

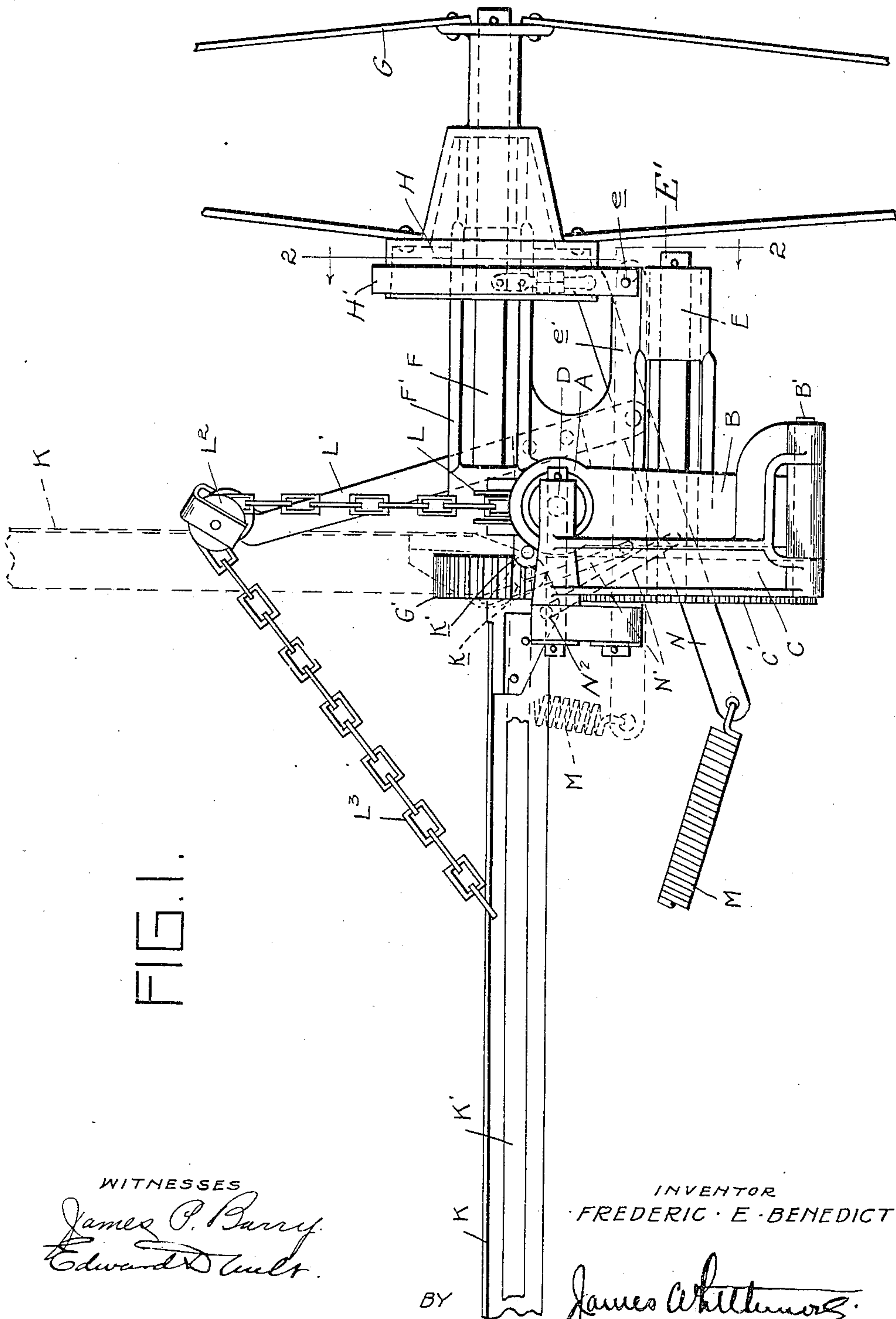
No. 831,529.

PATENTED SEPT. 25, 1906.

