

J. BRAUGH.
FAN BLOWER.

No. 17,664.

Patented June 30, 1857.

Fig. 2.

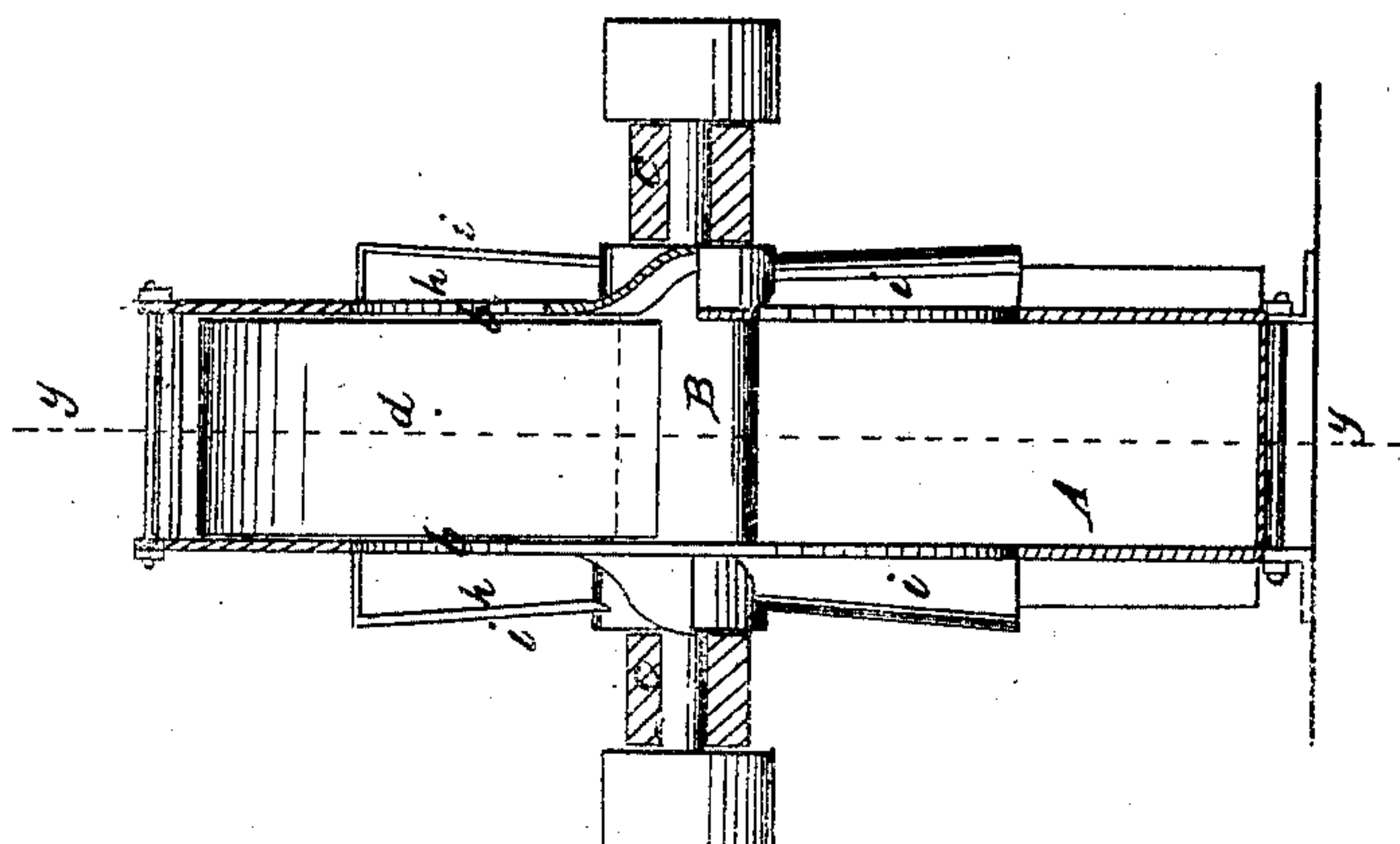
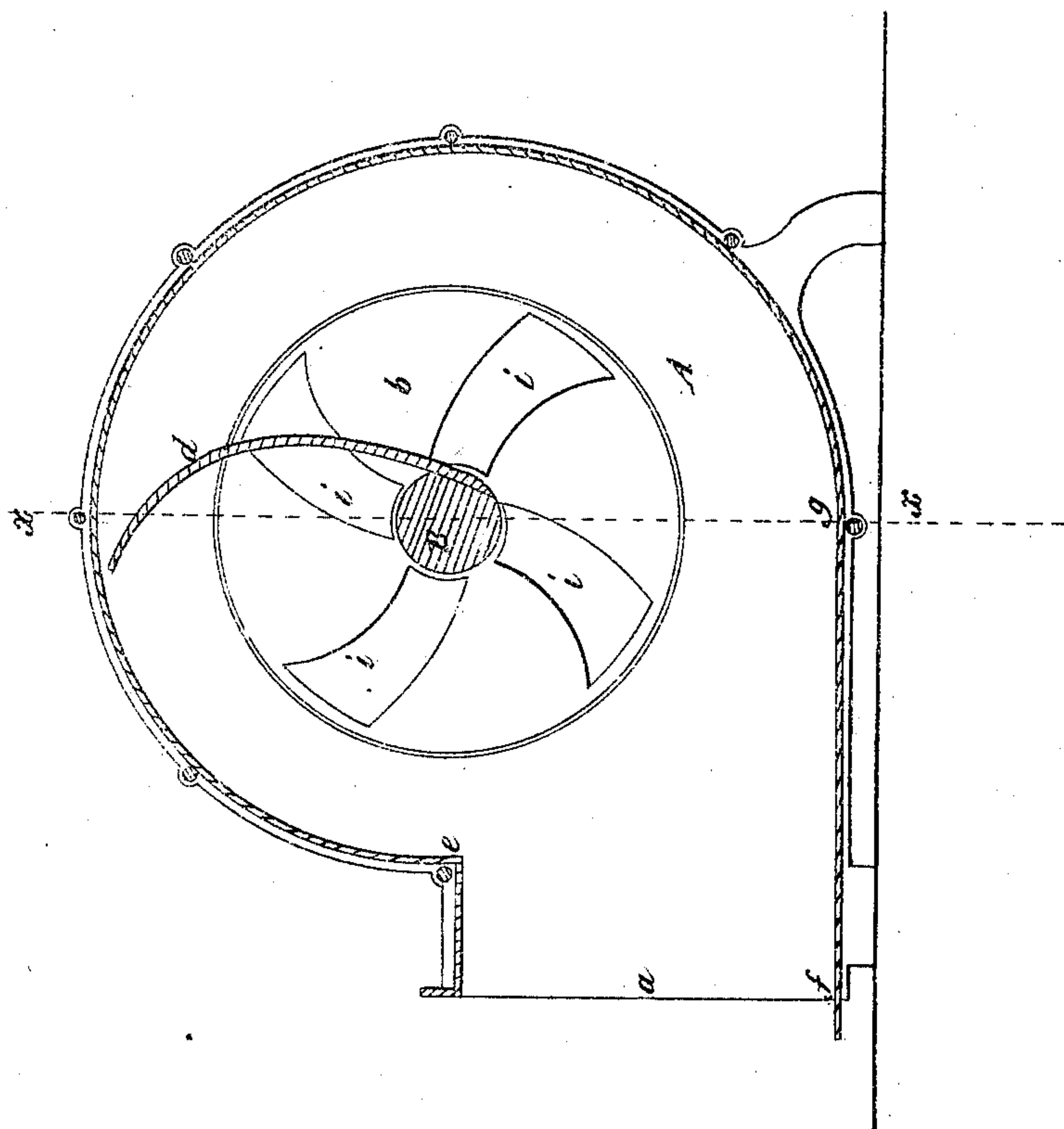


