

No. 819,809.

PATENTED MAY 8, 1906.

E. W. SARTOR.  
PENDULUM BEAT ADJUSTER.  
APPLICATION FILED JULY 13, 1905.

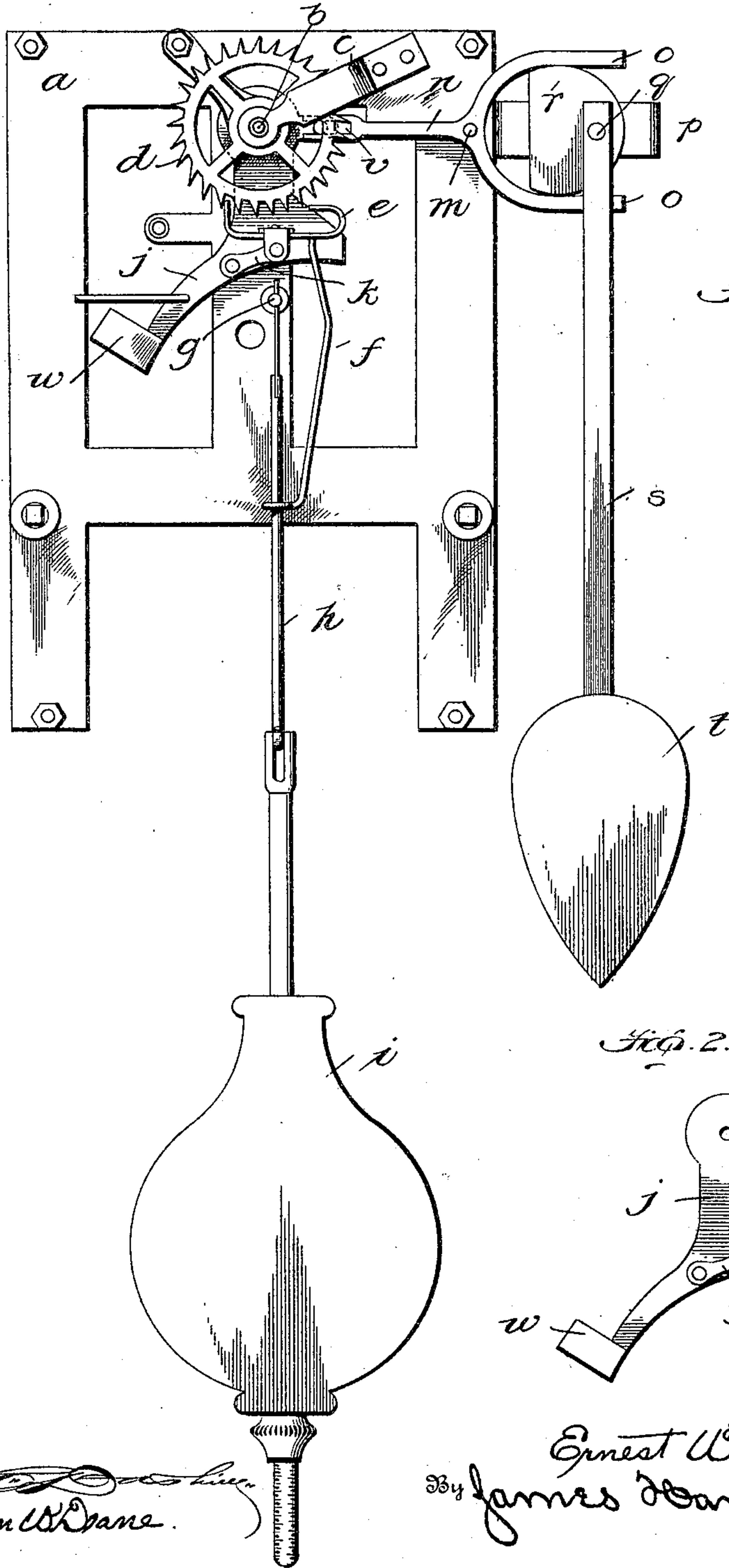


Fig. 1.

Fig. 2.

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Witnesses

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# UNITED STATES PATENT OFFICE.

ERNEST W. SARTOR, OF PADUCAH, KENTUCKY.

