

No. 748,436.

PATENTED DEC. 29, 1903.

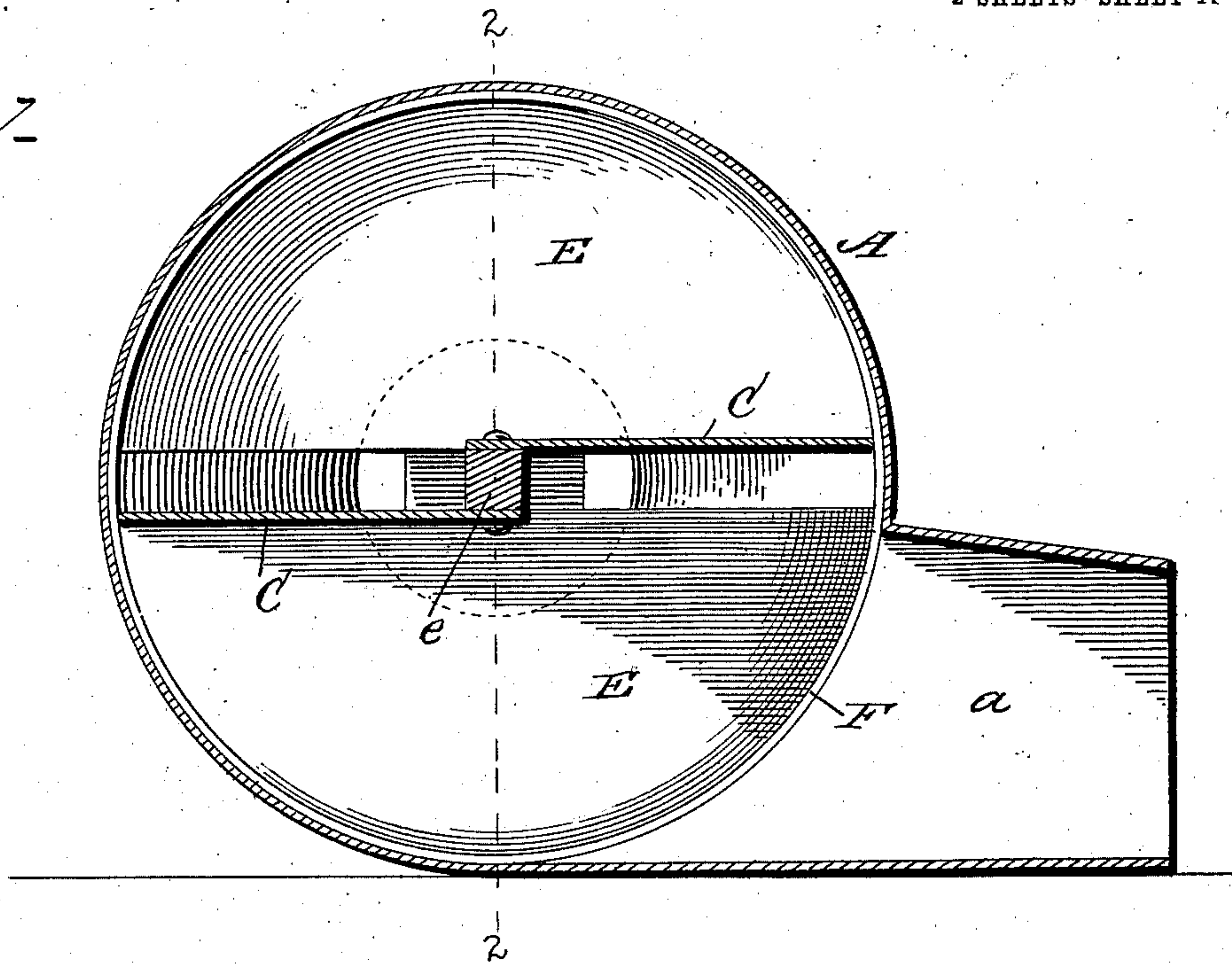
J. M. STUKES.  
FAN BLOWER.

