

T. JEFFERSON.
Wind-Mills.

No. 151,132.

Patented May 19, 1874.

Fig. 1.

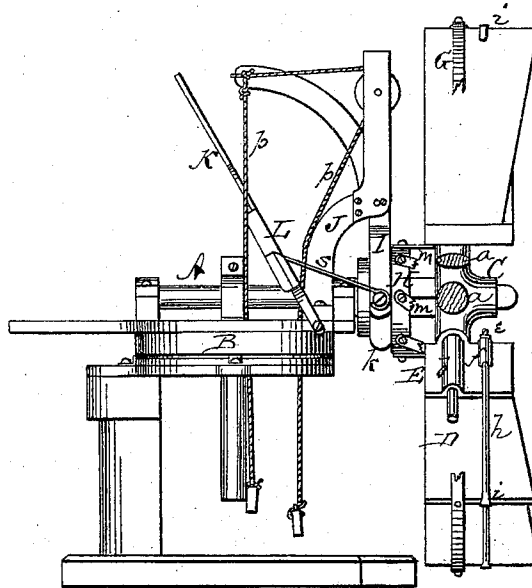


Fig. 3.

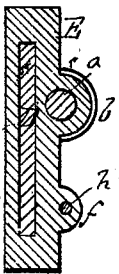
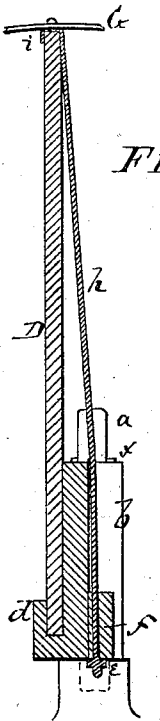
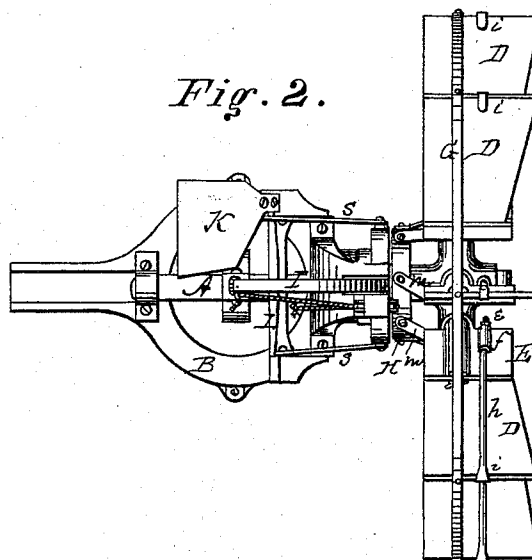


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

THOMAS JEFFERSON, OF WATSEKA, ILLINOIS.

IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. **151,132**, dated May 19, 1874; application filed April 16, 1874.

To all whom it may concern:

Be it known that I, THOMAS JEFFERSON, of Watseka, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Windmills; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the construction of the devices for attaching the wings or fans of a wind-wheel to the hub thereof, and also in the devices whereby said fans are placed at a greater or less angle of inclination to the wind, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a side elevation of a windmill embodying my invention. Fig. 2 is a plan view of the same, and Fig. 3 shows sections of one of the fans and the devices for attaching the same in enlarged dimensions.

A represents the main shaft or axle supported in suitable bearings on the usual turn-table B. C is the hub or head secured upon the shaft A and provided with a series of radiating arms, *a a*, for supporting the fans or blades D D. Upon each arm *a* is placed a casting, E, by said arm being passed through a tubular enlargement, *b*, formed on the side of the casting to one side of the center thereof, and a pin, *x*, is passed through the end of the arm, whereby the casting is prevented from coming off, but still allowed to turn on the arm. The casting E is made in the form of a plate with a socket, *d*, formed at the inner end on one side for the insertion of the end of the fan D. The tube *b* is on the other side of the plate, and on the same side as said tube is a perforated ear, *f*, the end of a rod, *h*. This rod has upon its outer end a hook, *i*, which fits over the outer end of the fan, and a nut, *e*, screwed upon the inner end of the rod secures the fan firmly to its place. A circular band,

G, connects the outer ends of all the fans, they being pivoted in said band on direct lines with the arms *a a*. The inner ends of the castings E are, by rods *m*, connected with a collar, H, sliding on the shaft A. This collar has a fork, *k*, placed over it, to which is pivoted a forked lever, I, and this lever is pivoted in a post or standard, J, on the turn-table, and operated by means of two weighted cords, *p p*, to throw the fans or blades D D in and out of the wind, as desired. K represents the regulating-fan, which is attached to a frame, L, pivoted on the turn-table, and this frame is, by rods S S, connected with the lower end of the forked lever I, by which means the inclination of the fans D to the wind will be automatically regulated according to and by the force or power of the wind.

I am aware that the fans of a windmill have been arranged to turn upon arms or journals radiating from a central hub. I am also aware that such fans have been arranged with other devices to be regulated both automatically and by hand, and I do, therefore, not claim such devices broadly as my invention.

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

1. The casting E, provided with tubular enlargement *b*, perforated ear *f*, and socket *d*, substantially as and for the purposes herein set forth.

2. The combination of the fan D, socket-casting E, and rod *h* with hook *i* and nut *e*, substantially as and for the purposes herein set forth.

3. The combination of the central hub C, with radiating arms *a*, castings E, fans D, sliding collar H, lever I, connecting-rods *m s*, fan K with frame L, and weighted cords *p*, all constructed substantially as and for the purposes herein set forth.

In witness that I claim the foregoing I have hereunto set my hand.

THOMAS JEFFERSON.

In presence of—

S. P. BELDEN,
GEO. C. HARRINGTON.