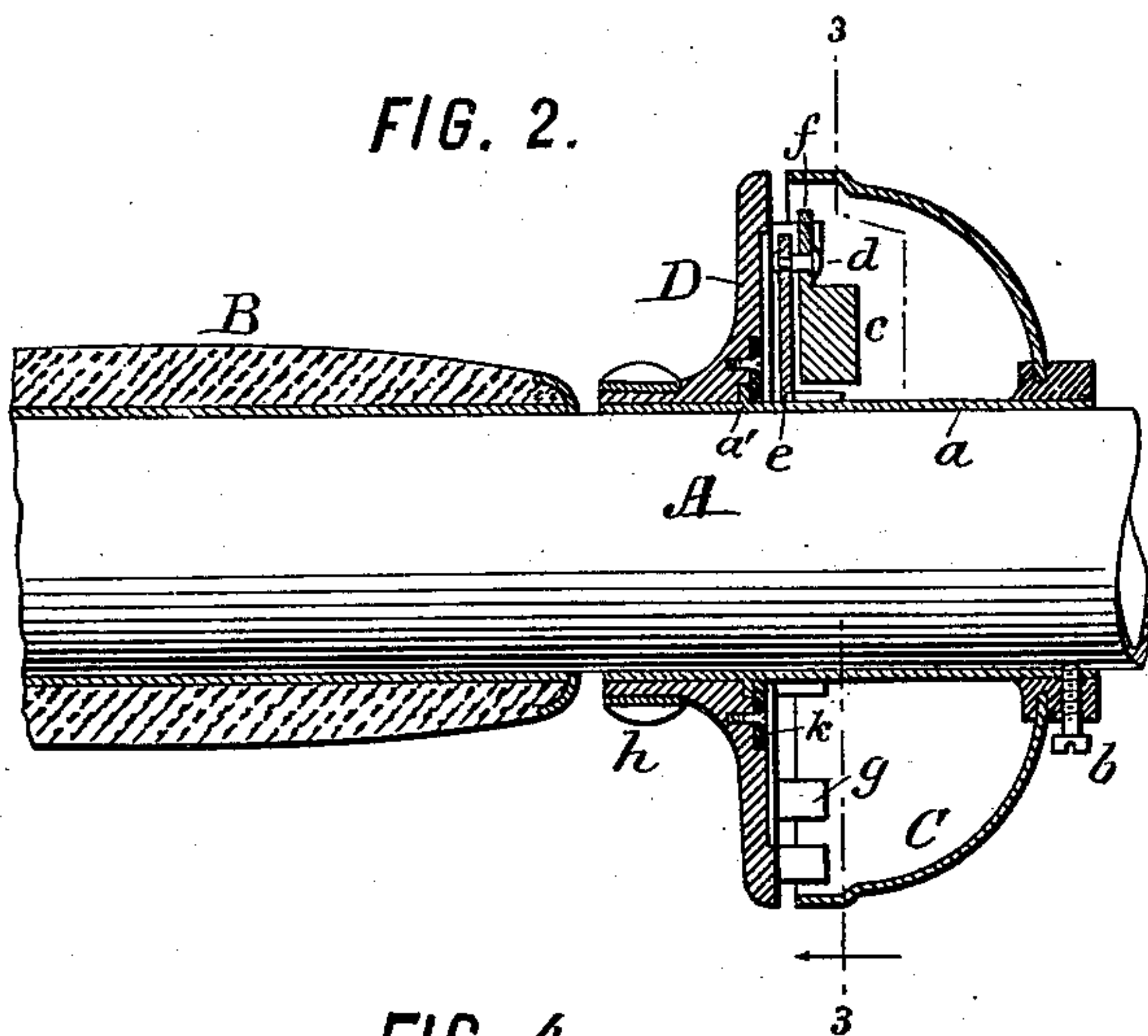


FIG. 3.

