

(No Model)

S. W. WARDWELL, Jr.
BICYCLE BELL.

No. 583,348.

Patented May 25, 1897.

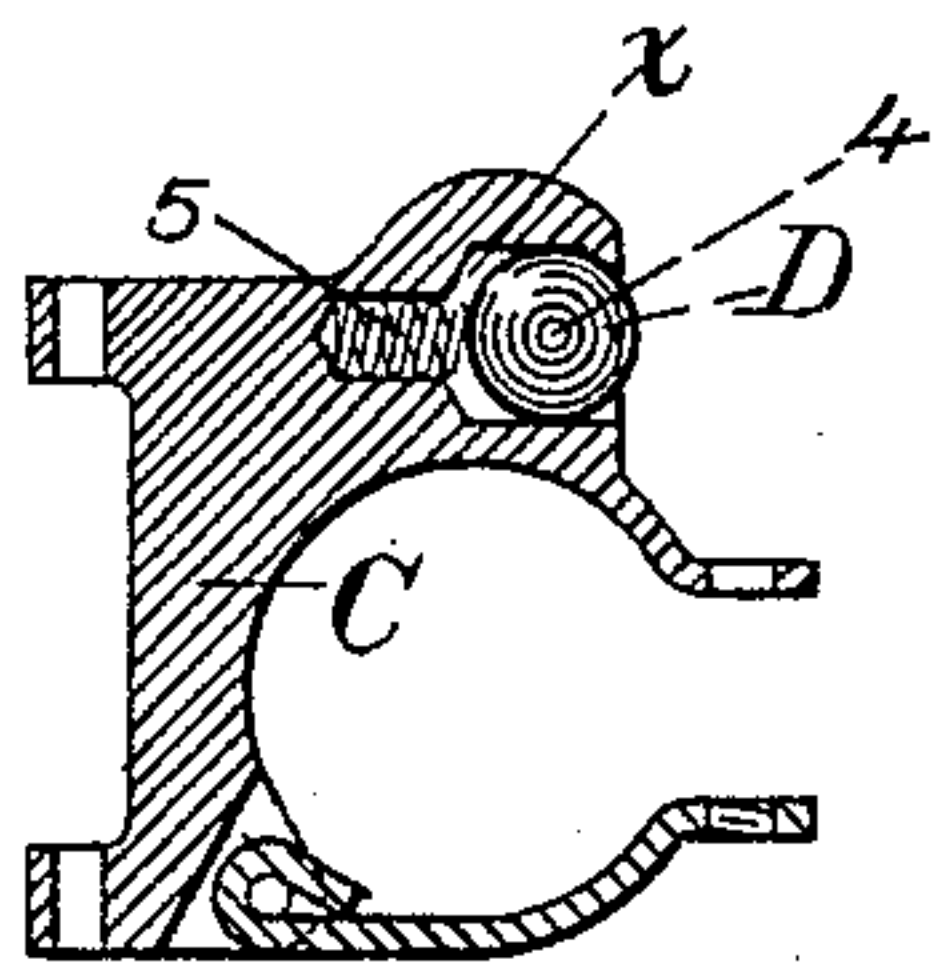


Fig. 3

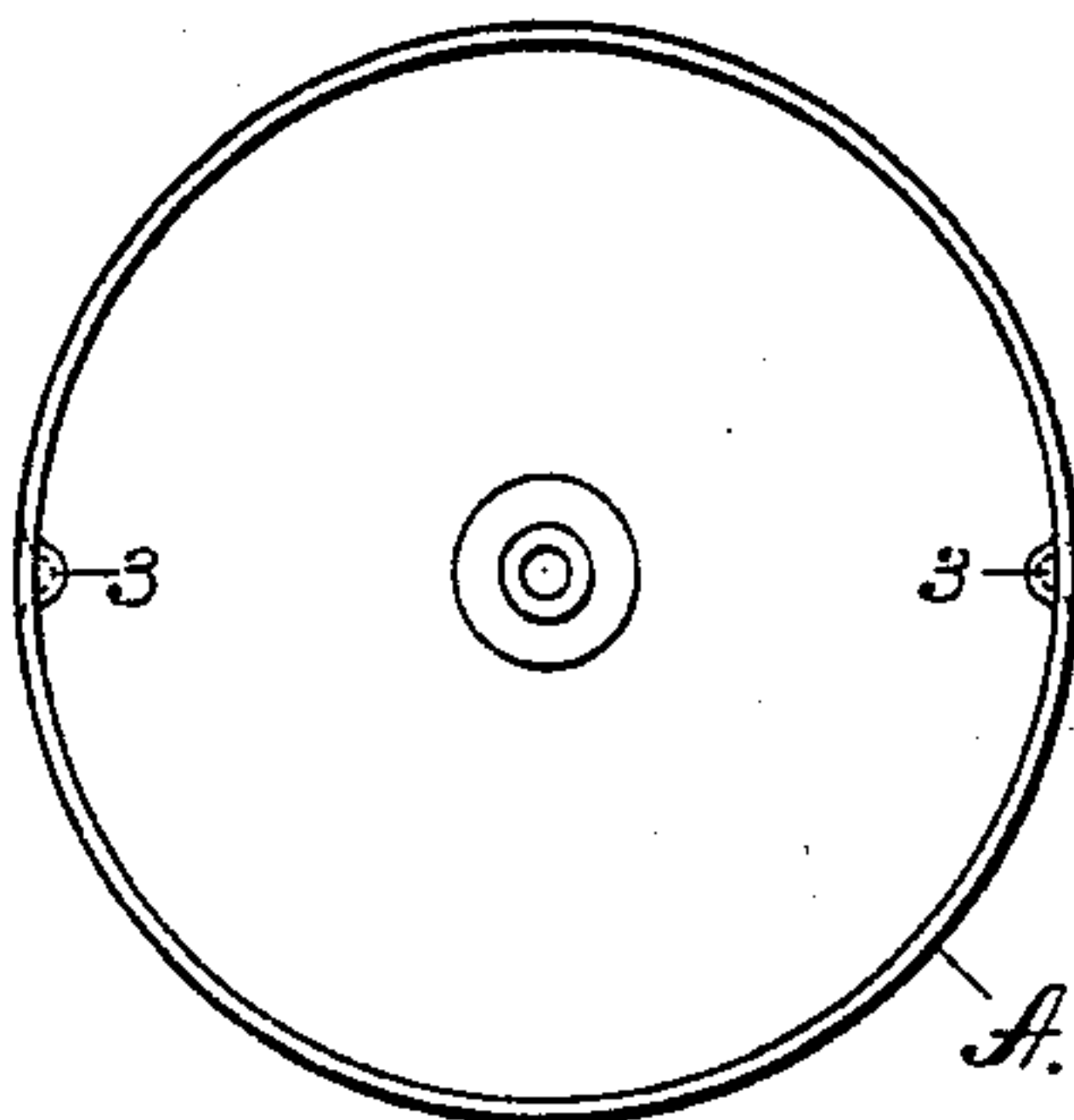


