No. 686,200.

Patented Nov. 5, 1901.

H. BRABY.

WIND MOTOR.

(Application filed Apr. 25, 1901.)

(No Model.)

2 Sheets—Sheet 1.

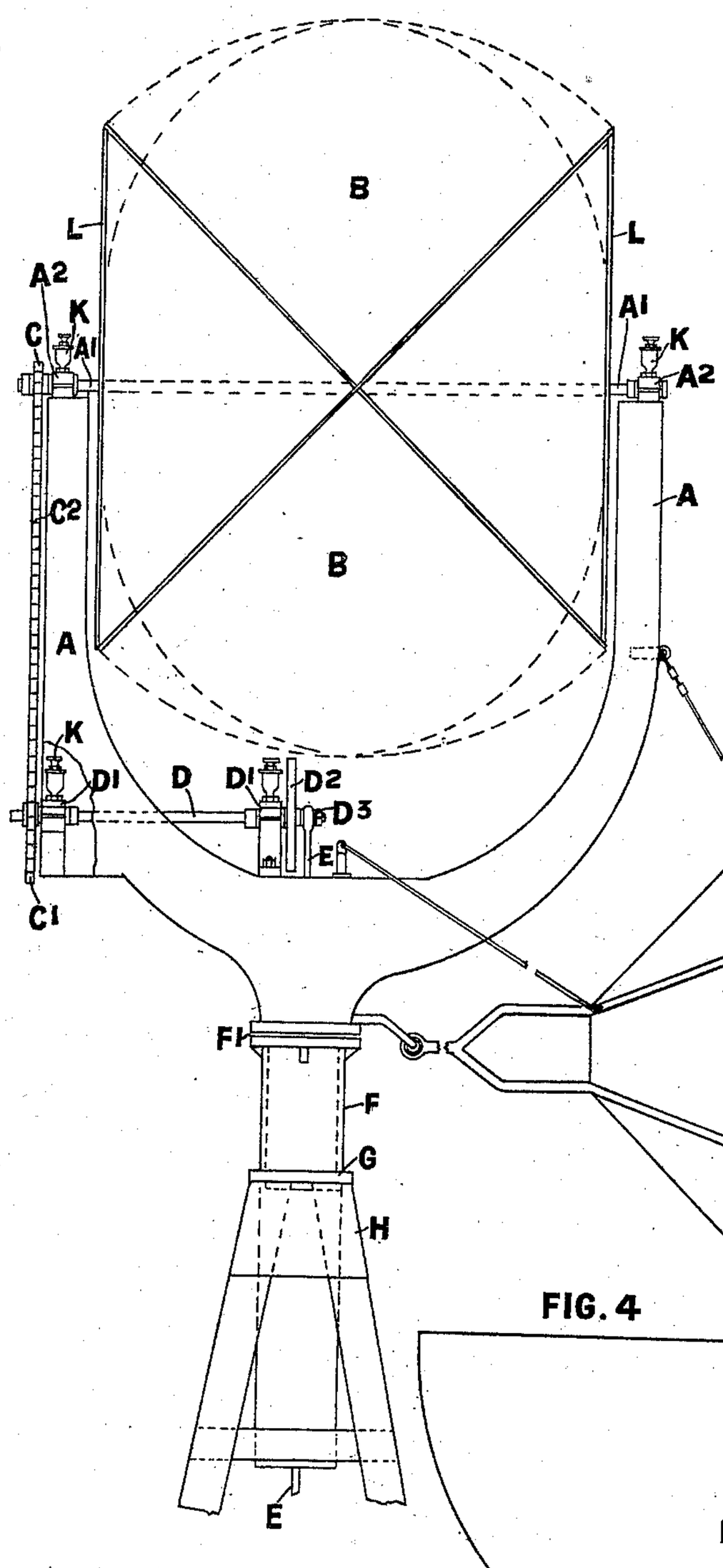
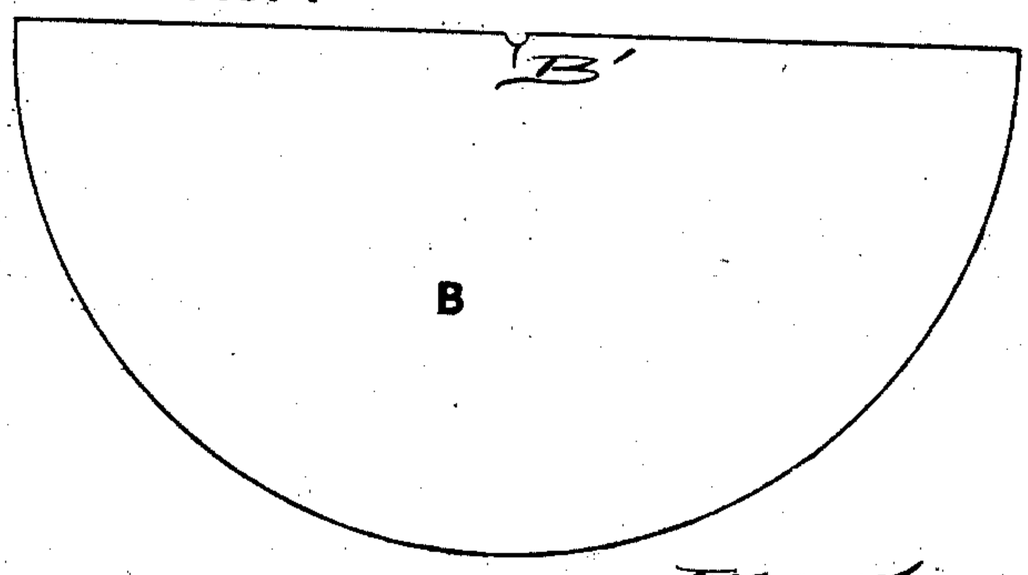