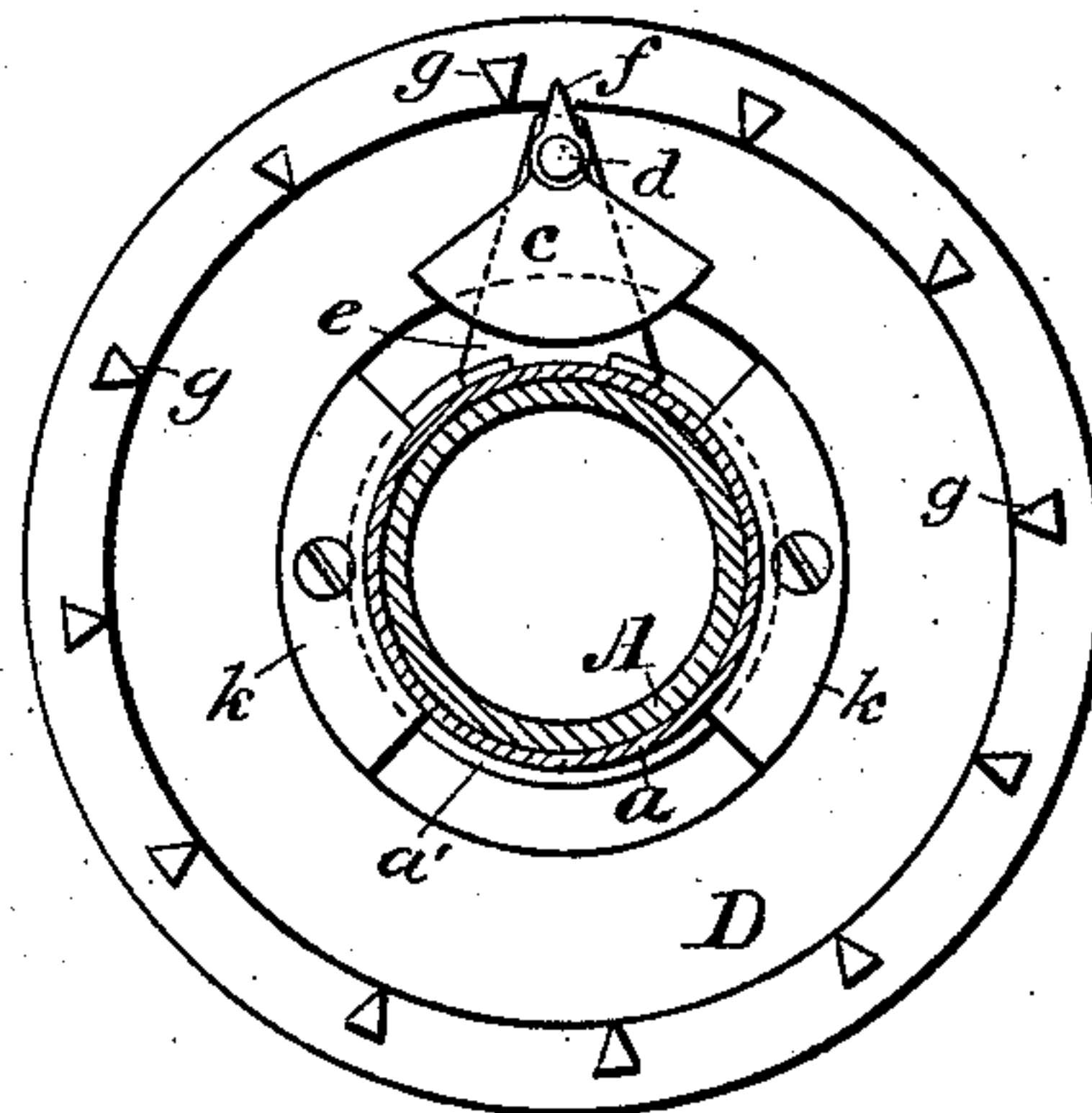


FIG. 4.

