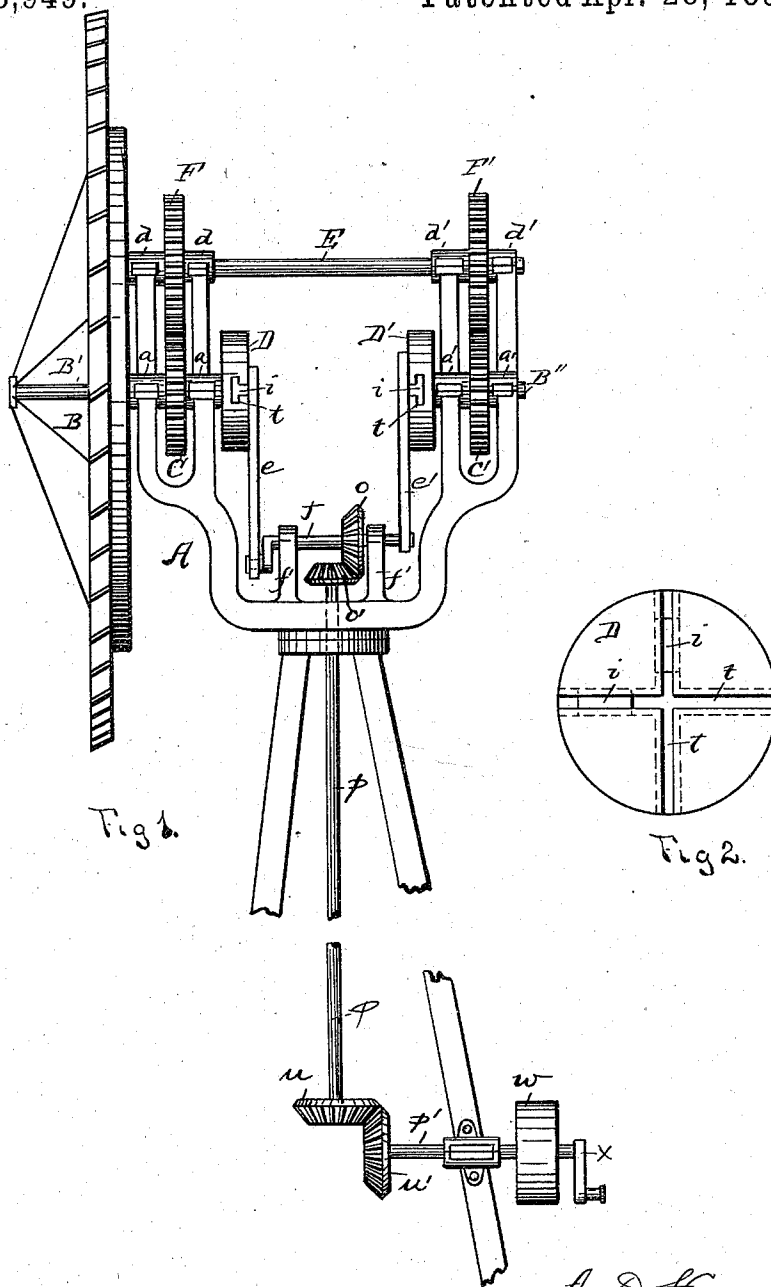


(No Model.)

A. D. HAY.
GEARING FOR WIND MOTORS.

No. 558,949.

Patented Apr. 28, 1896.



Witnesses
L. A. Knight.
J. Longenecker

A. D. Hay.
Inventor
By R. J. M. Cart.
his Attorney.

UNITED STATES PATENT OFFICE.

ABRAHAM D. HAY, OF NEW LEBANON, OHIO.

GEARING FOR WIND-MOTORS.

SPECIFICATION forming part of Letters Patent No. 558,949, dated April 28, 1896.

Application filed January 22, 1896. Serial No. 576,402. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM D. HAY, a citizen of the United States, residing at New Lebanon, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Gearing for Wind-Motors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to new and useful improvements in wind-motors, with a more particular reference to the gearing.

The object of the same is to produce a motor of the above class that is available for a variety of uses—such, for example, as cutting and grinding feed, sawing wood, pumping water, or doing any work requiring either rotary or reciprocating motion.

To these ends the invention has reference to parts that will be hereinafter described in the specification and pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a front elevation of a windmill-head with my improvements thereon. Fig. 2 is a detached view of one of the trammel-wheels.

The letter A designates the mill-head, upon one side of which a wind-wheel B is mounted, the shaft B' thereof being journaled in boxes *a a*.

C is a spur gear-wheel keyed to the central part of the shaft B' between the boxes *a a*, and D is a trammel-wheel keyed to the inner end of the shaft B'. In a direct line with the wheel D there is a second trammel-wheel D', keyed to a short shaft B'', journaled in boxes *a' a'* on the other side of the mill-head. C' is a spur-gear similar to wheel C and which is keyed to the central part of the shaft B''.

E is a shaft mounted across the upper part of the head in boxes *d d'*, and upon which

there are spur gear-wheels F and F', that mesh with the wheels C and C'.

From the foregoing description it will be noted that the wheel D is driven directly by the wind-wheel, it being on the shaft thereof, and that the companion wheel D' is driven through the spur-gears.

e and *e'* designate pitmen that are attached at one end to slides *i i*, that are confined and travel in slots *t t* in the trammel-wheels in a well-known manner. The lower ends of these pitmen are connected to a crank-shaft *f*, that is mounted in uprights *f'*, projecting from the mill-head. The ends of said shaft *f* are turned quartering, so that the shaft will not be liable to stop the wheels on centers.

o designates a bevel-pinion keyed to the shaft *f* and meshing with a similar pinion *o'*, that is keyed to the upper end of a vertical shaft *p*. This latter shaft drives a horizontal shaft *p'* through bevel-gears *u* and *u'*. The said shaft *p'* has a pulley *w* and a crank *x* thereon, through which rotary or reciprocating motion may be imparted for any of the purposes hereinbefore mentioned.

Having described my invention, I claim—

In a windmill, the combination with the mill-head and the wind-wheel, of trammel-wheels D and D' mounted on said mill-head the former directly on the shaft of the wind-wheel and the latter on a shaft on the other side of the mill-head in a line with the shaft of the wind-wheel, a train of gears actuated by the wind-wheel to drive wheel D' simultaneously with wheel D, and a crank-shaft journaled in the mill-head and actuated by said trammel-wheels and means for connecting said trammel-wheels and crank-shaft, substantially as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

ABRAHAM D. HAY.

Witnesses:

R. J. MCCARTY,
I. LONGENECKER.