G. D. GREENLEAF.

Ventilator.

No. 24,387. Patented June 14, 1859.

Fig. 2.

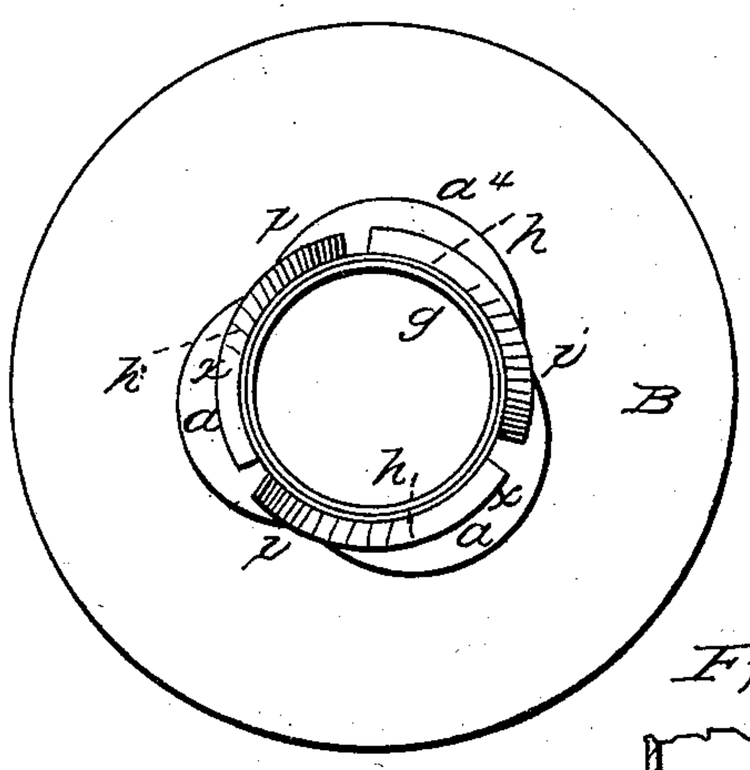


Fig. 3.