FIG. 1

FIG. 4



Witnesses:
M. Lee Helms.
F. B. Kellogg

Inventor
Henry Braby
By James L. Norris.
Assoc. Atty.

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2 Sheets—Sheet 2.

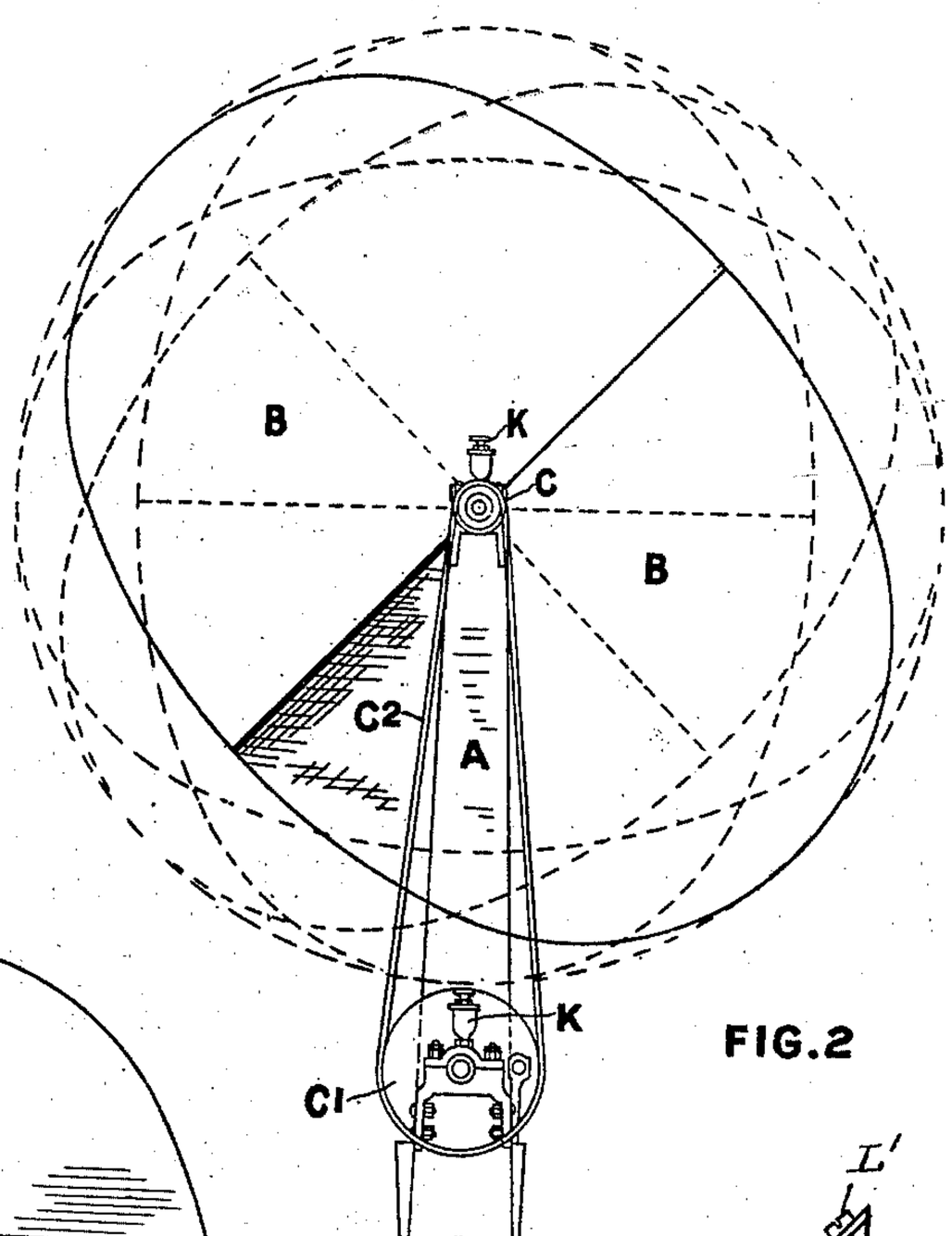
