

L. D. ANDERSON.

WIND-MILLS.

No. 185,423.

Patented Dec. 19, 1876.

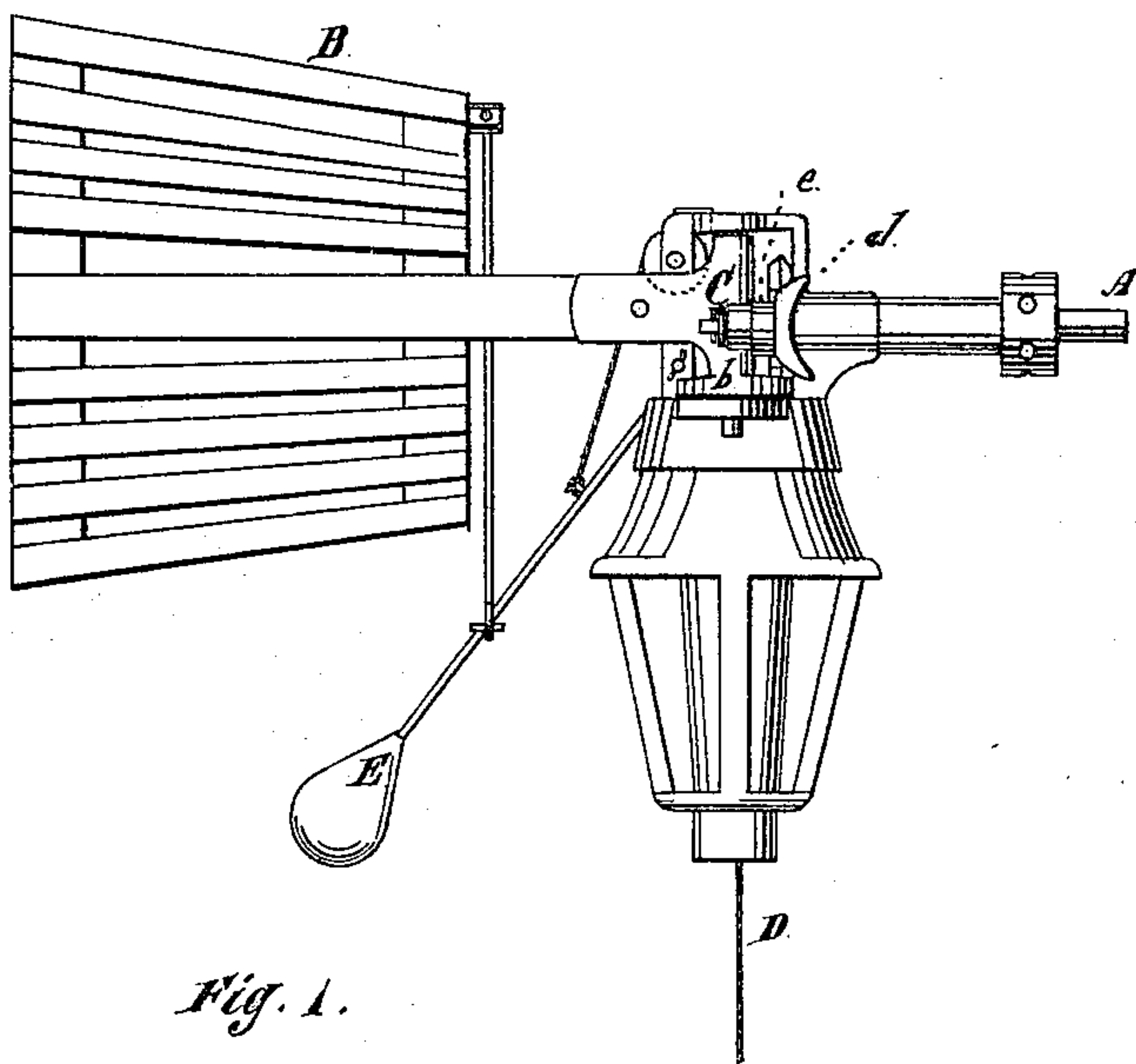


Fig. 1.

