

No. 641,447.

Patented Jan. 16, 1900.

H. N. GALE.
BICYCLE BELL CLAMP.
(Application filed Apr. 25, 1898.)

(No Model.)

Fig. 1

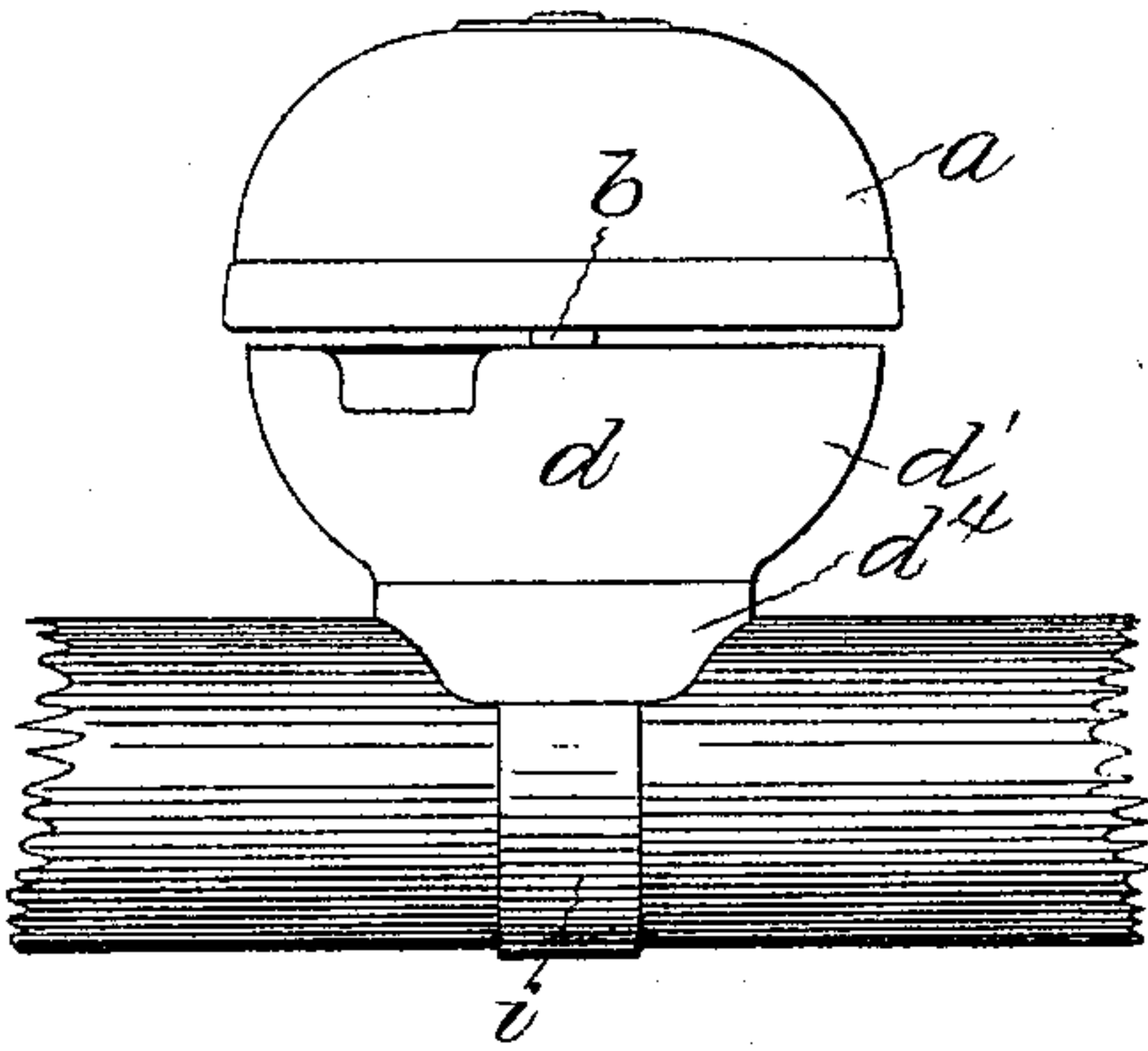


Fig. 2

