J. A. JELLEY & J. N. B. PARVIN.

Wind-Mills.

No. 153,342. Patented July 21, 1874.

Fig 1.

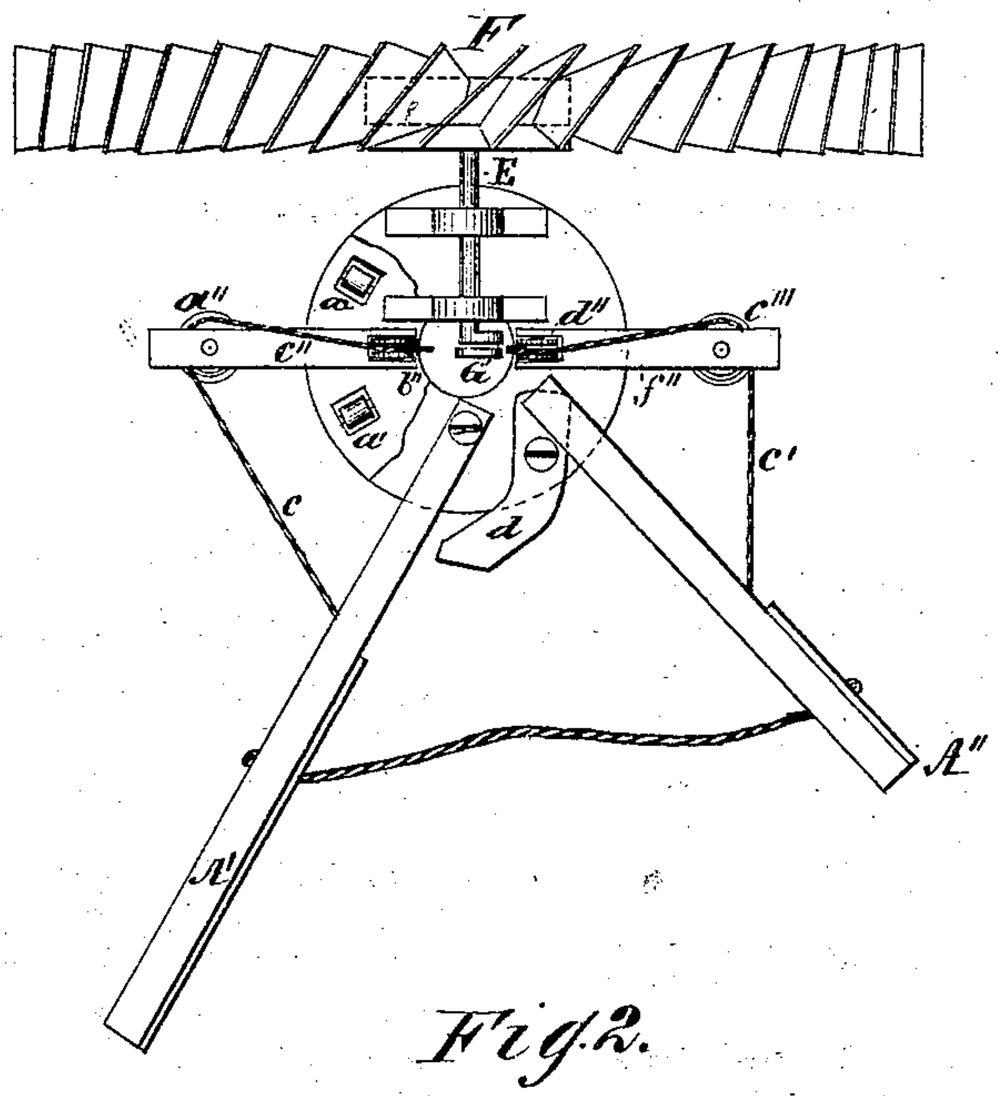
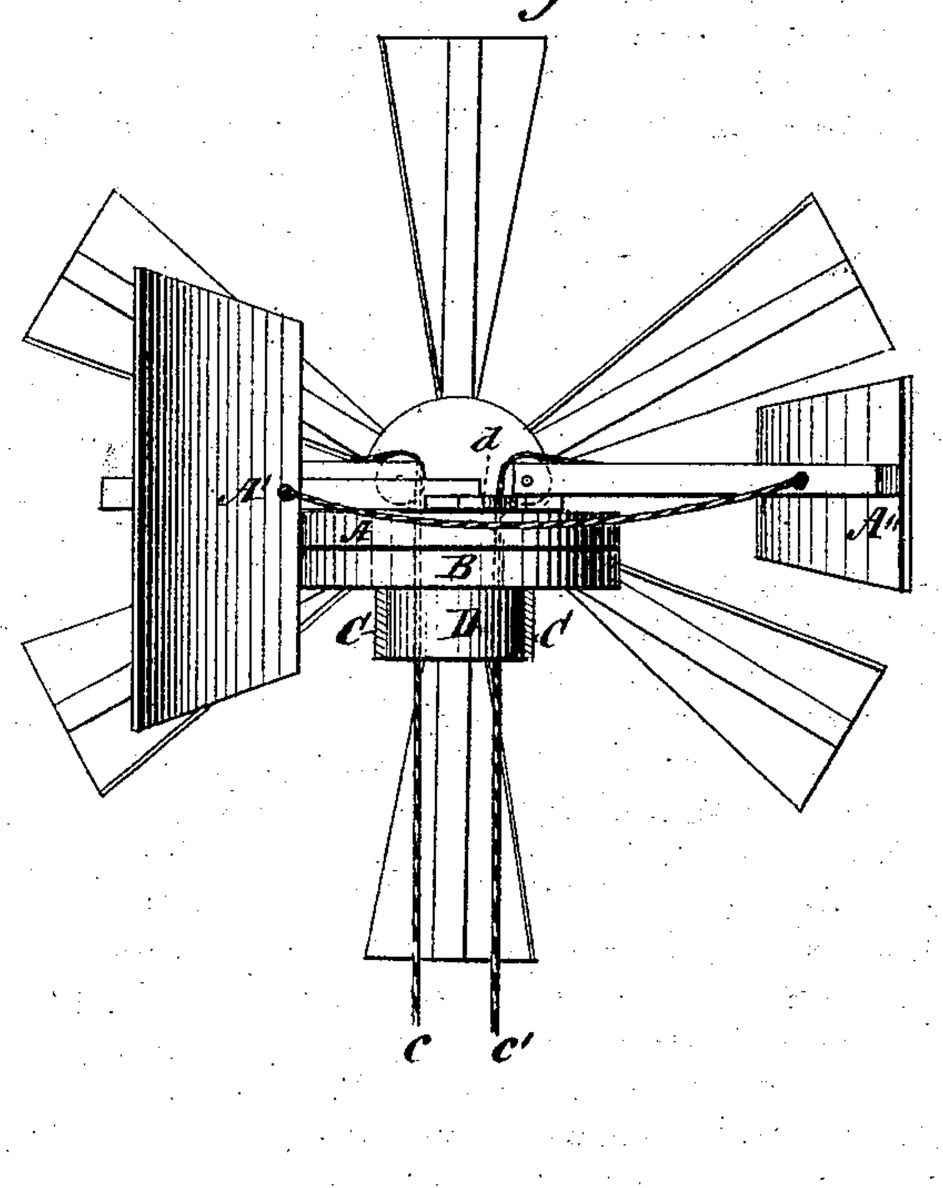


