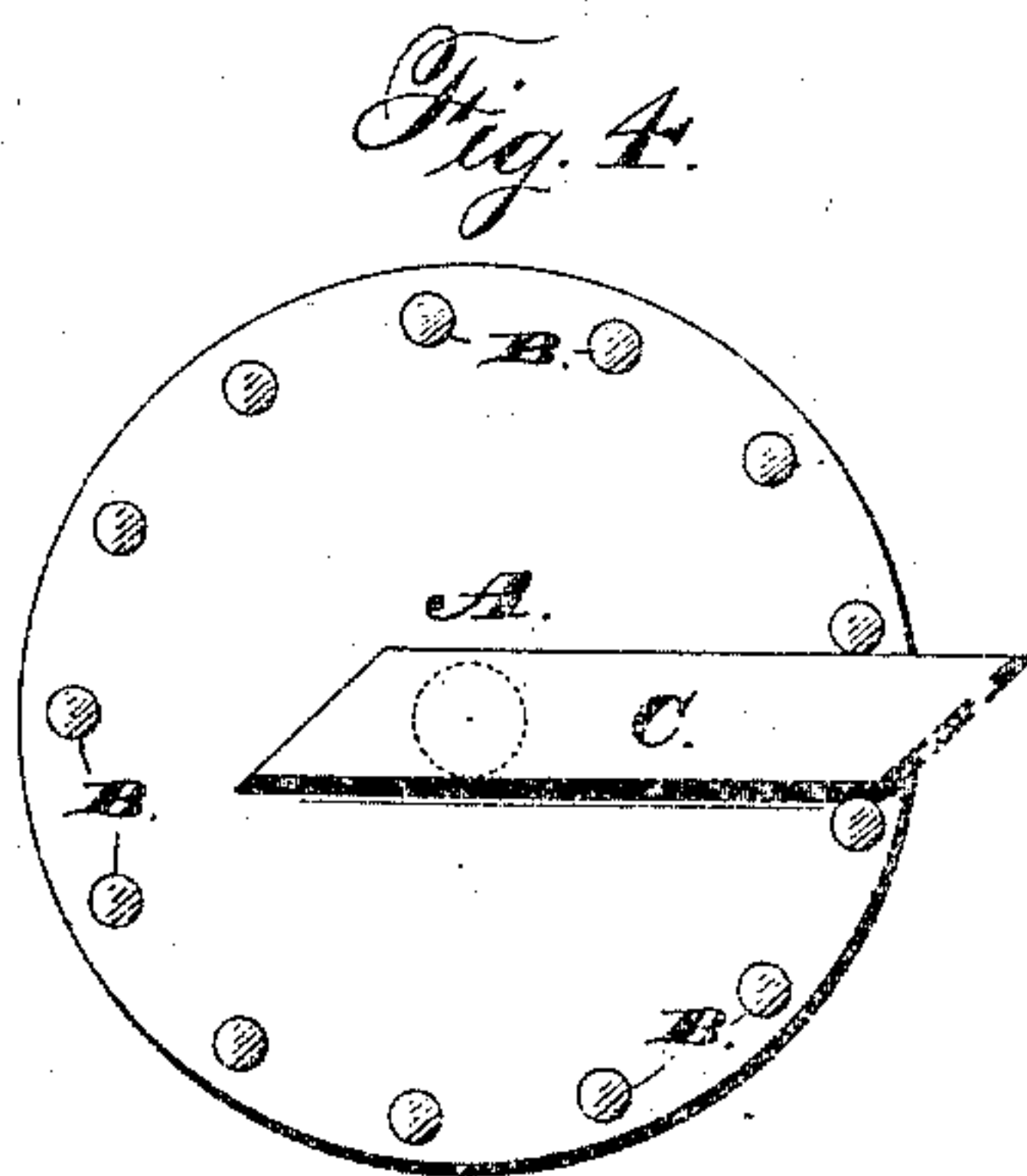
