A. J. BECKLEY.

Wind-Wheel.

No. 169,227. Patented Oct. 26, 1875.

Fig 1

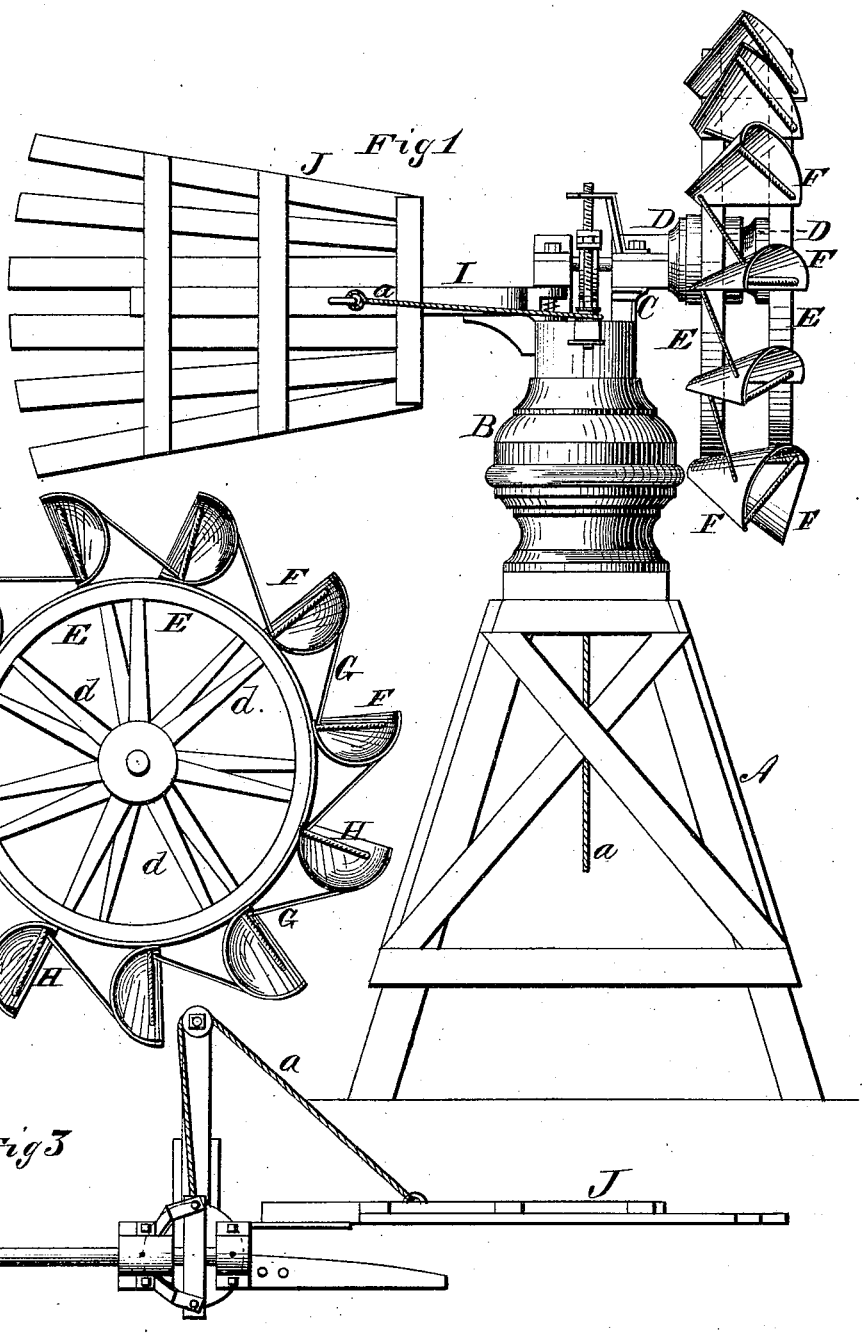

Fig 2

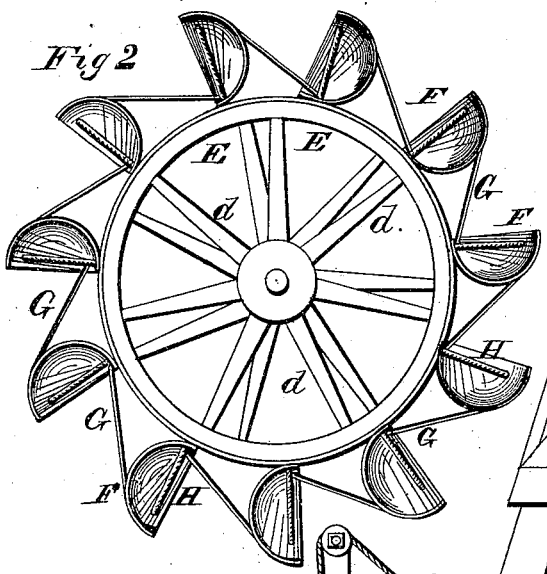

Fig 3

WITNESSES
Franck L. Durand
C. L. Emerson.

By

INVENTOR
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Alexander Mason
Attorney

UNITED STATES PATENT OFFICE.

ANSON J. BECKLEY, OF BATTLE CREEK, MICHIGAN, ASSIGNOR TO WALTER GREGORY AND ERASTUS H. GREGORY, OF SAME PLACE.

IMPROVEMENT IN WIND-WHEELS.

Specification forming part of Letters Patent No. **169,227**, dated October 26, 1875; application filed September 2, 1875.

To all whom it may concern:

Be it known that I, ANSON J. BECKLEY, of Battle Creek, in the county of Calhoun and in the State of Michigan, have invented certain new and useful Improvements in Windmills; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention relates to the peculiar manner of constructing air buckets or sails for windmills, and the construction of the wheel which carries the same, as also to the construction and combination of a suitable vane for regulating the same, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 represents a side view of my windmill; Fig. 2, a detached view of the wheel with its buckets; and Fig. 3, a detached view of the vane.

In the figures, A represents the frame which supports the wheel and other working parts, and which may be constructed in any of the well-known and usual ways. Upon the top of this frame is secured a suitably-constructed metallic hollow cylinder, into which passes a vertical shaft. To the upper end of this shaft is secured the metallic frame-work, which supports the wind-wheel and the vane. The shaft upon which the wheel is secured lies in a horizontal position, and has suitable bearings in the frame C.