Fig 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN A. JELLEY AND JOSIAH N. B. PARVIN, OF ATALISSA, IOWA.

IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. **153,342**, dated July 21, 1874; application filed May 20, 1874.

To all whom it may concern:

Be it known that we, JOHN A. JELLEY and JOSIAH N. B. PARVIN, of Atalissa, in the county of Muscatine and State of Iowa, have invented a new and Improved Windmill; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawing, in which—

Figure 1 is a plan view, and Fig. 2 is a vertical elevation.

The invention relates to a new and improved gearing for a windmill, by means of which the mill is made to present its vanes always to the wind, and to run with it blowing with any degree of intensity.

It consists of a large circular plate, A, resting upon rollers a^1 a^2 a^3 a^4, placed in a plate, B, attached to the top of the vertical shaft, the plate A being pivoted in its center to the plate B by means of a short hollow shaft, D, with collar C underneath to keep the running gear steady and prevent it from being lifted off by a sudden gust of wind. Heavily journaled in large boxes upon the plate A is the revolving shaft E, to one end of which is attached the vanes F, the other end terminating in a crank or eccentric, to which is attached a perpendicular rod or plunger, G, that passes through the hollow shaft and communicates motion to the wheels below. In the rear, pivoted upon plate A, are the two tails A′ and A″, connected by means of a slack rope. A′ is much larger than A″ and to it is attached a rope, *c*, which passes round the sheaves a'' b'' in the arm c'', attached to plate A, and then down through the hollow shaft, where it is fastened in reach of the workmen. The smaller tail, A″, is provided with a rope, c', rigged in a similar way upon sheaves c''' d'' in arm f'', attached to plate A, thus giving separate and distinct gearings for the independent operation of either one of the two tails, and has also an arm, *d*, which prevents the two tails from coming together. The said arm *d*, being permanently attached to the tail A″, also operates with tail A′, for the purpose of controlling the position of the vanes, in the following manner: When the wind is blowing moderately the vanes are set squarely to the wind, the large tail in the direction of the wind, and the smaller tail at or near right angles to the large one, so that the wind blows directly against it. Now, as the wind increases and becomes stronger than is required, the smaller tail is blown around, the arm *d* forced against the larger tail, said tail deflected, and by this means the entire position of the vanes and plate changed accordingly, so that the vanes are automatically presented obliquely to the wind and their speed correspondingly decreased. By means of this arrangement either one of the tails may be drawn around singly and operated independently of the other, and both the said tails so regulated and directed as to cause the vanes to present themselves either fairly to the wind or obliquely, in which latter position the mill may be run in extremely high winds with as much regularity and precision as under ordinary circumstances.

Having thus described our invention, what we claim as new is—

In a windmill, the combination, upon an equatorially mounted revolving plate, of the separate and distinct arms c'' f'', provided with ropes *c* and c', and sheaves a'' b'' and d'' c''', with the arm *d* and the two tails, substantially as and for the purpose described.

JOHN A. JELLEY.
J. N. B. PARVIN.

Witnesses:
ASA GREGG,
SAM. D. STUART.