

E. W. BRIDGE.
TOY-CLOCKS.

No. 194,645.

Patented Aug. 28, 1877.

Fig. 1.

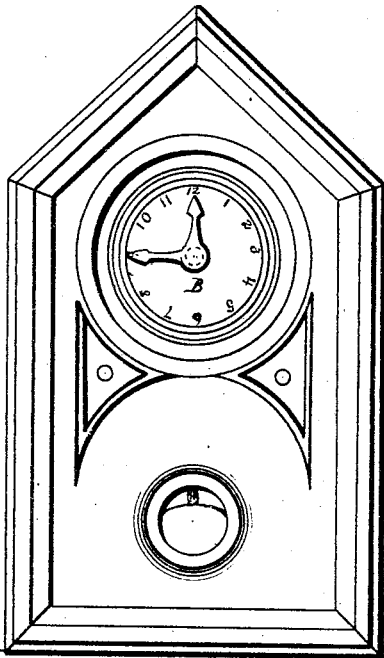


Fig. 2.

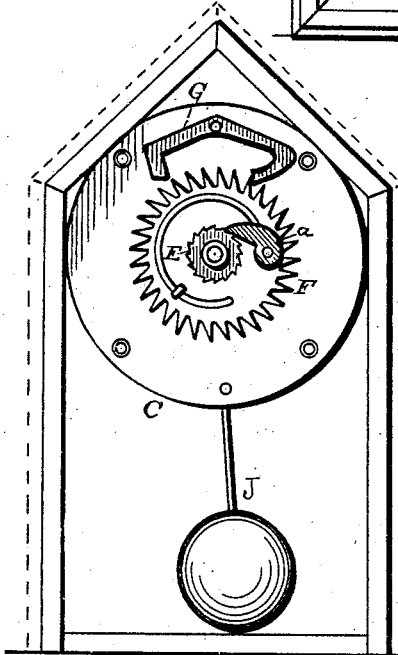


Fig. 3.

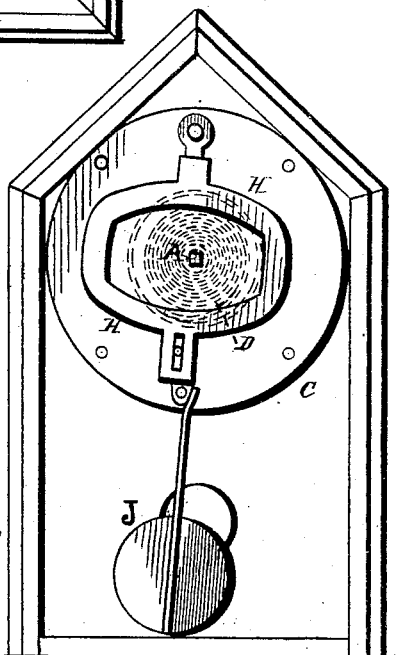
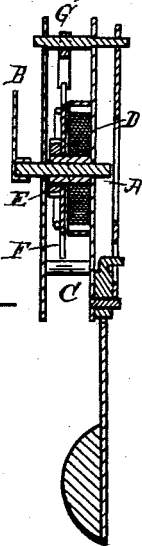


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD W. BRIDGE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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IMPROVEMENT IN TOY CLOCKS.

Specification forming part of Letters Patent No. **194,645**, dated August 28, 1877; application filed
January 30, 1877.

To all whom it may concern :

Be it known that I, EDWARD W. BRIDGE, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Toy Clocks, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front view of the clock embodying my invention. Fig. 2 is a similar view of the interior thereof. Fig. 3 is a rear view. Fig. 4 is a central vertical section of the mechanism.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a toy of the order of a clock, in which the ticking sound thereof is closely imitated.

For this purpose I employ an escapement movement which is retarded by a pendulum, the operation of which is hereinafter more fully described.

Referring to the drawings, A represents the center-post, which carries hands B, and is mounted on a suitable frame, C. D represents a spring, one end of which is secured to the frame C, and the other end is secured to and winds on the center-post A, the rear end of which is properly squared for application of the winding-key. To the post A is secured a ratchet-wheel, E, and on the same is loosely fitted an escapement-wheel, F, to which rotation is imparted from the spring by means of a spring-pawl, a, pivoted to the escapement-wheel, and engaging with the ratchet E in one direction, said pawl riding freely over the ratchet during the winding operation in the reverse direction. G represents the pallet-arm, whose axis is on the frame C, and it engages with the escapement-wheel and operates therewith, as is well known.

From the rear of the axial shaft of the pallet-arm there is secured the pallet-lever H, which may consist of an open frame, disk, or bar, and it extends vertically at the rear of the frame C, the opening in the lever permitting the insertion of the key on the center-post.

The lower end of the lever is connected by a slot and pin to the pendulum J, which is pivoted near its upper end to the frame C.

The operation is as follows: When the clock is wound the escapement is operated, and swinging motions are imparted to the lever H. As these motions would otherwise be quick, and the clock soon run down, the pendulum is employed as a detaining or retarding device, for when the lever swings to the left the pendulum-bob swings to the right, and vice versa; consequently the lever H is duly restrained, and the rotation of the center-post properly regulated, whereby the hands B move sufficiently slow over the dial of the clock.

It will be noticed that the ticking of a time-keeping clock is closely imitated, and the hands are moved, whereby the object of the toy is attained.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A toy clock in which the power of a spring is communicated from the center-post to the escapement and restrained by a pendulum, which is connected to a pallet-lever suspended from the axis of the pallet-arm, substantially as stated.

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Witnesses :

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