

(No Model.)

L. ERIKSON.
CLOCK PENDULUM PROTECTOR.

No. 333,120.

Patented Dec. 29, 1885.

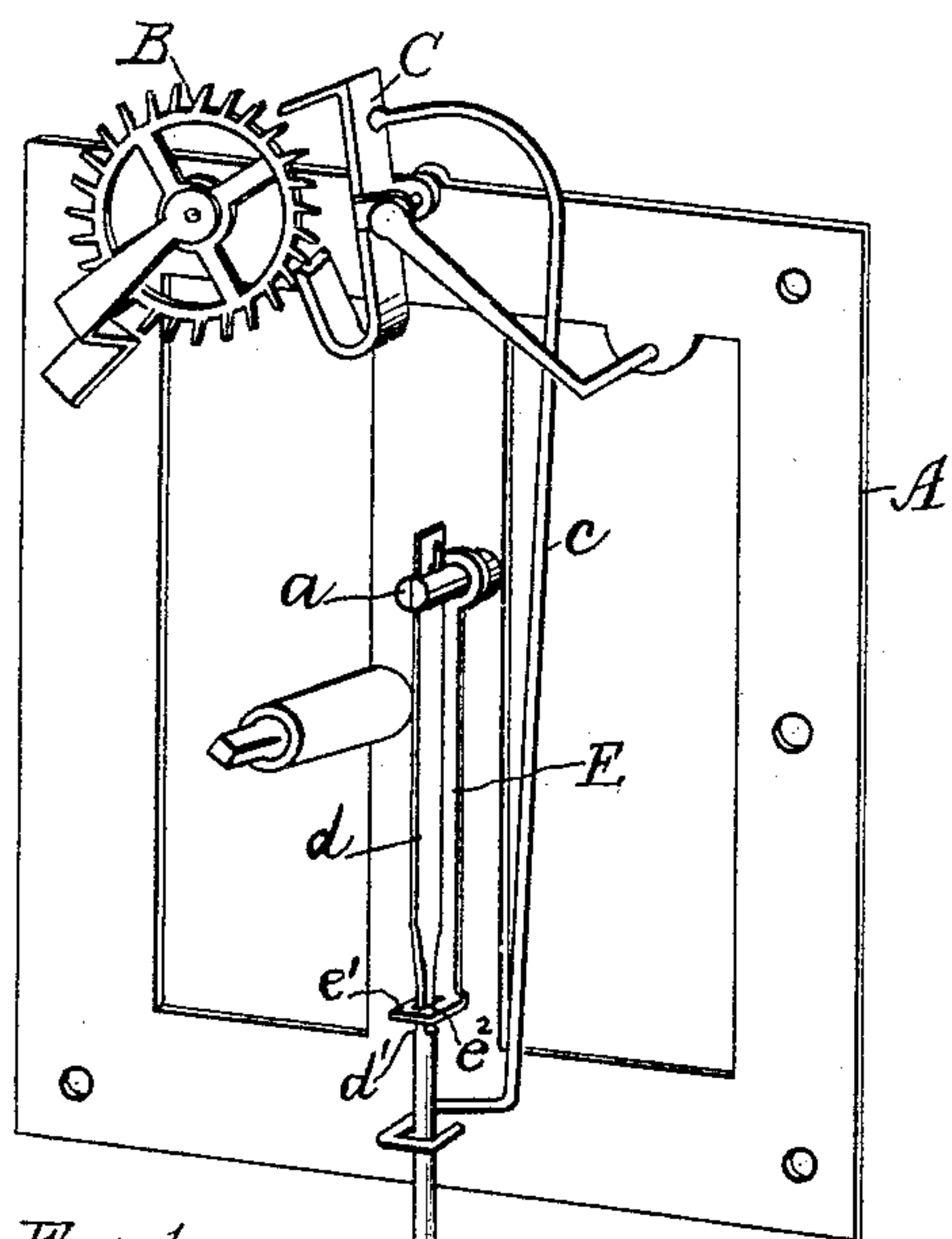


FIG. 1.

