W. W. Webb,

Fan Blower.

No. 113,229. Patented Mar. 28. 1871.

Fig 2.

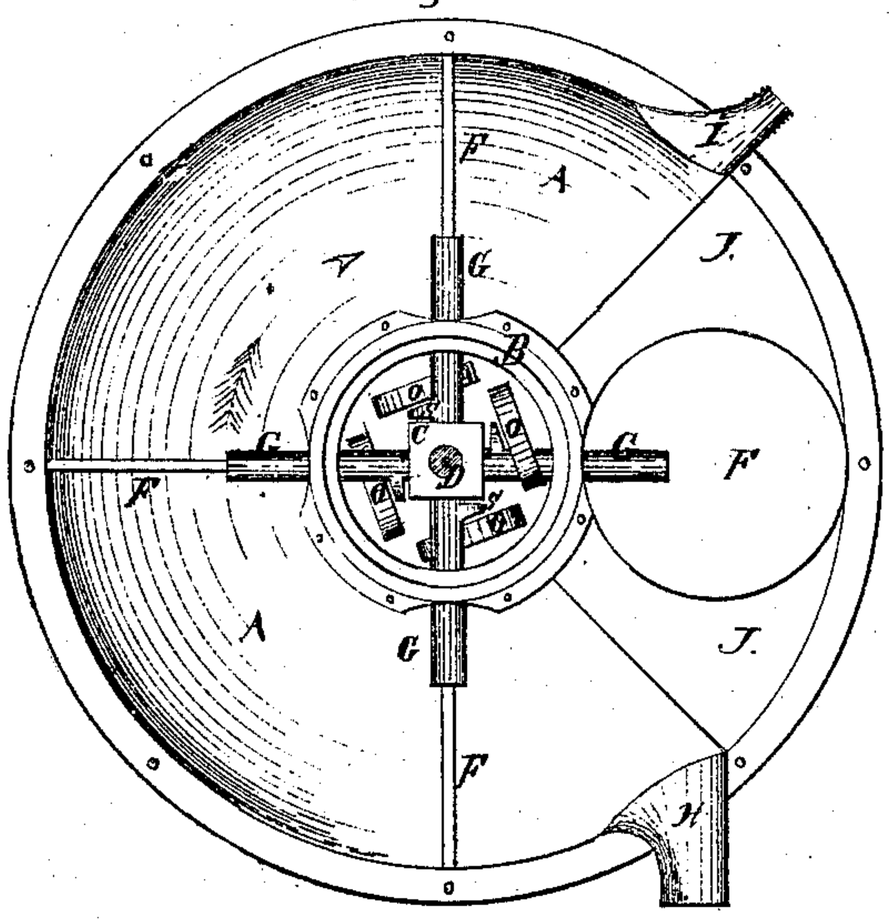

Fig 3.