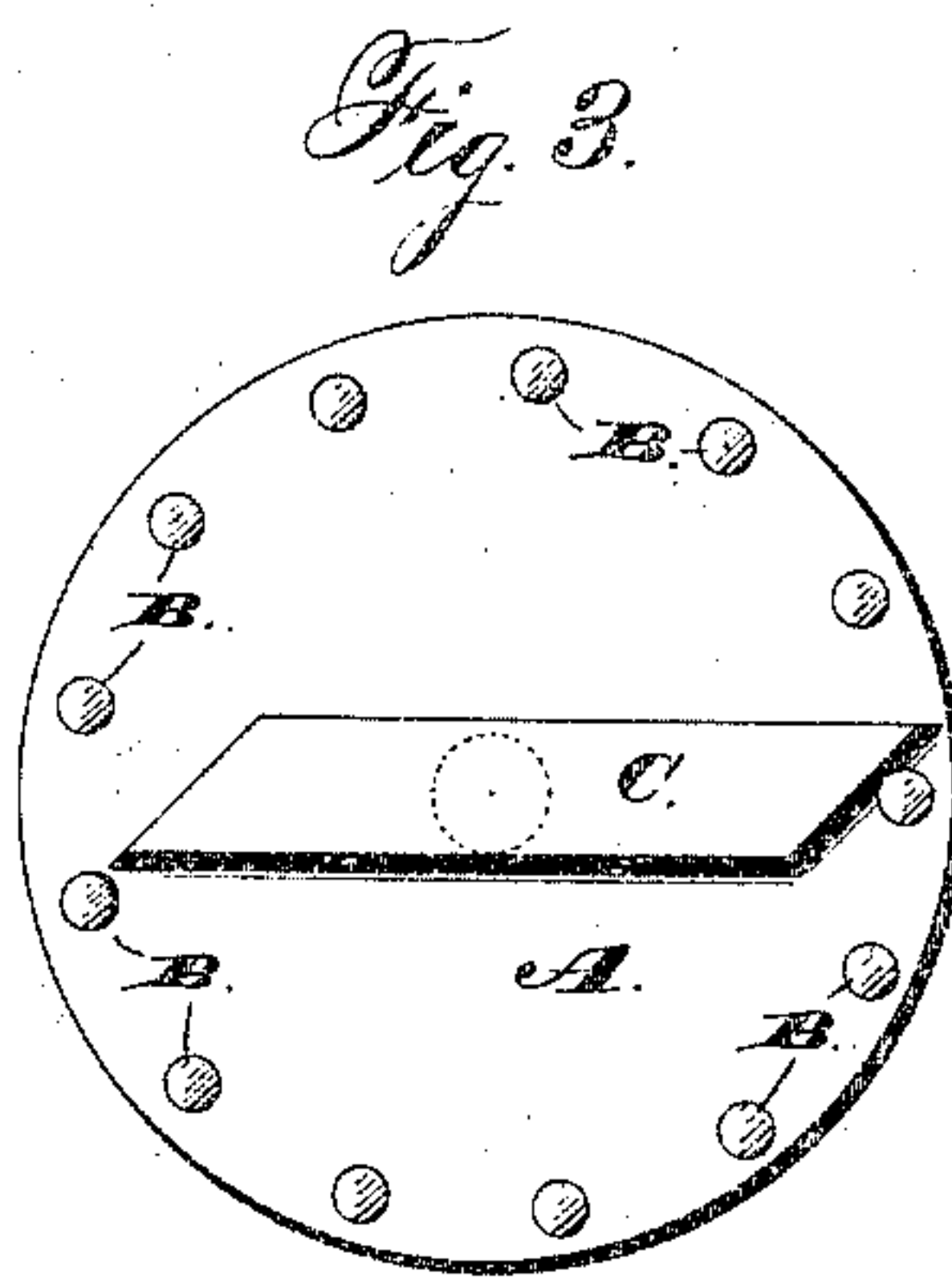
