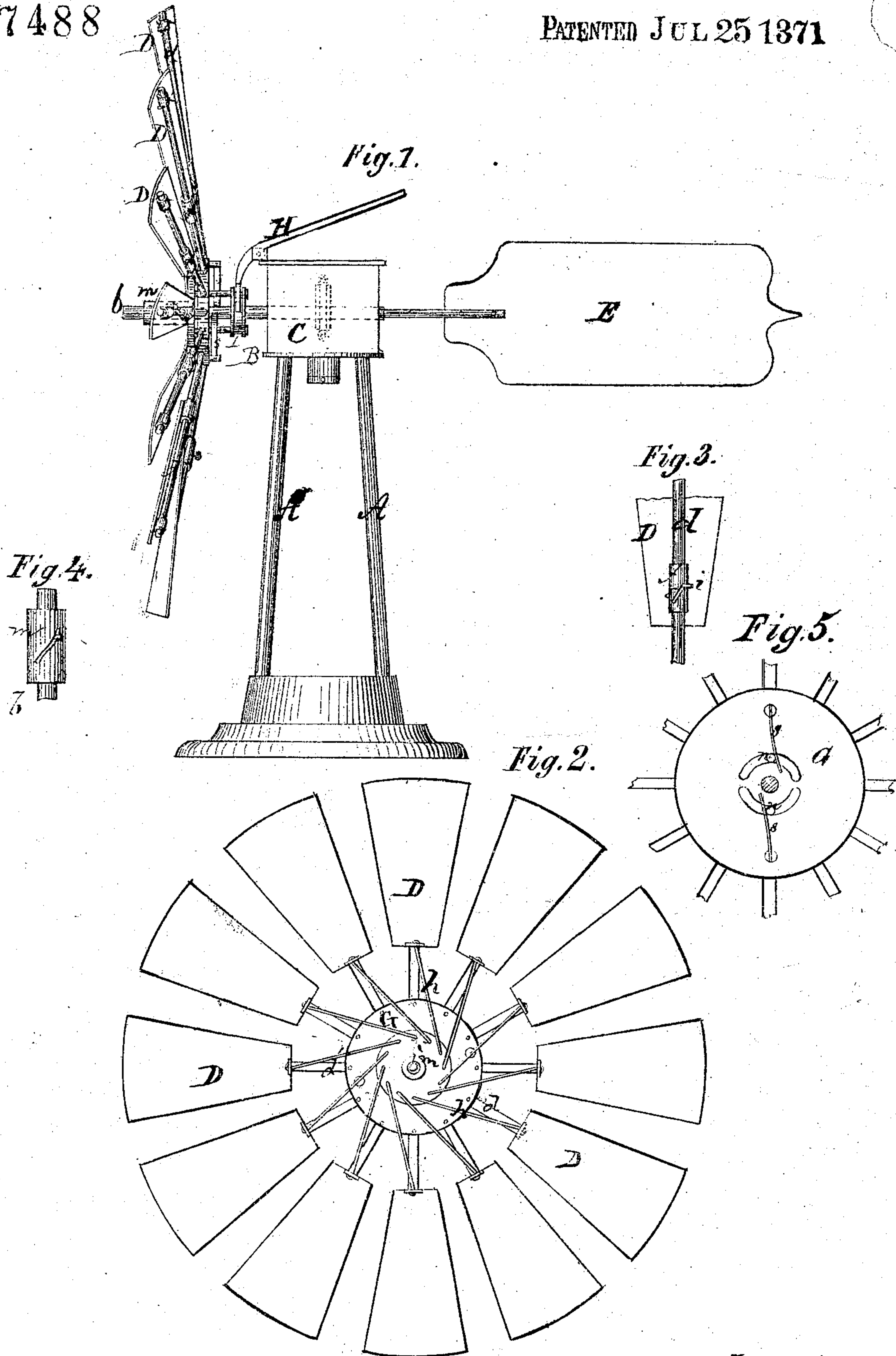


THO^S S. VAN DEVORT^S Wind Mill

117488

PATENTED JUL 25 1871



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS S. VAN DEVORT, OF YPSILANTI, MICHIGAN.

IMPROVEMENT IN WINDMILLS.

Specification forming part of Letters Patent No. 117,488, dated July 25, 1871.

To all whom it may concern:

Be it known that I, THOMAS S. VAN DEVORT, of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Windmills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a windmill, 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, in which—

Figure 1 is a side view of my entire windmill. Fig. 2 is a front view of the wheel. Figs. 3 and 4 are views of detached parts of the wheel, and Fig. 5 is a rear view of the center of the wheel.

A A represent two posts or standards united at the top by a face-plate, B. Over and between the same revolves the head-block C, giving a direct motion to the plunger with pump or other machinery below. From one side of the head-block C extends an arm, *a*, with wind-board E, while the shaft *b* has its bearings in said head-block and extends on the opposite side of the same. To this shaft *b* is attached the hub G, from the periphery of which radiates a series of round wooden arms, *d d*, for the support of the sails D D, one sail upon each arm. Each sail is secured to its arm by a clasp, *f*, at each end, and the clasp at the inner end of the sail is provided with a spiral slot, *e*, through which passes a screw or pin, *i*, into said arm, causing the sail to make a rotary movement in sliding out on the arm. In this manner the entire weight of the sail is made use of as a power to be acted upon by the centrifugal force when the wheel is in motion. Each

sail D is, by a rod, *h*, connected with a small wheel, *k*, attached to or forming part of a thimble, *m*, placed on the main shaft *b*. From the inner side of the wheel *k* two rods, *n n*, pass through curved slots in the hub G, and springs *s s*, attached to pins on the inner side of said hub, bear against these rods. These springs *s s*, when compressed by the sails, having been carried off on the arms by an undue motion, will reflex and cause said sails to assume their proper position for light wind. In the thimble *m* is a spiral slot, *e'*, with pin *i'* passing through the same into the shaft *b*, as shown in Fig. 4, and the inner ends of the rods *k k* are attached to a grooved wheel, I, back of the hub G, said wheel being operated by means of a lever, H, and a cord passing to the ground from the outer end of said lever. Thus, when desired, the sails may be turned out of the wind by hand from the ground by operating the lever H by means of the cord, thereby moving the wheels I and *k* outward on the shaft *b*. This motion of the wheel *k* gives to it also a rotary motion by means of the pin and spiral slot in the thimble *m*, and consequently turning the sails by the connecting-rods *h h*.

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

1. The sails D D, rods *h h*, wheel K, and thimble *m*, with spiral slot therein, all combined substantially as and for the purpose set forth.

2. The thimble *m*, with slot *e'* and pin *i'*, in combination with the rods *n n*, wheel I, and lever H, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOS. S. VAN DEVORT.

Witnesses:

JNO. GILBERT,
L. H. BENNETT.