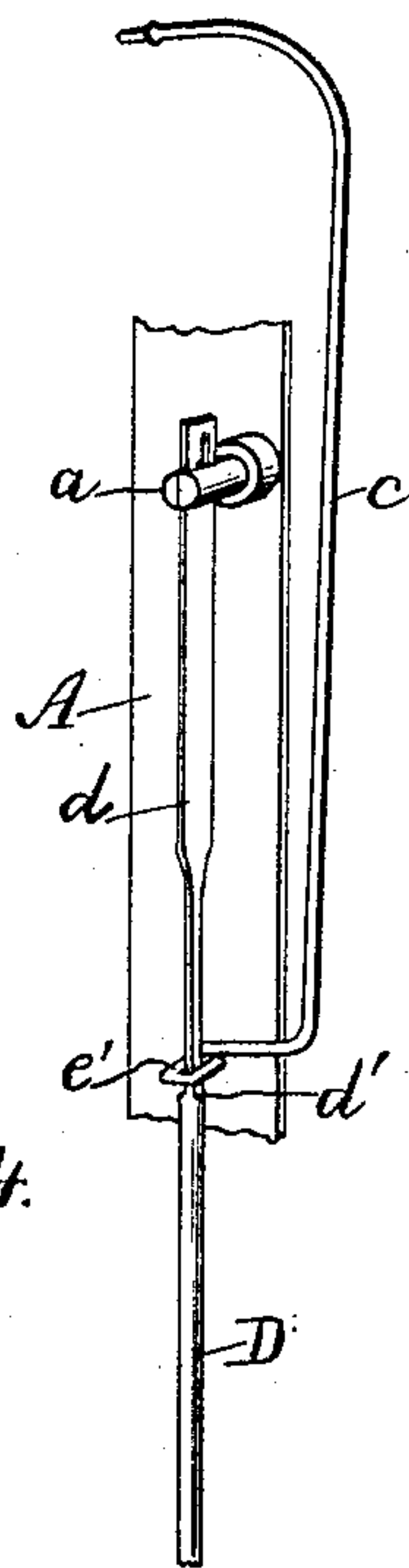


FIG. 4.