APPLICATION FILED JULY 30, 1903.

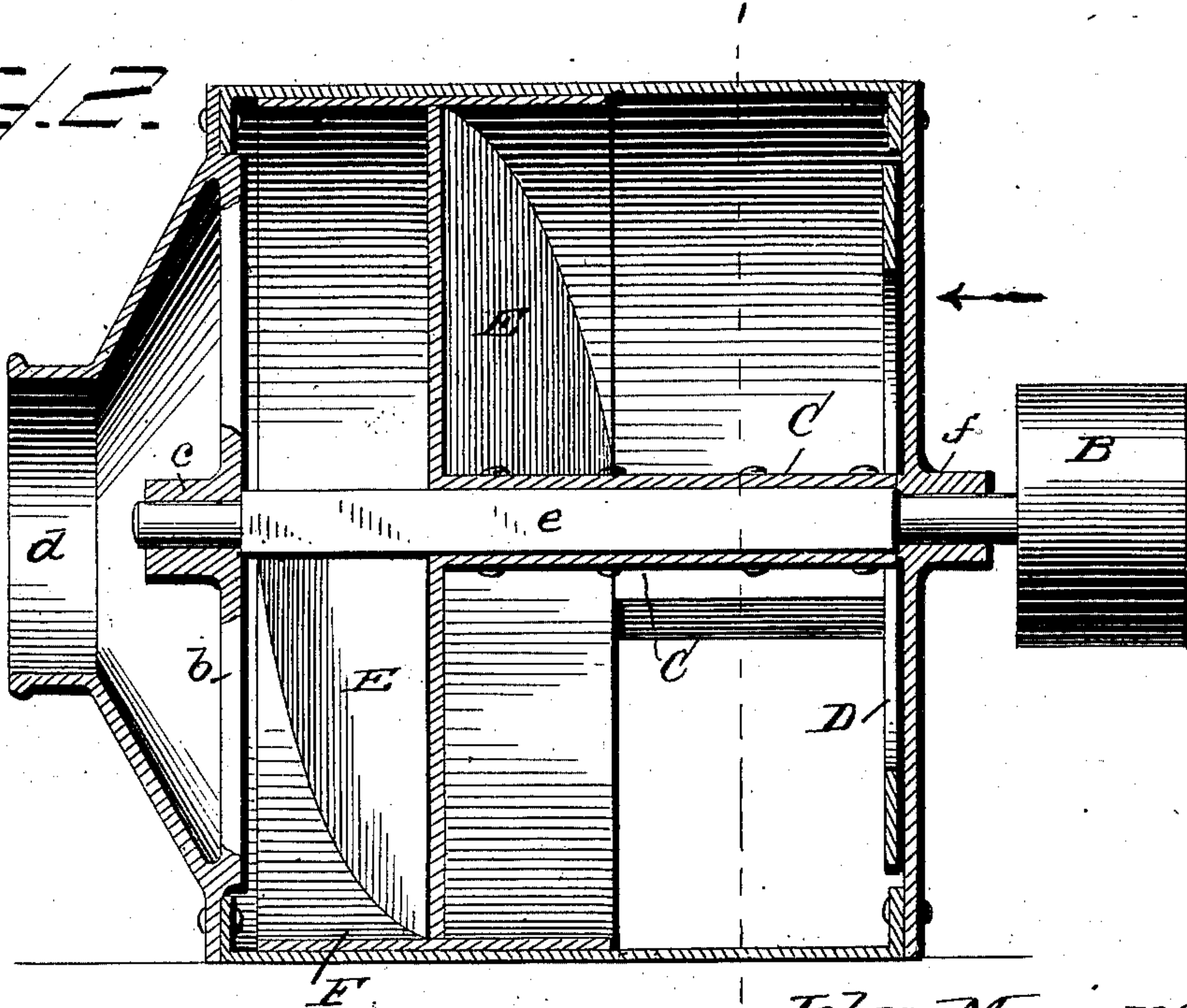
NO MODEL.

