

J. LEIDGEN.
CLOCK-ESCAPEMENT.

No. 172,638.

Patented Jan. 25, 1876.

Fig. 1.

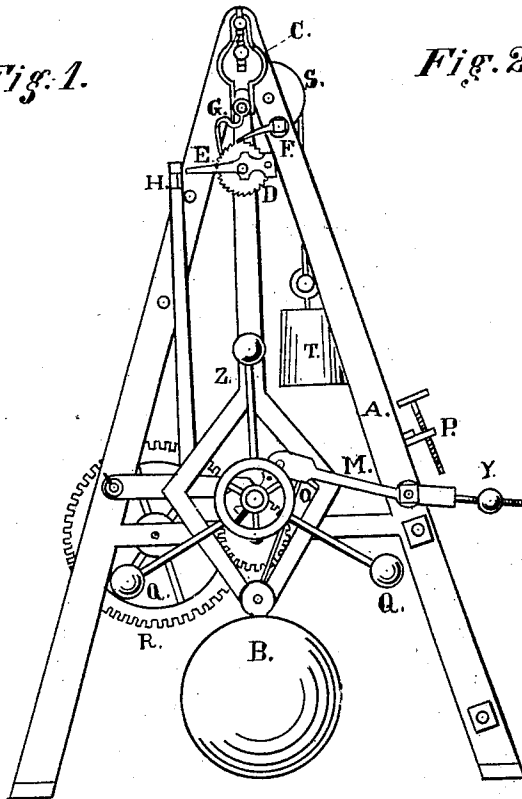


Fig. 2.

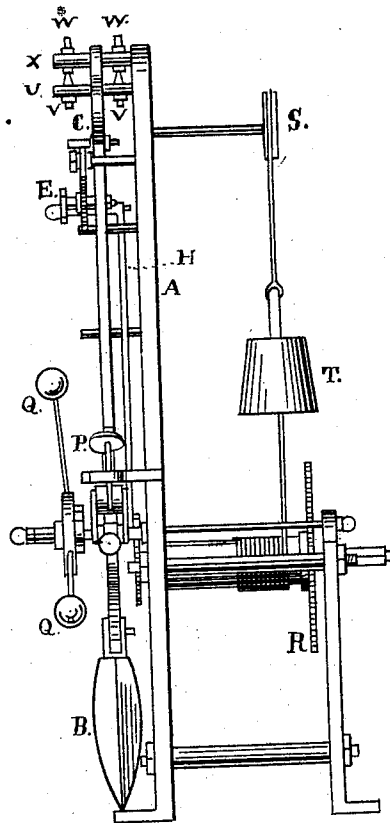
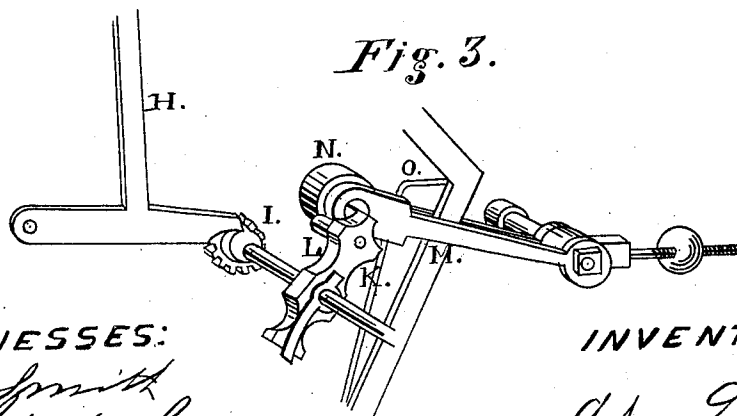


Fig. 3.



WITNESSES:

W. Smith
A. Schattner

INVENTOR:

Johu Leidgen.

UNITED STATES PATENT OFFICE.

