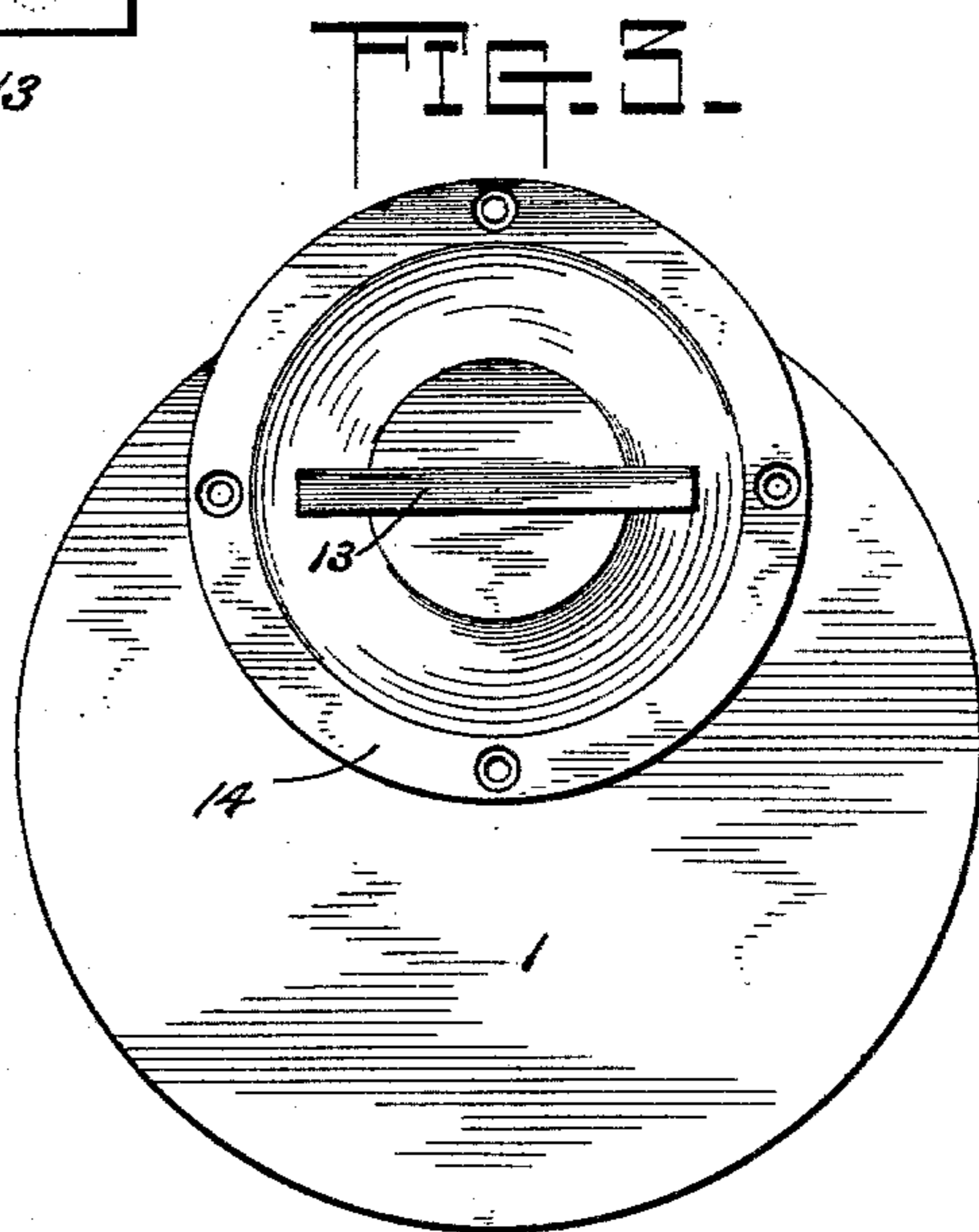
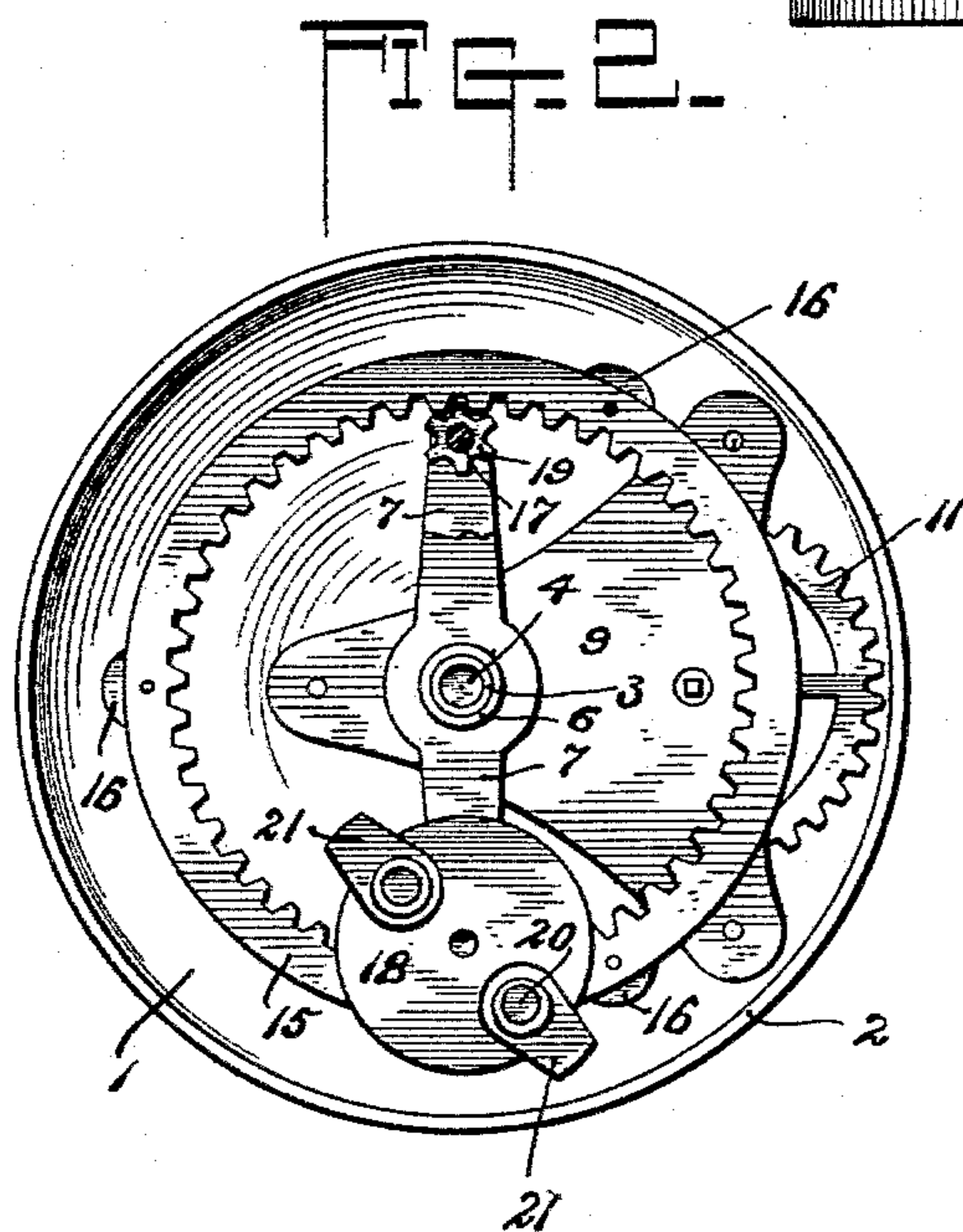
