

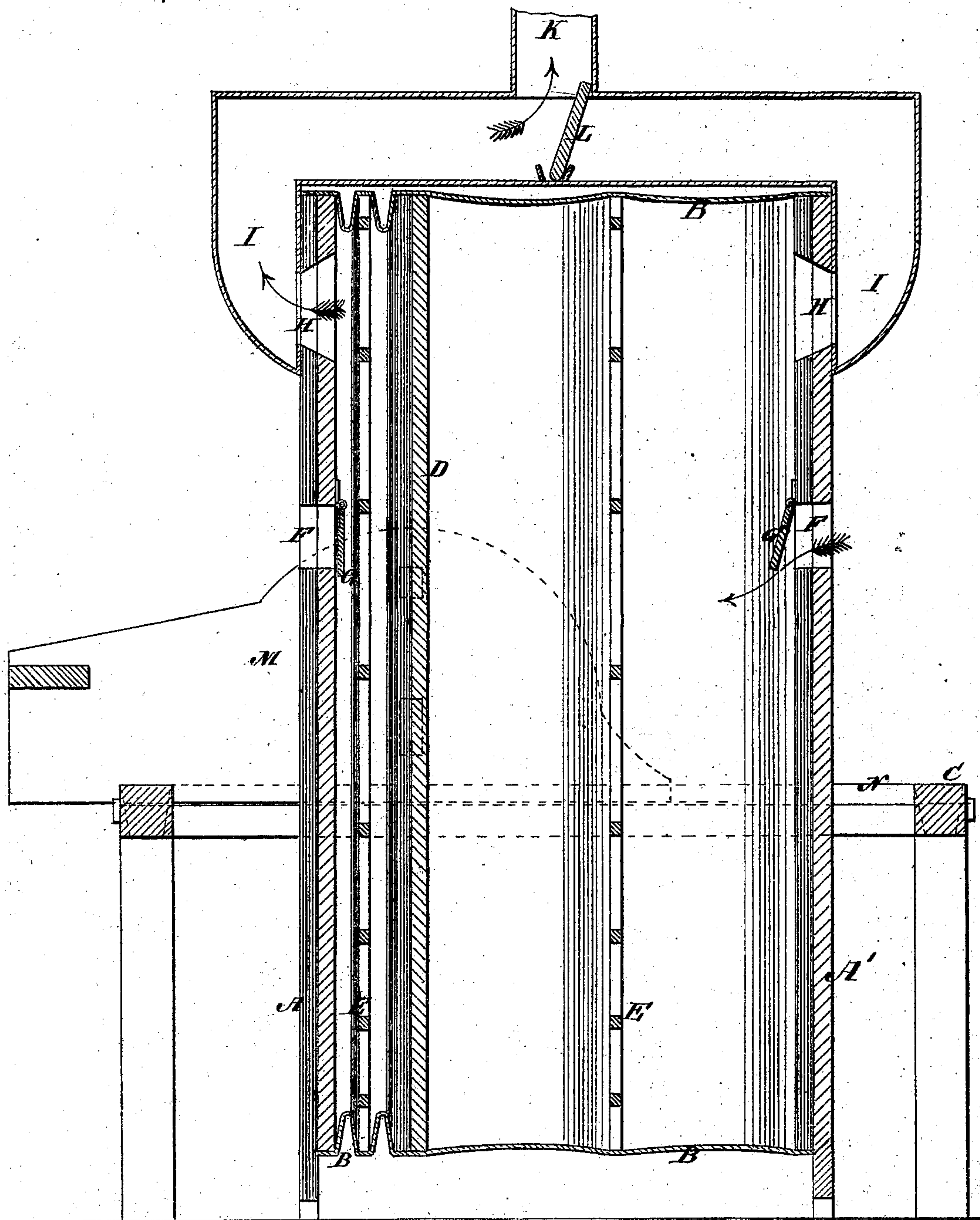
(12.)

J. W. NEWCOMB.

Air Blowers.

No. 122,959.

Patented Jan. 23, 1872.



Witnesses:

E. Wolff.  
Francis Mc Ardle

Inventor:

J. W. Newcomb  
PER *Mumford*  
Attorneys.

# UNITED STATES PATENT OFFICE.

JAMES W. NEWCOMB, OF NEW YORK, N. Y.

## IMPROVEMENT IN AIR-BLOWERS.

Specification forming part of Letters Patent No. 122,959, dated January 23, 1872.

Specification describing certain Improvements in Air-Blower, invented by JAMES W. NEWCOMB, of the city, county, and State of New York.

My invention consists in a double-acting blower of two flexible sides and ends, of leather or other like substance, two opposite rigid immovable sides, and a movable dividing-plate or board at the center of the flexible part, moving back and forth between the immovable sides, alternately inflating and exhausting the spaces between it and the said immovable sides, the air being driven from both sides into branches leading to an exhaust-pipe, which is alternately opened and closed to the respective sides by a valve moved by the shifting currents of air coming from the blower, all as hereinafter described.

The drawing is a sectional elevation of my improved blower. A and A' represent the front and rear or opposite fixed and rigid sides, which may be supported in any approved frame, C. B is the flexible cover, of leather or other suitable substance, for the two opposite sides and ends, being nearly twice as wide as the distance between the said fixed sides A A'. D is the intermediate plate, corresponding in size to the sides A, and having the leather cover B attached to its edges, so as to completely separate the space into two air-chambers. E represents frames for confining the leather cover at the sides and top. F are the induction-passages, with an inside valve, G, closing so as to prevent the escape of air outward. H represents the passages for the

escape of the air from the blower. Said passages lead into branches I of an exhaust, K, under which is a valve, L, automatically actuated by the air-blasts, and alternately opening one branch to the exhaust and closing the other. The dividing-plate D is connected to the diving mechanism by a plate or beam, M, of any kind at each edge, sliding back and forth in grooves or ways N on the top of the frame.

This apparatus furnishes a very efficient blowing apparatus of great power. When plate D begins to move in one direction to exhaust one side and inflate the other the valve L is tilted over by the first part of the blast coming against it, opening the passage for the air arising from one side and closing the exhaust to the other.

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

The improved blowing apparatus, consisting of fixed sides A A', having openings H H and valved openings F F G G, flexible cover B, movable divider D, and exhaust I, provided with pipe K and valve L, when these several parts are constructed and arranged and combined substantially as described.

The above specification of my invention signed by me this 14th day of September, 1871.

JAMES W. NEWCOMB.

Witnesses:

GEO. W. MABEE,  
T. B. MOSHER.