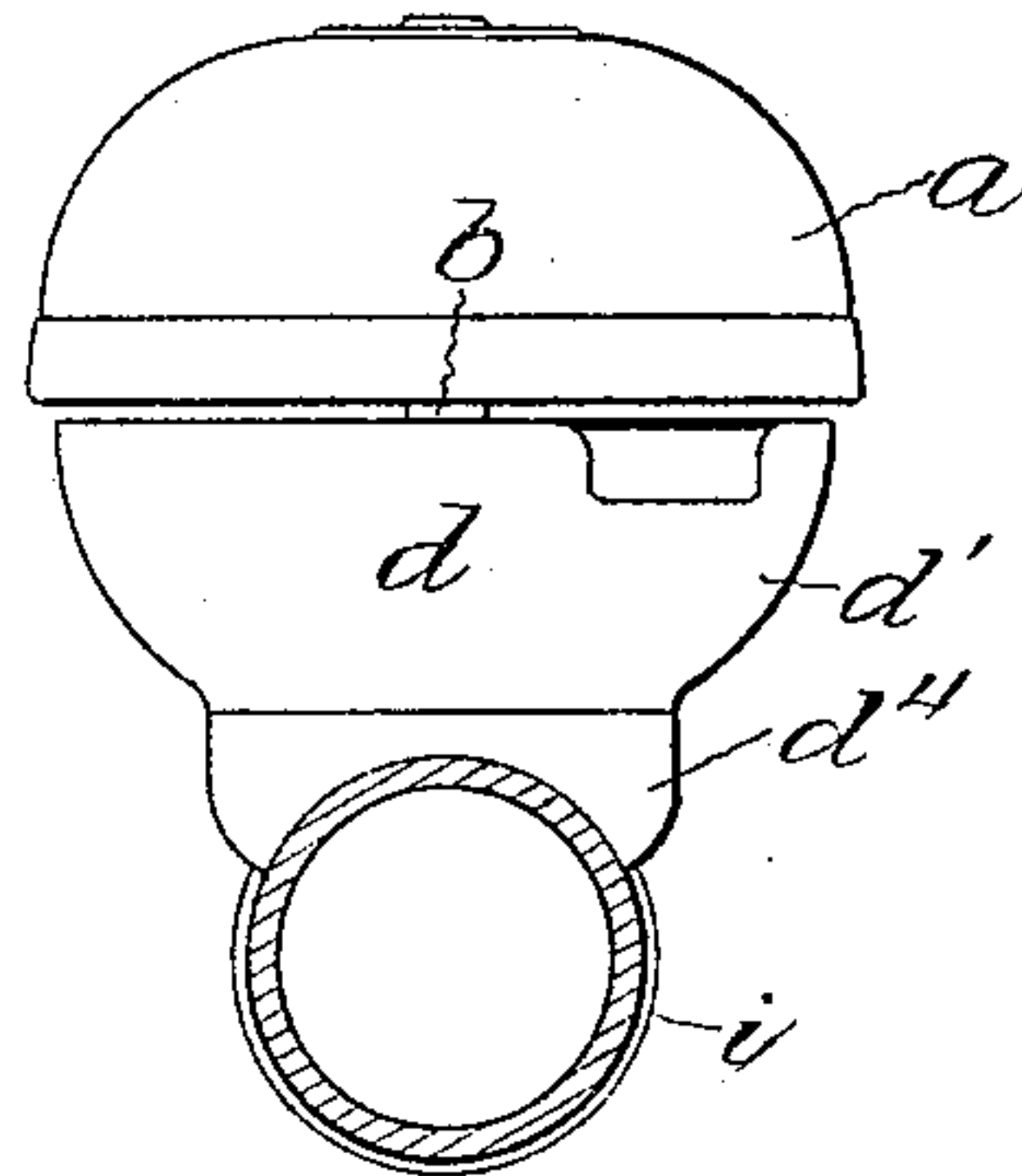


Fig. 3

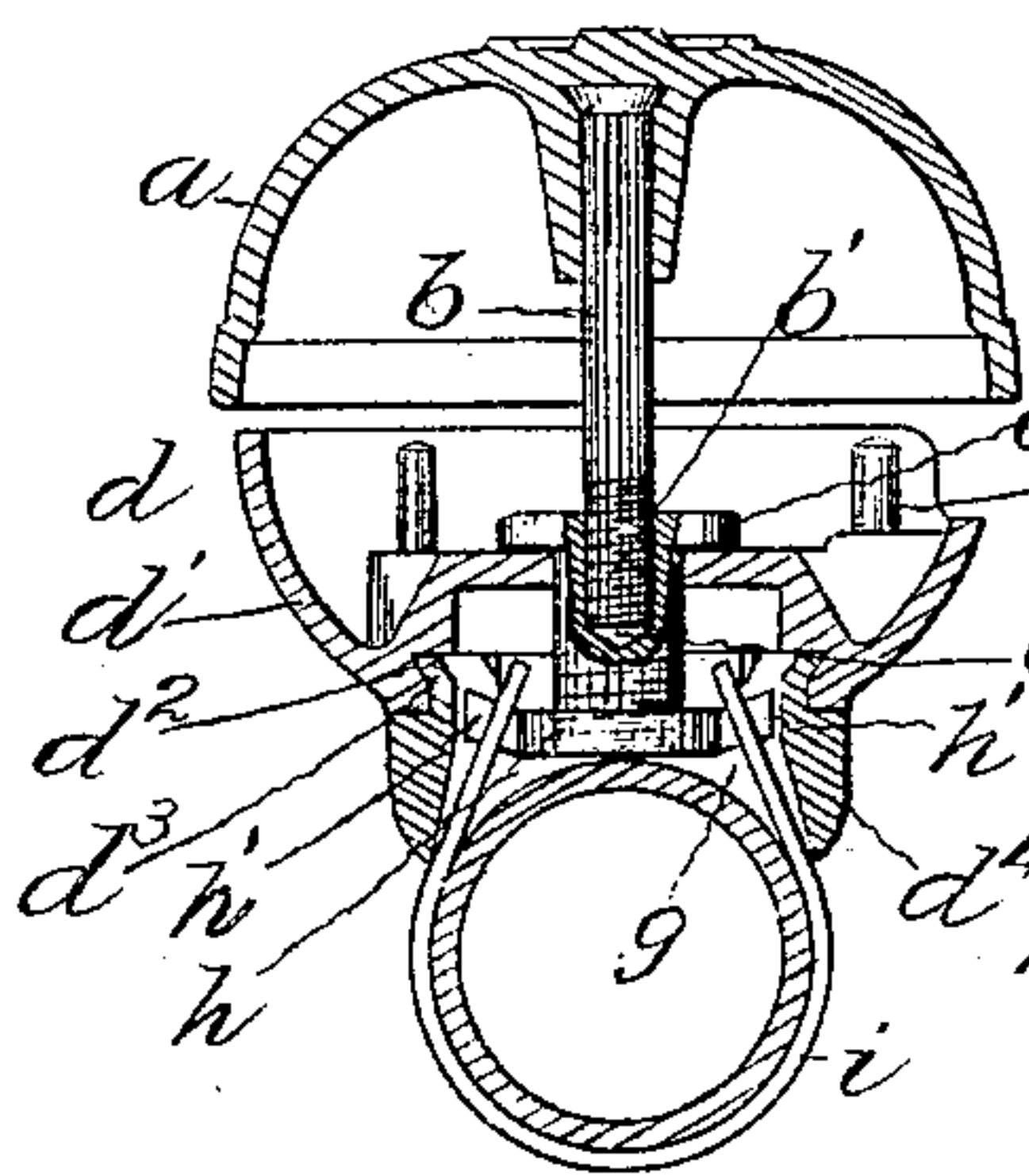


Fig. 4