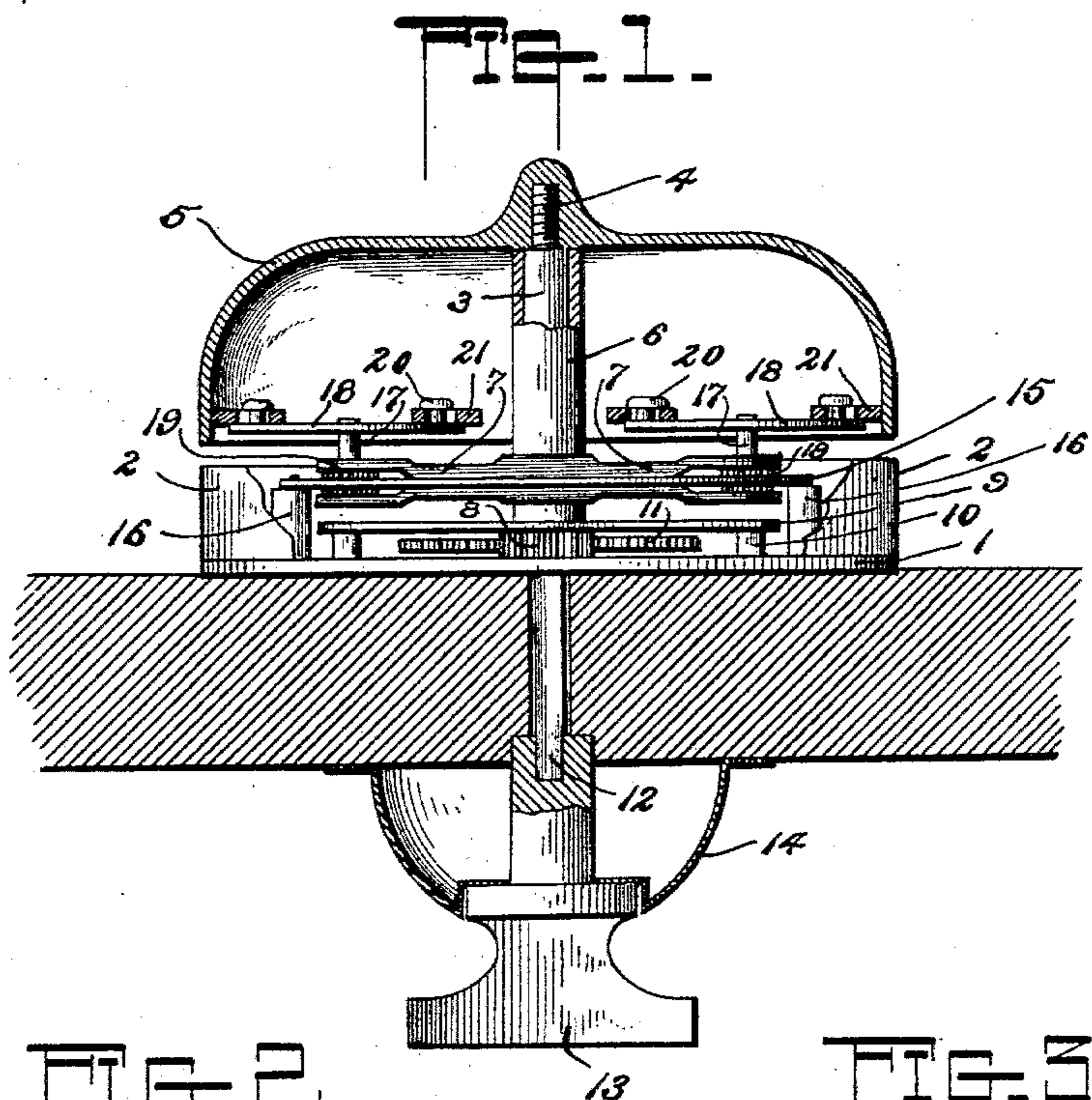