The wheel is constructed as follows: I take two hubs, which are firmly secured upon the horizontal shaft, and a short or suitable distance apart. A series of spokes radiate from these hubs, and enter the fellies of the wheel, in a similar manner as they do in ordinary carriage-wheels. These wheels thus formed are provided with iron tires. D D represent the hubs; *d d*, the spokes, and E E the fellies. The buckets or sails of these wheels are formed of metal, and are in shape one-half of a hollow cone. These concavo-convex half-cones are secured, at suitable distances apart, upon the periphery of the wheel, being connected to the two fellies and braced inside by the rods H H, and on the outside by the rods G G.

This forms a solid and substantial wheel, whose buckets are permanently secured to it, and not subject to wear, or to get out of order, while they receive and discharge the wind in a most satisfactory manner.

The vane is hinged, and is worked in one direction by means of a cord, and in the other by a suitable spring. By the use of this vane the operator can throw the wheel in position to catch the wind, or not, at pleasure.

I represents a beam, which runs in the line of the axis of the wheel, and which prevents the vane from moving in one direction beyond that line.

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

1. A wind-wheel constructed substantially as herein set forth, having two hubs, two fellies, and two sets of spokes, in combination with the stationary air buckets or sails, as is herein fully set forth, and for the purpose specified.

2. A series of sails or buckets made stationary upon a wind-wheel, said sails or buckets being concavo-convex in form, and in shape the one-half of a hollow cone, as is herein fully set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of August, 1875.

ANSON J. BECKLEY.

Witnesses:

JOHN MEACHEM,

ERASTUS H. GREGORY.