

(No Model.)

J. L. NOLL.

AIR BLOWER.

No. 303,878.

Patented Aug. 19, 1884.

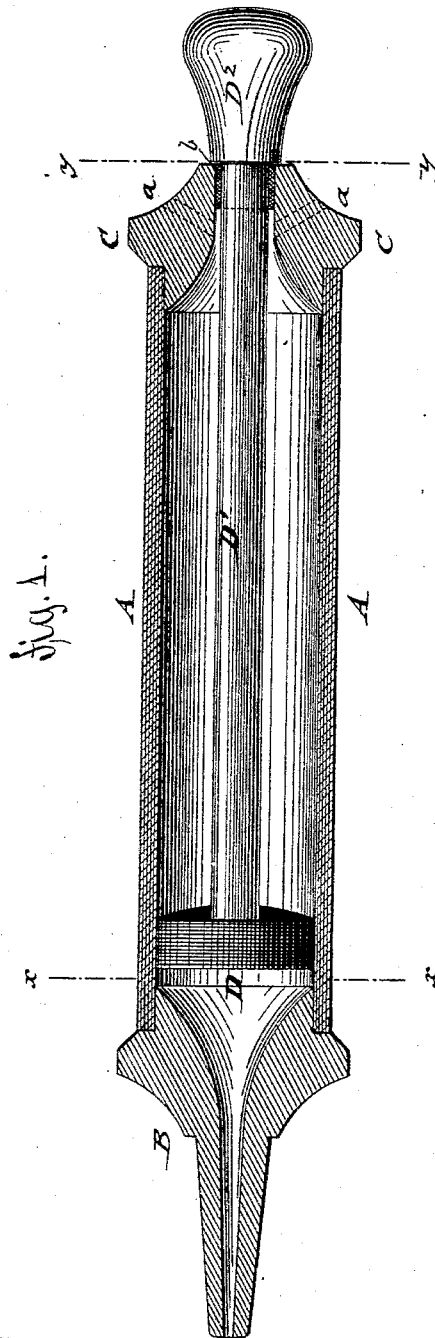


fig. 4.

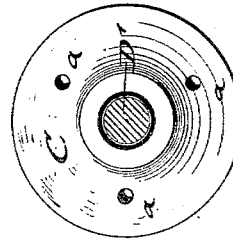


fig. 3.

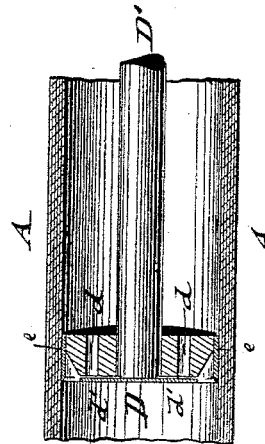
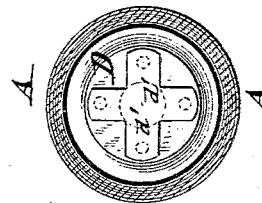


fig. 2.



WITNESSES:

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JOHN L. NOLL, OF BROOKLYN, NEW YORK.

AIR-BLOWER.

SPECIFICATION forming part of Letters Patent No. 303,878, dated August 19, 1884.

Application filed March 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. NOLL, of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Air-Blowers, of which the following is a specification.

This invention has reference to an improved air-blower which is to be used in the arts in place of bellows, said blower forming a handy and convenient device for removing dust and other sediments.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved air-blower. Fig. 2 is a vertical transverse section on line *x x*, Fig. 1. Fig. 3 is a detail section of the piston, and Fig. 4 a vertical transverse section on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the barrel of my improved air-blower, which barrel is made of one continuous piece of veneer, which is formed by wrapping it around a round block, the layers being glued together and allowed to dry while on the block. The nozzle B and head C are preferably made of wood and glued or otherwise secured into the ends of the barrel A. The nozzle B is provided with a central perforation that is wider at its base or inner end, and which gradually diminishes in width toward the outer end of the nozzle, so as to provide a smooth exit-channel for the air without any obstructing corners or projections. The head C is also provided with a central funnel-shaped opening, and with lateral air-holes *a a*. The piston-rod D' is guided by a packing, *b*, of the central perforation of the head C, which packing facilitates the motion of the piston-rod. The piston-rod D' is provided with an exterior handle, D². The piston D is provided with openings *d d* and flap-valves *d' d'*, of leather or other suitable material. The circumference of the piston is beveled and provided with a leather or other packing, *e*, having a skived edge. The circumferential recess of the piston and the

skived packing form a kind of pocket in which the air gathers during the forward motion of the piston, so that it acts in the nature of an air packing or cushion for the leather packing, and produces a tight and effective packing during the compressing action of the piston.

The operation of my improved air-blower is as follows: When the piston is drawn back, the flap-valves open, so that the piston moves without suction, while the air in the barrel escapes freely through the lateral openings in the head C, which enables the piston to be drawn back quickly. During the forward motion of the piston, the air in the barrel at the front of the same is compressed by the tight packing of the piston and forced out through the nozzle to the point where the current of air is to be applied. As the air enters freely during the forward motion of the piston through the holes *a a*, no suction or other impeding action is exerted on the piston. The flap-valves *d'* close the openings *d* of the piston, while the air-pressure forces the packing tightly against the inner surface of the barrel.

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

The combination of a barrel, A, a nozzle, B, attached to one end of said barrel, a head, C, attached to the opposite end of said barrel and provided with a central opening and lateral air-openings *a*, a piston-rod, D', which passes through said central opening, and a valved piston, D, fixed to the inner end of said piston-rod, beveled at its circumference, and provided with a circumferential flexible band or packing having a skived edge, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOHN L. NOLL.

Witnesses:

LOUIS C. RAEGENER,
SIDNEY MANN.