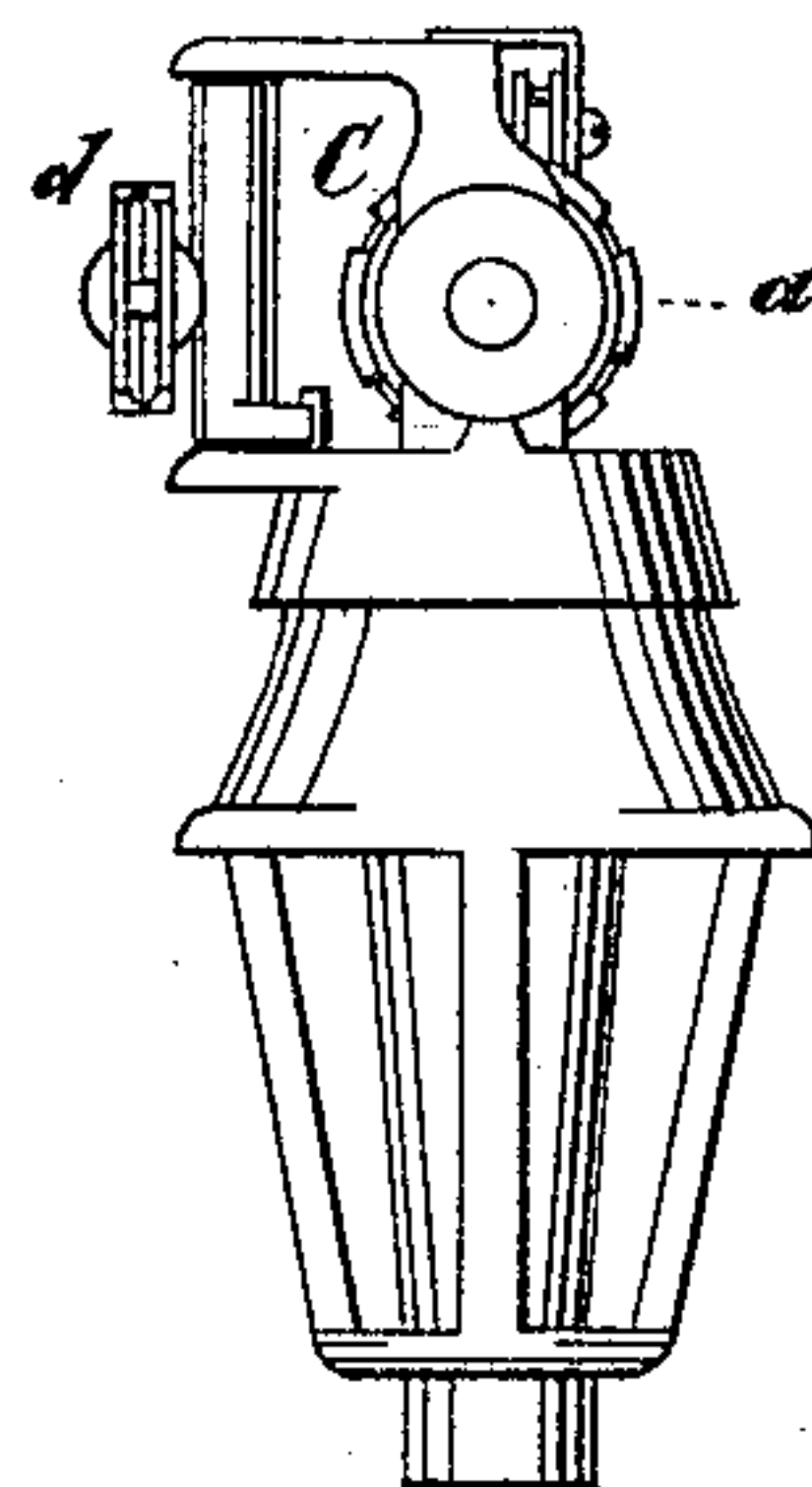


Fig. 2.