## PENDULUM-BEAT ADJUSTER.

No. 819,809.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed July 13, 1905. Serial No. 269,522.

*To all whom it may concern:*

Be it known that I, ERNEST W. SARTOR, a citizen of the United States, residing in Paducah, in the county of McCracken and State of Kentucky, have invented certain new and useful Improvements in Pendulum-Beat Adjusters, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in devices which automatically keep pendulum-clocks in beat irrespective of the inclination of the wall or other surface upon which the clock may be placed; and the object of my invention is to provide a device of this class which may be readily applied to any pattern of pendulum-clock and which shall be simple in construction and efficient in operation.

In the drawings illustrating the principle of this invention and the best mode now known to me of applying that principle, Figure 1 is a front elevation of the works of a pendulum-clock to which my new beat-regulator has been applied, and Fig. 2 is a detail view of the verge-carrier.

The plate *a* carries a stud or shaft *b*, one end of which is held by the bridge *c*, and upon this shaft is mounted free to rotate in one direction under the influence of the mainspring an escapement-wheel *d*, with which coöperates the verge *e*, from which depends the verge-wire *f*. In the slotted stud *g* is fastened the upper end of the pendulum-rod *h*, the lower end of which carries the pendulum-ball *i*. The verge-wire *f* and the pendulum-rod *h* are connected in the usual manner. The parts above named are all old and well known and of themselves form no part of this invention.

Upon the shaft *b* is mounted free to rotate in either direction a verge-carrier *j*. (Shown in detail in Fig. 2.) Upon the verge-carrier *j* is mounted a link *k*, in one end of which is rotatably mounted the verge *e*. Fulcrumed at *m* upon the plate *a* is a lever *n*, one end of which is forked or formed with arms *o o*. From the plate *a* projects an offset *p*, in which is rotatably mounted a shaft *q*, to which is fastened a cam *r* in the form of a segment of a circle, and an arm *s*, carrying at its lower free end a weight *t*. The cam *r* works between

the arms *o o* of the lever *n*, and as the weighted arm *s* swings the cam *r* rocks and causes the lever *n* to oscillate upon its fulcrum *m*. The verge-carrier *j* is formed with a lug *u*, which engages the slotted end *v* of the lever *n*, and through this connection the oscillations of the lever *n* upon its fulcrum *m* are transmitted to the verge-carrier *j*, thereby causing the verge-carrier to swing upon its shaft *b*. By the arrangement of parts just described a movement of the weighted arm *s* causes the verge *e* to be carried by the verge-carrier *j* around the escapement-wheel *d* in the proper direction to maintain the clock in beat, and as the weighted arm *s* is caused to swing by a change in the inclination of the surface upon which the clock is put the arrangement of parts serves to regulate automatically the beat of the clock. In order to make the verge-carrier *j* more sensitive by giving it a proper balance upon its shaft *b*, it is provided with a counterweight *w*.

So far as the principle of my invention is concerned it matters not whether the verge is placed above, below, at either side of or at an angle with the escapement-wheel, for whatever the location of the verge with reference to the escapement-wheel the verge-carrier by its connection with the other parts will carry the verge around the axis of the escapement-wheel in such a direction and to such an extent as is necessary to maintain the clock in regular beat, nor is it a matter of any importance where the verge is suspended, whether between the plates or between the bridge and plates.

What I claim is—

1. In combination with an escapement-wheel and a verge controlling the same, a verge-carrier rotatably mounted coaxially with said escapement-wheel; a lever one end of which is connected with said verge-carrier and the other end of which is forked; a cam which controls the forked end of said lever; and an arm for controlling said cam.

2. In combination with an escapement-wheel and a verge controlling the same, a verge-carrier provided with a counterweight and rotatably mounted coaxially with said escapement-wheel; a lever one end of which is connected with said verge-carrier and the



other end of which is forked; a cam which controls the forked end of said lever; and an arm for controlling said cam.

3. In combination with an escapement-  
5 wheel and a verge controlling the same, a two-armed verge-carrying lever the arms of which lie upon opposite sides of the fulcrum

thereof; and a member mounted free to swing and formed with a cam which contacts with one of the arms of said lever.

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Witnesses:

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