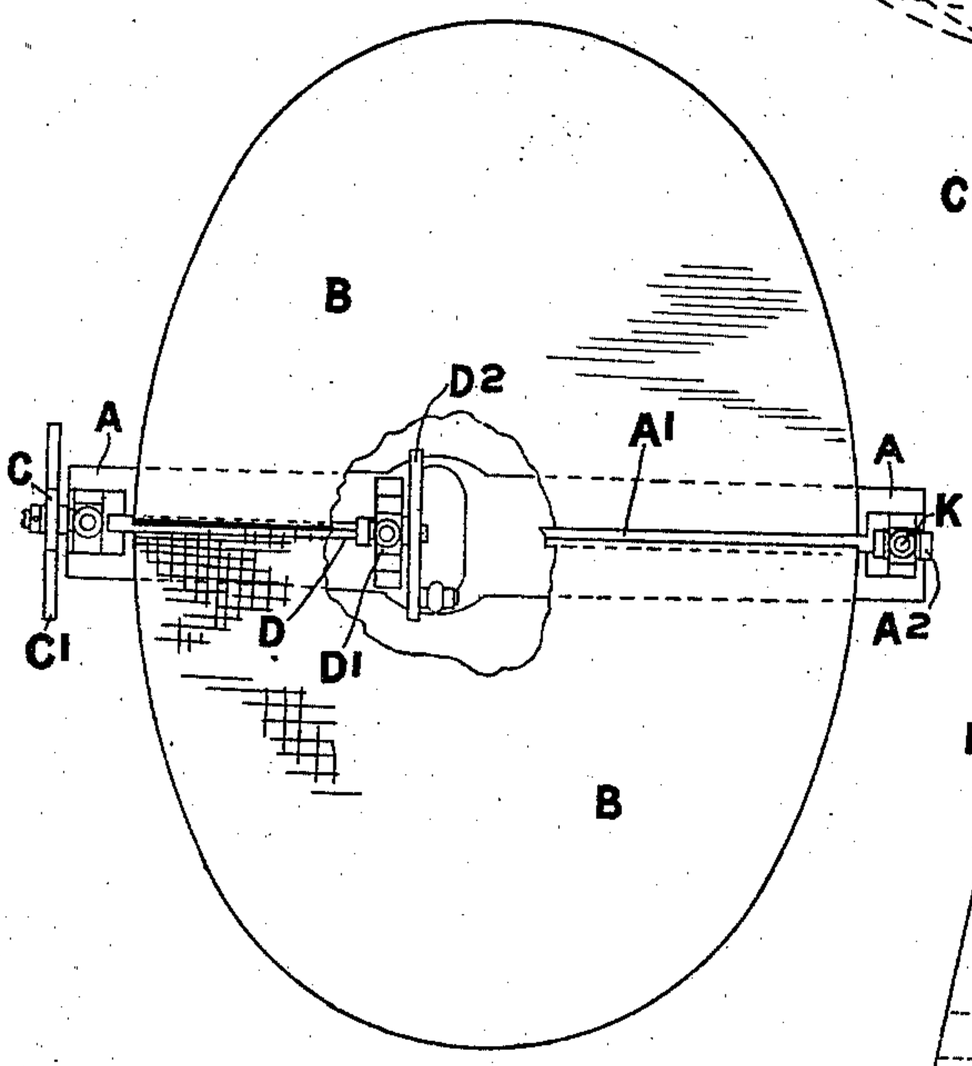


FIG. 2

FIG. 3



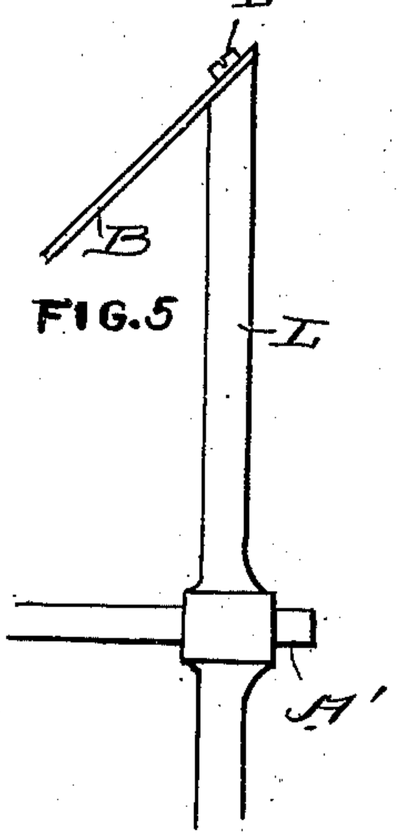


FIG. 5

Witnesses:
M. Lee Helms.
J. B. Keller

Inventor
Henry Braby.
By James L. Norris.
Asso. Atty.