Fig. 4

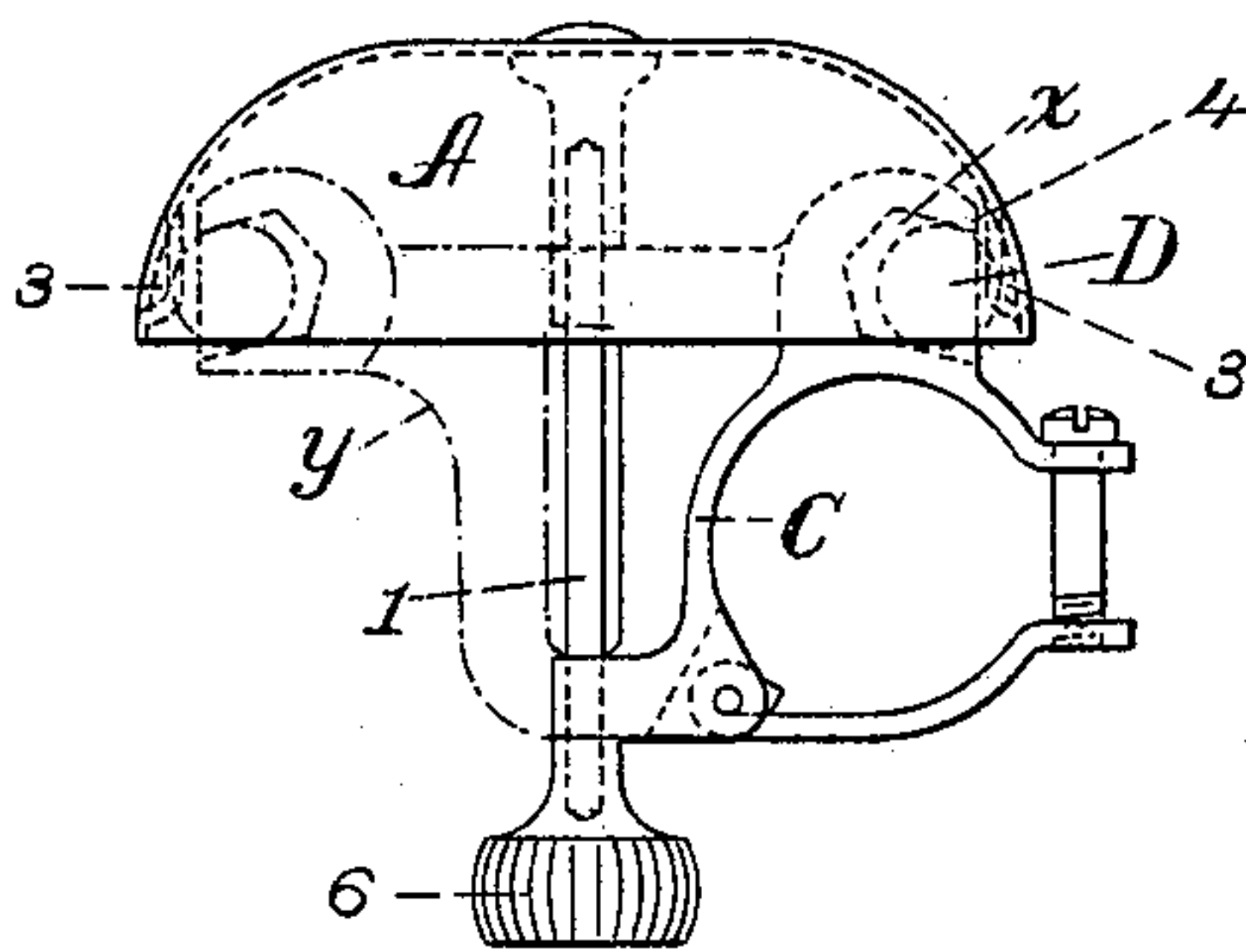


Fig. 1.