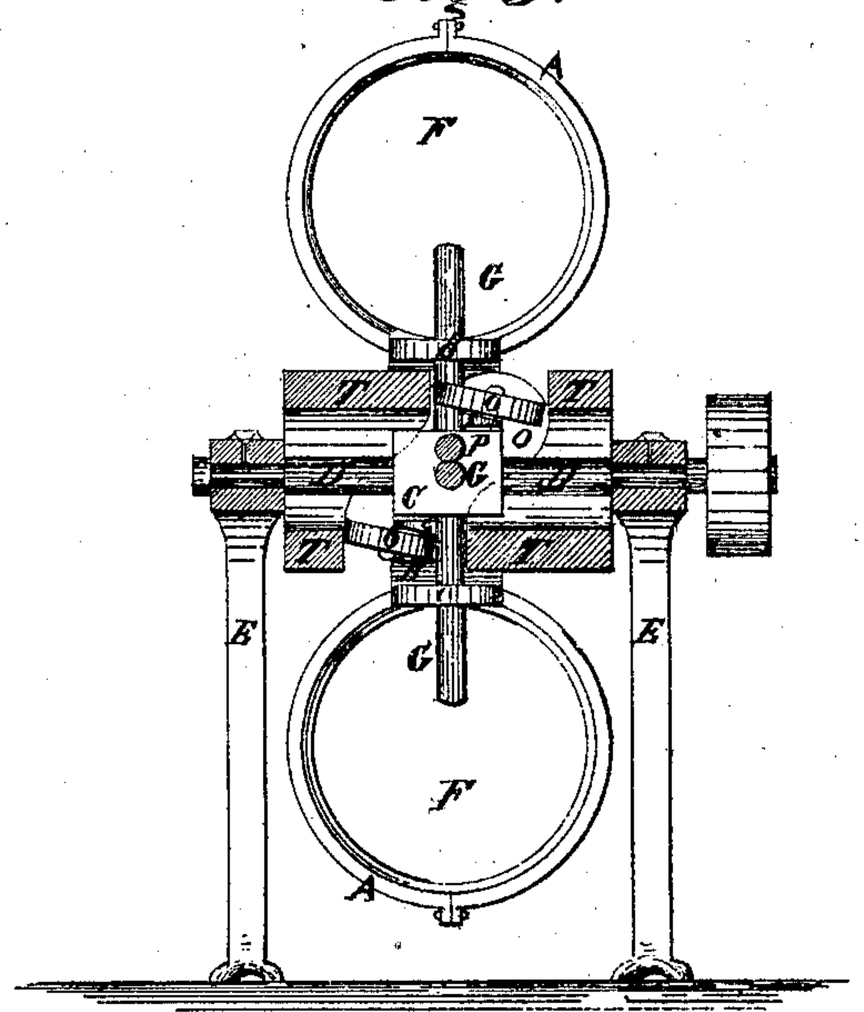

Fig 1.