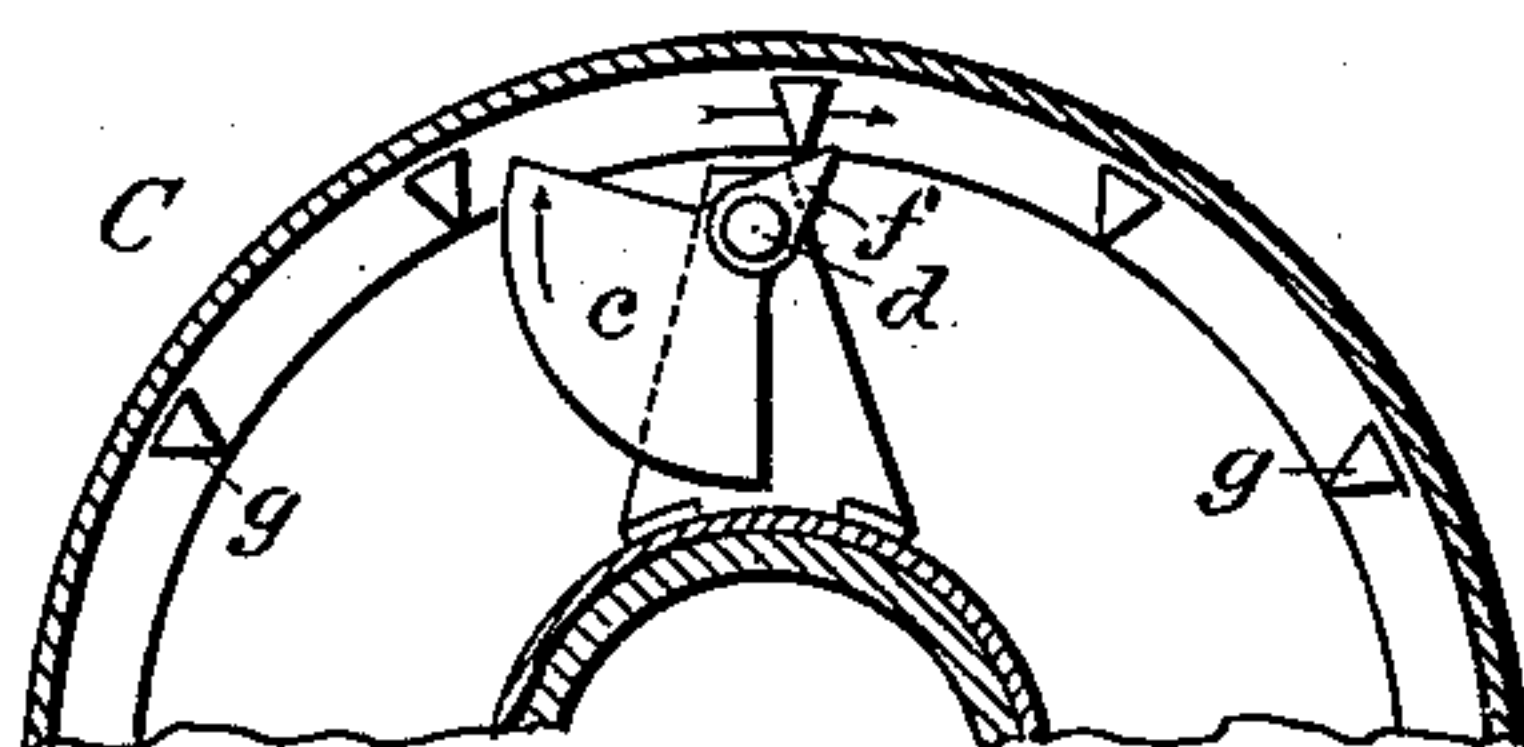


FIG. 5.