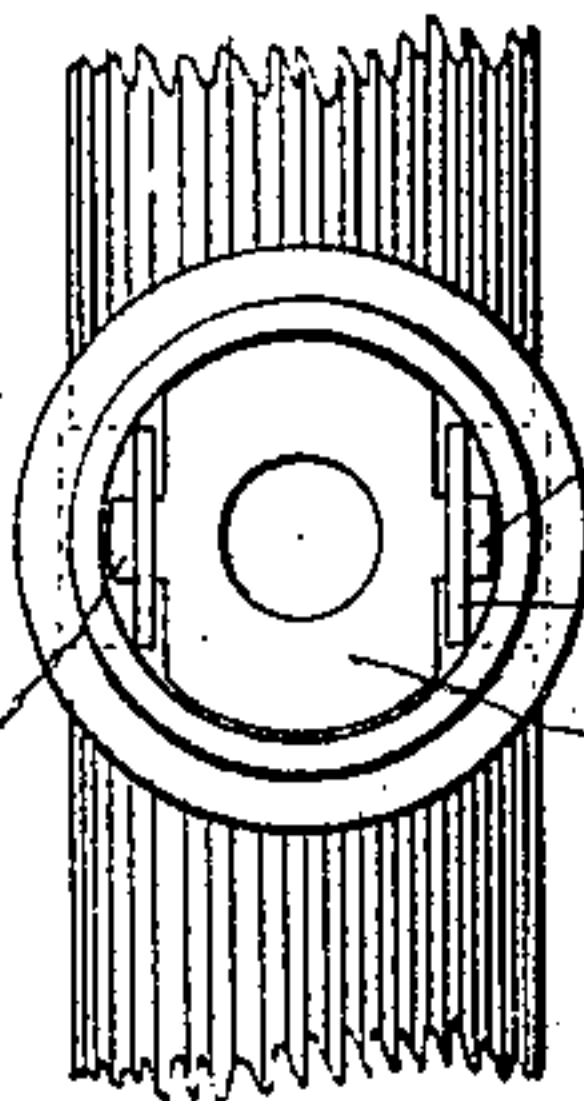


Fig. 5

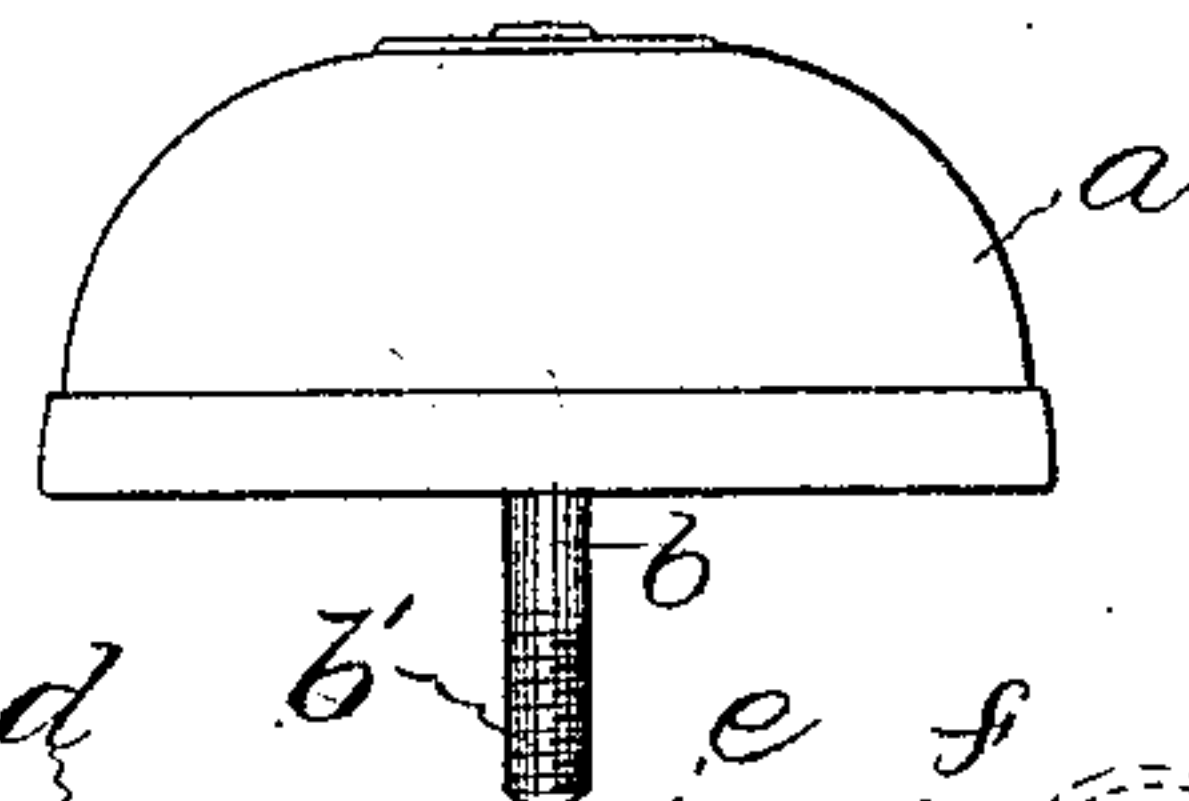


