J. SERRAMOGLIA & E. MIDDLETON.

WINDMILL.

APPLICATION FILED MAR. 5, 1913.

1,075,994. Patented Oct. 14, 1913.

Fig 1

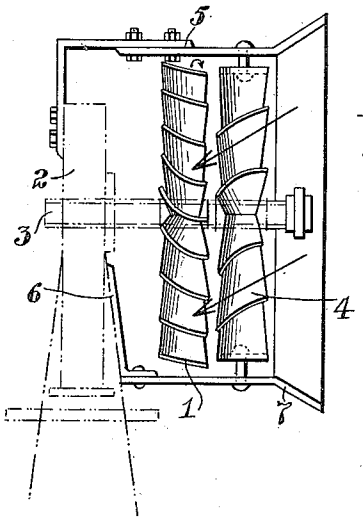
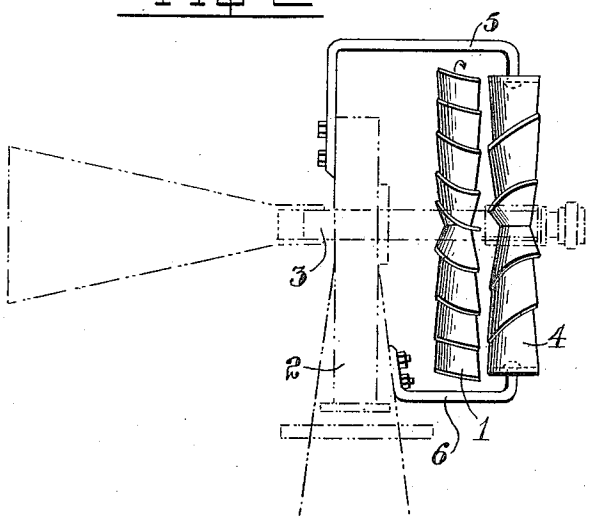


Fig 2



Attest:

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by

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UNITED STATES PATENT OFFICE.

JOSÉ SERRAMOGLIA AND ENRIQUE MIDDLETON, OF ROSARIO DE SANTA FÉ, ARGENTINA.

WINDMILL.

1,075,994. Specification of Letters Patent. Patented Oct. 14, 1913.

Application filed March 5, 1913. Serial No. 752,053.

To all whom it may concern:

Be it known that we, JOSÉ SERRAMOGLIA and ENRIQUE MIDDLETON, citizens of Argentina, residing at Rosario de Santa Fé, Argentina, have invented certain new and useful Improvements in Windmills, of which the following is a specification.

Our invention relates generally to windmills, and has especial reference to means for increasing the effective operation of the mill-wheel or fan blade.

The invention is illustratively exemplified in the accompanying drawing wherein—

Figure 1 is an elevational view of one form of the invention; and Fig. 2 is a similar view of a modified form.

Stated in general terms, our invention consists in arranging adjacent the mill-wheel means, such as a fixed wheel or fan, for directing the incoming air against the blades of the mill-wheel which serves as the driving wheel.

Referring to the accompanying drawing and particularly to Fig. 1 thereof, the numeral 2 designates the head of the tower in which the shaft 3 is mounted for rotation. Fixed on the shaft 3 and designed to rotate therewith and drive the same, is the driving wheel 1 which is of ordinary or usual construction.

Secured to the tower 2 is a frame consisting of the bars 5 and 6, which serve to support a fixed fan or bladed wheel 4 through which the shaft 3 passes. This wheel 4 is arranged immediately adjacent the driving wheel 1 but is not revoluble. The wheel 4 has fewer blades than the wheel 1, and the blades on the wheel 4 are curved in a direction opposite that in which the blades of the wheel 1 are curved.

The air entering the wind-mill first passes between the blades of the fixed wheel 4 and is deflected, as shown by the arrows, against the blades of the driving wheel 1 thus increasing the force and velocity of rotation of the latter.

To increase the effectiveness of the device, we may provide a flaring or cone shaped guide 7 at the ends of the frame members 5 and 6, which guide serves to concentrate the air which enters the wind-mill.

It will of course be understood that the angle of inclination of the blades on each wheel, and the number of blades on each wheel may be varied at will, and that if desired the cone 7 may be dispensed with.

In Fig. 2, we have shown a somewhat modified form wherein no cone is employed. In this figure, 2, is the head of the tower, 3 the driving shaft and 1 the driving wheel fast on the shaft. 5 and 6 are frame members carried by the tower 2, and which are inturned at their ends, to form bearings in which the wheel 4 is fixed. The modified form is the same in principle and substantially the same in construction as the form of invention shown in Fig. 1, and its operation is the same.

What we claim is:—

A wind mill, embodying therein a tower, a shaft mounted for rotation in the head of said tower, a bladed driving wheel fixed to said shaft intermediate its ends, a frame extending at right angles from the head of said tower, said frame comprising upper and lower parallel metal bars, a fan or bladed wheel secured against movement to each of said bars, said wheel having a plurality of blades thereon fewer in number than the blades on the driving wheel and curved in a direction opposite that in which the blades on the driving wheel are curved, and a flaring wind guide carried at the ends of said bars adjacent said fixed wheel and adapted to guide the wind to the latter.

In testimony whereof we have affixed our signatures in presence of two witnesses.

JOSÉ SERRAMOGLIA.
ENRIQUE MIDDLETON.

Witnesses:
CARLOS RIES,
ANGEL PEDRASCHZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."