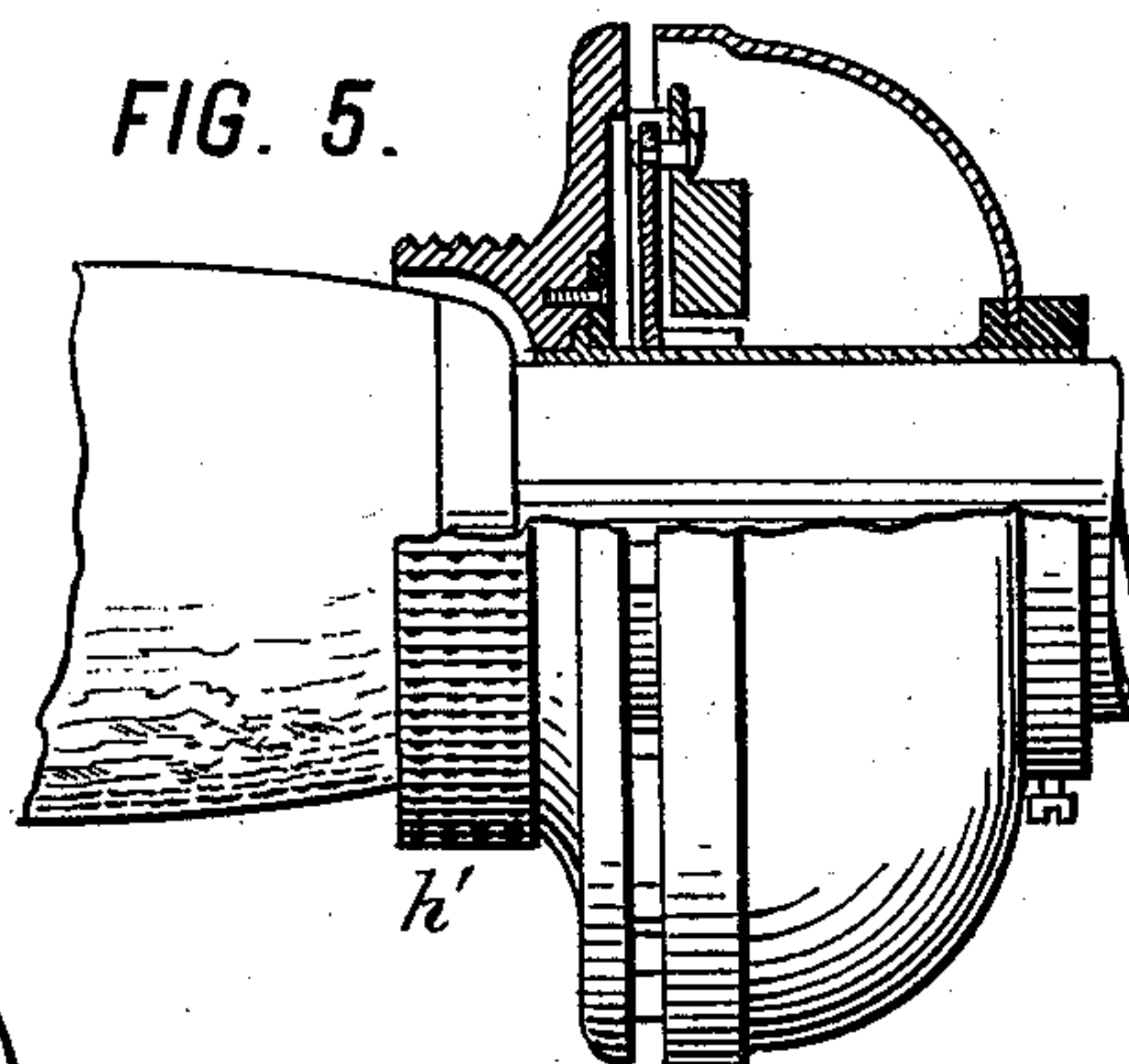
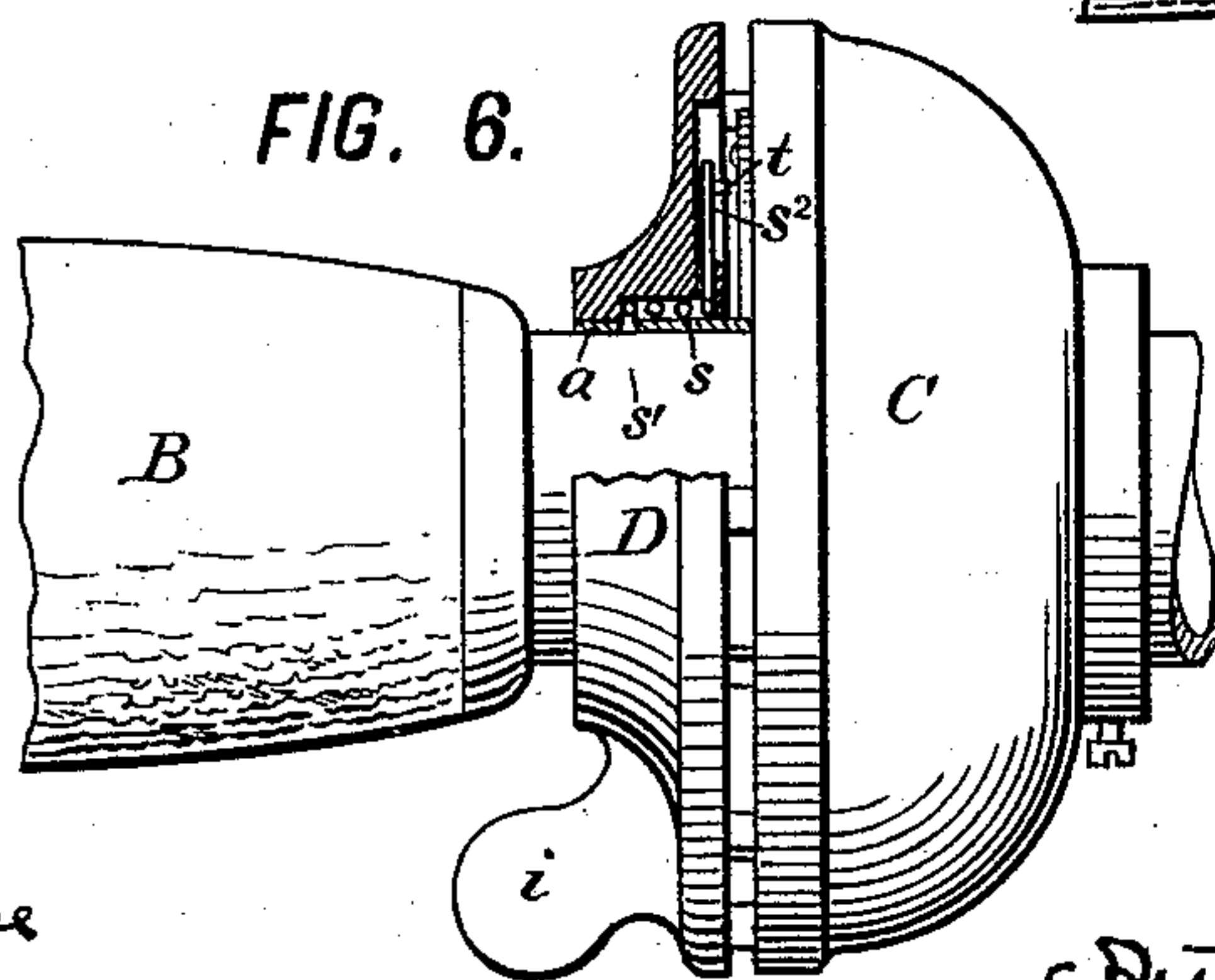


