

J. TUERLINGX

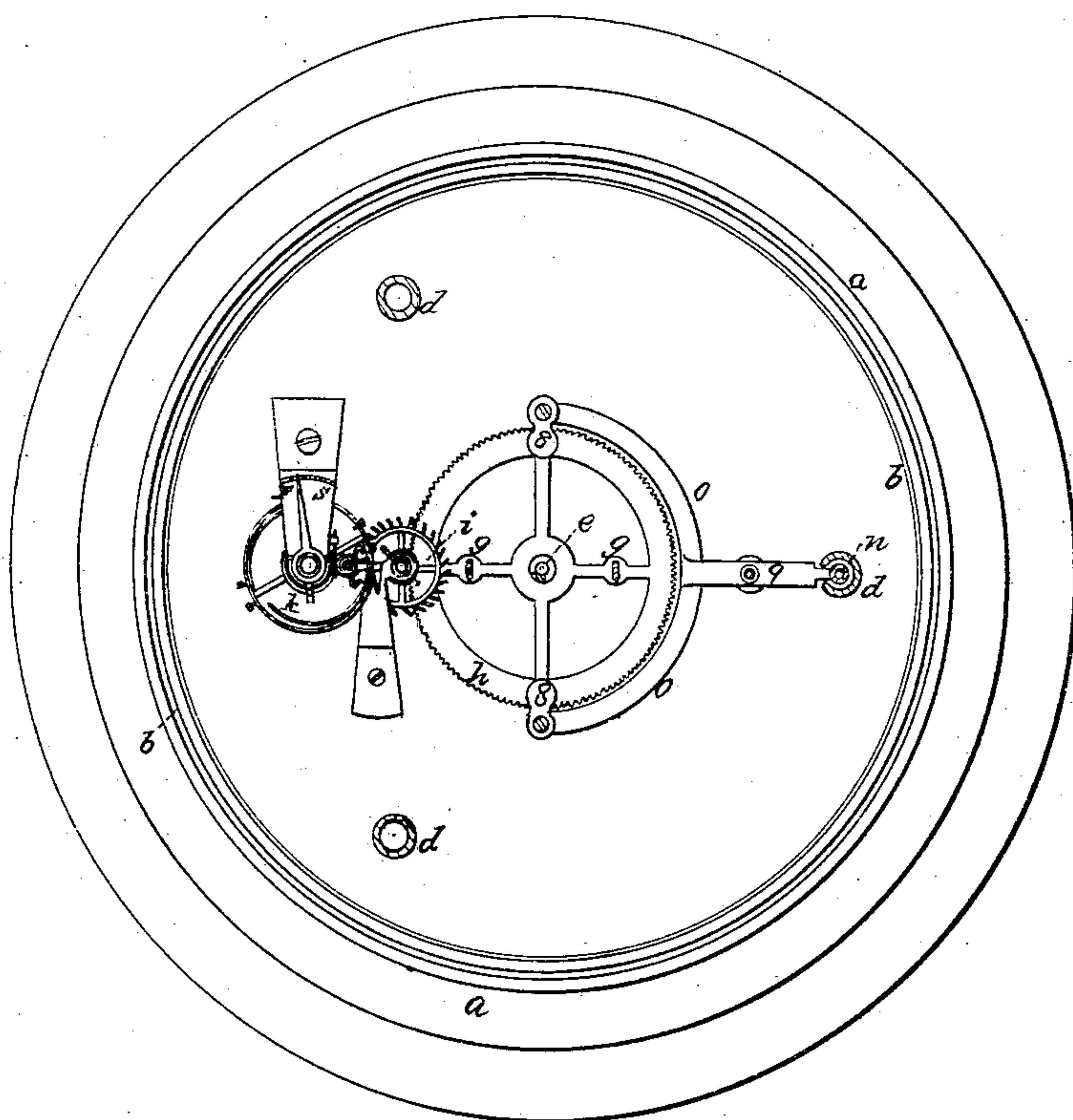
2 Sheets—Sheet 1.

Clock.

