(No Model.)

H. B. COLMAN.

WIND ENGINE.

No. 317,628. Patented May 12, 1885.

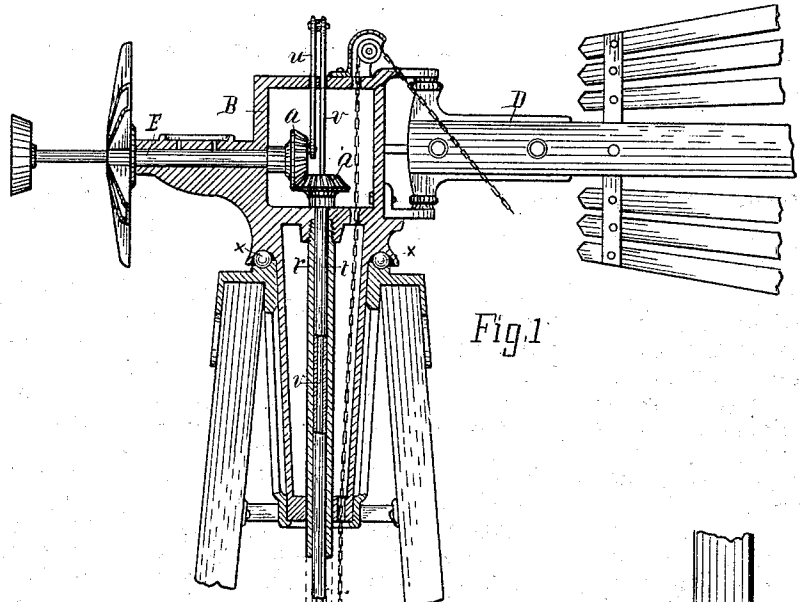


Fig. 1

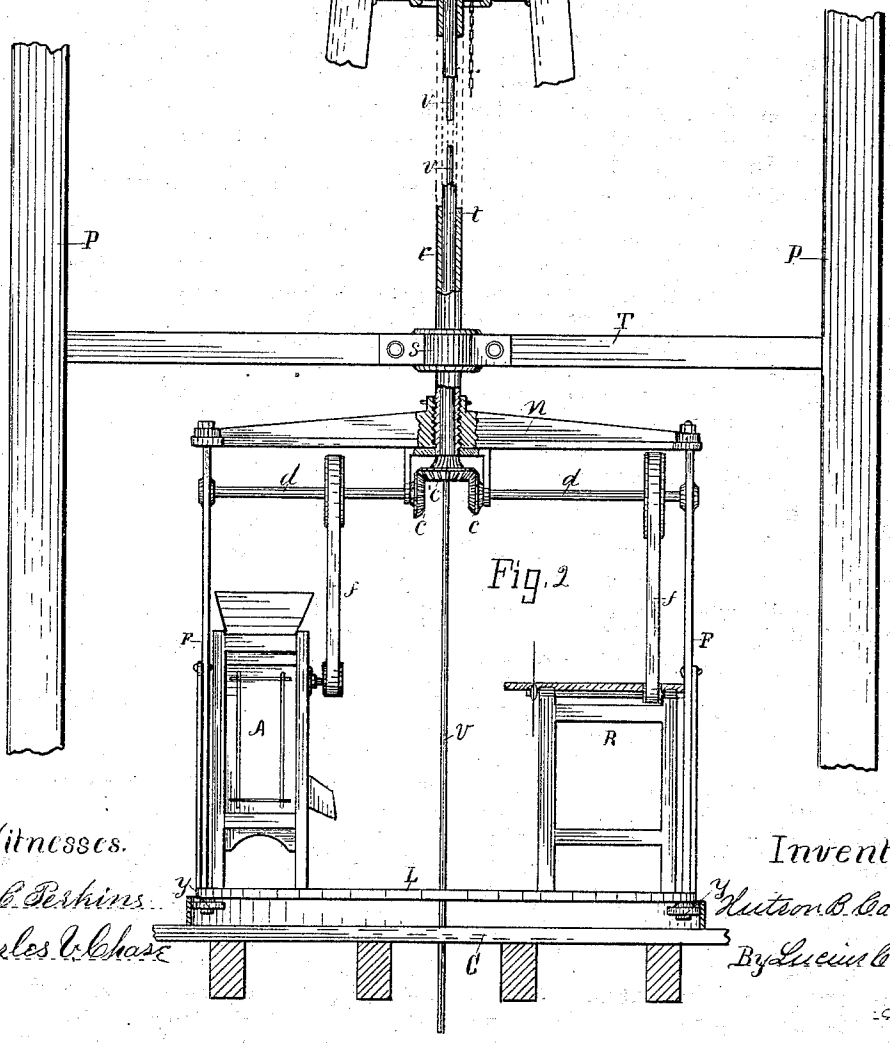


Fig. 2

Witnesses.
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UNITED STATES PATENT OFFICE.