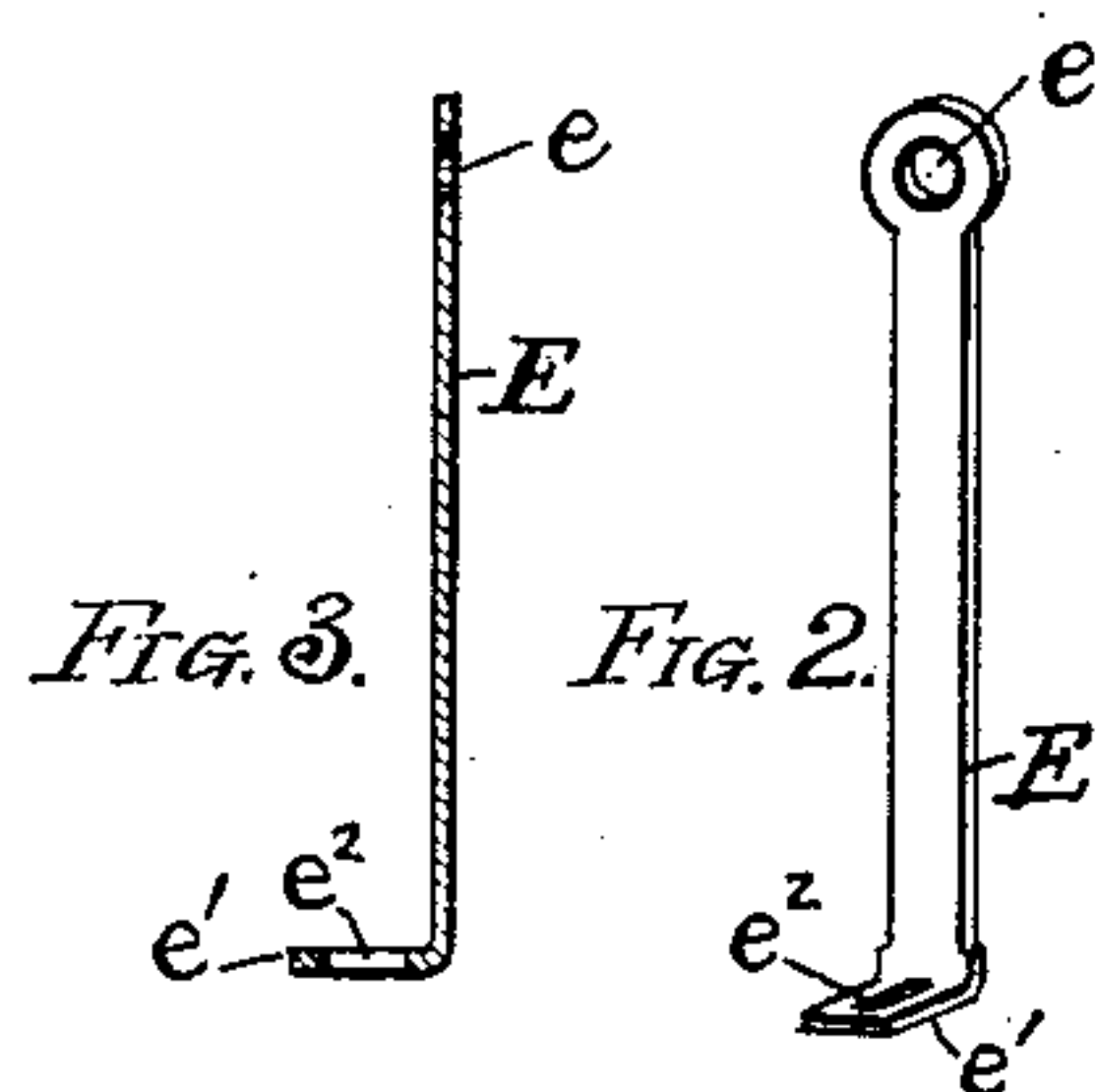


FIG. 3.

FIG. 2.

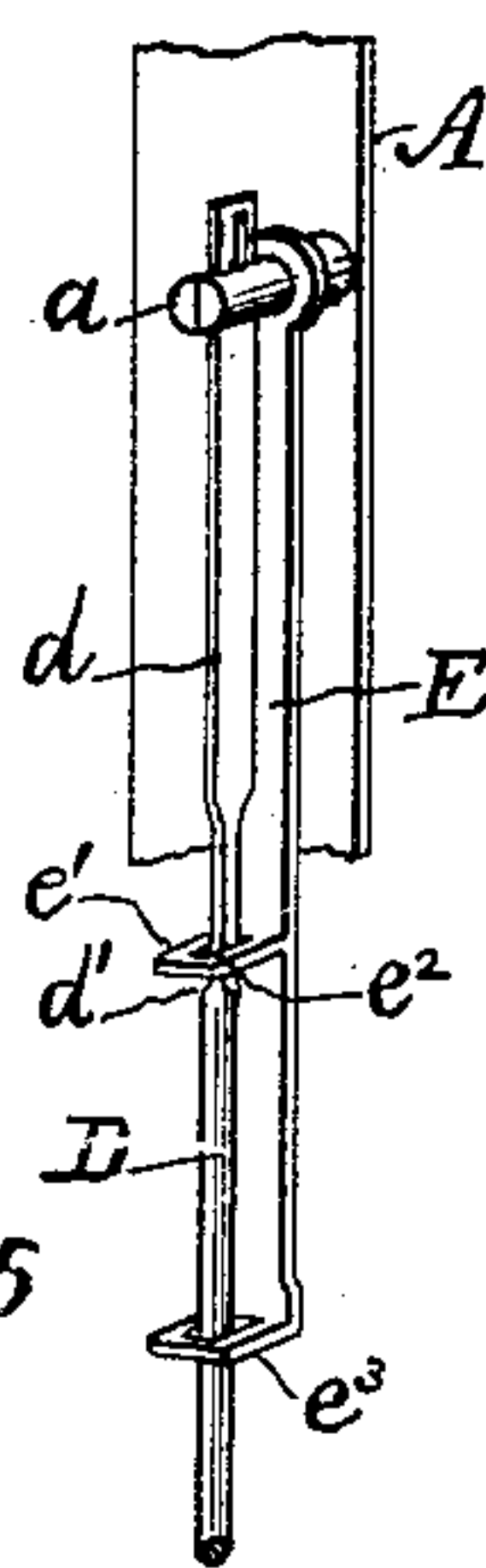


FIG. 5

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CLOCK-PENDULUM PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 333,120, dated December 29, 1885.