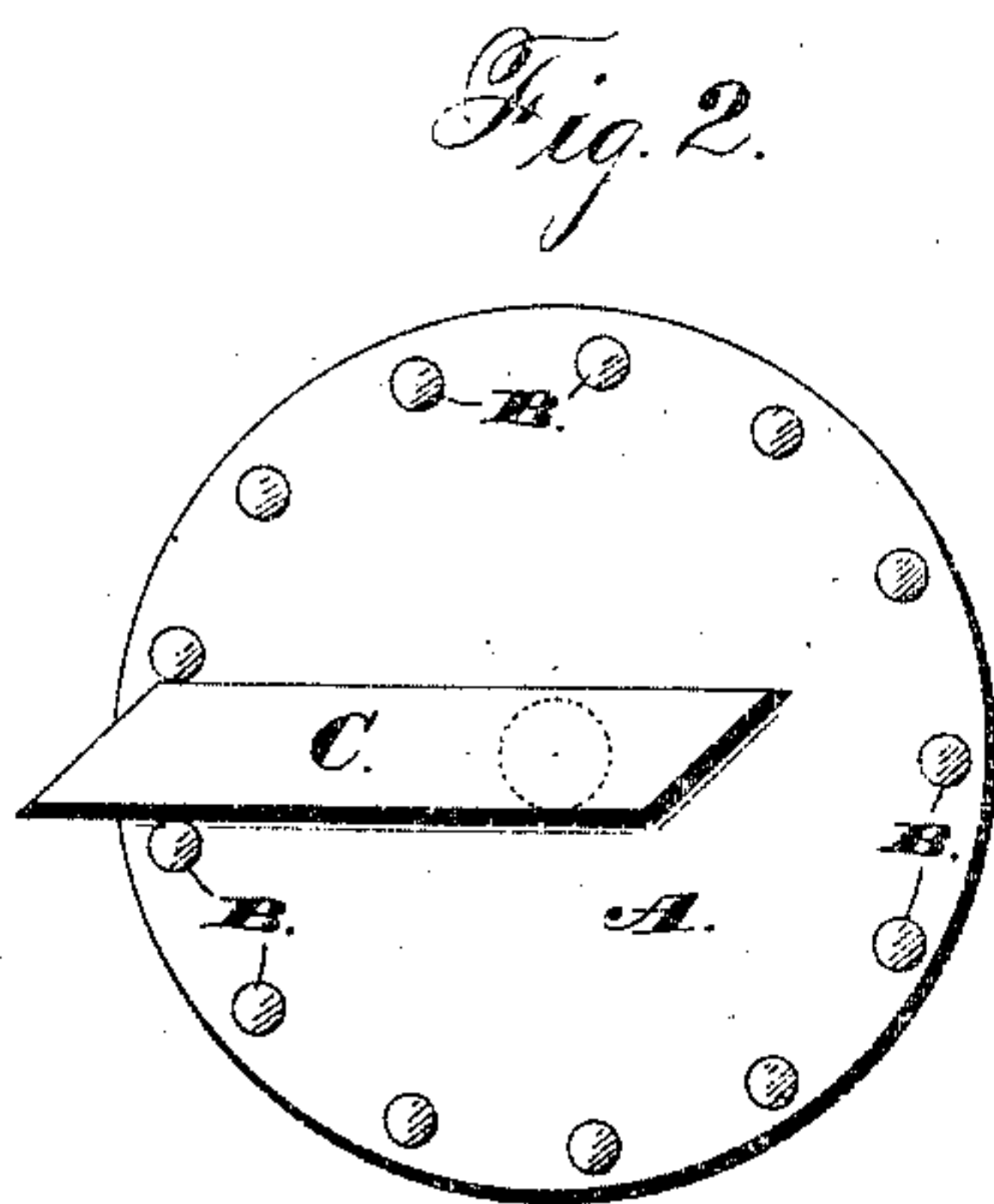
