(No Model.)

C. A. YOUNG.

WIND ENGINE.

No. 266,667. Patented Oct. 31, 1882.

Fig. 1.

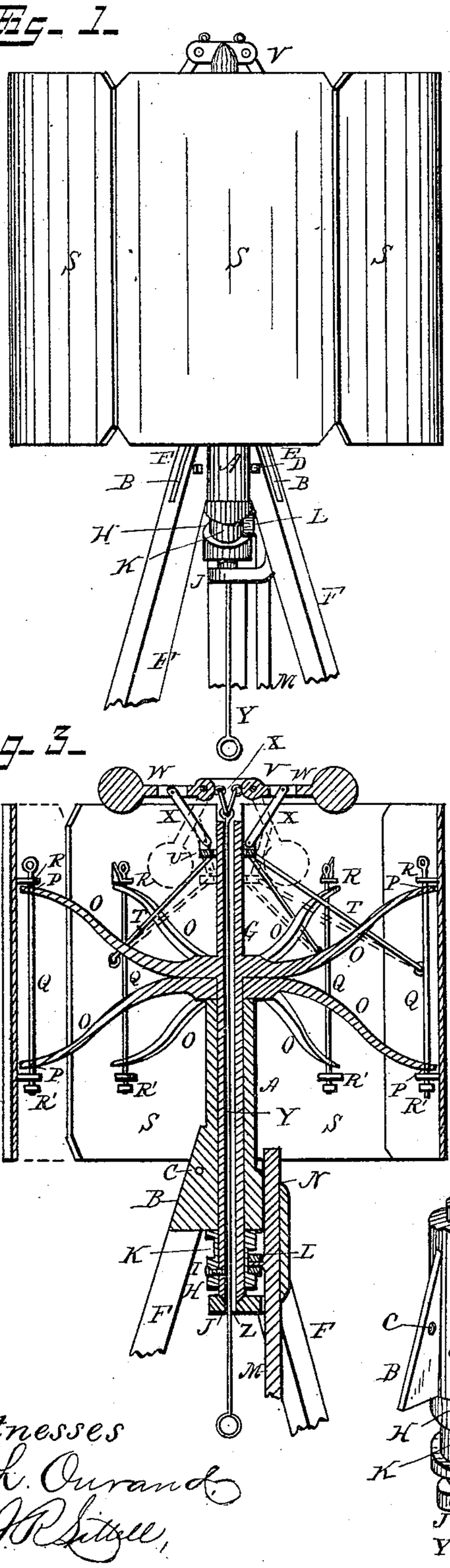

Fig. 2.

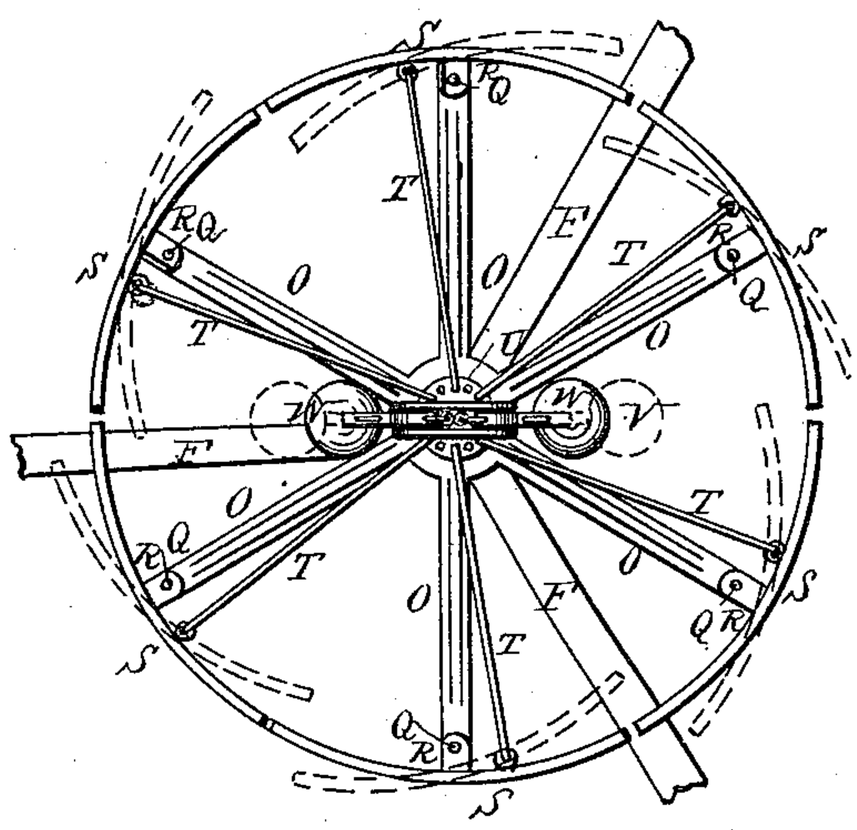

Fig. 3.

Fig. 4.