2 SHEETS—SHEET 1.

*Fig. 1*



*Fig. 2*



Witnesses

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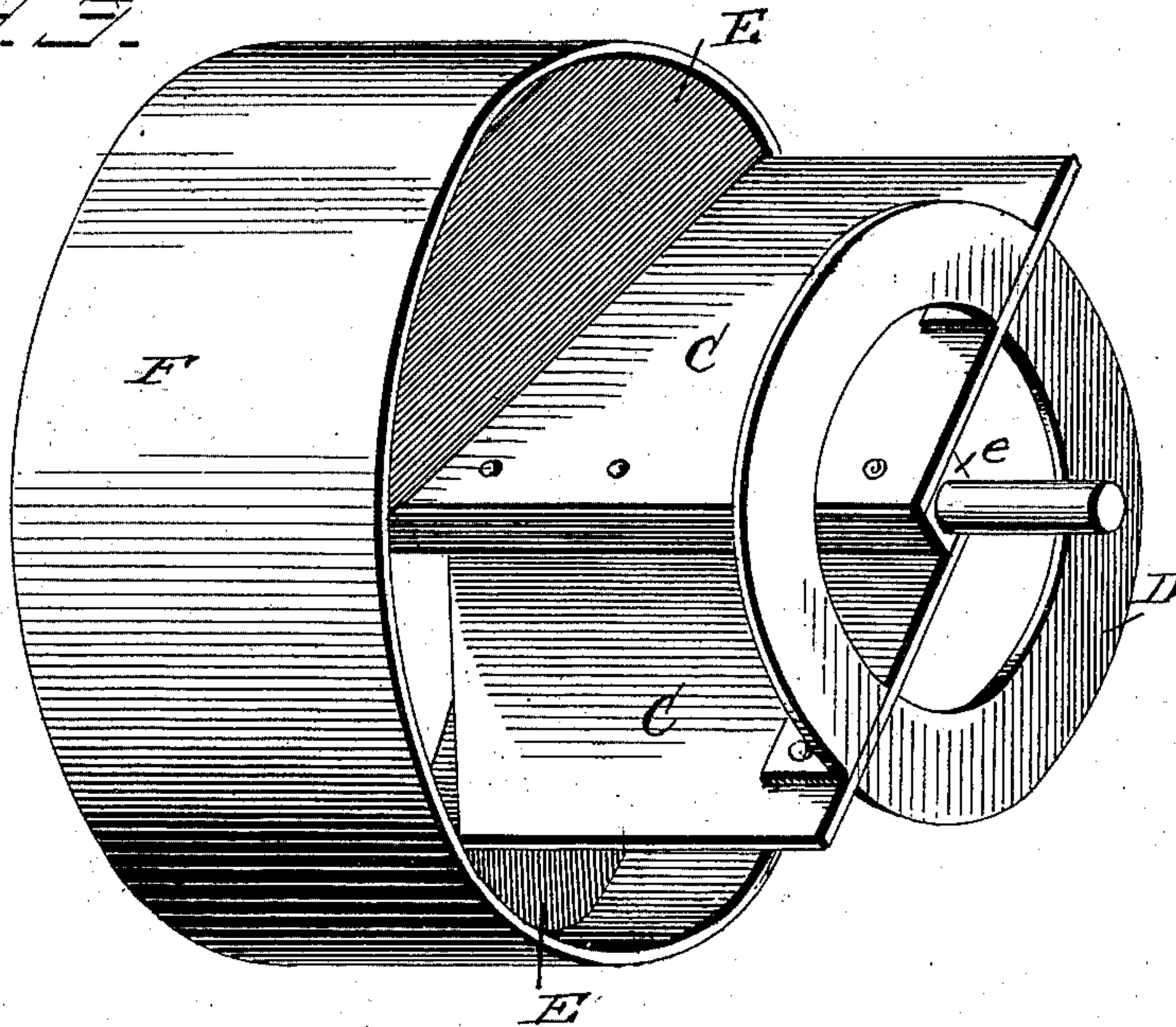
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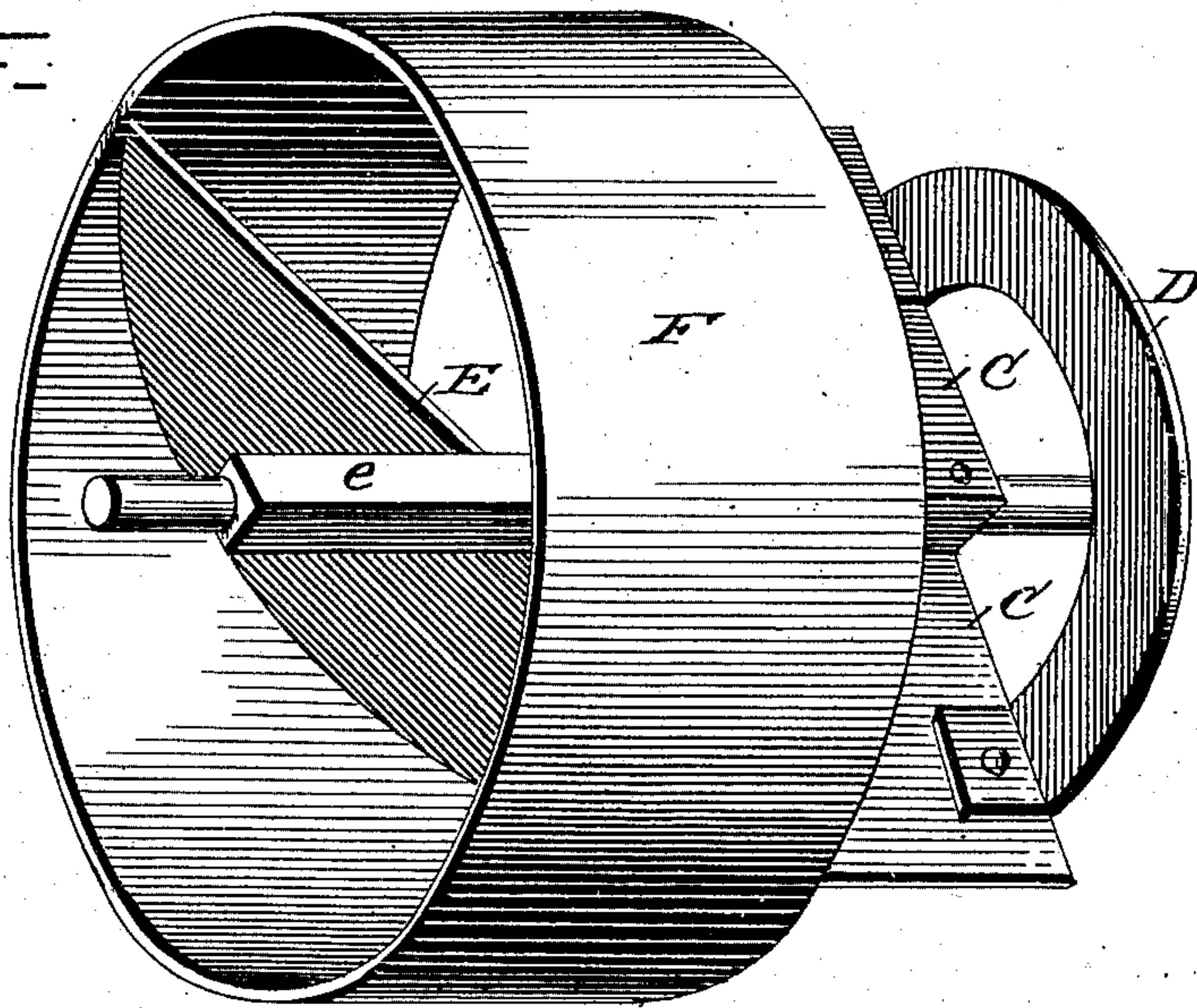
NO MODEL.

