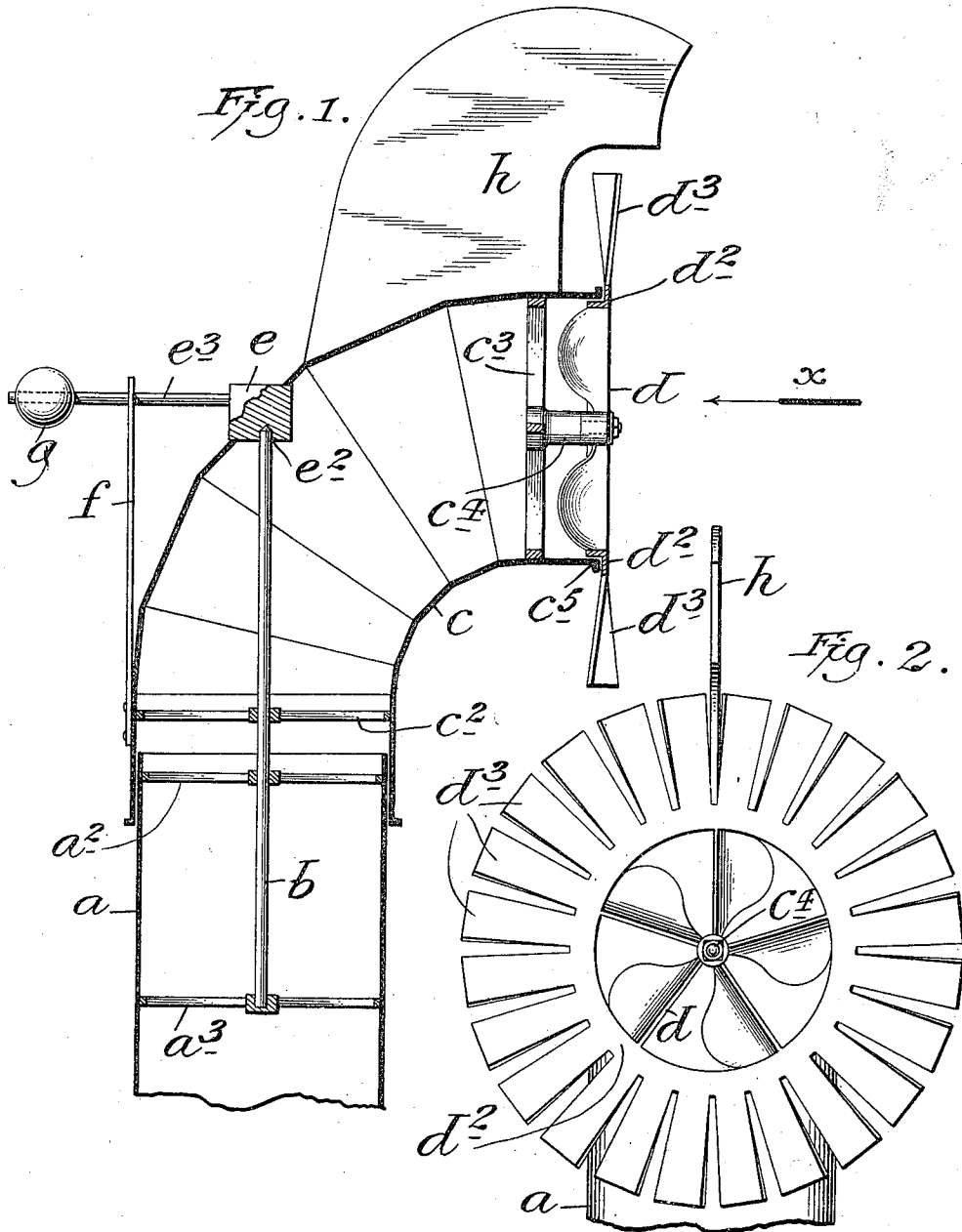


E. C. POWERS.
CHIMNEY COWL.

APPLICATION FILED MAY 18, 1908. RENEWED APR. 4, 1910.

975,636.

Patented Nov. 15, 1910.



WITNESSES
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UNITED STATES PATENT OFFICE.

EARLE CHESTER POWERS, OF ORANGE, NEW JERSEY, ASSIGNOR TO AUTOFORCE VENTILATING SYSTEM, OF BOSTON, MASSACHUSETTS, A CORPORATION OF SOUTH DAKOTA.

CHIMNEY-COWL.

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Specification of Letters Patent.

Patented Nov. 15, 1910.