Fig. 6

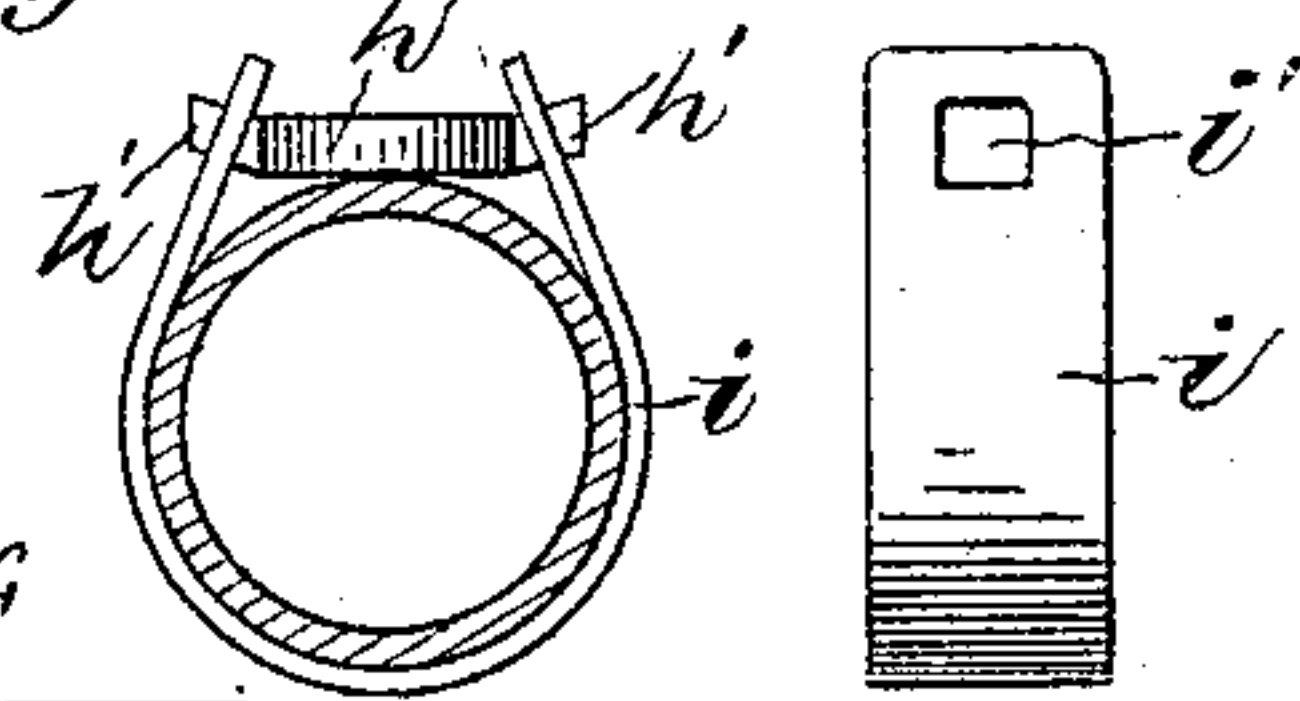
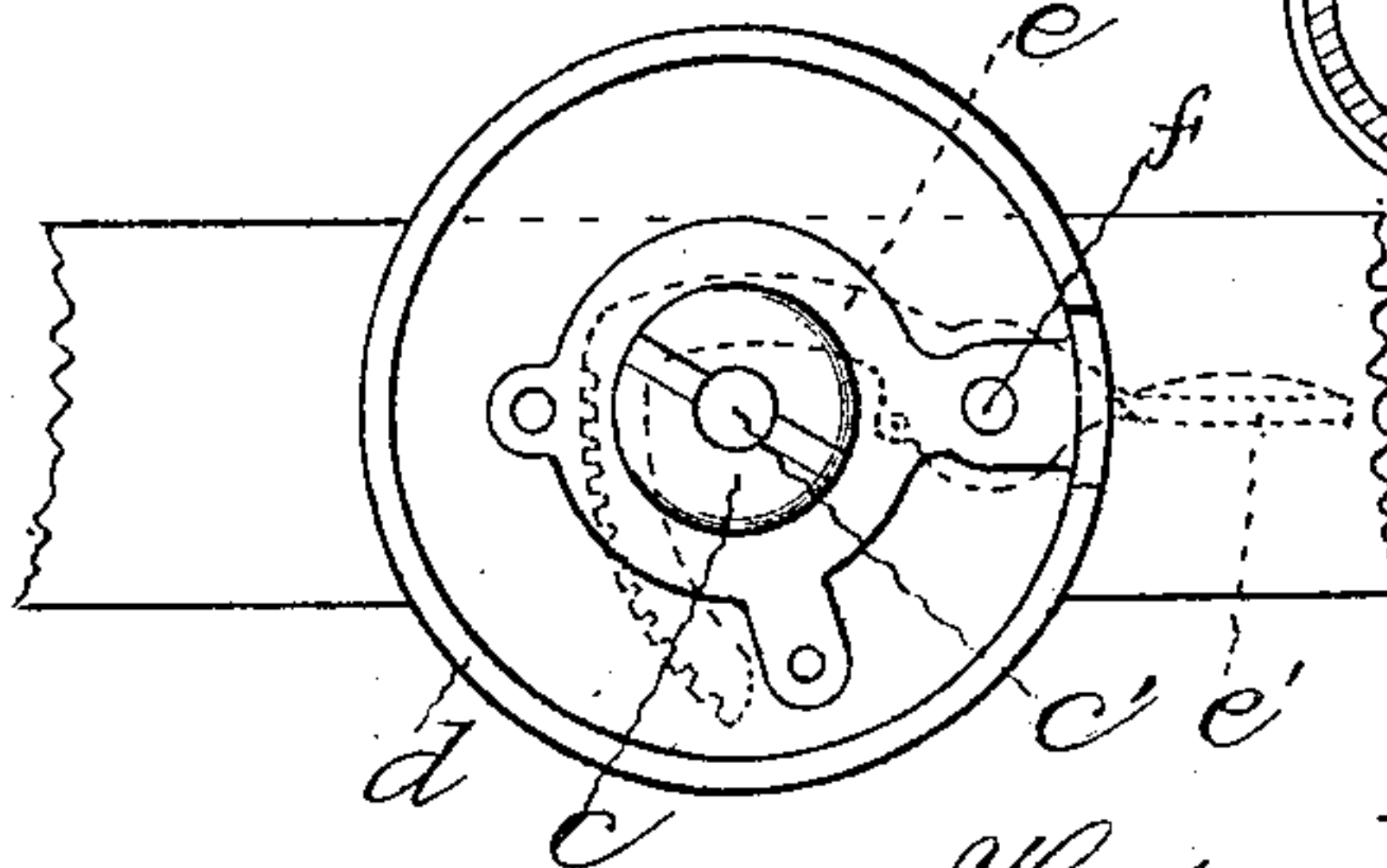


