R. WASKEY.
Fan-Blower.

No. 203,966. Patented May 21, 1878.

Fig. 1.

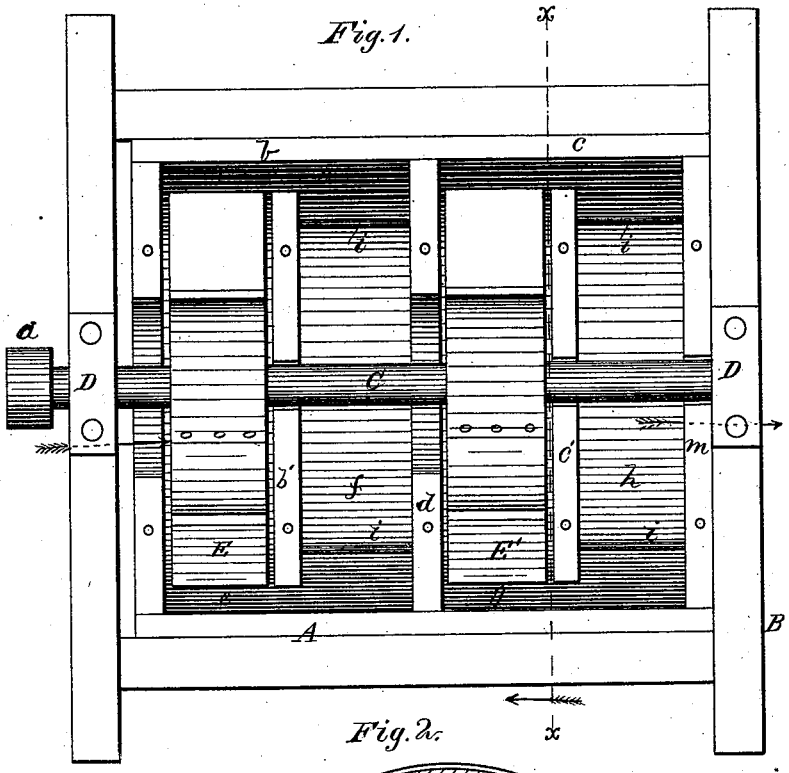
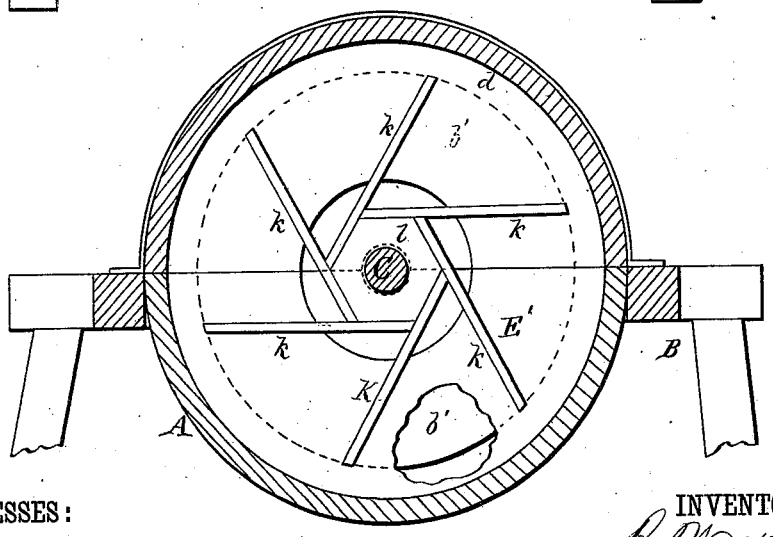


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT WASKEY, OF BLUE RIDGE, VIRGINIA.

IMPROVEMENT IN FAN-BLOWERS.

Specification forming part of Letters Patent No. **203,966**, dated May 21, 1878; application filed February 16, 1878.

To all whom it may concern:

Be it known that I, ROBERT WASKEY, of Blue Ridge, in the county of Botetourt and State of Virginia, have invented a new and Improved Fan-Blower, of which the following is a specification:

Figure 1 is a plan view of my improved fan-blower with the top of the casing removed. Fig. 2 is a vertical transverse section taken on line *xx* in Fig. 1, looking in the direction of the arrow.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide a blower for producing a uniform blast with the expenditure of a small amount of power.

The invention consists in a series of fans placed upon a shaft, and arranged so that the first fan in the series discharges into a chamber that communicates with the second fan in the series, and the last fan discharges into the pipe that conveys the wind away to be utilized.

In the drawing, A is a cylindrical casing, that is supported by the frame B, and C is a shaft that runs axially through the casing, and is journaled in boxes D, supported by the frame B, and is provided with a pulley, *a*, for receiving a driving-belt. The casing A is divided into two compartments, *b c*, by a median partition, *d*, and each compartment so formed is subdivided, the compartment *b* being divided into equal compartments *e f* by a partition, *b'*, and the compartment *c* being divided into compartments *g h* in the same manner by the partition *c'*. The partitions *b' c'* are smaller in diameter than the interior of the casing A, so that an annular space is left around the partitions for the passage of air. These partitions are supported by rods *i*, the partition *b'* being supported from the partition *d*, and the partition *c'* from the discharge end of the cylindrical casing A. Upon the shaft C a fan-wheel, E, is placed in the compartment *e*, and a similar fan, E', is placed on the said shaft in the compartment *g*. The fan-wheels are composed of a number of vanes or wings, *k*, which are secured to a hub, *l*. The wings *k* are tangential to a circle of small radius described from the center of the shaft. The head of the casing A which adjoins the fan E is apertured centrally to admit air to the fan, and the partition *d* is apertured in the same manner to admit air to the fan E'. The casing-head *m* is apertured at any convenient point to receive a pipe for conducting away the wind.

The operation of my improved fan is as follows: The shaft being rotated, air is drawn into the casing A by the action of the fan, and is thrown by centrifugal force against the inner surface of the casing, whence it passes through the annular space around the partition *b'* and into the compartment *f*, and is supplied, under pressure, to the second fan, E', which delivers the wind under still greater pressure to the compartment *h*, from which it is taken for use.

To increase the capacity of the blower, it is only necessary to add other fans, the speed at which it is driven remaining the same.

The advantage possessed by my fan-blower is that it will produce a current or pressure of air less obstructed and greater in proportion to the motive power than others that are somewhat similarly constructed.

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

The combination, with fans E E', of the casing A, divided into two compartments, *b c*, by a median partition, *d*, said compartments being subdivided by partitions *b' c'*, smaller in diameter than the interior of casing, as and for the purpose specified.

ROBERT WASKEY.

Witnesses:

W. M. RICHARDSON,

SAMUEL OBENSHAIN.