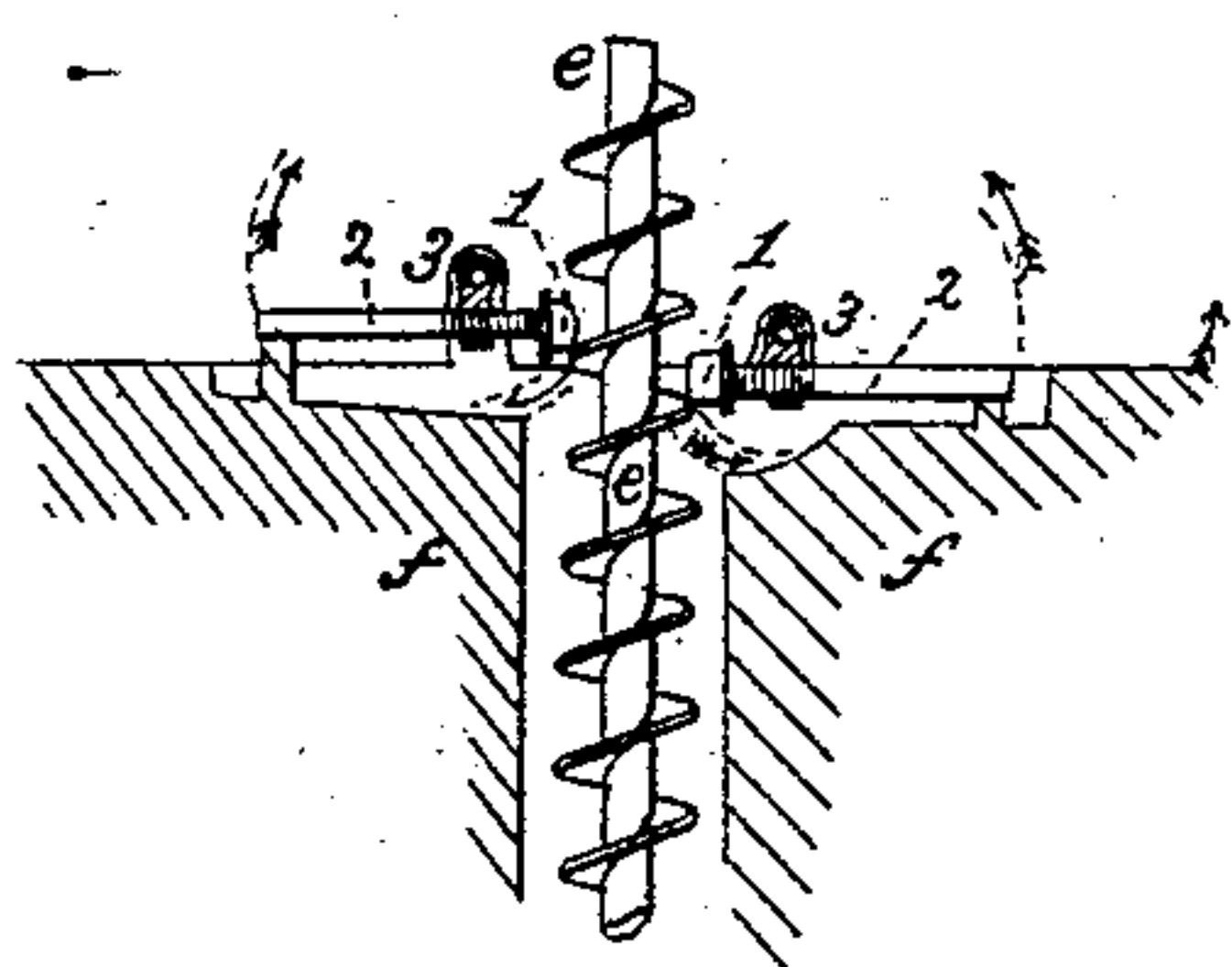
No. 16,344.

Patented Jan. 6, 1857.

