(No Model.)

E. F. SCHNEIDER.

FAN BLOWER.

No. 261,389. Patented July 18, 1882.

Fig. 1.

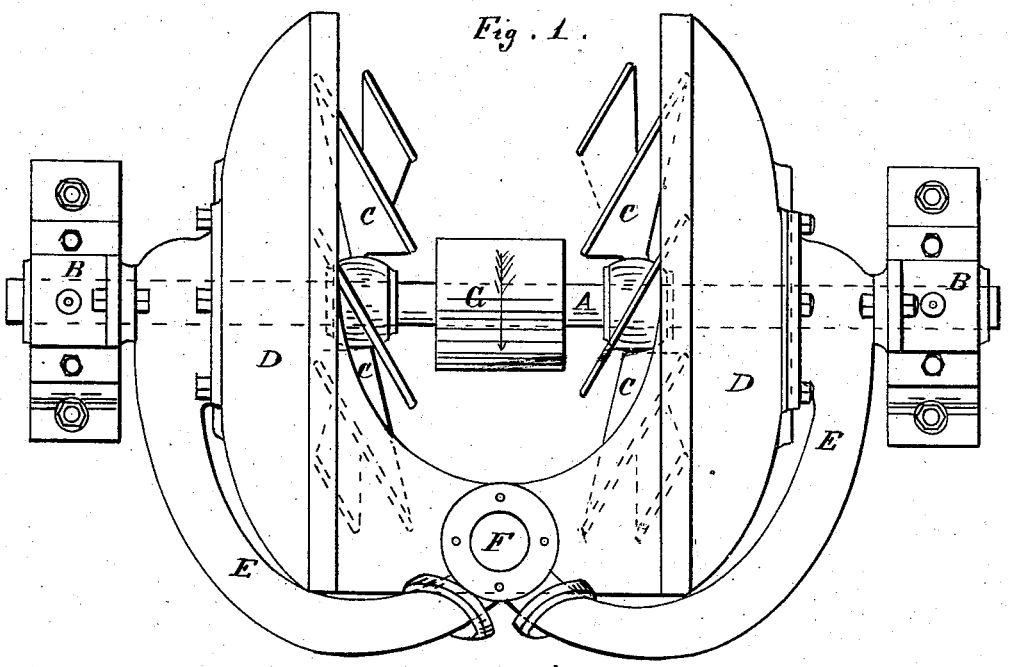
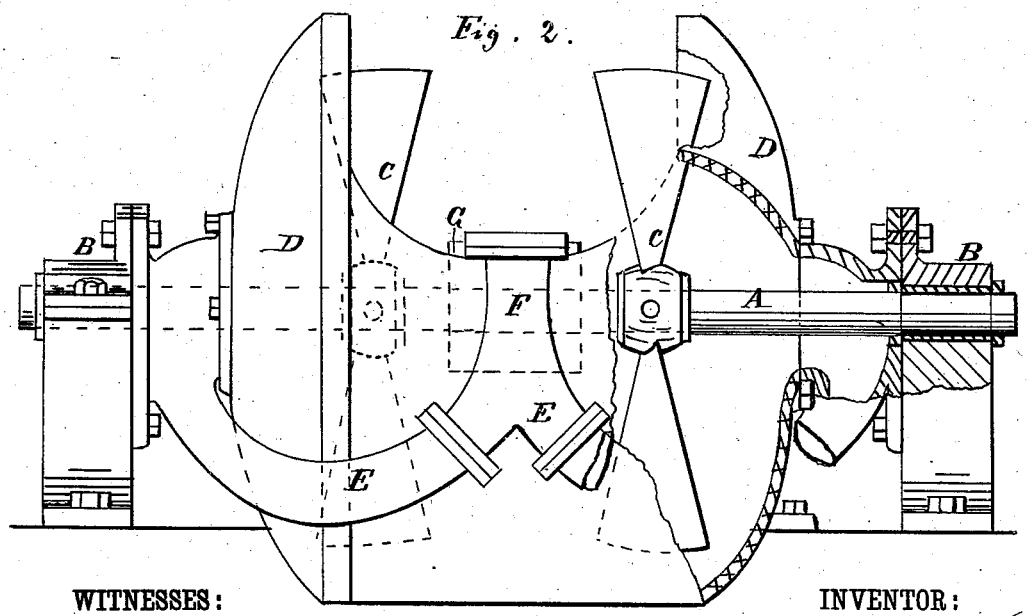


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD F. SCHNEIDER, OF RACINE, WISCONSIN.

FAN-BLOWER.

SPECIFICATION forming part of Letters Patent No. 261,389, dated July 18, 1882.

Application filed March 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. SCHNEIDER, of Racine, in the county of Racine and State of Wisconsin, have invented a new and Improved Fan-Blower, of which the following is a full, clear, and exact description.

The invention consists of a pair of fan-wheels having the spiral form of blades arranged side by side, but a little distance apart, upon one shaft, the blades being pitched in opposite directions, and the wheels turning so as to receive the air from the space between them and deliver it each way along the shaft in two oppositely-directed currents, which currents are received outside of said wheels by their respective hoods and delivered by branch pipes together into one pipe, all in a manner calculated to facilitate the suction of the air into the wheels and increase the pressure of the delivery; also, to increase the capacity of the fan-blower of a given diameter by doubling the capacity axially, which is advantageous in many cases, all as hereinafter more fully described, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of my improved fan-blower, and Fig. 2 is partly a side elevation and partly a sectional elevation.

A represents the shaft, mounted in suitable bearings, B, and carrying a pair of fan-wheels, C, which are located about as far apart on said shaft as is best for affording the proper amount of space between them to admit the air to them. The blades of the said wheels are of spiral or screw form and pitched oppositely in the respective wheels to receive the air between them and discharge it each way from them along the shaft into their respective hoods D, which are placed on the delivery sides of the said wheels and deliver the air to the pipes E, which join together in a single pipe at F and combine the two blasts in one, thus making a much more efficient fan within a given diameter than can be had with one fan of an equal diameter but greater breadth, because the percentage of useful effect diminishes as the breadth of the fan-blades increases, so that a single fan of double the breadth of blades would not be as effective as two fans arranged as I propose. The two currents may be separately utilized, if desired. In this arrangement the end-thrust on the shaft is balanced, making less friction and wear. It is also believed that a single fan-blower of larger diameter giving the same volume and pressure would require more power, because of the greater radius of the blades. The power is to be applied to the pulley G, located between the fan-wheels.

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

1. The combination, in a fan-blower, of the two oppositely-pitched screw-fans C, secured upon the same shaft, A, and revolving in the open air against the opening of two concave concentric hoods, D, said hoods being provided with central discharge-pipes, E, uniting in one delivery-pipe, F, as shown and described.

2. The combination of the fans C, shaft A, bearings B, and the pulley G, secured upon shaft A centrally between the fans for the purpose of balancing the strain, as shown and described.

EDWARD F. SCHNEIDER.

Witnesses:
JOHN L. VAN ORNUM,
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