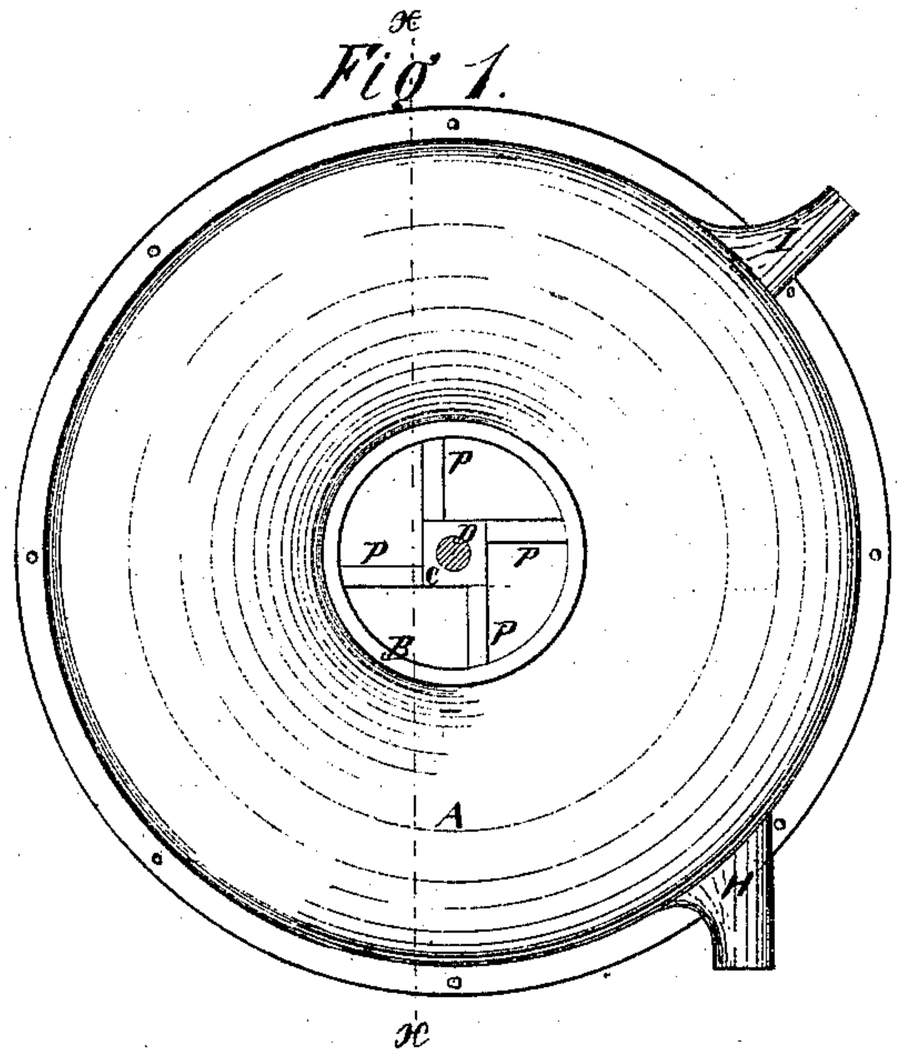

Fig 4.

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WILLIAM W. WEBB, OF INDIANAPOLIS, INDIANA.

Letters Patent No. 113,229, dated March 28, 1871.

IMPROVEMENT IN BLOWERS.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM W. WEBB, of Indianapolis, in the county of Marion and State of Indiana, have invented certain Improvements in Rotary Fan-Blowers; of which the following is a specification.

Nature and Objects of the Invention.

My invention consists in the construction, arrangement, and mode of operation of the rotary fan-blower, as will hereinafter more fully appear.

Description of the Accompanying Drawing.

Figure 1 is a side elevation of a rotary fan-blower embodying my invention.

Figure 2 is a side elevation of the same, with one-half of the external case removed.

Figure 3 is a vertical transverse section of the same taken on line *x x*, fig. 1.

Figure 4 is a stretched-out view of the cam-groove formed by the pieces T, in which the rollers O travel that give the required movement to the fan-blades F.

General Description.

A is the external case of the fan-blower, formed of two circular pieces of metal or other suitable material, that together constitute a circular tube, as shown, and which is made to fit, at the inner circle of the tube, into a groove in a rotating ring, B, into which the inner edges of the case A is packed, so as to form an air-tight joint.

C is a hub, fixed on a driving-shaft, D, that has its bearings in suitable boxes in the frame E.

The fan-blades or wings F are attached to shafts G, having their bearings in the hub C and in the ring B.

One-fourth of the case A being the space between the induction and eduction-orifices H and I, is filled with any suitable material to form an abutment, J, leaving merely space between the filling in the halves for the blades F to pass edgewise, as shown in fig. 2.

The shaft G, to which the fan-blades F are attached, have arms S near the hub C, in which the wheels O are pivoted, as shown, standing at an angle of forty-five degrees to the fan-blades.

In their rotary movement the wheels O travel in a cam-groove formed by the pieces T, which is shown in its stretched-out form in fig. 4, so arranged as to turn the fan-blades parallel to the plane of their rotation just as they pass the eduction orifice I and enter the narrow space in the abutment J, and transversely, so as to fill or close the circular tube as they emerge from the abutment, so as to gather the air at the induction-tube H.

The direction of rotation is indicated by the arrow in fig. 2.

The position of all the fan-blades, when one of them is turned edgewise in passing through the abutment J, is shown in fig. 2.

The hub C is supported in position by spokes P, as shown in fig. 1, but not shown in the other figures to avoid confusion.

The same device may be employed as a lift-and-force pump.

Claims.

I claim as my invention—

1. The wheels O and arms S, attached to the fan-blade shaft G, in combination with the cam-groove formed by the pieces T, arranged as and for the purpose set forth.

2. The ring B, in which the hub C and fan-blade shaft G are arranged, in combination with the case A, substantially as set forth.

WILLIAM W. WEBB.

Witnesses:
O. F. MAYHEW,
WM. H. WEEKS.