

McIlwain & Brunsfel,

Rotary Blower.

No. 103482.

Patented May 24, 1870.

Fig. 1.

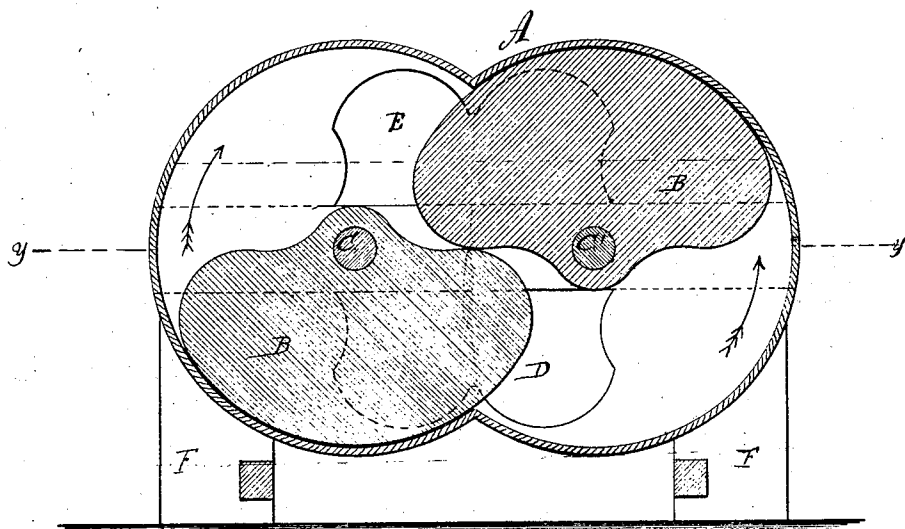
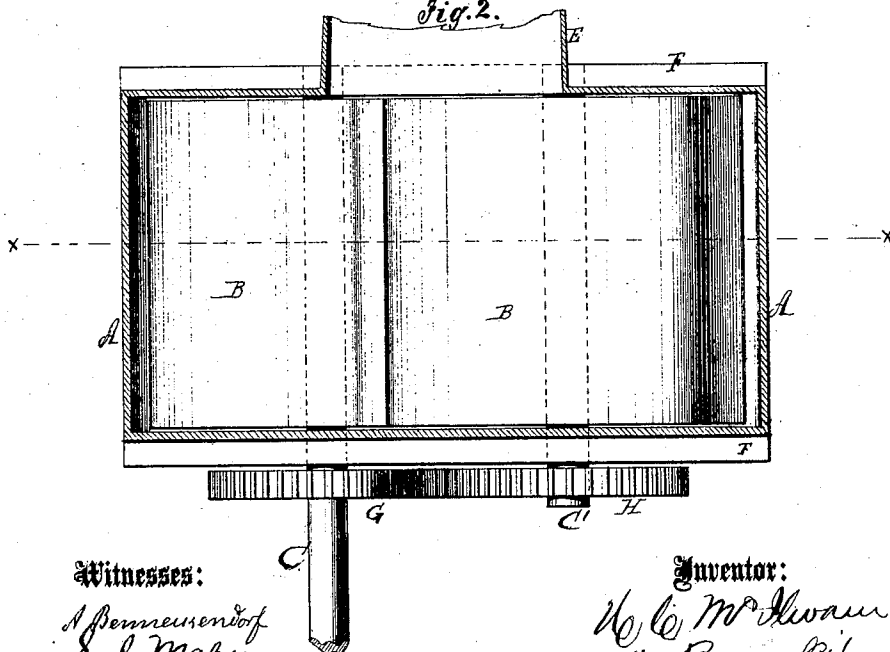


Fig. 2.



Witnesses:

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PER

United States Patent Office.

HENRY C. McILWAIN AND ALONZO BRUMFIEL, OF CONNERSVILLE,
INDIANA.

Letters Patent No. 103,482, dated May 24, 1870.

IMPROVEMENT IN ROTARY BLOWERS.

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

To all whom it may concern:

Be it known that we, HENRY C. McILWAIN and ALONZO BRUMFIEL, of Connorsville, in the county of Fayette and State of Indiana, have invented a new and useful Improvement in Rotary Blower for Furnaces and other purposes; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in blowers for forcing air for the various purposes for which artificial blasts or currents of air are required; and

It consists in rotating, in a properly-constructed shell or casing, two elliptical-shaped fans or wings, on separate centers, in such a manner that their surfaces roll together air-tight, constantly receiving air, and forcing it out, as will be hereinafter more fully described.

In the accompanying drawing—

Figure 1 is a vertical cross-section of the blower on the line *z z* of fig. 2.

Figure 2 is a horizontal longitudinal section of fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A represents the shell or stationary casing, consisting of two open-sided cylinders, united, as seen in fig. 1, each portion having its own distinct center, from which its circle is described, as seen in the drawing.

B B represent the two rotating fans or wings, which are fixed on shafts, C C', in the center of the circles of the casing. The form or outline of these wings is seen in fig. 1.

The outer sides are arcs of circles, correspond with the casing in diameter, and work air-tight therewith.

The inner sides of the wings are sinuous in form, but the sinuosities of one work air-tight with the outer or circular side of the other, so that the air has no chance to escape at their centers.

D is an orifice at one end of the casing, through which the air is admitted, seen in the drawing, fig. 1, partly in dotted line.

E is the orifice through which the air is expelled, also partly seen in dotted lines.

F represents the frame of the machine, the upper bars of which support the shafts of the fans, as seen in fig. 1.

These shafts are geared together by cog-wheels G H, fig. 2, so that they revolve at a uniform speed.

The power is applied to the shaft C by means of pulley and belt, or in any other suitable manner.

The wings revolve in the direction of the arrows, and act alternately in sweeping in air through the orifice D, and forcing it out through the orifice E to any point where it may be desired to discharge it.

This is a very simple and cheap device for blowing, and its advantages will be readily understood by all who are acquainted with the subject.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. As an improvement in fan-blowers, a casing, A, formed of two equal circular arcs, having their lines of junction in the plane of their common chord, and having inlet and outlet-apertures, D E, in the sides thereof, as shown and described.

2. The two fans B B, arranged on shafts located in the same plane, and each composed of a semi-cylinder rounded off at the diametrical ends, concaved between said ends and the axis, and rising in a curve over said axis, so that their corresponding sinuosities will always be in contact at some point, and constantly work air-tight together, all as described.

3. The case A, constructed as described, and having side apertures D E, for receiving and discharging air, combined with two fans, B B, of the form shown, and relatively arranged within the case, as set forth.

HENRY C. McILWAIN.
ALONZO BRUMFIEL.

Witnesses:

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