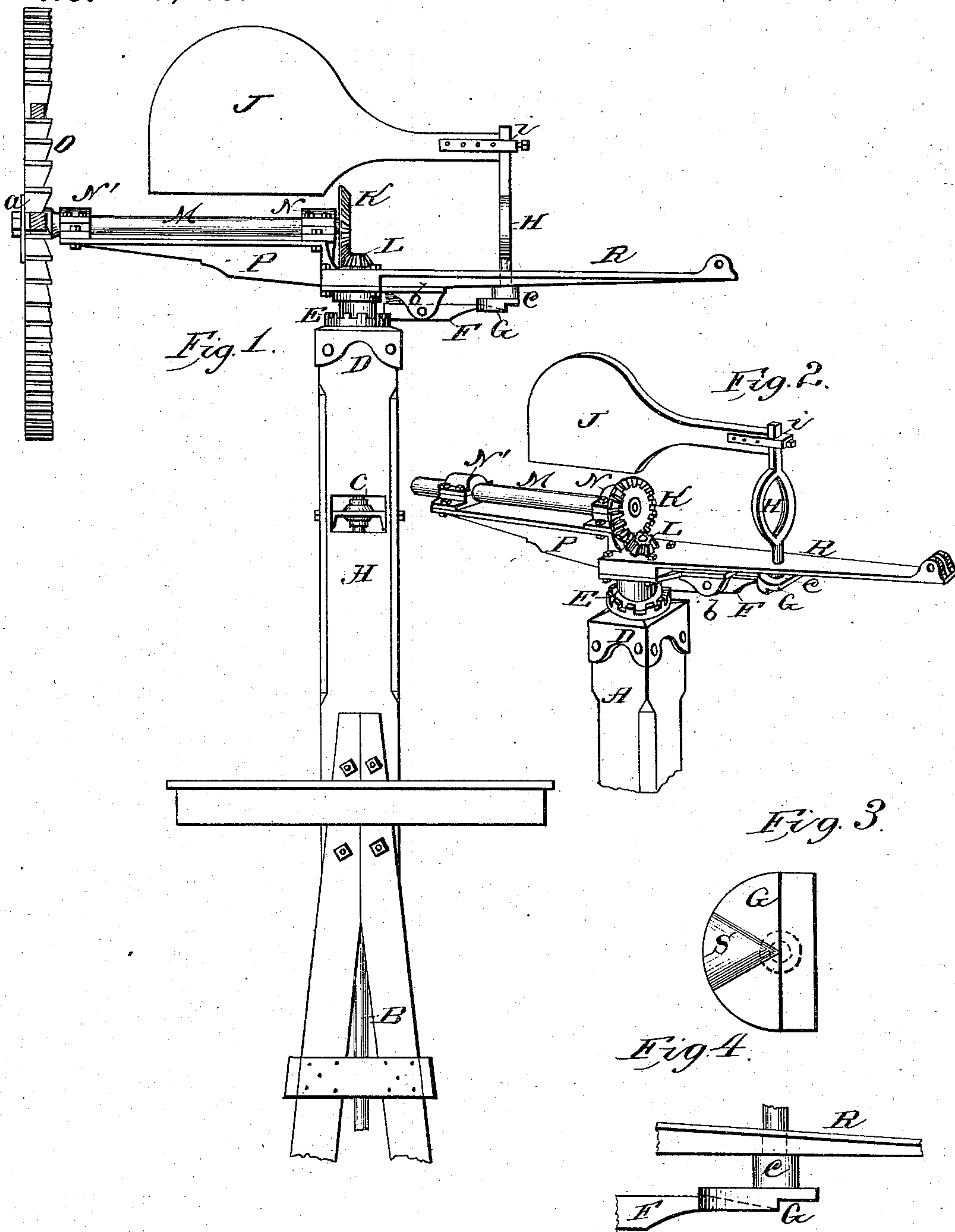


(No Model.)

G. HODGES.
Windmill.

No. 237,277.

Patented Feb. 1, 1881.



Witnesses:

E. G. Asmus
J. C. Peck.

Inventor:

George Hodges
by C. E. Hunt

Attorney

UNITED STATES PATENT OFFICE.

GEORGE HODGES, OF RACINE, WISCONSIN, ASSIGNOR TO WINSHIP BROTHERS, OF SAME PLACE.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 237,277, dated February 1, 1881.

Application filed November 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HODGES, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Windmills; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to wind-wheels; and it consists in a device for locking the wheel in the wind and releasing it automatically when the wind changes, as will be hereinafter fully described.

In the drawings, Figure 1 is a side view of a wind-wheel and mast. Fig. 2 is a perspective view of the upper portion of the mast and beam. Fig. 3 is a bottom view of a cam which is secured to the lower end of the vane-shaft, and Fig. 4 is a detail.

A is the mast, which, as usual, is hollow to receive the vertical driving-shaft B, this shaft passing up through the mast and beam R, and carrying a horizontal bevel-wheel to engage with the horizontal bevel-wheel on the wheel-shaft. I cast or otherwise provide the shaft with teeth or projections E, to receive between them one end of a pawl, F, pivoted to beam B and actuated by a spiral or other spring, while the other and outer end of the pawl projects beneath the cam G upon the lower end of the vane-shaft H. The thinnest part S of this cam G is directly beneath the vane J, so that when the latter is parallel with the beam the portion S of the cam will be directly over the outer end of the pawl F, the inner end resting between two of the teeth E

and locking the wheel in the wind; but as the wind shifts either way the vane will be carried about, turning the thicker portion of the cam G upon the outer end of the pawl F and raising its inner end from between the teeth. The beam will now revolve until it is parallel with the vane and the thinnest part of the cam is over the pawl, when the locking will again take place.

Of course it is obvious that the inner end of the pawl will not be raised out of the teeth, except by a decided and material shift of the wind; but this may be easily regulated by the height of the teeth and degree of the incline on the cam.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a windmill, a notched or toothed plate attached to the top of the mast, and a pawl and cam, in combination with a vane and its shaft, whereby the shifting of the wind will cause the vane to unlock the beam and permit the wheel to keep in the wind, as set forth.

2. The combination, in a windmill, of a vane having a shaft, H, upon the lower end of which is a cam, the beam R, plate D, having teeth E, and a pawl, F, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of November, 1880.

GEORGE HODGES.

Witnesses:

JOHN ROWAN,
A. P. DUTTON.