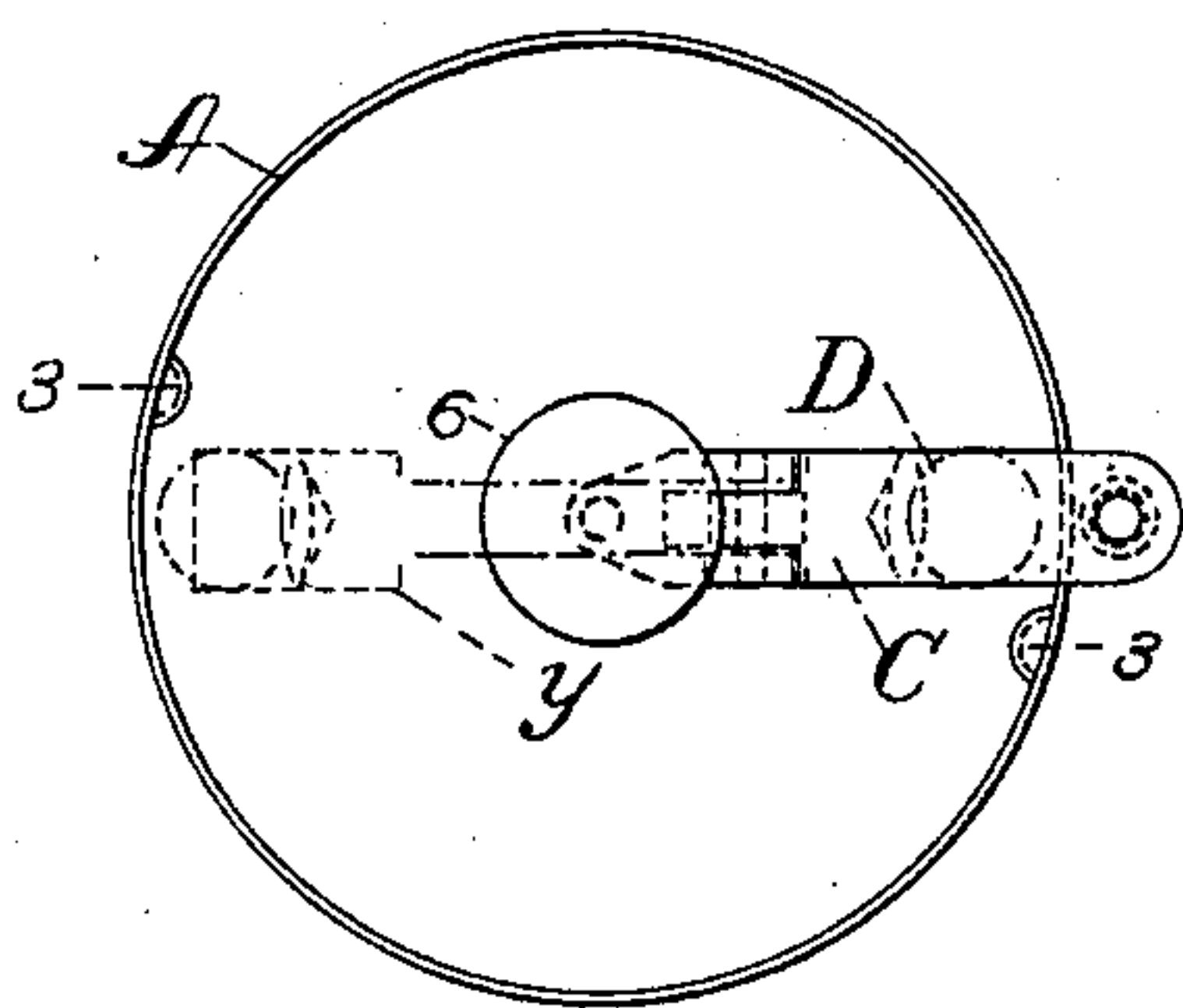


Fig. 2.

WITNESSES:

James W. Stevens
J. A. Ferguson

INVENTOR

Simon W. Wardwell, Jr.

BY

Foster Freeman
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SIMON W. WARDWELL, JR., OF PROVIDENCE, RHODE ISLAND.

BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 583,348, dated May 25, 1897.

Application filed November 10, 1896. Serial No. 611,633. (No model.)

To all whom it may concern.

Be it known that I, SIMON W. WARDWELL, Jr., a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Bells, of which the following is a specification.

My improved bell has two members, one of which may be held stationary, while the other is mounted so as to rotate, and the bearings and weight of the parts are such that the rotating member will continue its movement for a certain time by momentum.