UNITED STATES PATENT OFFICE.

HENRY BRABY, OF AYR, QUEENSLAND.

WIND-MOTOR.

SPECIFICATION forming part of Letters Patent No. 686,200, dated November 5, 1901.

Application filed April 25, 1901. Serial No. 57,683. (No model.)

To all whom it may concern:

Be it known that I, HENRY BRABY, a subject of the King of Great Britain, and a resident of Ayr, in the county of Gladstone, State of Queensland, and Commonwealth of Australia, have invented a certain new and useful Improved Wind-Motor, of which the following is a specification.

This invention relates to an improved wind-motor from which more power can be obtained than from those hitherto in use and which can be constructed at much less cost.

According to this invention a horizontal shaft revolves in bearings in a rotatable U standard or frame on the top of the tower. The said shaft carries sails or vanes of peculiar construction in that they are composed of two semicircular metal sheets (preferably of plain or corrugated galvanized iron or steel) secured across the shaft at an angle of about forty-five degrees and at right angles to each other. The sails are braced together and form an ellipse when viewed from either side or from either end. From the main shaft is driven a counter-shaft, having bearings in the said U-standard for reciprocating the pitman-rod.

In order that the invention may be clearly understood, reference will now be made to the accompanying drawings, in which—

Figure 1 is a front and Fig. 2 a side elevation, and Fig. 3 a plan, illustrating the improved wind-motor, while Fig. 4 is a plan of one of the sails. Fig. 5 is a detail in elevation, on an enlarged scale, showing the manner of securing the sails to the ties.

Portions of some of the figures have been shown broken away for the sake of clearness.

The same reference-letters indicate the same or corresponding parts.

A is a U-shaped standard or frame carrying the horizontal shaft A′ in the bearings A^2.

B B are the semicircular sails or vanes secured across the shaft at an angle of about forty-five degrees, each sail being at right angles to the other.

C C′ are sprocket-wheels on the shaft A and counter-shaft D, respectively, geared together by the chain C^2. The speed of the counter-shaft may be varied by changing the size of the sprocket-wheels.

D′ D′ are bearings for the shaft D.

D^2 is a crank-disk carrying the arm or crank-pin D^3 for reciprocating the pitman-rod E.

F is a cast-iron sleeve-pipe, having ball-bearings at F′ (not shown) between its flange and that of the pivot of the U-frame.

G is a Babbitt or other suitable metal bearing, and H a metal cap holding the top of the tower rigidly together.

J is the guiding and regulating vane.

K K are lubricating-cups.

L L are ties bracing the sails together.

The semicircular vanes or sails B have rounded notches, as B′, centrally of their straight edges to receive the shaft A′ substantially at the middle of the latter, while the opposite ends of the vanes are fastened by screws, as L′, to the outer ends of the oppositely-disposed arms of the ties L, the hubs of which are fastened to said shaft.

In operation the wind strikes the surface of the sails B, and the shaft A′ being rotated drives through the gear-wheels C C′ the counter-shaft D′, by means of which the pitman-rod E is reciprocated. The sails are kept to the wind by the U-frame being pivoted off the center, as shown clearly in Figs. 1 and 3.

It will be understood that any number of sails may be employed, this being simply a matter of choice, and that alterations may be made in the details without departing from the spirit of the invention.

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

1. In a wind-motor, a horizontal shaft and a pair of semicircular sails secured at their inner straight edges directly to said shaft and substantially midway of the length of such edges, said sails being set approximately at right angles to each other.

2. In a wind-motor, a horizontal shaft and a pair of semicircular sails secured at their inner straight edges directly to said shaft and substantially midway of the length of such edges, said sails being set approximately at right angles to each other combined with a rotary U-shaped standard the branches of which support the opposite ends of said shaft.

3. In a wind-motor, a horizontal shaft and a pair of semicircular sails secured at their inner straight edges directly to said shaft and substantially midway of the length of such

edges, said sails being set approximately at right angles to each other combined with a rotary U-shaped standard the branches of which support the opposite ends of said shaft and said standard being pivoted off the center.

4. In a wind-motor, a horizontal shaft and a pair of semicircular sails secured at their inner straight edges directly to said shaft and substantially midway of the length of such edges, said sails being set approximately at right angles to each other combined with a rotary U-shaped standard the branches of which support the opposite ends of said shaft a second shaft also supported by said standard and driving connections between said shafts.

HENRY BRABY.

Witnesses:
JOHN WILLIAM MAYHEW,
JAMES JORDAN COLEMAN.