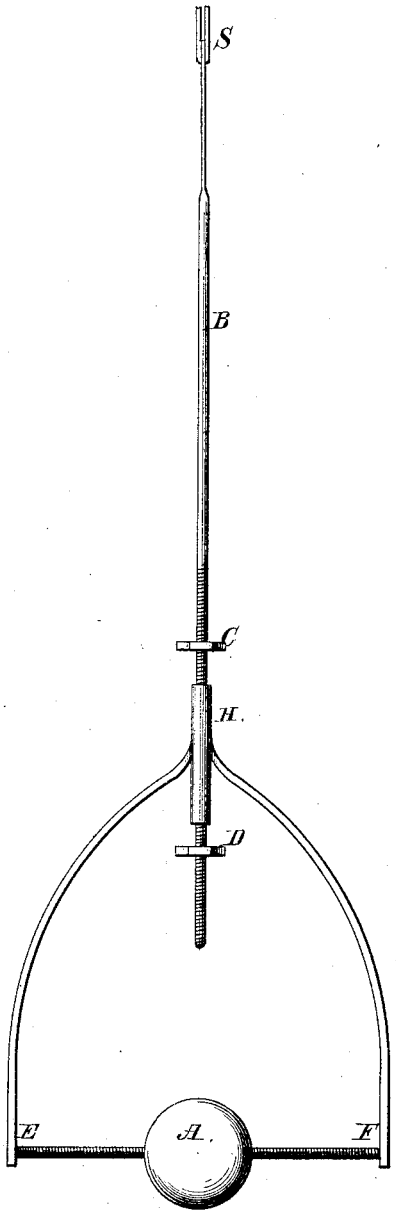
A. B. RICHMOND.
Clock-Pendulum.

No. 196,702. Patented Oct. 30, 1877.



Attest.

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UNITED STATES PATENT OFFICE.

ALMON B. RICHMOND, OF MEADVILLE, PENNSYLVANIA.

IMPROVEMENT IN CLOCK-PENDULUMS.

Specification forming part of Letters Patent No. **196,702**, dated October 30, 1877; application filed March 16, 1877.

To all whom it may concern:

Be it known that I, ALMON B. RICHMOND, of the city of Meadville, in the county of Crawford, State of Pennsylvania, have invented a new and Improved Pendulum for Clocks, which improvement is set forth in the following specification, reference being had to the accompanying drawing.

The object of my invention is as follows: It is well known to manufacturers of clocks, and horologists generally, that to make a clock keep perfect time it must be "in beat"—that is, the pendulum must be so adjusted that when it vibrates it must permit the pallet to strike the escape-wheel evenly, or both sides alike. This is usually done by bending the verge-wire (that connects with the pendulum) either to the right or left. If the clock is put in beat by the manufacturer or salesmen while it stands on a level table or counter, when the purchaser takes it home and places it upon a mantel or clock shelf which may not be level, the clock is out of beat, and to put it in beat it must be wedged up level, or the verge-wire must be bent to accommodate the pendulum to the position of the clock. To bend the verge-wire is a difficult feat to an unskilled hand, and on many clocks the face must be removed, that the verge-wire may be reached, and then it is difficult to bend the verge-wire just right.

My invention is intended to obviate this difficulty, and permit a very unskillful hand to put a clock in beat most accurately by its use.

The pendulum is so constructed that its center of gravity may be thrown to the right or left of the pendulum-rod, as may be necessary to make the pallet strike the escape-wheel evenly. Its construction is as follows: B is a pendulum-rod of the usual form and construction; S, the point of suspension. On the lower end of the rod is a screw-thread and two nuts, C and D. H is a socket, through which the pendulum-rod passes, and it may be raised or lowered by the screw-nuts C D, and thereby raise or lower the pendulum to regulate the time of its vibration in the usual manner.

To the socket H two wires or arms, E F, are attached, and between the lower ends is a rod with a screw-thread from E to F. On this rod the pendulum-ball A is screwed, so that by revolving it, it will move from E to F or from F to E, as may be desired.

It will be seen that by this construction the center of gravity of the pendulum may be moved to the right or left of the pendulum-rod B. This, of course, will cause the rod B to hang either to the right or left of the point of suspension S, as may be required to put the clock in beat.

The effect of moving the ball A to the right or left will be the same as bending the rod B on the verge-wire, and by this means the beat of the pendulum can be most accurately adjusted.

What I claim as my invention is as follows:

1. The combination, with a pendulum-rod, of a weight or ball, and means for moving the ball to the right or left of the rod in order that the center of gravity may be changed, substantially as and for the purpose specified.

2. The ball A, or its equivalent, and the screw-rod attached to E and F, in the manner described, and for the purposes set forth.

ALMON B. RICHMOND.

Witnesses:

JOSEPH T. WHITE,

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