FIG. 6.



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BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 543,419, dated July 23, 1895.

Application filed January 21, 1895. Serial No. 535,589. (No model.)

To all whom it may concern:

Be it known that I, RAYMOND M. BEATTY, a citizen of the United States, residing in Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bicycle-Bells, of which the following is a specification.

This invention relates to alarm-bells for bicycles, tricycles, or other velocipedes. Such alarm-bells as heretofore constructed have been in the form of an attachment to the handle-bar or other convenient part of the velocipede, the bell being commonly mounted side-wise on the handle-bar with its axis perpendicular to the axis of the bar, a clamp or such a device being employed to fasten it on the bar. All such attachments are objectionable as detracting from the neatness and simplicity of the bicycle itself and as being in the nature of makeshifts, constituting no real part of the machine.

An alarm-bell has become a so-necessary and almost universally-used accessory to a bicycle that it is desirable that it should be assimilated in construction to the remainder of the machine and made to appear as a proper and natural part thereof. My invention aims to realize this desideratum, so as to impart to the bell a neat, simple, and workmanlike appearance, while making it easy and convenient to operate.

To these ends I construct the bicycle-bell with a large central opening adapted to admit the handle-bar to be passed axially through the bell, and I provide means for mounting the bell upon the handle-bar in suitable permanent manner. To best provide for the mounting of the bell I arrange it on a sleeve which is adapted to slide over the handle-bar and provide a set-screw or other fastening device for holding it in place thereon. To ring the bell I provide an alarm mechanism comprising an actuating-disk mounted to turn around the sleeve and having pins or cams for acting against a hammer or lever for striking the bell, this disk being constructed to be turned by the thumb or between the thumb and finger of the rider and being in

close proximity to the handle, so as to enable it to be conveniently turned in this manner. 50

Figure 1 of the accompanying drawings is an elevation of the handle-bell and a portion of the handle-bar. Fig. 2 is a longitudinal section through the bell and part of the handle. Fig. 3 is a transverse section on the line 55 3 3, the bell or gong being omitted. Fig. 4 is a fragmentary section in the same plane, showing the act of striking the bell. Fig. 5 is a sectional elevation of a modification. Fig. 6 is a sectional elevation of another modification. 60

Let A designate the handle-bar and B one of the handles, both of which may be of any usual construction.