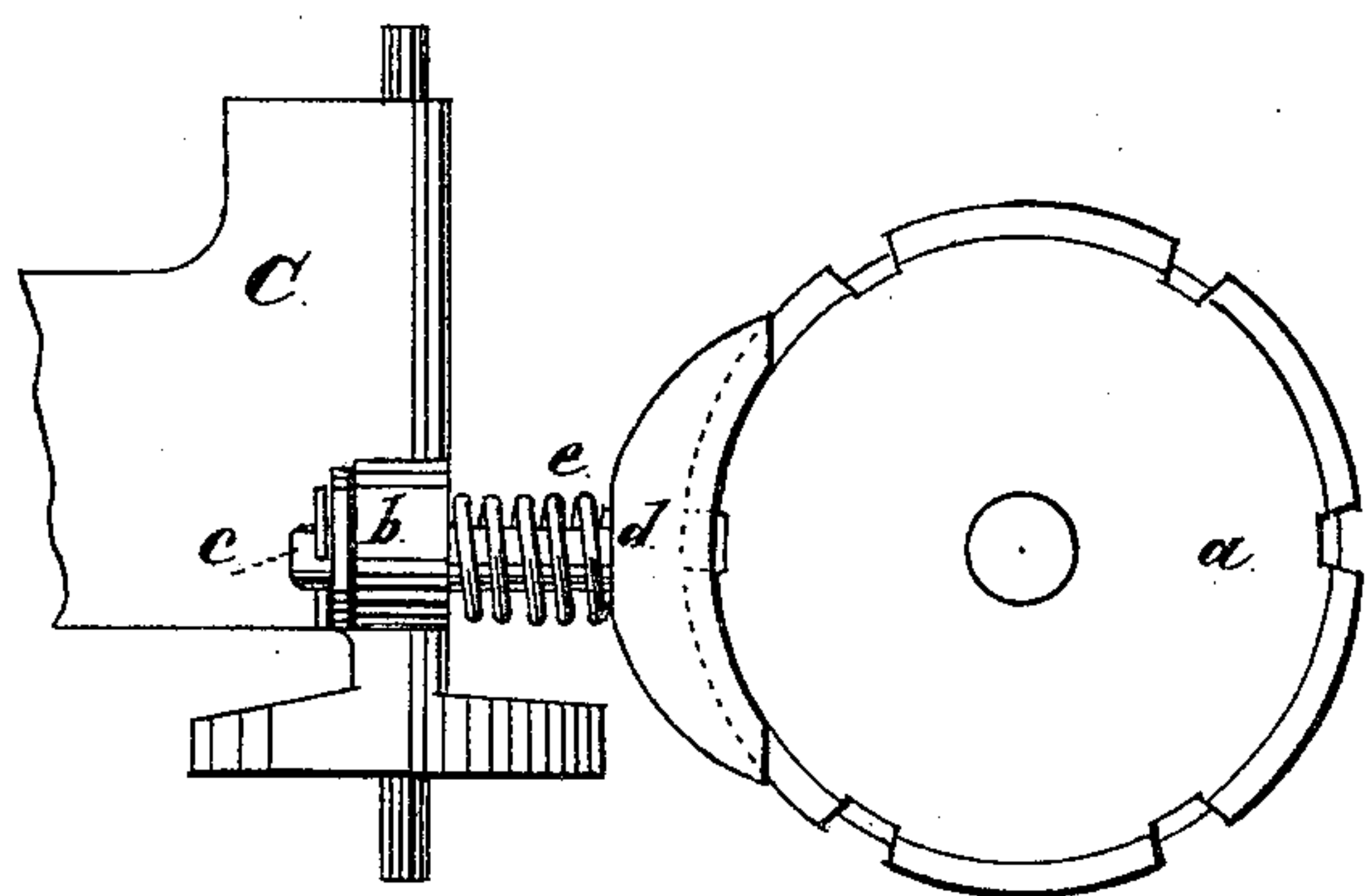


Fig. 3.

Witnesses:  
O. W. Bond.  
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Atty.



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. **185,423**, dated December 19, 1876; application filed August 14, 1876.

*To all whom it may concern :*

Be it known that I, L. DUVAL ANDERSON, of Geneseo, Henry county, State of Illinois, have invented a new and useful Improvement in Windmills, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, an end view, and Fig. 3 a detail enlarged.

This invention relates to that class of wind-mills in which the wind-wheel is solid, as distinguished from a wheel having movable sections, and in which the wind-wheel can be thrown out of the wind by devices for that purpose.

As such mills have been heretofore constructed, when the wind-wheel has been thrown out of the wind it will still occasionally revolve, pumping some water when not needed, or, in cold weather, filling the pump so that the water therein is liable to freeze.

The object of this invention is to so construct such mills that when the wind-wheel has been thrown out of the wind it will cease to revolve; and this I accomplish by means of a brake attached to the inner end of the vane, or to the iron which supports the vane, so arranged as to come in contact with the wind wheel shaft, or with a disk thereon.

In the drawings, A represents the wind-wheel shaft. The wheel itself is not shown. B is the vane. C is an iron to which the vane is secured, which iron is pivoted in suitable bearings, in the usual manner. *a* is a wheel or disk, rigidly secured to the inner end of the wind-wheel shaft A. *b* is a projection upon the iron C, having a hole through it. *c* is a pin or shaft passing through *b*, and secured in place by means of a key or pin, or in some other suitable manner. *d* is a shoe or brake, permanently secured to the inner end of *c*. The inner face of this shoe is adapted to fit the wheel *a*. As represented, it is

grooved upon the inside, and the wheel *a* is rounding upon its edge. The wheel *a* also has, as shown, a series of notches in its periphery, which notches and shoe *d* must be so constructed that they will not engage and lock one with the other, because the sudden stopping of the wind-wheel would be liable to break some of the parts. These notches can be so made that the friction between the wheel *a* and the shoe *d* will be increased. *e* is a spring located between *b* and the shoe *d*. It may be rubber or metal.

The parts not described are constructed in the usual manner.

In use the wind-wheel can be thrown out of the wind by means of the cord D, in the usual manner, bringing the parts into the position represented in Fig. 3, in which position the shoe *d* will be in contact with the edge of the wheel *a*, and, being held by a considerable force, by means of the spring *e*, the friction between these parts will prevent the rotation of the wind-wheel. When the cord D is released the weight E will disengage the shoe *d* from the wheel *a*.

The arrangement of the shoe *d* and wheel *a* represented is believed to be the most convenient; but it is not necessary that this arrangement should be followed, as it is evident that the attachment *d* can be made to come in contact with the shaft of the wind-wheel, or some enlargement thereon, at some other point than represented.

What I claim as new, and desire to secure by Letters Patent, is as follows:

In a windmill, the shoe or brake *d*, in combination with the vane B and shaft A of the wind-wheel, substantially as and for the purpose specified.

L. DUVAL ANDERSON.

Witnesses:

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