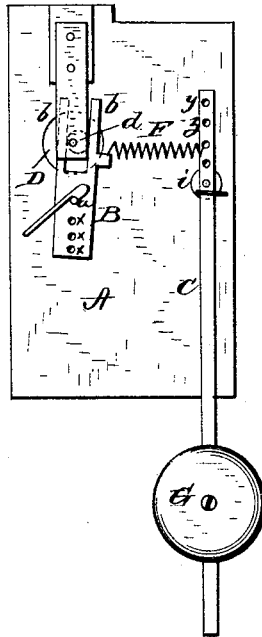


R. S. ABERNETHY.  
Clock-Escapement.

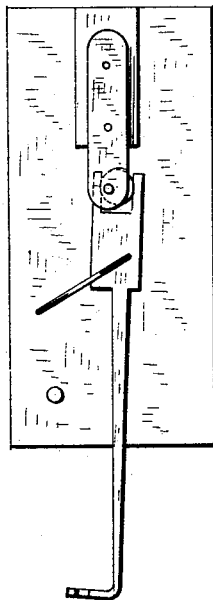
No. 221,490.

Patented Nov. 11, 1879.

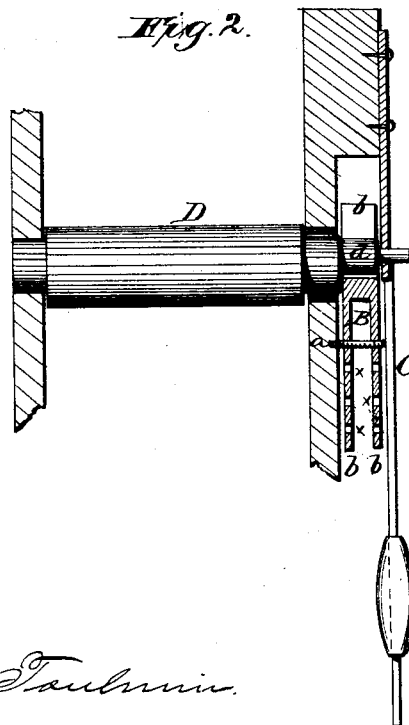
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



WITNESSES

*James L. Curran*

*H. Aubrey Toulmin*

INVENTOR

*R. S. Abernethy*

*Alexander Mason*

ATTORNEYS

# UNITED STATES PATENT OFFICE

ROBERT S. ABERNETHY, OF HAPPY HOME, NORTH CAROLINA.

## IMPROVEMENT IN CLOCK-ESCAPEMENTS.

Specification forming part of Letters Patent No. **221,490**, dated November 11, 1879; application filed September 26, 1879.

*To all whom it may concern:*

Be it known that I, ROBERT S. ABERNETHY, of Happy Home, in the county of Burke, and in the State of North Carolina, have invented certain new and useful Improvements in Clock-Escapements; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a clock-escapement, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 is a front view, and Fig. 2 a side view, of my improved clock-escapement. Fig. 3 shows a modification of the same.

A represents the frame of a clock. B is the escapement-arm, pivoted at *a*, and having its upper end forked, the two prongs *b b* being spaced to correspond to the diameter of an eccentric, *d*, on the end of the main shaft D. The escapement-arm B is provided with a series of holes, *x*, for changing the pivot to aid in regulating the length of the vibration in connection with elevating or lowering the bob on the pendulum-wire.

C is the pendulum-wire, pivoted at *i*, which is also provided with a series of holes, *y*, for changing the position of the spiral spring F, which connects said wire with the arm B. By elevating the spring F the length of vibration will be shorter, and by lowering the spring it will be longer.

The pendulum-bob G should be adjustable on the wire C.

The shaft D takes the place of the escapement wheel and shaft in clocks now in use, and on said shaft are to be six, eight, or more cogs to connect with a system of wheels similar to those already in use, except that the shaft D must rotate faster than the corresponding shaft in other systems, since there can be but two strokes of the pendulum to each revolution of the shaft.

The spiral spring F should be of such material as to allow the pendulum to continue its vibrations for a while after the clock runs down.

In Fig. 3 I have shown a modification of the escapement-arm, consisting in extending the arm itself to form a spring, which is to spring in unison with the pendulum-wire, which wire is to be of the style already in use, and attached to the front part of the clock frame.

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

In a pendulum-clock, the combination of the shaft D, provided with the eccentric *d*, the forked escapement-bar B, and a spring connecting said bar with the pendulum, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of September, 1879.

ROBT. S. ABERNETHY.

Witnesses:

HENRY L. CAPUS,  
H. A. ABERNETHY.