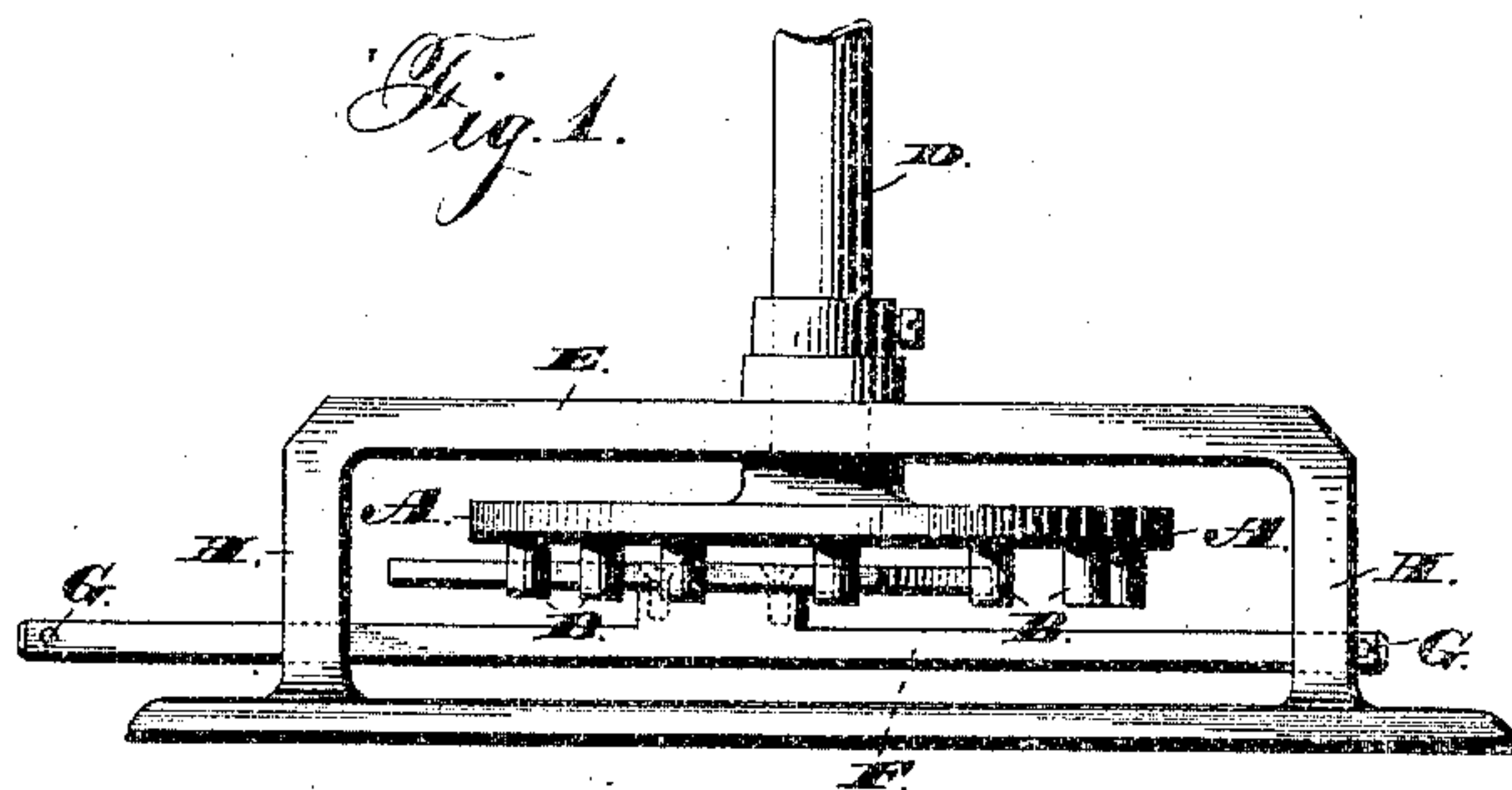


