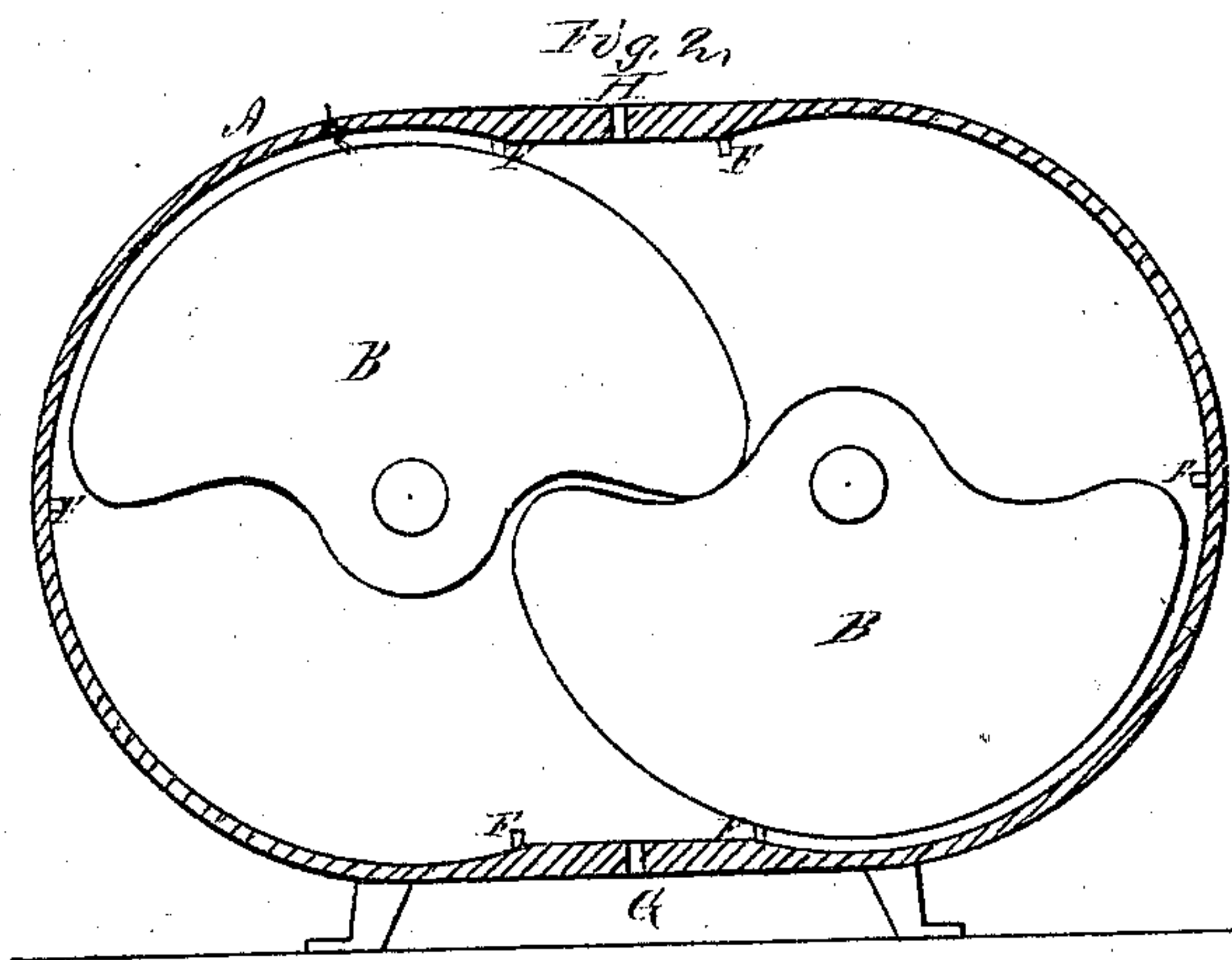
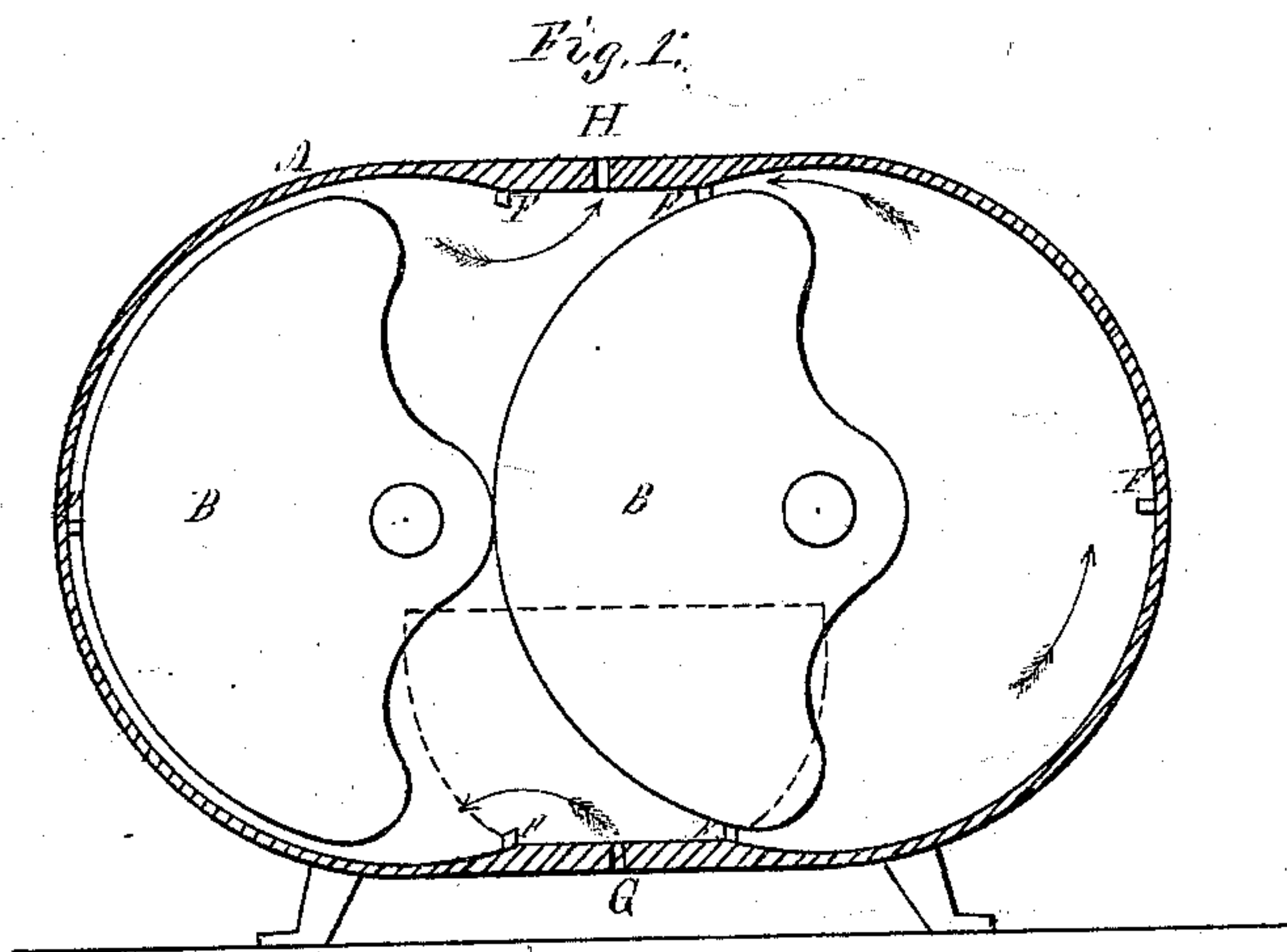