(No Model.)

W. B. McASHAN.  
DOOR BELL.

No. 593,233.

Patented Nov. 9, 1897.



Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

WALTER B. MCASHAN, OF FORT MADISON, IOWA.

## DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 593,233, dated November 9, 1897.

Application filed June 16, 1896. Serial No. 595,766. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER B. MCASHAN, a citizen of the United States, residing at Fort Madison, in the county of Lee and State of Iowa, have invented a new and useful Bell, of which the following is a specification.

This invention relates to bells, and the object in view is to provide a mechanical gong or alarm-bell of simple, inexpensive, and durable construction, which will closely imitate the sounding of an electric bell and which may be used upon doors or vehicles and various other places.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and embodied in the claims.

In the accompanying drawings, Figure 1 is a sectional view of a bell constructed in accordance with the present invention. Fig. 2 is a plan view of the same with the bell proper removed and parts broken away to show the construction of the operating mechanism. Fig. 3 is a reverse plan view of the same.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the base-plate of the bell, which may be of any desired shape, being shown preferably in the form of a disk and provided with a surrounding rim or flange 2 for inclosing and concealing the operating mechanism. Arranged centrally of the base and rigidly connected thereto is a center post 3, the upper end of which is reduced and threaded, as indicated at 4, to receive the bell proper, 5, which is screwed thereon, as shown in Fig. 1.