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To all whom it may concern:

Be it known that I, EARLE C. POWERS, a citizen of the United States, and residing at Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Chimney-Cowls, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to chimney cowls, and the object thereof is to provide an improved device of this class which is simple in construction and operation, and which belongs to the class of rotary cowls and is provided with a wind operated propeller which aids in producing vacuum in the chimney or chimney flue or other ventilating pipe or flue and thus produce a constant draft there-through.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a sectional view of a part of a chimney, chimney flue or other ventilating pipe and showing my improved cowl connected therewith, the construction being in section, and; Fig. 2 a view at right angles to that shown in Fig. 1 and looking in the direction of the arrow *x*.

In the drawing forming part of this specification, I have shown at *a* a chimney flue or other ventilating pipe in which is placed at predetermined points two spider frames *a*² and *a*³ in which is secured a rod *b*; and in the practice of my invention I provide an elbow-shaped cowl pipe *c*, one end of which incloses the chimney flue or pipe *a* and is provided with a spider frame *c*² through which the rod *b* also passes, and the other end of which is provided with a spider frame *c*³ having a central outwardly directed stud *c*⁴ on which is mounted a rotary exhaust propeller *d*.

In the top central portion of the elbow-shaped cowl pipe *c* is fixed a block *e* in which the upper end of the rod *b* is pivoted as shown at *e*², and the block *e* is provided with a backwardly directed arm *e*³ which passes through a support *f* connected with the lower end of the cowl pipe *c*, and the rod *b* is pro-

vided with a weight *g* which counter-balances the cowl device.

The propeller *d* is provided with a rim *d*² which is L-shaped in cross section and fits on and around the outer end *c*⁶ of the cowl pipe *c*, and the rim *d*² of the propeller *d* is provided with a number of projecting blades *d*³ forming a wind wheel by which the propeller *d* is operated.

The blades *d*³ of the propeller *d* are of the form usually employed in devices of this class, and these blades, in the operation of the device, draw the air out from the flue or pipe *a* and produce a vacuum, and this operation of the propeller creates a constant draft through the chimney flue or pipe when the wind is blowing.

The cowl pipe *c* is also provided at the top of the outer or exhaust end thereof with a vertically arranged vane *h* by means of which the cowl device is always held with the discharge end thereof in the direction in which the wind is blowing. By pivoting the cowl device on the rod *b*, and balancing the same by means of the arm *e*³ and weight *g* the said cowl device is free to rotate with the least possible friction, and various changes in and modifications of the construction herein shown and described may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

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

1. A rotatable cowl for use in connection with a chimney flue or other ventilating tube, comprising an elbow-shaped pipe, one end of which communicates with the flue and the other end of which extends approximately horizontally and is provided at its mouth with a vertical wind wheel having a set of draft-producing blades and a set of propeller blades standing in approximately the same vertical plane, the former being confined to the open mouth of said elbow tube and the latter projecting radially beyond the rim of said open mouth of the tube for rotating the wind wheel and thereby enabling the draft-producing blades to promote ventilation, a rim secured to and encircling said draft-producing blades and carrying said propeller blades, and a wind vane

adjacent the discharge end of the cowl by which the cowl may be rotated.

2. A rotatable cowl for use in connection with a chimney flue or other ventilating tube, comprising an elbow-shaped pipe, one end of which communicates with the flue and the other end of which extends approximately horizontally and is provided at its mouth with a vertical wind wheel fitting over said open mouth and provided with radially arranged blades, those adjacent the center at the mouth of the pipe being turned obliquely to create a draft when rotated, and those peripherally beyond the draft producing blades extending radially beyond the rim of the pipe in an oblique direction to propel the wheel by the engagement therewith of the external wind, a rim secured to said wheel encircling said former blades and carrying the latter blades, and a wind vane adjacent the discharge end of the cowl by which the cowl may be rotated.

3. A rotatable cowl for use in connection with a chimney flue or other ventilating tube comprising an elbow-shaped or curved pipe, one end of which incloses the flue, and the other end of which is provided with a wind operated suction propeller which fits therein and is provided with an annular rim having radially arranged blades forming a wind wheel by which the propeller is oper-

ated, the discharge end of the cowl being also provided at the top thereof with a vertically arranged wind vane by which it may be rotated.

4. A cowl device comprising an elbow-shaped pipe, one end of which is adapted to inclose a chimney flue or ventilating tube, and the discharge end of which is provided with a suction wind operated propeller which fits therein and is provided with an annular rim having radially arranged blades forming a wind wheel by which the propeller is operated, said flue or tube being provided with a centrally arranged rod which passes upwardly into the cowl device, and said cowl device being provided centrally of the top portion thereof with a pivot block in which said rod rests, and said block being provided with a backwardly directed arm, and a balancing weight mounted on said arm, and said cowl device being also provided at the top of the discharge end thereof with a vertically arranged vane.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 16th day of May, 1908.

EARLE CHESTER POWERS.

Witnesses:

M. E. DOODY,
C. E. MULREANY.