(No Model.)

W. R. PARK.
MECHANICAL MOVEMENT.

No. 277,849.

Patented May 15, 1883.



Witnesses:

Jas. E. Hutchinson.

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by Prindle and Quirell
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UNITED STATES PATENT OFFICE.

WILLIAM R. PARK, OF TAUNTON, MASSACHUSETTS.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 277,849, dated May 15, 1883.

Application filed March 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. PARK, of Taunton, in the county of Bristol, and in the State of Massachusetts, have invented certain new and useful Improvements in Mechanical Movements; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows a view of my invention in elevation. Fig. 2 shows a detail view of the sliding tappet and pin-plate, with the tappet shown in position as at the limit of its movement in one direction; Fig. 3, a similar view with the tappet shown as just striking one of the pins on its return movement from the position shown in Fig. 2, and Fig. 4 a like view with the tappet shown in position at the limit of its movement opposite to that shown in Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to provide an improved means for converting rectilinear reciprocating into rotary motion; and to this end it consists in the combination of a face-plate or disk provided with pins projecting from one face thereof with a reciprocating tappet with its ends cut on an incline and adapted to engage said pins, substantially as hereinafter described, and specifically set forth in the claims.

In the drawings, A designates the face-plate or disk, having a series of pins equidistant from each other set in one face thereof, and in a circle concentric with the disk. These pins must be odd in number, so that no one of them can be diametrically opposite another. The number is of course to depend upon the distance through which it is desired that the disk should turn at each reciprocation of the tappet C. The ends of this tappet are cut away, as shown, on lines at an angle with the longitudinal edges of the tappet-plate and parallel with each other. These ends therefore present inclined bearing-surfaces for engagement with the pins on the disk as the tappet reciprocates, and said disk obviously will be turned in the same direction each time that either end of the tappet engages with a pin. The width of

the tappet is nearly equal to the distance between two adjacent pins, and its length is such that when one end comes into contact with a pin the other end shall leave contact with the pin on the opposite edge of the disk. This disk is attached to a shaft, D, which is journaled in the bridge E, and held in position by a collar and set-screw. The tappet is fastened by screws or otherwise to a bar, F, which slides in bearings in the upright supports H I of the bridge-piece E. Pins G near the ends of the bar F serve to limit its motion by striking against the bearings. Separate guiding and bearing pieces can of course be provided, if desired. As the tappet is of such a length that one end does not pass out of engagement with a pin on the disk until the other end comes into engagement with another pin, it is obvious that the disk will be positively turned by, and cannot be turned to any extent in either direction without, the action of the tappet. Said tappet, then, while intermittently serving to turn the disk in one direction, also serves to lock the same against any independent movement.

Such a mechanical movement is of use wherever it is desired to convert rectilinear reciprocating into rotary motion. It can be used to great advantage to turn the calendar cylinders or disks in calendar-clocks, and the registering-wheels in a register for piston water-meters. In the calendar-clocks the pawl-rod is to be attached directly to the tappet-bar F, and in the case of meters this bar is to be connected with the reciprocating piston or some part moving therewith.

The shaft D is to be geared in any suitable way with the registering devices.

Having thus fully set forth the nature and merits of my invention, what I claim is—

1. The combination of the rotary disk provided with a series of pins projecting from its face, a reciprocating tappet having both ends cut on an incline to the line of its reciprocation, and adapted to engage with the pins and impart rotary motion to the disk in its reciprocation, and means for reciprocating the tappet, substantially as and for the purpose set forth.

2. The combination of the disk having a series of pins equidistant from each other, ar-

ranged concentric with the axis of rotation of the disk, with the reciprocating plate having its ends cut on an incline to the line of its reciprocation and parallel to each other, all so arranged that the tappet will turn the disk an equal distance in the same direction at each reciprocation.

3. The combination of the rotary disk, the series of pins, the tappet with parallel inclined ends, and the reciprocating bar, substantially as and for the purpose set forth.

4. The combination of the shaft D, disk A, series of pins B B, tappet C, with parallel inclined ends, bar F, pins G G, and bridge E, with its supports H H, formed with bearings for bar F, substantially as and for the purpose described.

5. The combination of the reciprocating bar provided with stop-pins to limit its motion in either direction, bearings for the bar, tappet with ends formed at an inclination to the line of its movement, but parallel with each other,

and the rotary disk provided with the circular series of pins, substantially as and for the purpose set forth.

6. The combination of the rotary disk provided with a concentric series of equidistant pins, uneven in number, projecting from its face, and the double-acting reciprocating tappet, engaging said pins, and having a width nearly equal to the distance between two adjacent pins, and a length such that one end does not pass out of engagement with one pin until the opposite end goes into engagement with another, all so arranged that the tappet not only serves to turn the disk, but locks the same against independent movement.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of March, 1883.

W. R. PARK.

Witnesses:

JOHN E. BLAKEMORE,
ELMER P. HOWE.