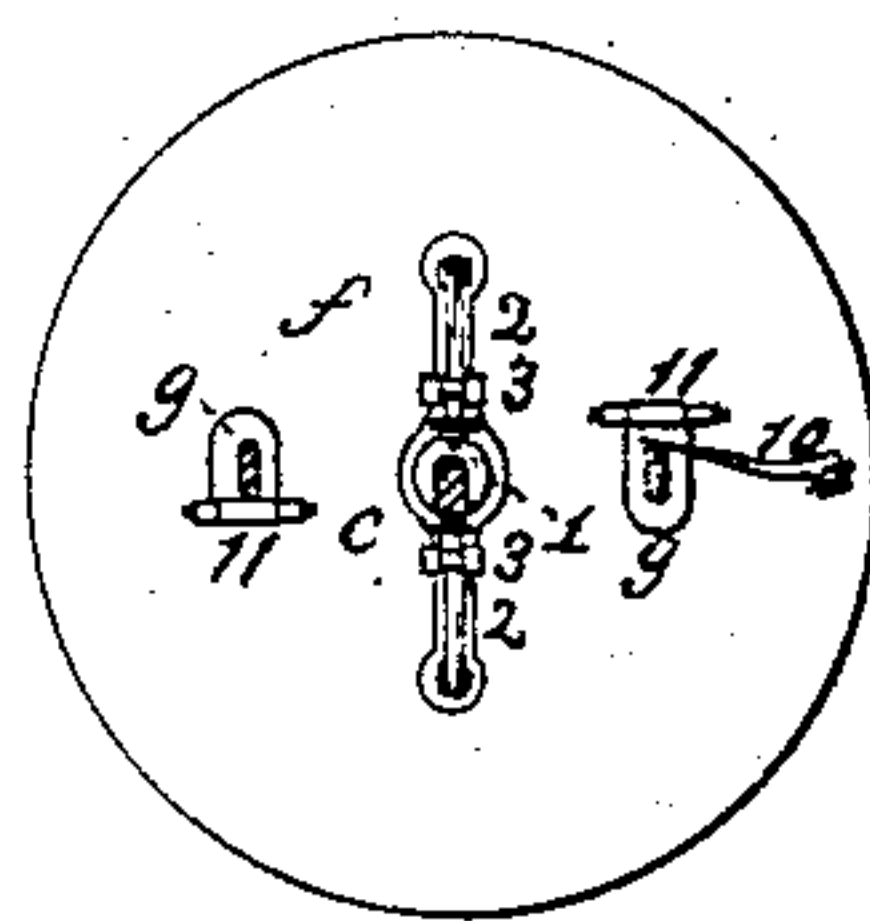
*Fig. 1.*



*Fig. 4.*



*Fig. 3.*



Witnesses:

Wm. Whipple  
Samuel W. Snell

Inventor:

