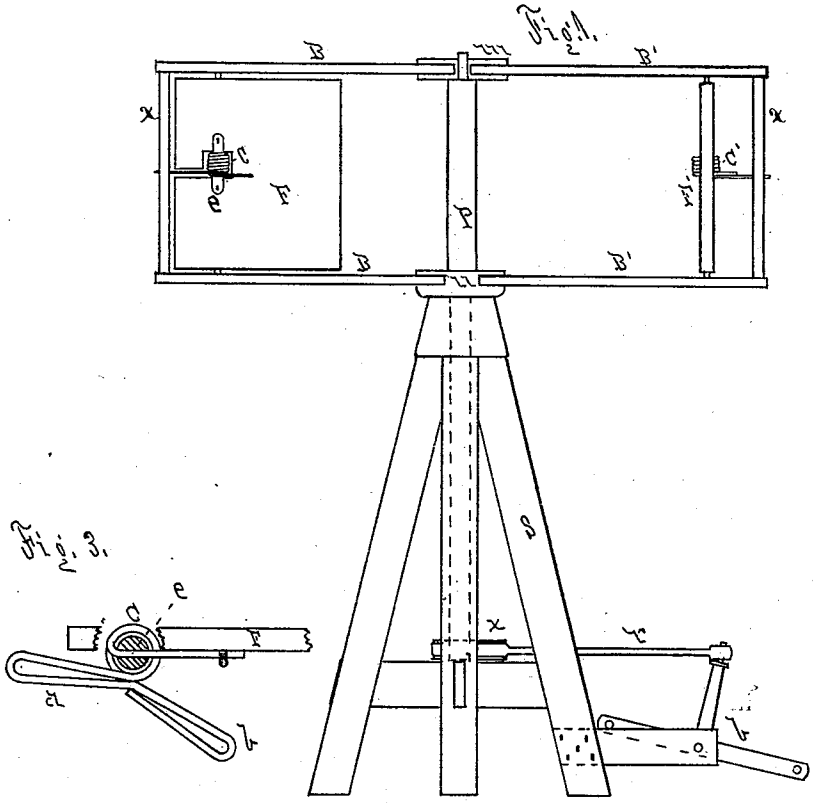
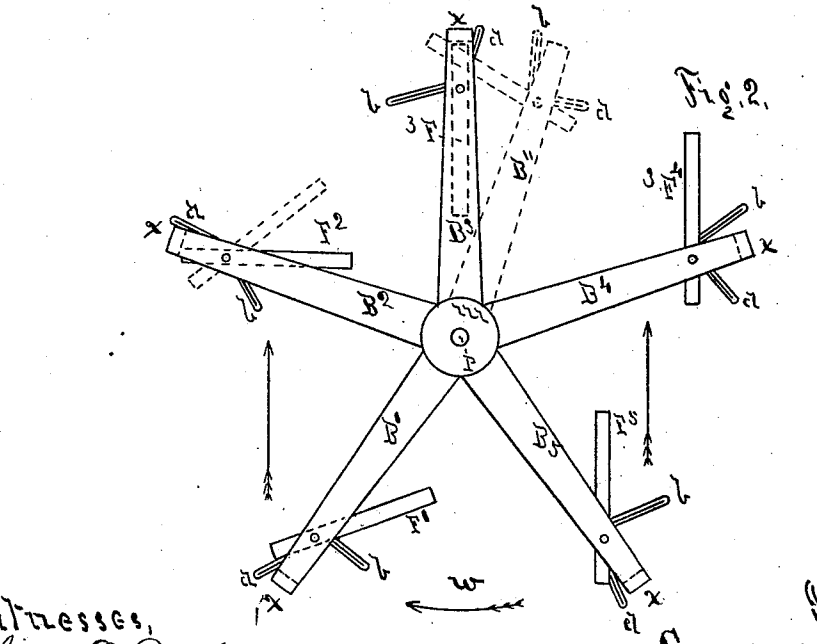
G. SACCONE.
Windmill.

No. 226,357. Patented April 6, 1880.





Witnesses,
Elison V. Buckley
D. B. Cummings

Inventor,
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UNITED STATES PATENT OFFICE.

GIOVANNI SACCONE, OF SACRAMENTO COUNTY, CALIFORNIA.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 226,357, dated April 6, 1880.

Application filed August 7, 1879.

To all whom it may concern:

Be it known that I, GIOVANNI SACCONE, of the county of Sacramento, State of California, have invented a new and useful Improvement in Windmills, of which the following is a specification.

The invention relates to that class of windmills that are built so as to revolve on a horizontal plane and are supported by an upright shaft.

The invention consists in the means for shifting and governing the position of the fans in a horizontal windmill so that the wind will cause the mill to rotate.

In the accompanying drawings, Figure 1 shows a sectional elevation of a windmill with two fans embodying my invention. Fig. 2 is a plan of a mill with five fans. Fig. 3 is a detail of the spring-arms used in each fan.

In Fig. 1 is shown the frame B B′, attached to the upright shaft P, so that it can rotate on a horizontal plane. The frame B and spindle P are supported by and revolve in the frame S. The shaft P extends down, as shown in dotted lines, around which is an eccentric, from which the rod *r* transmits motion to the cross pump-lever *b*.

In the two arms of frame B B′ are shown two fans, F F′. In this case we will suppose the wind to be blowing toward the drawings, so that the fan, F, having its side presented is caught by the wind and carried with it, while at the same time the opposite arm, B′, and fan, F′, has its edge presented and is coming around against the wind without being resisted, and for the purpose of controlling the motion of the fans which are pivoted in frame B, so as to be free to swing, they are provided with two spring-arms, *a* and *b*, which strike against the upright posts *x* and control the position of the fans, as will be hereinafter explained.

Fig. 3 shows a detail of the spring-arms *a b*, which, in this case, are composed of a single wire connected to the fan F and coiled around an upright rod, *e*, several times, in order to give sufficient flexibility. From the coil the wire extends out and forms arm *a*, thence back to the coil and out, forming arm *b*.

In Fig. 2 is shown a plan of a mill having five arms, B, with fans F in each. In this plan we will suppose the wind to be blowing in the direction shown by the arrows, and the mill is supposed to be rotating in the direction shown by arrow *w*. Now fan F′ in arm B′ is presenting its side to the wind by the arm *a* striking against the bar *x* and preventing it from swinging around so as to bring its edge to the wind, while fan F^2 in arm B^2 also presents its side, and in case the wind is very strong the spring of arm *a* allows the fan to swing back still farther, as shown in dotted lines, thus exposing less surface to the wind.

In arm B^3 the fan has presented its edge until it moves to B″, when the arm *a* throws it around, and arm *b* strikes the post *x* and holds the fan so that the wind can strike it at an angle, pressing it around in the direction the mill is moving until it reaches about to where arm B^4 is shown, when, as in B^5, the fans are allowed to swing around and present their edge to the wind, as shown.

What I claim as new is—

The spring-arms *a* and *b*, in combination with the fans F and upright bars *x*, in a windmill-frame revolving on a horizontal plane, substantially as shown and described.

GIOVANNI SACCONE.

Witnesses:
ELISON V. BUCKLEY,
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