Fig. 7



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UNITED STATES PATENT OFFICE.

HERBERT N. GALE, OF BRISTOL, CONNECTICUT.

BICYCLE-BELL CLAMP.

SPECIFICATION forming part of Letters Patent No. 641,447, dated January 16, 1900.

Application filed April 25, 1898. Serial No. 678,717. (No model.)

To all whom it may concern:

Be it known that I, HERBERT N. GALE, a citizen of the United States, and a resident of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Bicycle-Bell Clamps, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

10 The object of my invention is to provide means for securing a bicycle-bell or like structure to the handle-bar or a frame member of a bicycle in such manner as to permit the ready adjustment of the bell in the desired position and the clamping of the parts without requiring a separate tool or implement.

15 To this end my invention consists in the combination of the several parts making up the clamping mechanism and the details of such parts and their combination, as hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a view in side elevation of a bicycle-bell embodying my improvement. Fig. 2 is a view in side elevation of the bell and in cross-section of the bar to which the bell is attached. Fig. 3 is a view in transverse central section through the bell and clamping device, the striking mechanism being omitted. Fig. 4 is a detail top view of the saddle, showing the ends of the clamp and the yoke. Fig. 5 is a detail view of the several elements separated, but arranged in axial alinement. Fig. 6 is a view in side elevation of the flexible band. Fig. 7 is a detail top or plan view showing the base-plate of the bell and its relative position on the bar.

20 In the accompanying drawings the letter *a* denotes the gong or sounding-shell of the bell, having a stem *b* secured to it, as by casting. The lower end of this stem is provided with a thread *b'*, which fits within a threaded socket in the screw *c*, the length of the stem being such that when the gong *a* is located in proper relation to the base-plate *d* of the bell the lower end of the stem *b* strikes against the bottom of the threaded socket *c'* in this screw *c*.

50 The base-plate *d* is arranged to support the striking mechanism, a lever *e* being pivoted to a pin *f* on the base-plate and having a han-

dle *e'* projecting beyond the periphery of the base-plate and located in convenient position to enable it to be operated by the rider of the wheel. A socket *g*, formed on the inner side of the base-plate, provides a space within which a nut *h* and the ends of a flexible clamping-band *i* are located. The screw *c* extends into a socket in the floor of the base-plate, and this socket *g* has a thread on the screw fitting a thread in the nut *h*.