2 SHEETS—SHEET 2.

*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

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## FAN-BLOWER.

SPECIFICATION forming part of Letters Patent No. 748,436, dated December 29, 1903.

Application filed July 30, 1903. Serial No. 167,581. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN MARION STUKES, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Fan-Blowers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has for its object to provide a fan-blower that will be simple in construction and possess the necessary strength and durability required of this class of devices and will discharge a maximum amount of air with a minimum amount of power and is particularly adapted for use in all pneumatic work where a blast is required.

The invention consists in a fan-blower constructed substantially as shown in the drawings and hereinafter described.

Figure 1 of the drawings is a longitudinal vertical section of a fan-blower embodying my invention, taken on line 1 1 of Fig. 2; Fig. 2, a transverse vertical section taken on line 2 2 of Fig. 1; Fig. 3, a perspective view of the blower removed from the shell or casing looking in the direction indicated by the arrow in Fig. 2 of the drawings. Fig. 4 is a similar view looking in the opposite direction.

In the accompanying drawings, A represents the shell or casing of the blower, which may be of any suitable construction, but close fitting and provided with the usual outlet *a*. The shell or casing A at one end has a transverse brace *b*, with a suitable bearing *c*, the air passing into the shell or casing through the inlet *d*.

Supported in the bearing *c* is one end of a shaft *e*, the opposite end of the shaft being supported in like manner by the bearing *f* at the end of the shell or casing, and upon the end of said shaft is a suitable belt-pulley B, by which the blower is operated through suitable power.

The shaft *e* is flat-sided, as shown in Figs. 1 and 4 of the drawings, and to this shaft are suitably connected what I term "throw-off" paddles C, which extend across the shell or casing, as shown in Fig. 1 of the drawings.

To the throw-off paddles C is connected a brace-band D to render the paddles strong and rigid, and at the opposite ends of said paddles are radial angle-blades E, which may be of any suitable number, as may also the paddles. These angle-blades E incline in opposite direction to each other and are of semicircular shape, so that the blades will extend substantially one-half the circumference of a circular rim F, as shown in Figs. 1 and 2 of the drawings, and the blades are firmly secured to the rim, which forms a strong and substantial brace therefor.

It will be noticed that the throw-off paddle C and the angle-blade E are constructed from one and the same piece of metal, or, in other words, the two are integral with each other, rendering the paddle and blade more easily formed and adding greater strength and durability thereto as well as materially decreasing the cost of manufacture.

The curved edges of the blades E correspond with the curve of the inner periphery of the circular rim F and come in contact therewith throughout their length, and the entire curved edge of each blade is rigidly secured to the circular rim, which forms a perfectly rigid connection between the blade and rim and increases the rigidity and strength of the blades, as the blades will be braced throughout the length of the curved edges thereof.

The two blades E form together almost a complete circle, as shown in Fig. 1 of the drawings, with the single exception that a sufficient space is left between them for the air to pass, this in itself materially adding to the efficiency of the blower and rendering it more practical in its operation. These angle-blades E will effectually draw the air into the shell or casing A when the blades are in motion, and the paddles C force the air thus taken into the shell or casing out through the discharge *a*, keeping up a strong current of air with reduced power over the fan-blowers in ordinary use.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A fan-blower comprising a suitable shell or casing, a flat-sided rotatable shaft supported therein, throw-off paddles secured to

the shaft upon the opposite sides thereof and  
extending radially in opposite directions to  
each other and connected to a brace-band,  
semicircular angle-blades integral with the  
5 throw-off paddles, and a circular rim, the  
curved edges of the blades corresponding  
with the curve of the rim and rigidly secured  
thereto throughout the length of the edges

of said blades, substantially as and for the  
purpose set forth. 10

In testimony whereof I affix my signature  
in presence of two witnesses.

JOHN MARION STUKES.

Witnesses:

W. P. Cox,

J. L. DAVENPORT.