6 designates a sleeve which surrounds the center post 3 and is adapted to turn thereon. This sleeve is provided with one, two, or more radial arms 7 and has fast thereon at one end a pinion 8, located between the base 1 and a bridge-plate 9 of triangular shape in plan, as shown in Fig. 2. This bridge-plate is spaced from the base-plate 1 by means of intervening posts 10, located in position to receive and support the angles or corners of the bridge-plate, the latter being riveted or otherwise secured thereto. At one side of the pinion 8 is located an actuating spur-wheel 11,

the same being interposed between the base 1 and the bridge 9 and having its hub portion journaled therein. The hub of the wheel 11 is provided with a square or irregular shaped bore, into which the squared or irregular stem 12 of an operating knob or thumb-piece 13 is adapted to be removably fitted. The knob 13 is mounted in an escutcheon-plate 14, as shown in Figs. 1 and 3, said escutcheon-plate being adapted to be secured to a door or door-frame or other place in a manner similar to devices of a like character in other bells. By turning the knob 13 the wheel 11 may be actuated in either direction and rapid motion thus communicated to the pinion 8, which meshes therewith.

15 designates a toothed rim which is mounted in fixed relation to the base 1, being secured at a suitable distance from the base upon a series of posts 16. This rim is toothed by preference upon its inner surface, and the arms 7 on the central sleeve 6 have journaled in their outer ends the spindles 17 of rotating disks 18. The spindles 17 are provided with spur-pinions 19 fast thereon and in constant mesh with the toothed rim 15, so that as the arms 7 are rotated about the center post the disks 18 will be given an independent and more rapid rotation. Each of the disks 18 is provided with one, two, or more shouldered or headed studs 20, and upon these studs are loosely mounted centrifugal hammers or strikers 21. The openings in these strikers or hammers are sufficiently larger than the studs 20 to permit them to be thrown in and out to turn partially or wholly around said studs in the rapid rotation of their respective disks.

It will thus be seen that as motion is imparted to the arms 7 by means of the knob 13 the disks 18, by reason of their intermeshing engagement with the stationary rim 15, will be caused to rotate with great rapidity, and the strikers or hammers will be thrown outward by centrifugal action and caused to impinge against the inner surface of the bell 5, thus producing an almost continuous tapping of the bell. It is intended to locate the strikers or hammers upon one disk 18 in a different relation—for instance, at right angles to those upon the other disk—in order that no two hammers or strikers may contact with the

bell at one and the same time. By varying the number of disks 18 and the number of hammers or strikers thereon the rapidity with which the strokes follow each other may be

5 correspondingly varied.

The parts 6 and 7 of my invention constitute what may be termed a "table," which is in operative connection with the rim or rack 15 at one end and carries at the other end the

10 striking device.

It will be understood that the mechanism is susceptible of changes in the form, proportion, and minor details of construction which may accordingly be resorted to without departing from the spirit or sacrificing any of

15 the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. In an alarm device, a stationary rim or rack 15, a movable table in operative connection with the rack, a gong supported over the rack and table, and a striking device carried by the table and operated by the rack, substantially as described.

25 2. The combination with a suitable base, of a stationary toothed rim, a post located centrally of said rim, an arm mounted to revolve about said post, means for rotating said arm, a pinion journaled in said arm and meshing

30 with the toothed rim, and one or more hammers or strikers connected loosely to the spindle of said pinion and adapted to impinge against the bell, substantially as described.

35 3. The combination with a suitable base, and a bell thereon, of a stationary toothed rim, a post located centrally of said rim, a pair

of arms rotating about said post, means for rotating said arms, pinions journaled in said arms and meshing with the toothed rim, rotating disks fast on the spindles of said pinions, and hammers or strikers mounted on said disks, those on one disk being located at different points from those on the other disk, substantially as and for the purpose described.

4. In a bell, a pivoted arm, and actuating means therefor, in combination with a stationary device having an extended curved surface described in the arc of a circle of which the axis of said arm is the center, and a striker rotatably mounted on said arm and operatively associated with the curved surface of said stationary device, whereby a positive rotation is given to the striker during a considerable portion of the sweep of said arm, substantially as described.

5. In a bell, the combination with a revolving arm, and means for imparting motion thereto, of a stationary rim or annulus concentric to the axis of said arm, a striker rotatably mounted on said arm, and suitable gearing interposed between said striker and rim, whereby the striker is rotated independently of said carrying-arm, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WALTER B. MCASHAN.

Witnesses:

GEORGE G. HAESSIG,  
HIRAM H. SCHELL.