F. E. BENEDICT.  
BRAKE FOR WINDMILLS.

APPLICATION FILED JAN. 2, 1906.

2 SHEETS—SHEET 1.



WITNESSES

*James P. Barry*  
*Edward D. Melt*

INVENTOR

FREDERIC E. BENEDICT

BY

*James Whittemore*  
ATTY.

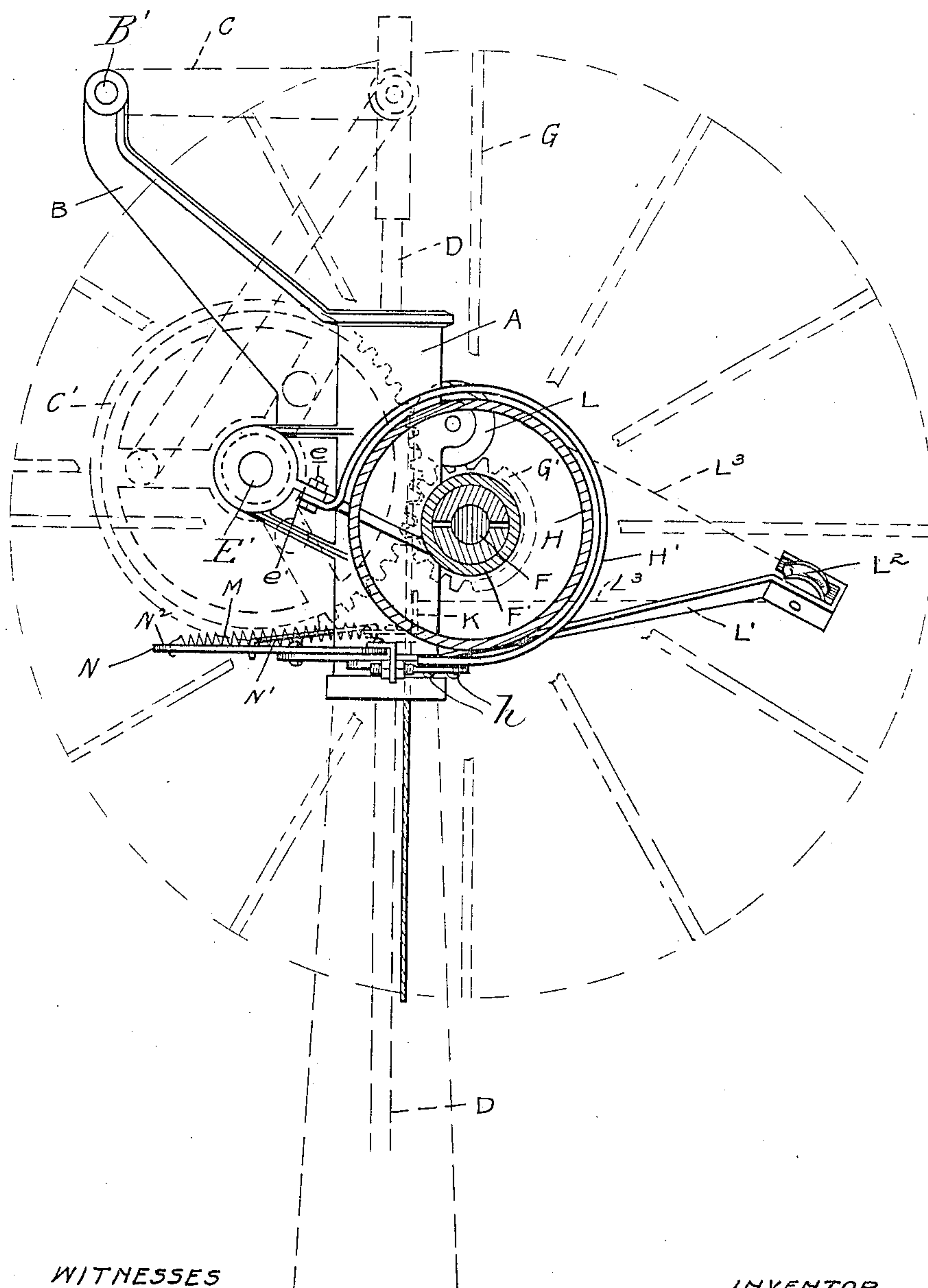
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FIG. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

FREDERIC E. BENEDICT, OF CHICAGO, ILLINOIS, ASSIGNOR TO  
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CORPORATION OF ILLINOIS.

