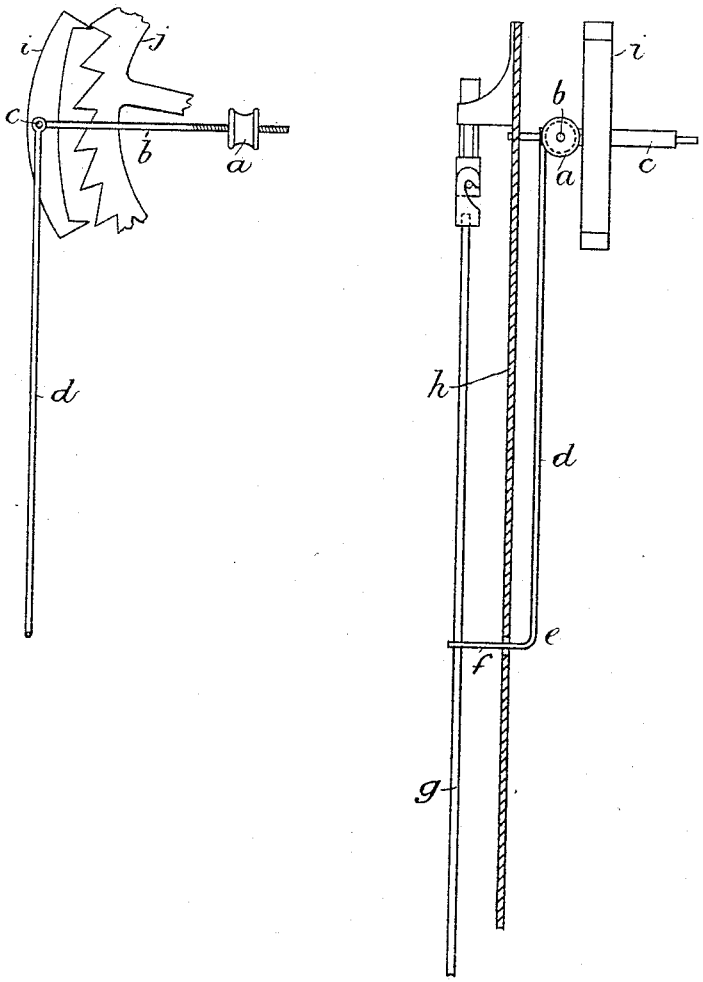
(No Model.)

A. DARDENNE.

CLOCK ESCAPEMENT.

No. 345,486. Patented July 13, 1886.



Witnesses.
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UNITED STATES PATENT OFFICE.

AUGUSTE DARDENNE, OF MARIENBOURG, BELGIUM.

CLOCK-ESCAPEMENT.

SPECIFICATION forming part of Letters Patent No. 345,486, dated July 13, 1886.

Application filed January 28, 1886. Serial No. 190,034. (No model.) Patented in Belgium August 13, 1884, No. 66,015; in France October 11, 1884, No. 164,748; in Germany October 15, 1884, No. 31,696, and in England February 6, 1885, No. 1,681.

To all whom it may concern:

Be it known that I, AUGUSTE DARDENNE, a subject of the King of Belgium, residing at Marienbourg, in the Kingdom of Belgium, have invented new and useful Improvements in Clocks, of which the following is a specification.

The chief impediment to the accurate working of clock-movements as at present constructed arises from the shake or play of the crutch-fork or connecting-rod which connects the crutch or escapement-rod to the pendulum-rod. Different temperatures act on the mechanism of the movement in such a manner that such shake or play is greater under the effect of heat and less under the effect of cold. Heat gives more freedom and cold reduces it.

The present invention has for its object to do away with all kinds of forks or connecting-rods, and to prevent all shake or play between the parts.

In order to enable the invention to be fully understood, I will proceed to describe the same by reference to the accompanying drawings, which represent two different views of a clock-escapement constructed according to this invention, showing the pallets and the escapement-rod or crutch, the pendulum-rod, and the counter-weight, hereinafter described.

Similar letters in both figures represent similar parts.

In the drawings, *a* represents a counter-weight screwed and adjustable on a screw-threaded rod, *b*, which latter is fixed to the pallet-staff *c*, and forms a right angle with the crutch *d*, which latter, instead of being terminated with (for example) a fork, is simply turned at right angles at its lower end, *e*. The counter-weight *a*, fixed horizontally to the pallet-staff *c*, serves to constantly press the end *f* of the crutch *d* on one side only of the pendulum-rod *g*.

h is one of the plates of the clock-movement.

i is the pallet, and *j* the escapement-wheel.

By this arrangement no shake or play can take place between the parts during the to-and-fro movement of the pendulum.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In combination with a clock-escapement, a counter-weight fixed horizontally to the pallet staff, in the manner and for the purposes substantially as set forth.

2. The combination, with the clock-escapement, of the threaded rod *b*, its counter-weight, pallet-staff *c*, crutch *d*, having a single bent end, *e f*, and pendulum-rod *g*.

AUGUSTE DARDENNE.

Witnesses:
ADOLPH STEIN,
PIERRE VON HAFKE.