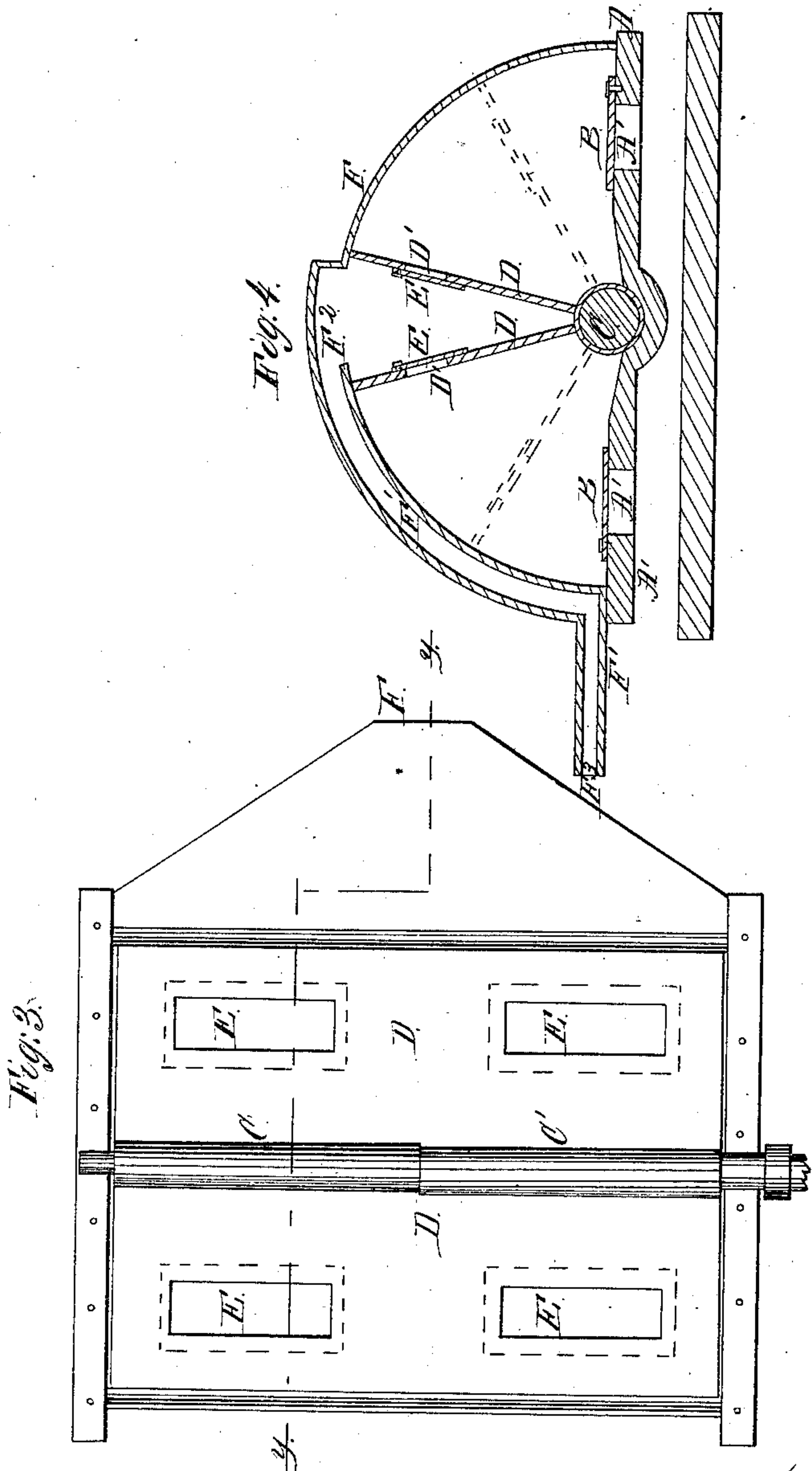


W.A. Parmele,

Fan Blower,

No 67,345.

Patented July 30, 1867.



Witnesses:
William
Lawrence Murphy

Inventor:
Wm A Parmele
J P Holloway & Co
Sols Attys

United States Patent Office.

WILLIAM A. PARMELE, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 67,345, dated July 30, 1867.

IMPROVEMENT IN BLOWERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM A. PARMELE, of New Haven, in the county of New Haven, and State of Connecticut, have invented a new and useful Improvement in Fan-Blowers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is an end elevation.

Figure 2 is a side elevation in part.

Figure 3 is a plan of the bottom of the fans.

Figure 4 is a vertical transverse section.

In all the figures the same letters are employed for the designation of parts which are identical.

A is the bottom plate, which is constructed with openings A', over which are placed the flap-valves B, which permit the air to pass upwards through the plate, but will not allow it to escape downwards. The bottom plate also contains proper bearings for the fan-shafts C C'. The fans D D are rectangular plates attached to the shafts C and C', having openings D', through which the air may pass upwardly under the flap-valves E, which prevent the air from passing in the reverse direction. The upper casing is composed of two plates, F and F'. The plate F extends over the entire semicircle, but not with a curve of uniform radius, that of nearly a quadrant being less than the remainder, which has a longer radius. The plate F' has a curve of the same radius as the shorter one above mentioned, and it is also a little less than a quadrant, so as to leave a passage, F², for the air between the plates, as shown in fig. 4. This air-passage is contracted to form a nozzle at F³. The fans D oscillate within the upper plates F and F', the ends being in near proximity to, but not touching the plates. An oscillatory motion is communicated to the fans D by the revolution of the pulley G, which is driven by a belt. A crank-pin, G', projects from the side of the pulley to which the connecting rods H H' are attached. These connecting rods are respectively attached by wrist-pins to the arms I and I'. The revolution of the pulley gives a reciprocating motion to the connecting rods, and they communicate an oscillatory motion to the arms I I'. The shaft is formed in two parts C C'. One of the fans is attached to the part C, the other to the part C'. The latter is tubular, and the end of the shaft C (between the arm and its middle) is turned smaller to pass through the tubular portion C'. The collar to which the arm I is attached is fastened to the end of the shaft C; the arm I' is, in like manner, attached to the tubular portion of the shaft C'. As the arms I I' are drawn upwards by the motion of the pulley, the fans will in like manner be raised, and the air will flow in through the valves B, filling the space behind and below the fans; the air which is in front and above the fans will be forced through the passage F². As the fans oscillate downwards the valves E will be opened to allow the air to escape through them to the upper side of the fans, and the valves B will be closed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The oscillating fans D with valves E, in combination with the bottom plate A, with valves B and case F F', forming an air-passage, F², said parts being respectively constructed and arranged substantially as set forth.

2. The fans D attached to the shafts C C', in combination with the arms I I', connecting rods H H', and pulley G, and arranged to operate substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. A. PARMELE.

Witnesses:

CHRISTIAN STREIT,
M. LYONS.