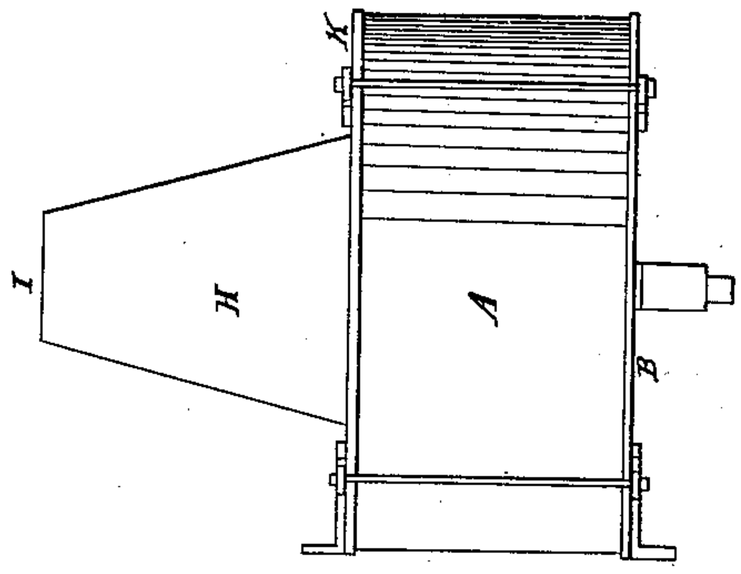
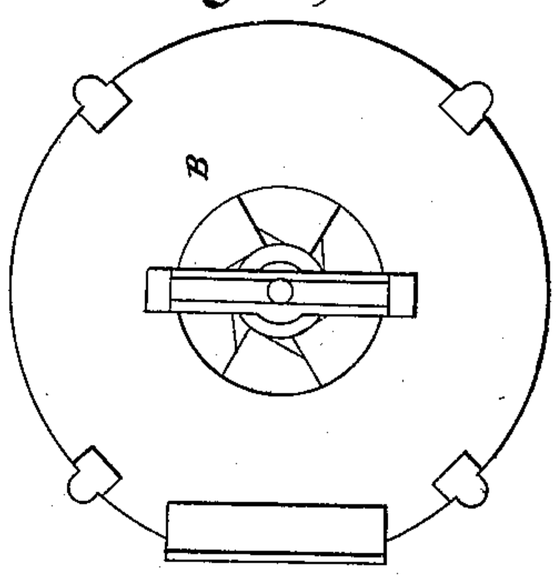
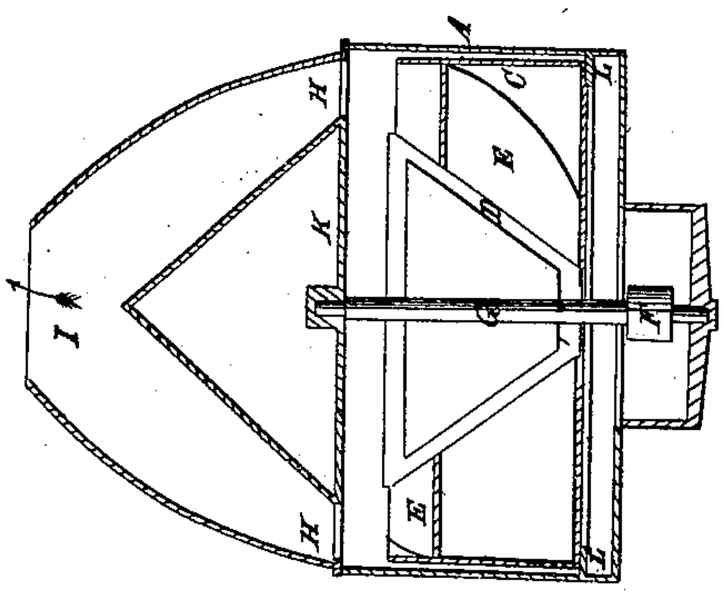
Gartley & Fox,

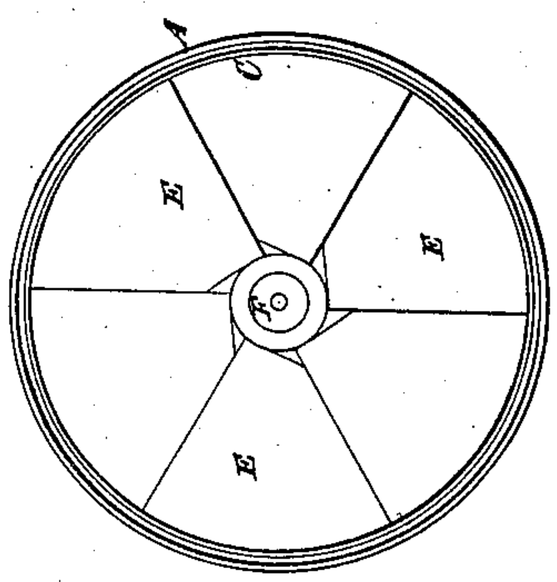
Fan Blower.