James Tuerlingx

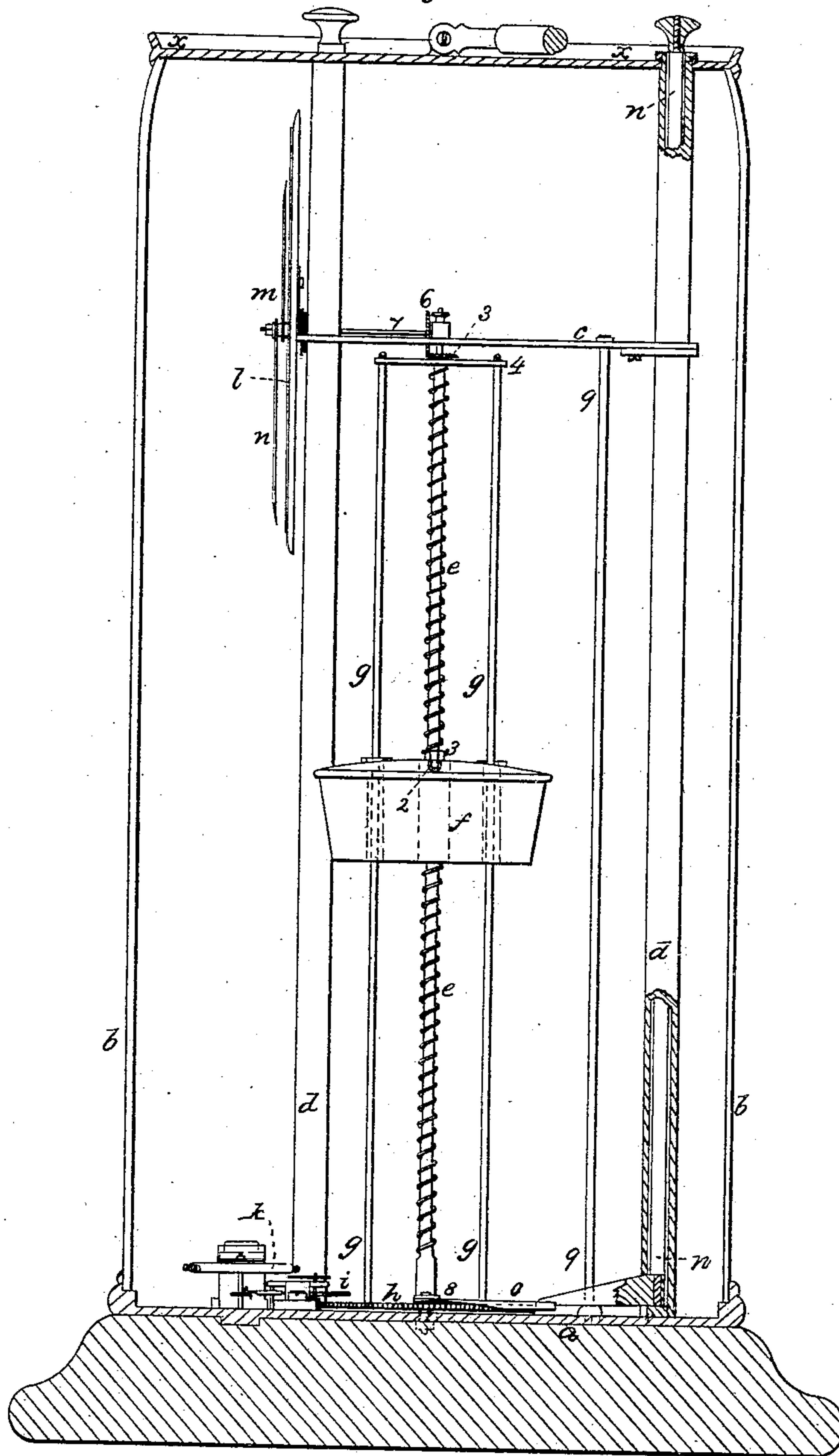
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Clock.

No. 16,344.

Patented Jan. 6, 1857.

Fig. 2.



Witnesses:

Heman Whipple  
 Samuel H. Small

Inventor:

James Tuerlingx



# UNITED STATES PATENT OFFICE.

JAMES TUERLINGX, OF NEW YORK, N. Y.

## MAINTAINING POWER FOR TIMEPIECES.

Specification of Letters Patent No. 16,344, dated January 6, 1857.

*To all whom it may concern:*

Be it known that I, JAMES TUERLINGX, of the city, county, and State of New York, have invented, made, and applied to use  
5 certain new and useful Improvements in Clocks or other Timepieces; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being  
10 had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a plan of the lower plate and works of the clock, Fig. 2, is a side elevation of the clock with the case surrounding  
15 the same shown in section. Fig. 3, is a plan and Fig. 4, is a vertical section of the weight made use of in this clock. Fig. 4, being on a larger scale to represent the parts.

Similar marks of reference denote the  
20 same parts.

The nature of my said invention consists in a peculiar arrangement of parts for applying a weight to a fixed spiral or screw, so that, as said weight runs down and re-  
25 volves on said screw, it gives motion to the other parts of a clock, either to drive the time or striking gear or both. And in connection with said arrangement of revolving weight, I make use of a peculiar means for  
30 winding the clock by raising up said weight at the same time that a retaining power is applied to continue the motions of the clock in winding.

In the drawing *a*, is a suitable base or  
35 plate receiving the clock works, and the whole of the parts may be inclosed in a glass shade or suitable case *b*.

*c*, is a plate sustained by columns *d, d, d*, which also extend up to the cap plate *e*,  
40 which retains the shade *b*.

