

J. B. Charles

Fan Blower,

Fig. 1.

N^o 27,108,

Patented Feb. 14, 1860.

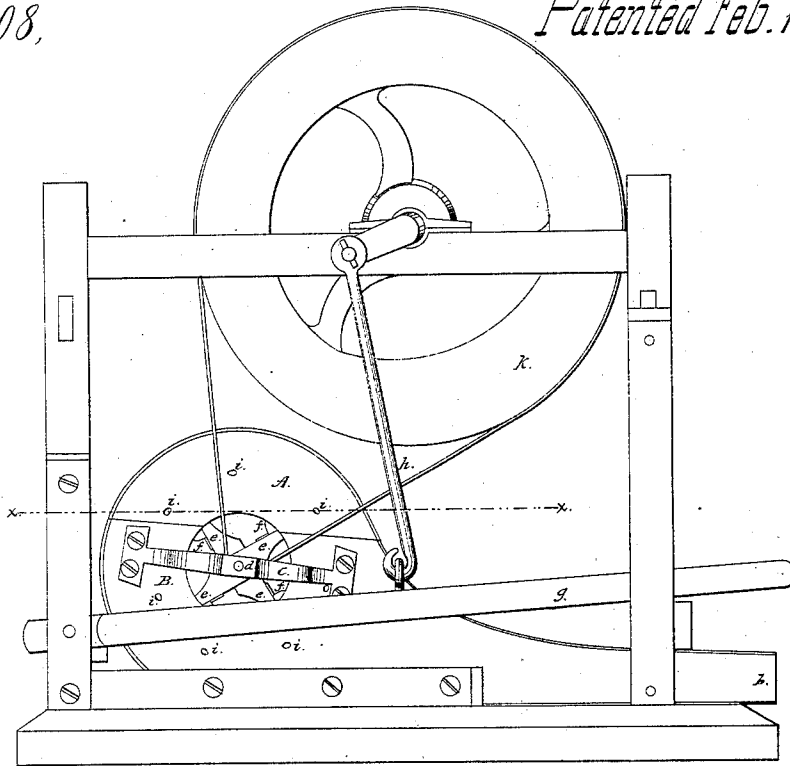
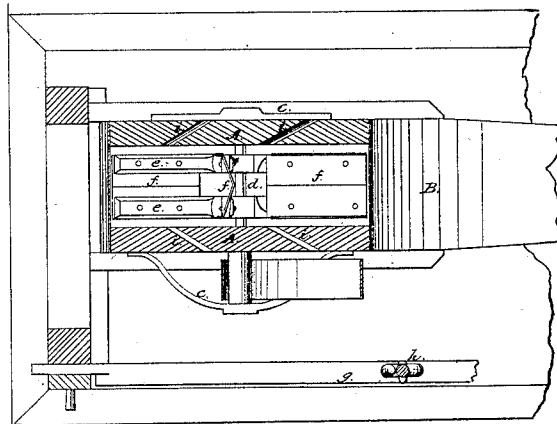


Fig. 2.



Witnesses;

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UNITED STATES PATENT OFFICE.

JOSEPH B. CHARLES, OF ASHLAND, OHIO.

FAN-BLOWER.

Specification of Letters Patent No. 27,108, dated February 14, 1860.

To all whom it may concern:

Be it known that I, JOSEPH B. CHARLES, of Ashland, in the county of Ashland and State of Ohio, have invented a new and useful Improvement in Fan-Blowers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, Figure 1, being a side view of my improved fan-blower, and Fig. 2 a section in the line x, x, of Fig. 1.

Similar letters indicate the same parts in both drawings.

My improvement in fan-blowers consists in giving a concave or recessed face to each of the wings *f*, of the fanning-wheel, in connection with a series of oblique apertures *i, i*, formed in the sides A, B, of the casing of said wheel, substantially as shown in the drawings. The said concave or recessed shape of the fanner-wings enables each one of them to gather and carry forward a considerable quantity of air, which air can only be discharged at the extremities of the wings; and therefore, the oblique apertures in the sides of the fanner-casing, enable the said improved fanner-wings to draw currents of air by suction directly through the oblique apertures *i, i*, in the sides of the fanner-casing, without danger of any loss of air through the same; from which it necessarily follows that my improved fan-blower will discharge a much larger quantity of air from the nozzle-outlet thereof than it would be possible to do were the air only admitted to

the casing or chamber of said blower through the ordinary apertures surrounding the shaft *d*, of the fanner-wings.

In the accompanying drawings A, is the movable portion of the casing of my improved fan-blower; B, is the main portion of said casing which terminates in the eduction nozzle *b*; *c, c*, are the journal supporters of the fanner-shaft *d*; *e, e*, are the arms of the fanner-shaft which receive and support the fanner-wings *f, f*.

When adapted to a blacksmith's forge, my improved fan-blower may be operated by hand by the means represented in the accompanying drawings, viz: by banding the fanner-shaft to a fly-wheel *h*, placed upon a crank-shaft, and then revolving the said fly-wheel by means of a hand-lever *g*, and a pitman *h*.

Having thus fully described my improvement in fan-blowers, what I claim therein as new and desire to secure by Letters Patent, is—

Giving a concave or recessed shape to the faces of the fanning wings (*f*) at the same time that oblique eduction apertures (*i, i*,) are formed, opposite said wings, in the sides of the fanning chamber, substantially in the manner and for the purpose herein set forth.

The above specification of my improvement in fan-blowers, signed this 10th day of December, 1859.

J. B. CHARLES.

Witnesses:

Z. C. ROBBINS,
G. Y. AT LEE.