HUTSON B. COLMAN, OF KALAMAZOO, MICHIGAN.

WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 317,628, dated May 12, 1885.

Application filed December 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, HUTSON B. COLMAN, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Wind-Engine, of which the following is a specification.

The object of this invention is to construct and combine, with a rotary shaft having a swiveled bearing-support, a machine chamber or frame and means for transmitting power connecting with said shaft and chamber in a manner that when the swiveled bearing-support is turned from one point of the compass to another the machine-chamber will turn with it, thus dispensing with swiveled reciprocating rods and means heretofore used for transmitting motion from a rotary shaft having a swiveled bearing-support to a rotary shaft with which machinery is connected.

A construction embodying the invention in effect simply amounts to a vertical extension of the swiveled bearing-support of the driving-shaft and having bearings therein for the driven shaft, and the machinery to be driven supported by said extension.

In the drawings forming a part of this specification, Figure 1 is a side elevation of a wind-engine, parts being broken away and in vertical section; and Fig. 2 is a side elevation of the lower part of the construction, portions being broken away and in section, the vertical broken shaft in one figure being a continuation of the shaft in the other figure.

In Fig. 1, B is the engine-head with the usual vertical extension in the top of the derrick, said parts constituting for the purposes of this description the swiveled bearing-support of the driving-shaft E, said shaft being the "wind-wheel shaft."

Connecting with the head B is a hollow tubing, *r*, the same being vertically extended and provided with bearings in the fixed beam T. This beam may represent the roof or floor of a building or a brace or a guide-beam connected with a frame, P P, according to the location of the engine.

With the lower end of the tubing *r* is connected the machine-chamber F. Thus the swiveled bearing-support above supports the weight of the machine-chamber F, and when the former turns, carrying the wind-wheel to different points of the compass, the chamber F turns with it. This tubular shaft *r* may be detachably connected with the head B and machine-chamber, as shown in Fig. 1, and in Fig. 2 in beam *n*, or these parts may be rigidly connected.

Below the floor L of the machine-chamber F at the sides are guide friction-wheels *y y* for engaging the interior surface of a circular guide-rim, Fig. 2. This construction may not be found always necessary. In some instances the wheels may be set at a vertical angle, and traverse the floor C beneath them.

The use of the chamber F is illustrated by the grinding-mill A and the sawing-machine R, supported by said chamber and carried with it when it turns. The driven shafts *d d* have bearing in the wall of the chamber and in a central support, at which latter point they engage the end of a vertical shaft, *t*, by means of bevel-gear *c' c c*. The upper end of this shaft is provided with bevel-gear *a'*, which meshes with the bevel-gear *a*, secured to the end of the driving-shaft E. By this means rotary motion is transmitted from the driving-shaft E to the driven shafts *d d* during all periods of change in the position of the wind-wheel and its swiveled head, because, as before stated, when said parts turn the machine-chamber and contents turn with them.

In the drawings, the shaft *t* is shown to be hollow. This construction need not be followed, however, except when desiring to connect a pump-rod, *v*, with the crank-disk of the driving-shaft and pass said rod down through the shaft into the chamber, and down through said chamber, if desired.

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

1. The combination of a rotary driving-shaft, a swiveled bearing-support for said shaft provided with a vertical extension, a machine-chamber connecting with said vertical extension, a driven shaft having bearings in said machine-chamber, and a transmitting power-shaft connecting in an operative manner the driving and the driven shafts, substantially as set forth.

2. The swiveled engine-head and wind-wheel shaft, the tubular extension and con-

nected machine-chamber, the driven shafts, a transmitting-shaft connecting in an operative manner by bevel-gears with the wind-wheel shaft and the driven shafts, and a beam forming guide-bearings to the lower end of the tubular extension, in combination.

3. A machine frame or chamber connecting with the swiveled bearing-support of a driving-shaft and containing a driven shaft and provided with guide-wheels at the lower sides, in combination with said driving-shaft and swiveled bearing-support and a transmitting-shaft connecting in an operative manner the driving and driven shafts, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

HUTSON B. COLMAN.

Witnesses:
SAM FOLZ,
JOS. A. FRANKLIN.