C is the bell proper or gong. This is of peculiar arrangement and construction, being made with an axial opening large enough to admit the handle-bar through it and being slipped over the handle-bar so as to be mounted concentrically thereon, as shown in Fig. 1. 70 Its open side is closed by preference by means of a disk D, which may come as close to the mouth of the bell as will not obstruct its vibration. For conveniently mounting the bell on the handle-bar, and for mounting the disk 75 relatively to the bell, I provide a tube or sleeve *a* of such size as to easily slip over the handle-bar, and I mount the hub of the bell on one end of this sleeve, fastening it thereto preferably by means of a set-screw *b*, which 80 set-screw I arrange to pass through the hub and sleeve, so that its end will bear or set against the handle-bar, in order not only to fasten the bell upon the sleeve, but to fasten both firmly upon the handle-bar. In lieu of 85 the set-screw some other fastening device may be substituted to similar effect. For conveniently ringing the bell I mount the disk D to rotate or oscillate upon the sleeve *a* and provide it with suitable means for actuating a 90 hammer. In the particular construction shown the hammer consists of a sector-shaped head *c* formed on a lever which is hung on a pin *d* projecting from a pedestal or upright *e*, which is mounted fixedly on the sleeve *a*. 95 The hammer-lever has a short upwardly-pro-

jecting arm *f*, which stands in the path of a series of pins or cams *g g* carried by the disk D. By turning the disk D in either direction these pins successively act upon the hammer-arm, throwing the hammer-head to one side, as shown in Fig. 4, and causing it to strike the bell. The hammer-head falls back after each blow by gravity, or a spring may be introduced, if desired, to draw it back.

For rotating or oscillating the actuating-disk D it is provided with some means for enabling the rider to actuate it by means of his thumb or finger while his hand still grasps the handle B. One such means consists of a serrated or toothed flange or ring *h*, as shown in Figs. 1 and 2. Another means consists in constructing it with an overhanging flange *h'*, projecting over the end of the handle, as shown in Fig. 5; or the disk may have a thumb-piece projecting from it, as shown at *i* in Fig. 6, so that the rider, by pressing with his thumb on this thumb-piece, may oscillate the disk in one direction, a spring being provided for turning it backward. With the bell-ringing mechanism described the bell will be caused to ring during both movements. For thus returning the disk a spring *s* is provided, coiled around the stationary sleeve *a*, with one end *s'* fastened to the sleeve and the other end *s²* pressing against a projecting pin *t* on the disk.

For holding the disk D in proper rotative engagement with the sleeve *a*, or preventing it moving longitudinally thereon, I prefer to construct the sleeve with a projecting flange *a'*, Figs. 2 and 3, entering a recess formed annularly in the hub of the disk and engaged by segmental plates *k*, fastened by screws or otherwise to the disk in such manner that their inner edges shall overhang this flange, as shown in Figs. 2 and 3.

My improved bicycle-bell has when applied to the bicycle the appearance of being a part of the machine, as distinguished from a mere attachment thereto. It is very neat and has a desirable appearance of simplicity. It is very easily operated without the rider being compelled to take his hand from the handle. It is also cheap to construct and easy to apply to the machine, it being only necessary to remove the handle-screw and slip off the handle, then set the bell onto the handle-bar and fasten it with a set-screw *b*, and then replace the handle—operations which can be

performed at least as readily as the attachment of the ordinary bells by means of clamping-screws.

I claim as my invention the following-defined novel features, substantially as hereinbefore specified, namely:

1. A cycle bell having a large central opening, and a sleeve passing axially through said opening on which the bell is fixed, said sleeve adapted to fit over the handle-bar and having means for attachment thereto and an actuating part mounted on the exterior of said sleeve and movable to ring the bell.

2. A cycle bell having a central opening large enough to admit the handle-bar through it and adapted to be mounted on the handle-bar, combined with an alarm mechanism comprising an actuating part mounted to turn axially around the handle-bar.

3. A cycle bell having a central opening large enough to admit the handle-bar through it and adapted to be mounted on the handle-bar, combined with an alarm mechanism comprising an actuating disk mounted annularly around the handle-bar to close the mouth of the bell and adapted to be turned axially around the handle-bar to ring the bell.

4. A cycle bell mounted annularly around the handle-bar, combined with a swinging hammer having a projecting arm, and a rotative disk adapted to turn axially around the handle-bar, and carrying projections adapted to engage said hammer arm and throw the hammer against the bell.

5. In a cycle bell, the combination with a sleeve *a*, the bell C fixed thereon, a disk D mounted to turn thereon, a hammer for striking the bell, and means carried by said disk for actuating the hammer.

6. The combination of a sleeve *a* having a flange *a'*, a bell C fixed on said sleeve, a disk D mounted to turn on said sleeve, and segmental plates *k* attached to said disk and engaging said flange to prevent the longitudinal displacement of the disk.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

RAYMOND M. BEATTY.

Witnesses:

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GEORGE H. FRASER.