60 The nut *h* is provided with lugs *h'* on opposite sides, and these lugs pass through the holes *i'* near the ends of the clamping-band *i*. The parts are so arranged that when the ends of the band are located within the socket *g* and engaged with the lugs on the nut they cannot be accidentally released. The lower surface of the base-plate *d* is so shaped as to conform to the circular cross-sectional outline of the handle-bar or frame member and form a close joint between the parts.

70 The screw *c* has a slotted head to enable it to be turned to engage the nut *h*, and, if desired, the base-plate may be clamped upon the handle-bar by turning this screw *c*, as by means of a screw-driver. An equally convenient means of doing this, and, in fact, that intended to be employed, contemplates the screwing of the stem *b* into the socket *c'* until its end strikes the bottom of the socket in the screw *c* and then by the continued rotation of the gong and its stem cause the screw *c* to rotate in the nut *h*, which is held against rotation by its engagement with the ends of the clamping-band *i*. This rotary movement of the gong is continued until the grasp of the clamping-band is sufficient to hold the bell in position.

90 Instead of making the base-plate in one piece, as above described, it is preferably made in two parts, which are so united as to rotate one upon the other, although held against other relative movement. The upper part *d'* is provided with a dovetailed annular groove *d²* in the wall of the socket *g*, and a portion *d³* of the flange on the saddle *d⁴* is pressed outward to engage the sloping wall of the groove, and thus hold the two parts of the base-plate closely engaged, but free to rotate on each other.

100 The lower surface of the saddle is shaped to fit closely upon the handle-bar or other cy-

lindrical frame member, and therefore bears a fixed relation to the bar. By providing for a rotary movement of the upper part of the base-plate on this saddle the outer end of the lever *e* may be placed in the desired position with relation to the bar and the parts clamped firmly, as by turning the gong, and with it the stem *b* and screw *c*, as described. The forming of the base-plate in two pieces, as described, constitutes a desirable feature of the improvement.

It is obvious that other means may be used to connect the two sections of the base-plate so that one will rotate upon the other, and my invention is not limited to the particular construction described.

I claim as my invention—

1. In combination with a base-plate having a socket in its lower surface, a flexible clamping-band with its ends located within the socket and engaging a nut, a nut located in the socket and engaging a screw, the screw loosely mounted in the base-plate with a shoulder overhanging the edge of the opening through the floor of the base-plate, a removable member having a threaded stem with its end fitting within the threaded socket in the screw, all substantially as described.

2. In combination with a base-plate having a socket in its under surface, a flexible clamping-band with its ends located in the socket and having means for attachment to a nut, the nut having means for engaging the ends of the clamping-band, a removable member having a stem permanently secured thereto and means connecting said stem with the nut whereby on the rotation of the stem the nut is moved in the socket, all substantially as described.

3. In combination with a base-plate formed in two sections rotarily connected, a socket in the under surface of the base-plate, a nut located within the socket and having means for

attachment to a band, a flexible band having its ends extending within the socket and means for attachment to the nut, a gong or like removable member with the stem permanently connected thereto, and means connecting said stem and the nut whereby on the rotation of the gong the nut is moved in the socket, all substantially as described.

4. In combination with a base-plate formed in sections rotarily connected, the lower section shaped across its edge to fit a cylindrical surface, a socket in the under surface of the base-plate, a nut located within the socket, a flexible band having its ends extending within the socket, means for connecting the ends of the flexible band and the nut, a screw having a shoulder resting on the floor of the base-plate and a threaded end engaging the nut, a gong having a rigid stem and threaded lower end, the latter located in a threaded socket in the screw, all substantially as described.

5. In combination in a bicycle-bell, a base-plate having a socket in its under surface and an undercut groove formed in the wall of the socket, a lower section or saddle having a flange with outturned lugs engaging the groove and its lower edge shaped to fit a cylindrical surface, a flexible clamping-band with its ends extending within the saddle, a nut located within the saddle, means for attaching the ends of the band to the nut, a screw extending through a central hole in the floor of the base-plate and having a shoulder resting on said floor, a threaded end engaging the nut and a central socket opening upward, and a gong having a rigid stem with a threaded end fitting the socket in the screw, all substantially as described.

HERBERT N. GALE.

Witnesses:

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