## BRAKE FOR WINDMILLS.

No. 831,529.

Specification of Letters Patent

Patented Sept. 25, 1906.

Application filed January 2, 1906. Serial No. 294,270.

*To all whom it may concern:*

Be it known that I, FREDERIC E. BENEDICT, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brakes for Windmills, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to new and useful improvements in windmills; and it consists in the novel arrangement and construction of a brake and connecting means therefor.

The object of my invention is to provide a simple and efficient means for operating a brake on the wheel when the vane is drawn into parallelism with the wheel to stop the wheel, as will be more fully hereinafter described, and pointed out in the claim.

In the drawings, Figure 1 shows a plan of the mill. Fig. 2 is a cross-sectional view on lines 2 2 on Fig. 1.

A is a suitable swiveled supporting-standard for the operating parts and may be of any suitable construction.

B is an arm preferably integral with the standard A and carrying the pivot B' of the crank C, eccentrically secured to a gear C'. The crank C is pivotally connected to the vertical reciprocatory rod D, passing through the center of the standard A.

E is a bearing casing or housing for the shaft E', to which shaft the gear C' is secured, and this casing is preferably formed integral with the standard A.

F is the wheel-shaft, journaled in a casing F', which is preferably integral with the standard A. On one end of the wheel-shaft is secured the wheel G and on the other end a gear B', meshing with the gear C'.

A brake-drum H is secured to the shaft F, preferably by being formed integral with the hub of said wheel, and a brake-band H' has one end secured to the casing E by a bolt e engaging a flange e' on said casing. However, it is obvious that other means of attachment may be employed without departing from the scope of my invention.

K is a vane of any ordinary form pivoted in lugs k on the lower end of standard A and provided with a brace K', pivoted in lug k' on the upper end of the standard.

Many different forms of construction are

employed for drawing the vane into parallelism with the wheel when it is desired to stop the mill, and the free end of the brake-band may be easily connected to be operated thereby; but the construction which I prefer to employ and which I have shown is the invention of Allan J. Patch and is at the present date the subject of an application for patent. This construction consists of the following:

A pulley L is journaled on the standard A, an arm L' secured to the standard A and carrying a pulley L<sup>2</sup> at one end, and a chain L<sup>3</sup> connected to the vane and passing over pulleys L L<sup>2</sup> and down to a point within reach from the ground. One end of a spiral spring M is secured to the vane, and its other end is connected to one end of a lever N. The lever N is pivoted at points intermediate its length to one end of the arm L' and to one end of a link N', the other end of the link being pivoted on the vane at N<sup>2</sup>. To the end of the lever N, I secure the free end of the brake-band H' by bolts h or other suitable means.

When it is desired to stop the wheel, the chain L<sup>3</sup> is pulled and the vane swung around into parallelism with the wheel, with the parts in the position shown in dotted lines on Fig. 1. The lever N in its movement will draw on the free end of the brake-band and apply said band to the drum H, thus preventing the further turning of the wheel, which is possible in most cases in a strong wind, even when the wind on the vane has caused the wheel to swing into a position parallel to the direction of the wind.

What I claim as my invention is—

In a windmill, the combination with a wheel, a wheel-shaft and a stub-shaft, connecting means between said shafts, of a casing for said stub-shaft, a brake-drum on said wheel-shaft, a brake-band for said drum having one end secured to said stub-shaft casing and operating means connected to the free end of said brake-band, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERIC E. BENEDICT.

Witnesses:

H. J. ROBINS,

H. E. CRANKSHAW.