JOHN LEIDGEN, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF HIS
RIGHT TO JAMES BLAKE, OF SAME PLACE.

IMPROVEMENT IN CLOCK-ESCAPEMENTS.

Specification forming part of Letters Patent No. **172,638**, dated January 25, 1876; application filed
April 26, 1875.

To all whom it may concern:

Be it known that I, JOHN LEIDGEN, of Milwaukee, in the county of Milwaukee, in the State of Wisconsin, have invented certain Improvements in Clock-Escapements, of which the following is a specification:

The object of my invention is to regulate the movement of clocks; and it consists of an escapement made with a diamond-shaped pendulum-rod, on the inside of which is a wire or rod passing from the lower point of the same up to the center, the top of the rod being set out a distance from the side, so as to make the rod stand near a perpendicular, and being turned to the side of the pendulum. A lever with a roller on its end is held up by a stop on a shaft which is in the center of the clock-frame, and a pawl, one end of which is attached to the side of the frame, catches in a ratchet on said shaft, which holds it in position. When this pawl is tripped, the weight which is wound up to keep the clock in motion runs down, and turns this shaft and rolls out the stop from under the lever. The roller then drops onto the rod in the diamond-shaped pendulum-rod, and pulls the pendulum to one side, and the momentum thus caused keeps the pendulum in motion till the pawl is tripped again. When the shaft has revolved till the ratchet in the wheel catches the pawl again, the rest which holds up the lever will strike it and hold it up till the pawl is tripped again.

Figure 1 is a front view of my invention; Fig. 2, a side view of same; and Fig. 3 a sectional view of the roller, stop-shaft, pawl, and rod in the diamond-shaped pendulum-rod.

A is the clock-frame; B, the pendulum; C, the bolt to which the top of the pendulum-rod is hung; D, a ratchet-wheel on the pendulum-rod; E, a hand on the shaft of the ratchet-wheel D; F, a pawl attached to the frame, the outer end of which catches in the teeth of the ratchet-wheel D; G, a hand, the upper end of which is hung to a pivot on the pendulum-rod, the lower end dropping into the teeth on the ratchet-wheel D; H, an arm running up from the pawl, which is hung at

its outer end to the frame, the inner end catching in the ratchet in the center shaft; I, a ratchet on the shaft holding the stop which catches under the lever and holds the roller up; K, stop which holds roller N up; L, center shaft which turns and trips the pawl or stop, permitting the roller N to fall onto wire or rod O; M, lever to which roller N is attached; N, roller on the end of lever M; O, rod on the inside of diamond-shaped pendulum-rod; P, a stop on frame A to regulate the fall of lever M; Q, balls on arms out from a wheel on shaft L; R, a cog-wheel with drum on its shaft, around which is a cord which runs over pulley S, on a shaft out from frame A, and attached to weight T; U, a pin out from frame A, carrying points V, on which hang centers W, which sustain cross-bar X, on which hangs and works pendulum B; Y, a ball on the outer end of lever M, to balance roller N, and regulated by a screw on lever M.

The weight T being wound up, the pendulum is put in motion, and as it swings the ratchet on wheel D strikes against pawl F, which turns the ratchet-wheel, and with it hand E. The hand G holds the ratchet-wheel in position till the end of hand E comes round so as to strike on a projection on the arm of pawl H, which throws the arm back, thus lifting the end of pawl H out of ratchet I. Shaft L then turns, and with it the stop K is turned from under lever M, and the roller N, losing its support, falls onto the rod O, and the pendulum B is pulled in the direction of the lever M. As the shaft L is revolved, the stop K is brought round under the lever M, and raises roller N high enough to clear rod O, holding it till the pawl H is tripped again, and so on.

I claim as my invention—

Pendulum B, pawl H, ratchet I, stop K, and shaft L, in combination with lever M and rod O, substantially as set forth.

JOHN LEIDGEN.

Witnesses:

J. R. SMITH,
JOHN MANSLE.