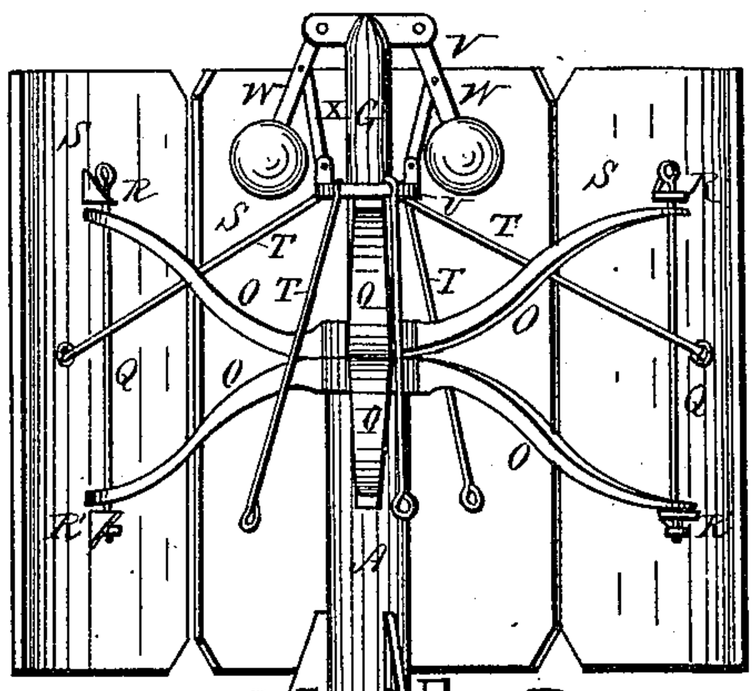

Fig. 5.

Witnesses
F. L. Ourand.
J. R. Sitgell.

Inventor.
Chas. A. Young.
by Casnow & Co.
Atty's.

UNITED STATES PATENT OFFICE.

CHARLES A. YOUNG, OF STERLING, COLORADO, ASSIGNOR OF ONE-HALF TO DAVID B. DAVIS, OF SAME PLACE.

WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 266,667, dated October 31, 1882.

Application filed September 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. YOUNG, of Sterling, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Wind-Engines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to wind-engines, and has for its object to provide a simple, durable, inexpensive, automatically-governed, and efficient engine, that will readily accommodate itself to varying winds.

In the drawings, Figure 1 is a side view of my improved wind-engine; Fig. 2, a top view; Fig. 3, a vertical longitudinal sectional view. Fig. 4 is a side view with a number of the fans or wings removed. Fig. 5 is a perspective detail view of the plunger-operating mechanism and adjacent parts.

Referring to the drawings, A designates a vertical cylinder, forming a box or bearing for the wheel-shaft, and provided at its bottom with radial flanges B, each having a perforation, C, through which passes the pin or bolt D, that secures the bifurcated ends E of supports F on said flanges, as shown.

G is the hollow vertical wheel-shaft, which is provided with a collar, H, at its lower end, secured by a set-screw, I. This collar H is arranged between the bottom of boxing A and a bracket, J, depending therefrom, and is provided with an eccentric annular groove, K, in which travels a roller, L, journaled on the plunger-rod, M, which works in a vertical slot or perforation, N, in bracket J. Thus as shaft G turns with collar H the wheel or roller L travels in eccentric groove K, and a reciprocating motion is imparted to the plunger M, from which the power is received to drive the mechanism or machinery desired.

From shaft G, above cylinder A, radiate a series of substantially <-shaped arms, O, the ends of which are provided with perforations P, through which passes a vertical pivot-pin, Q, also passing through brackets R R′ at the top and bottom, respectively, of the vertical convexo-concave wings or fans S.

Each wing S has an about centrally-located rod, T, pivoted near the edge and extending up and pivoted to a vertically-sliding collar, U, on shaft G. Collar U is operated by a governor, V, which comprises the ball-rods W W, pivoted in the top of shaft G, and connected to the collar by pivoted links X X.

To the links pivoted to the inner ends of the ball-rods W W is connected a vertical stop-rod, Y, extending down through hollow shaft G and a perforation, Z, in bracket J to the ground.

The operation and advantages of my invention will be readily understood. The normal weight of the governor-balls is sufficient to keep them down and the wings open, ready to catch the wind when light; but in gusts or very strong winds the increased velocity of the wheel will quickly cause the governor, which of course revolves with shaft G, to rise of its centrifugal force, thus elevating the collar U, and, by reason of connecting-rods T, drawing in the wings out of engagement. By this means the velocity is quickly and automatically regulated in all forces of wind, and stopped altogether when it becomes too strong. The operator, to stop the engine, has only to grasp rod Y and bring it down, which will cause the governor and collar U to rise and draw the fans in out of operation.

I claim as new—

1. The combination of a cylindrical boxing or bearing, A, having a depending bracket, J, at its lower end, provided with a vertical slot or perforation, a rotary shaft, G, carrying the wheel, and a collar, H, having an annular eccentric groove, K, and the plunger-rod carrying a roller moving in groove K, as set forth.

2. The combination, with the cylindrical boxing or bearing A, having radial bottom flanges, B, provided with perforations C, of the supports F, having bifurcated top ends, E, and the cross pin or bolt, as set forth.

3. The combination of the vertical cylindrical bearing A, a hollow shaft, G, working

therein, and having radial arms above cylinder A, to which are pivoted vertical fans or wings, the governor having its ball-rods pivoted on top of shaft G and carrying a sliding collar, U, pivoted connecting-rods T, and a vertical stop-rod, Y, connected to the ends of the governor ball-rods and extending down through shaft G, as set forth.

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

CHARLES A. YOUNG.

Witnesses:
D. B. DAVIS,
M. C. KING.