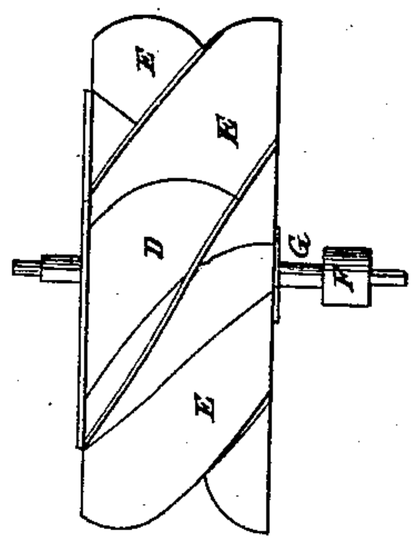
No. 13,260. Patented July 17, 1855.











Witnesses:
M Carpenter.
George Hepp.

Inventors.
Jos Chartley
Jacob Fox

UNITED STATES PATENT OFFICE.

JOSEPH C. GARTLEY AND JACOB FOX, OF PHILADELPHIA, PENNSYLVANIA.

FAN-BLOWER.

Specification forming part of Letters Patent No. **13,260**, dated July 17, 1855.

To all whom it may concern:

Be it known that we, JOSEPH C. GARTLEY and JACOB FOX, of the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Fan-Blower for Furnaces, &c.; and we do hereby declare that the following is a full and exact description thereof, reference being had to accompanying drawings and letters of reference thereon, the drawings forming a part of this specification.

To enable others skilled in the art to make and use our invention, we will describe its construction and operation.

A is a circular casing that incloses blowing-wheel; B, a side at which the air enters the fan; C, a circular casing that incloses the blades E; D, a conical hub on which the blades E are fastened; E, diagonal or screw-shaped blades; F, a pulley; G, a shaft; H H, discharge-pipes; I where the pipes H H run together; K, side to which the discharge-pipes H H are fastened, and L a small flange that is fastened on casing A.

The shell.—The fan-blowers we make with two sides B and K, the side B receiving the air through a circular opening in the center, and the side K discharging the air into the pipes H H. In connection with sides is a circular casing A. The sides B K and the casing A form a circular chamber for the blowing-wheel.

The blowing-wheel.—In the chamber described are the blowing-wheel and air-chambers.

D is the hub of blowing-wheel, shaped like the frustum of a cone, which is fastened on the shaft G. On the hub D are fastened the blades E, running diagonally or screw-shaped across the hub. The blades E are inclosed with the circular casing C, to which the outside of the blades are fastened.

Fastened to the casing A on its inside is a small flange L nearest the side B. Between the blowing-wheel and side K is an air-chamber for receiving the air that is discharged from blowing-wheel. Between blowing-wheel and the side B is also an air-chamber for receiving the air as it enters through the circular opening of the side B. Between the circular casings A and C is a space for air to circulate, but prevented from escaping by the small flange L. This air-space partly counteracts the centrifugal force of blowing-wheel.

Operation: When the blowing-wheel is put in motion by some power applied to the pulley, the external air enters the circular opening on the side B, distributing itself through the air-chamber between the side B and blowing-wheel. It is then taken up by the blades E, passing along between the blades, conical hub D, and rim C, there discharging into the air-chamber between the side K and blowing-wheel, then conducted from the air-chamber by the pipes H H to I, and there discharging. We also claim where an ordinary parallel hub is used a circular plate or pieces of plate fastened to the hub and blades E of blowing-wheel, inclosing the greater portion of the side of blowing-wheel toward the side K, to answer the same purpose for which the larger portion of the conical hub is intended, which is to prevent a central reacting current after it has passed through the blowing-wheel.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement of fan-blower as described in specification.

2. We do not claim the parts described separately, but we do claim their combination in the manner set forth or shown, for the purposes named.

JOS. C. GARTLEY.
JACOB FOX.

Witnesses:
M. CARPENTER,
GEORGE HEPP.