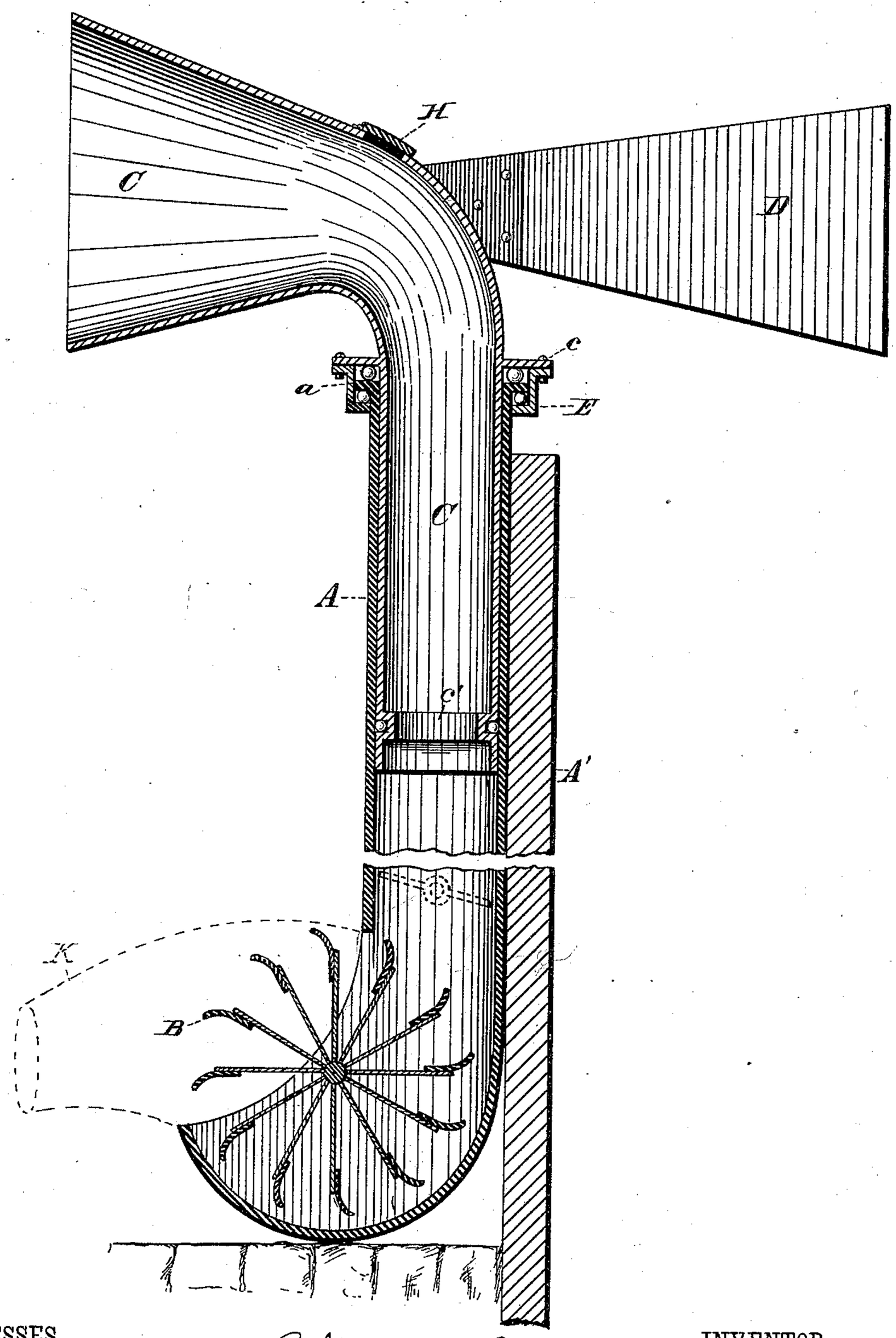
(No Model.)

C. S. GARRIGUS.

WIND POWER.

No. 299,127. Patented May 27, 1884.



WITNESSES

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UNITED STATES PATENT OFFICE.

CULBERSON S. GARRIGUS, OF TIFFIN, OHIO, ASSIGNOR OF ONE-HALF TO J. H. PITTENGER, OF SAME PLACE.

WIND-POWER.

SPECIFICATION forming part of Letters Patent No. 299,127, dated May 27, 1884.

Application filed July 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, CULBERSON S. GARRIGUS, of Tiffin, in the county of Seneca and State of Ohio, have invented certain new and useful Improvements in Wind-Powers; and I do hereby 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 pertains to make and use the same.

My invention relates to improvements in wind-powers; and it consists in certain features of construction, and in combinations of parts hereinafter described, and pointed out in the claims.

In the drawing the figure is a side elevation in vertical section of my new device.

A represents a tube of any desired size supported in some manner—as by the post A′—in a vertical position, and terminating below in a casing suitable for the wheel B, as shown. This wheel is supported on a shaft that is journaled in boxes attached to the sides of the case. The shaft extends beyond the boxes on one or both sides, and may be provided with pulleys, gears, cranks, or any devices for transmitting power. The upper end of the tube A has an outside flange, *a*.

C is also a tube operating inside of the tube A, and bent at about a right angle at the upper end, and terminating in a broad funnel, C′, as shown. The tube C is provided with the flange *c*, to which is bolted the flange E. The combination of these flanges *a*, *c*, and E forms two annular chambers, the one above and the other below the flange *a*. These chambers are provided with anti-friction balls. The balls in the upper chamber support the weight of the tube C and its attachments, while the balls in the lower chamber prevent the said tube from being lifted by the wind, and also guide and prevent the tube C from coming in contact with the tube A at this end. The lower end of the tube C has an annular recess, *c′*, also provided with balls, that guide laterally the lower end of the tube C and keep it from contact with the tube A, so that by means of these balls above and below the said tube C may revolve almost frictionless.

D is a vane attached to the part C, and so located as to always hold the mouth of the funnel toward the wind.

H is a safety-valve, held closed, preferably, by a spring or its own weight, but that will open outward by a pressure from within, and will relieve the tubes from any surplus pressure of wind.

The operation of my device is so apparent from a view of the drawing that but little description is necessary. The broad funnel gathers the wind from any direction from which it may be blowing and concentrates it in the tubes, by means of which it is brought in full force to act on the wheel B. A valve or damper may be placed in the pipe *d*, as shown in the dotted lines, by which the speed of the motor may be controlled, either by hand or by a governor driven from the motor, substantially in the manner that engines are controlled.

The parts broken in the drawing may extend upward to any distance, so as to reach above all obstructions and receive the wind in full force. When the power of the wheel is not required, a hood may be placed over the discharging-orifice, as shown in dotted lines at K, and the air conducted to any part desired and used to good advantage for renovating vaults, cellars, and the like, or for ventilation.

As a motor this device has some marked advantages over the ordinary windmill, in that the power may be applied as near the ground as desired and direct from the motor, and without any intermediate transmitting mechanism.

What I claim is—

1. The combination, with a stationary tube provided at its lower end with a wind-wheel, and a tube swiveled to the stationary tube, and provided with an open flaring mouth and vane, of a damper located above the wind-wheel, and adapted to regulate the supply of air to the latter, substantially as set forth.

2. The combination, with a stationary tube provided at its lower end with a wind-wheel, and a tube swiveled to the stationary tube, and provided with an open flaring mouth and a vane, of a damper situated above the wind-wheel, and a relief-valve situated above the damper, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 29th day of June, A. D. 1883.

CULBERSON S. GARRIGUS.

Witnesses:

ALBERT E. LYNCH,

CHAS. H. DORER.