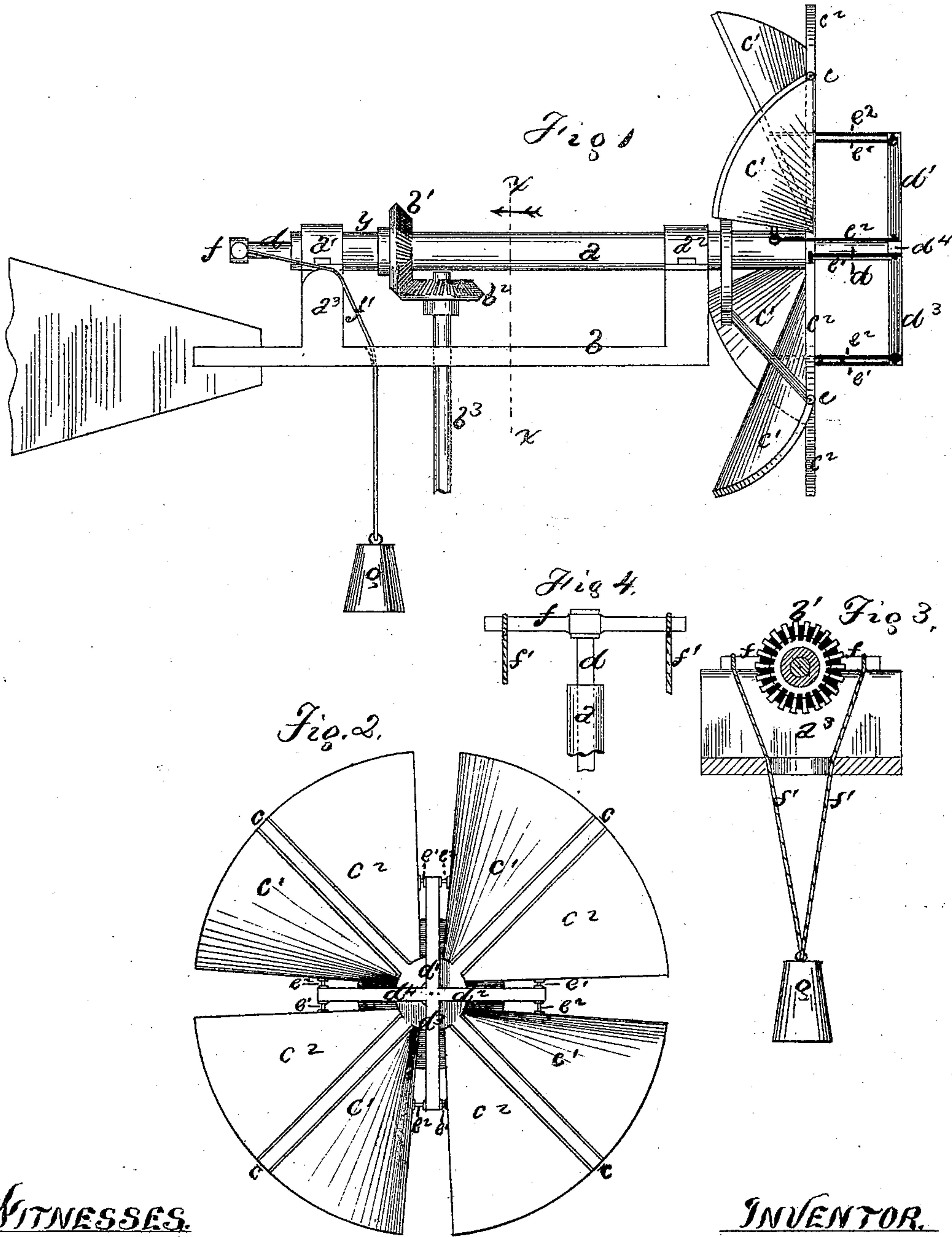


Wind-Mills.

No. 141,094.

Patented July 22, 1873.



WITNESSES.

John Pollitt.
John R. Sax

INVENTOR.

Charles A. Taylor
By Wm. Edgar Skinner
Att.

UNITED STATES PATENT OFFICE.

CHARLES A. TAYLOR, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. **141,094**, dated July 22, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, CHARLES A. TAYLOR, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Windmills, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the windmill. Fig. 2 is a front view. Fig. 3 is a section at $x x$ looking in the direction indicated by the arrow. Fig. 4 is a top view of the rear end of the windmill-shaft up to about the point y , Fig. 1.

The invention consists in making each of the wings or sails of two flaps, hinged to a central post, and in an arrangement for so weighting and counterbalancing these flaps that the sails may be made to present any desired angle of resistance to the wind.

The letter a indicates the windmill-shaft, turning in the bearings $a^1 a^2$, which are set upon the base-board b . The bevel-gear b^1 communicates motion to the bevel-gear b^2 and shaft b^3 . Each wing or sail consists of a rigid central post, c , springing from the front end of the shaft a , having a flap, $c^1 c^2$, upon either side of the post, hinged thereto, so that these flaps may be swung backward. Through the center of the length of the shaft a is a rod, d , having some longitudinal play. On the front end of this rod are the arms $d^1 d^2 d^3 d^4$, from the ends of which run connecting-rods $e^1 e^2$,

the former to the edge of the flap c^2 , and the latter to the edge of the flap c^1 . When the rod d is moved backward, the flaps $c^1 c^2$ are swung back so as to present less resisting-surface to the wind, thereby diminishing the power of the mill. On the rear end of the rod d is a swivel-arm, f , which does not turn with the rod. From the end of this swivel-arm run two cords, $f' f'$, over the rounded top of the bearing-block a^3 , and thence downward vertically to suspend the weight g . This weight tends to keep the sails of the mill fully expanded, and by altering the size of this weight the pressure of it can be so adjusted to the opposing pressure of the wind as to make the mill, within proper limits, exert any required force.

I claim as my invention—

1. A windmill-sail, consisting of a fixed central post, c , with flaps $c^1 c^2$ hinged thereto upon either side, substantially as described, and for the purpose set forth.

2. The combination of the sails, composed of the central post c and the flaps $c^1 c^2$ hinged thereto upon either side, the connecting-rods $e^2 e^2$, the arms $d^1 d^2 d^3 d^4$, the rod d running through the length of the shaft a , the swivel-arm f , cords f' , and weight g , all constructed, arranged, and designed for operation, substantially as and for the purpose set forth.

Witnesses: CHAS. A. TAYLOR.

WM. EDGAR SIMONDS,
JOHN POLLITT.