Fig. 1.



UNITED STATES PATENT OFFICE.

JOHN BRAUGH, OF AURORA, ILLINOIS.

BLAST-BLOWER.

Specification of Letters Patent No. 17,664, dated June 30, 1857.

To all whom it may concern:

Be it known that I, JOHN BRAUGH, of Aurora, in the county of Kane and State of Illinois, have invented a new and Improved Fan-Blower; 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, in which—

Figures 1 and 2 are vertical sections of my improvement; the two planes of section crossing each other at right angles; (x) (x) (y) (y) indicate the planes of section.

Similar letters of reference indicate the same parts in both figures.

My invention consists in having two circular plates with a curved bucket or piston secured between them; the plates being each provided with radial or slightly curved orifices or openings. These plates and bucket, which form a blast wheel, are fitted within a fan box of scroll shape, and so arranged that a good blast is obtained by a moderate expenditure of power.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the fan box, which is of scroll form, and is placed in a vertical position, as shown clearly in the drawing. The form of the fan box is shown clearly in Fig. 1 (a) being the orifice. The fan box may be constructed of sheet metal or wood. Within the fan box A, a wind wheel is placed. This wheel is formed of two circular plates (b) (b) placed on a shaft B, said shaft being fitted in suitable bearings (c) (c) attached to horizontal bars which are secured to the sides of the fan box. The plates (b) (b) fit in circular spaces cut in the sides of the fan box; and the outer surfaces of the plates are flush with the outer surfaces of the fan-box. Between the two plates (b) (b) a curved bucket or piston (d) is secured; the inner end of the piston or bucket being attached to the shaft B. This bucket or piston is of such a length that its outer end will nearly touch the

inner side of the scroll at the point (e) as shown in Fig. 1; and as the scroll gradually increases in diameter from this point around to the lower end of its orifice, as shown at (f), it follows as a matter of course that as the piston or bucket passes around, the space between the end of the bucket or piston (b) and the inner side of the scroll will gradually increase from the point (e) to (g). Each plate (b) is provided with openings (h) which are slightly curved from a radial position, and each opening has a hood (i) over it; the hoods retaining or catching the wind or air and causing it to be forced as the plates rotate within the wheel, the bucket or piston (d) forcing the wind out through the orifice (a).

In consequence of having the fan box of scroll form, so that the passage through which the air is forced is gradually enlarged, an impetus is given the blast, for it is well known that the movement of air, water, and all fluids in pipes, is accelerated by having the tubes gradually enlarged as they approach their discharge ends. By having the wind or blast wheel constructed as shown, and used in connection with the scroll fan-box, a good or powerful blast is obtained by a moderate expenditure of power.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:

The wind or blast wheel, constructed of the circular plates (b) (b) having openings (h) made through them, and provided with hoods (i); the plates having a bucket or piston (d), one or more, secured between them; when the wheel thus constructed is fitted within the fan box A, constructed in the form of a scroll, substantially as described, for the purpose set forth.

JOHN BRAUGH.

Witnesses:

WILLIAM HARRIS,
W. R. ANDREWS,
I. G. BARRE.