In the accompanying drawings, forming a part of this specification, and in which like letters and figures of reference indicate corresponding parts, Figure 1 is a side elevation of the invention. Fig. 2 is an end view thereof. Fig. 3 is a detail sectional view of a modified form of the clamp and hammer, and Fig. 4 is a plan view of the gong.

As shown, the rotating member is the gong portion A of the bell and is secured to a shaft 1, which has its bearings in the non-rotating member C, which, as shown, is in the form of a bracket adapted to be clamped to a bar or post or other part to which it should be attached. A common form of clasp device is shown, but need not be described.

In addition to the two members specified there is a third or vibrating member, which is in the form of a sphere D and is so supported that it may move back and forth radially to and from the gong, the said vibrating member being carried by the member C. The gong is provided with one, two, or more projections 3, preferably with inclined sides and arranged externally, or, as shown, internally, according as the striking member is external or internal.

The striking member or sphere D may be supported in any suitable manner, so that it will normally be adjacent to the face of the gong in such position as to make contact with the projection or projections 3 when the gong is rotated in respect to the member C.

The striking member, which constitutes in effect and which I shall term the "hammer," may be mounted in any suitable manner upon the member C. As shown in Figs. 1 and 2, the member C has a recess, guide, or socket x , adapted to receive, but longer than, the spher-

ical hammer or ball, so that the latter can play regularly therein and is provided with a lip or stop 4, which limits the movement of the ball toward the gong and prevents its contact with the body thereof, but permitting it to move outward far enough to be struck by the projections 3. The socket x may be inclined, as shown in Fig. 1, so that the spherical hammer will move toward the gong by gravity, or it may be horizontal, as shown in Fig. 3, with a spring 5 throwing the spherical hammer toward the gong.

The shaft 1 and its bearings are so constructed as to permit the rotating gong to turn with great freedom. As shown in Fig. 1, where the member C is the stationary member, the shaft is provided with a button or head 6, serrated at the edge, so that by applying the thumb and forefinger to the head a rapid rotation may be imparted to the shaft and to the gong, thereby bringing the projections 3 and the spherical hammer in repeated contact, the weight of the gong causing it to continue its movement by momentum.

Owing to the hammer being in the form of a sphere and only loosely supported, it will not only move freely away from and toward the gong, but it will rotate readily under the frictional contact with the projections 3, so that there is comparatively little frictional resistance to the rotating member, which movement will continue for a much longer time than would otherwise be the case.

If desired, the part C may be constructed so as to support two or more spherical hammers, as illustrated by dotted lines y , Figs. 1 and 2.

Without limiting myself to the construction and arrangement shown, I claim as my invention—

1. In a bell, the combination of a gong having a series of projections, and arranged to revolve freely and to continue its motion by momentum, and a hammer supported to be struck by, and move radially under the action of the projections, substantially as described.

2. In a bell, the combination of a gong having projections, and a hammer consisting of a sphere, a radial guide supporting the sphere to permit its free play in said guide only in a direction radial to the center of the bell, a stop arranged to prevent contact of the ham-

mer and the body of the gong, and means tending to throw the sphere toward the gong, substantially as described.

3. The combination with a clamp, of a rotatable gong, having projections carried thereon, and a hammer adapted to move freely to and from the gong, likewise supported upon the clamp, substantially as described.

4. The combination in a bell of a bracket, means for securing the same to a support, guides for a spherical hammer, bearings for a shaft, and a rotatable gong carried by the shaft and provided with projections for making contact with the hammer, substantially as set forth.

5. The combination in a bell of a bracket, means for securing the same to a support, guides for a spherical hammer, bearings for a shaft, and a rotatable gong carried by the shaft and provided with projections for making contact with the hammer, and a thumb-piece on the shaft, substantially as set forth.

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

SIMON W. WARDWELL, JR.

Witnesses:

EDWIN C. SMITH,
PHILIP E. BRADY.