*e*, is a screw or circular incline attached at the plates *a* and *c*, so as to be stationary, and *f*, is a weight surrounding said screw and constructed with a center hole large  
45 enough to freely pass the screw or incline *e*.

1, 1, are rollers, on levers 2, 2, set on fulcrums 3, 3, on the weight *f* at opposite sides of the screw *e*, and one roller is to be  
50 sufficiently higher than the other to retain the weight level as said rollers set on the fixed screw.

*g, g*, are guide rods connected at top to the head 4, that revolves around the upper  
55 part of the fixed screw *e*, and at the bottom to the wheel *h*, that acts on the pinion of the

escapement wheel *i*, that propels the balance *k*, by the anchor or any other suitable escapement.

It will thus be seen that the weight *f* if  
60 uncontrolled would run down the incline or spiral *e*, making as many rotations as there may be screw thread turns around said spiral *e*, and the power thus derived is ap-  
65 plied to the clock works by the guide rods *g, g*, connecting the head 4, and wheel *h*, and said guide rods pass freely through holes in the weight *f* and 11, is a roller or  
rollers that serve to relieve friction.

5, is a miter gear suitably proportioned  
70 taking the wheel 6, on the shaft 7, communicating the required motion to the hands *m*, in front of the dial or face *l*; or the motion obtained by the clock weight *f* in running  
75 down might be communicated to any suitable arrangement of striking apparatus.

The "winding up" of this clock may be effected by simply elevating the weight, but in order to furnish facility for so doing  
80 without removing the case *b*, I provide a rod *n*, passing down through one of the columns *d*, and connecting to a fork *o*, sliding on a guide rod 9, and side of the column *d*, is to be slotted to allow the said fork *o* to be  
85 raised the desired height by the rod *n*.

8, 8, are fingers, which take under the weight *f* when the fork *o*, is raised up to  
elevate the same and renew the propelling power of the clock, and as the weight is  
90 drawn up the rollers 1, 1, swing out of the way (see Fig. 4) and act similarly to pawls, and fall back over the inclines of the screw, ready again to descend. As soon  
95 as the fork *o*, and fingers 8, take the weight *f* the power of the weight to rotate the clock is relieved. I therefore make use of the spring 10, as a retaining power  
100 which acts in the direction of the revolution of the wheel *h*, against one of the guide rods *g*, keeping up the motion of the clock while the weight is raised bodily up; and the holes in the weight *f* for the rods *g* are large  
105 enough to allow the motion that is given by the spring 10, and when the weight is again taken by the rollers 1, 1, on the screw *e*, the spring 10, is again compressed by the rotation of said weight, ready to act when the clock weight is again being raised. I  
110 thus obtain a simple cheap and reliable clock, and one that is always propelled by a uniform power, and almost all the present train of gearing is dispensed with.



The effective power of the weight will be regulated by the pitch of the screw thread, and the time that the clock will run is to be regulated by the length of the  
5 incline *e*, compared with the gearing.

I do not claim giving motion to wheels or other articles by means of a sliding nut or weight on a screw or circular incline, as that is not new, but such an arrangement is ob-  
10 jectionable as applied to a clock, because the weight hanging on a moving screw would cause so much friction as quickly to wear out the parts and derange the same, particularly if the clock be moved about, but by  
15 having a fixed screw or circular incline, down and around which the weight moves, all the strain and friction is taken by the said incline as a fixture and the weight only acts on the parts of the clock through the  
20 medium of the rods *g*, *g*, or their equivalents with the power required for propelling the clock. Therefore—

What I claim as my invention and desire to secure by Letters Patent is—

1. The fixed screw or circular incline *e*, 25 carrying the weight *f* combined with the rods *g* *g* or their equivalents for communicating the motion and power from the said revolving weight to the wheel *h*, substantially as specified. 30

2. I also claim the retaining spring 10, on the weight *f* combined with the fork *o* and fingers 8, or their equivalents that will lift the weight up bodily and allow said retaining power to act substantially as speci- 35 fied.

In witness whereof I have hereunto set my signature this twenty-third day of September 1856.

JAMES TUERLINGX.

Witnesses:

LEMUEL W. SERRELL,  
HEMAN WHIPPLE.