*McIlwain & Brumfiel,*

*Rotary Blower.*

*No. 110,929.*

*Patented Jan. 10. 1871.*



*Witnesses*

*Jos. A. Ellis.*  
*J. V. White*

*Inventors*

*H. C. McIlwain & A. Brumfiel.*

*For*

*J. H. Alexander*  
*Atty.*

# United States Patent Office.

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

Letters Patent No. 110,929, dated January 10, 1871.

## 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 certain new and useful Improvements in Rotary Blowers; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

Our present invention is intended as an improvement upon the rotary blower for which Letters Patent were granted to us May 24, 1870; and

It consists in placing "rubs" at intervals around the inside of the casing for a purpose that will be hereinafter fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 represents one of the fans finishing its discharge for one revolution and the other fan on point of commencing to discharge.

Figure 2 represents a half-way position of the fans.

A represents the stationary shell or casing.

B B, fans which are geared together and run at equal velocity.

G G are openings at the bottom and each end of casing to receive air; and

H is the opening at the top of the case for discharge orifice, which may be of any suitable size or shape.

F F are rubs, which may be adjustable and made of soft metal, rubber, wood, or other suitable material.

They are placed at intervals around the inside of the casing A, so that the long back or extremity of the fans will bridge from one to the other and not touch the case between the rubs but all the time be in contact with one of them, and thus let no air escape back to the receiving orifice and secure the same air-tight effect as if the whole of the cylindrical part of the case was bored out or made true and the fans fitting air-tight and rubbing all the way around.

The advantages gained will be cheapness and ease of construction and considerable reduction of friction; in fact, to almost nothing.

We are aware of the patent granted to P. H. & F. M. Roots, January 21, 1868, the difference between our invention and theirs being that they employ strips of metal or wood across the minor surface of the shell, so as to obviate the necessity of finishing off the whole inner surface, and also for the purpose of reducing the friction of the pistons in their revolutions; whereas, we employ adjustable strips of rubber, so arranged on the interior of the case that in the revolutions of the fans, no air can escape except through the orifice intended for this purpose.

What we claim, therefore, is—

The adjustable rubber "rubs," in combination with fans B B, relatively so arranged that the fans will bridge from one rub to the other, at or near the point of deviation from the line of the arc in the shell, as and for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

HENRY C. McILWAIN.  
ALONZO BRUMFIEL.

Witnesses:

SAMUEL GREEN,  
GEORGE MORRIS.