Application filed August 21, 1885. Serial No. 174,936. (No model.)

To all whom it may concern:

Be it known that I, LARS ERIKSON, a subject of the Kingdom of Sweden and Norway, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new, useful, and Improved Clock-Pendulum Protector, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view representing a part of the frame with the escapement and pendulum of an ordinary clock having said protector applied thereto. Fig. 2 is a detail view in perspective of said protector. Fig. 3 is a transverse vertical sectional view thereof. Fig. 4 is a modification in which said feature is applied to the verge-arm of said clock. Fig. 5 is a modification of said first construction.

Like letters of reference indicate corresponding parts in the different figures.

The object of my invention is to provide a protector for clock-pendulums, whereby the latter may be prevented from being kinked, twisted, or broken in transportation or in detaching said pendulum from the clock, all of which will be hereinafter more particularly described, and definitely pointed out in the claims.

In the drawings, A represents a portion of the frame of a clock to which is attached the usual escapement, B, the oscillating verge C, with the usual depending arm, *c*, for actuating the pendulum.

D represents said pendulum, which is flattened at the top in the usual manner to form a spring, *d*, which is inserted in the ordinary way in a split stud, *a*. It is a well-known fact that when suspended, as shown, if the pendulum D is pushed upwardly in any way by accident or otherwise the part *d*, instead of slipping through the slot in the stud *a*, is bent and either broken or so kinked as to greatly impair its efficiency. To avoid this danger, I form a shoulder, *d'*, upon or insert a pin through said pendulum D below the spring *d*. A loose depending arm, E, which is enlarged at the top and preferably provided with a suitable perforation, *e*, Figs. 2 and 3, is then placed loosely upon the stud *a*, as shown in Fig. 1.

The bottom of said arm E is bent outwardly at right angles to the shank, as shown at *e'*, and is provided with a slot, *e²*, through which the pendulum-spring *d* is inserted before attaching said pendulum to the stud *a*. Sufficient play should be left between the bottom of the part *e'* and the shoulder *d* to permit the free oscillation of the pendulum. Upon pushing the pendulum-rod upwardly the shoulder *d'* abuts against the part *e'* and prevents injury to said part *d*, while the two oscillating as they do in unison and upon the same axis the normal movement of the pendulum is not impeded by said guard. The part of the pendulum which enters the slot *e²* is preferably flat, and while loosely inserted in said slot prevents said pendulum from being twisted sufficiently to injure it.

As a modification of said construction, the depending arm *c* of the oscillating verge may be constructed like the part *e'* of the guard E, as shown in Fig. 4, the part *e'* being in corresponding proximity to the shoulder *d'*; but as the axis of said arm is different from that of the pendulum I prefer the other construction.

If preferred, the guard E (shown in Fig. 1) may be made longer, and the lug *e²* added at a point lower down upon the pendulum, as shown in Fig. 7, in which event any lateral strain upon the pendulum would cause the bearing-points *e'* *e²* of the guard to act entirely upon the stiff portion of the pendulum.

In lieu of the shoulder *d'*, a slotted hole may be made in the pendulum, through which a horizontal pin attached to the arm E may extend in lieu of the lug *e'*.

I am aware that a guard-rod rigidly attached to the pendulum just below its limber portion and extending upwardly until it comes nearly in contact with the pin to which the pendulum is suspended and provided with a cross-bar at its top, the ends of which are turned upwardly to prevent the parts from becoming disengaged, has been used, and I herein expressly disclaim such construction.

What I do claim, and desire to secure by Letters Patent, is—

1. As an improved article of manufacture, the clock-pendulum guard E, having its lower end bent at right angles, or approximately so,

to the shank, and slotted, as described, and the upper end perforated, as at *e*, substantially as described, and for the purposes set forth.

2. The combination, with a clock-pendulum
5 provided with a shoulder *d'*, or its equivalent, and the stud by which the pendulum is suspended, of the guard E, loosely connected with said pendulum by means of the slot *e*²

and loosely suspended from said stud, substantially in the manner and for the purposes so specified.

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Witnesses:

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