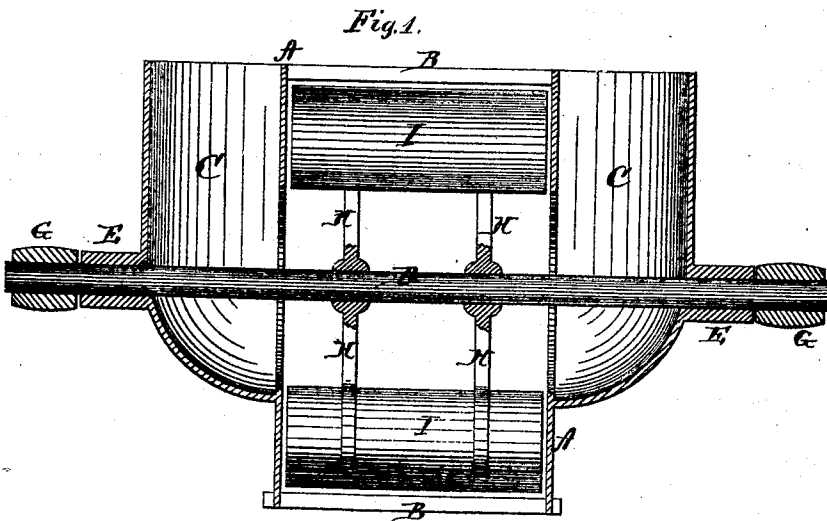
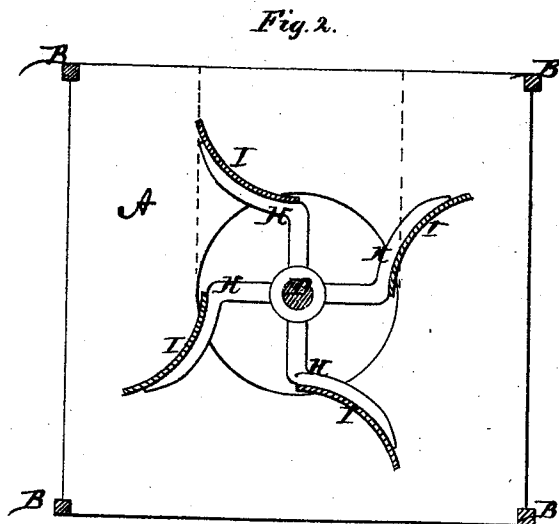


C. R. PATTERSON.

Suction Fans.

No. 130,310.

Patented Aug. 6, 1872.



Witnesses

Henry H. Miller
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Inventor

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per

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UNITED STATES PATENT OFFICE.

CHESTER R. PATTERSON, OF PITTSBURGH, PENNSYLVANIA.

IMPROVEMENT IN SUCTION-FANS.

Specification forming part of Letters Patent No. 130,310, dated August 6, 1872.

To all whom it may concern:

Be it known that I, CHESTER R. PATTERSON, of Pittston, in the county of Luzerne and in the State of Pennsylvania, have invented certain new and useful Improvements in Suction-Fans; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "suction-fan" with the circumference of the fan or the part outside of the wings open, with suction-pipes at the ends, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal-vertical section of my suction-fan, and Fig. 2 is a transverse vertical section of the same.

A A represent two end pieces, connected at the corners by means of cross-bars B B, and having a tube, C, attached to or forming part of each end piece on the outside. These tubes or suction-pipes open in a central aperture on the end pieces, and a shaft, D, passes through the center of said apertures, supported in journal-boxes E E formed in or on the outer sides of the suction-pipes C C. Upon the

outer ends of the shaft D are pulleys G G to attach belts for running the fan. On the shaft D, between the end pieces A A, are attached suitable collars, with curved arms H H, said arms supporting the curved wings I I. These wings are so arranged and of such size as to move close to the inner sides of the end pieces A A, and the inner edges of the wings are at or near the edges of the apertures in the end pieces. These end pieces are of such size, square, that the outer edges of the wings will be at or near the edges of said end pieces, in the center of their sides. Thus the entire portion outside of the wings is left open.

This fan is intended to be used for ventilating mines, or for other purposes where there is no blast needed, but all the suction that can be had. This fan will run with about one-half the power and draw more air than one enclosed so as to give as a blast.

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

The combination of the frame A B, open at its front and rear sides, top, and bottom, the tubes C at each side of the frame, and the curved arms H H with curved wings I I on the shaft D, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of March, 1872.

Witnesses: C. R. PATTERSON.

A. M. ROUSHEY,
J. T. WILSON.