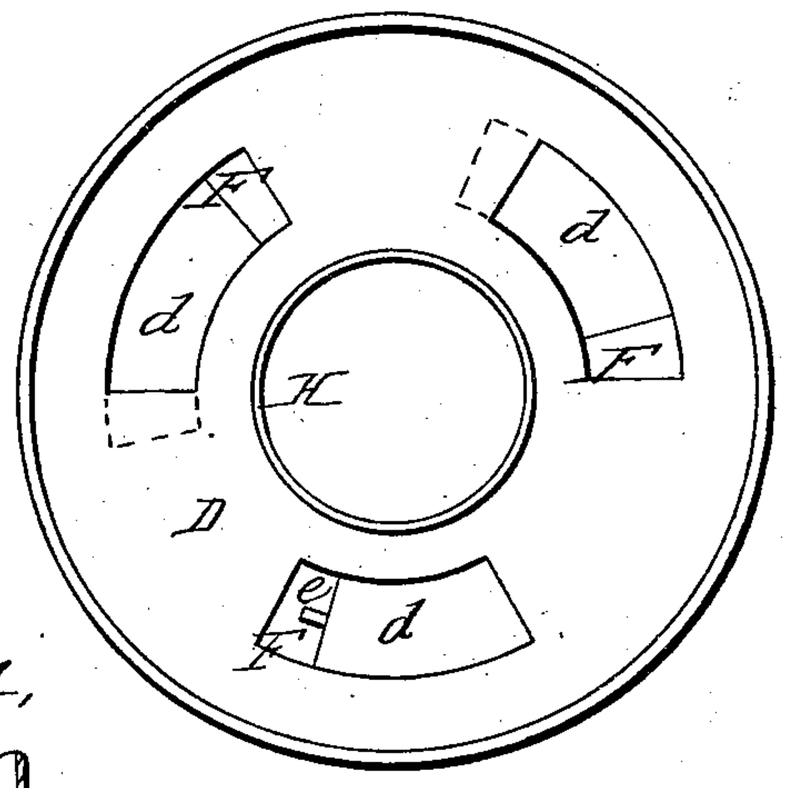
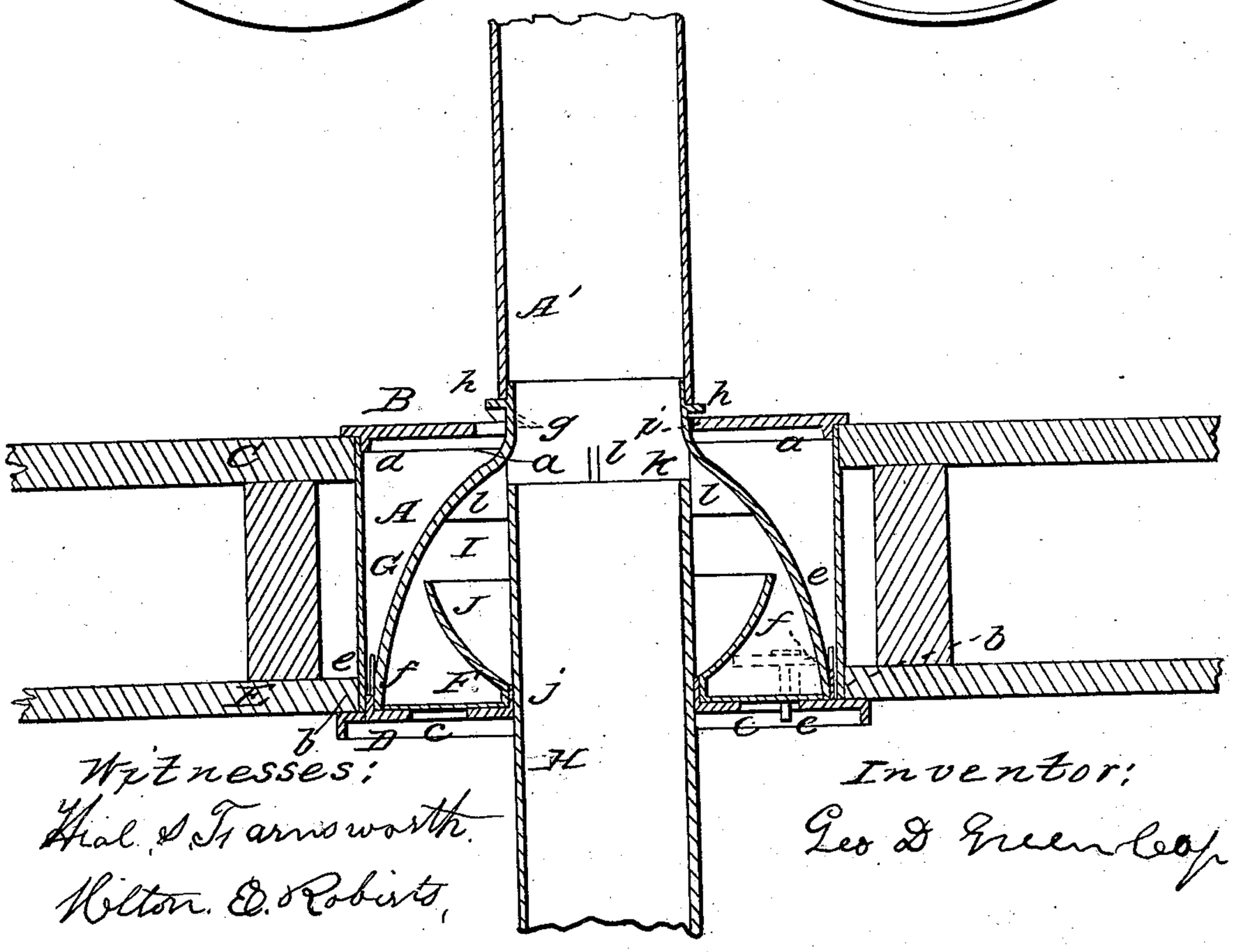


Fig. 1.



Witnesses:
Hial S Farnsworth.
Welton. E. Roberts,

Inventor:
Geo D Greenleaf

UNITED STATES PATENT OFFICE.

GEO. D. GREENLEAF, OF CHATEAUGAY, NEW YORK.

VENTILATOR.

Application of Letters Patent No. 24,387, dated June 14, 1859.

To all whom it may concern:

Be it known that I, GEORGE D. GREENLEAF, of Chateaugay, in the county of Franklin and State of New York, have invented a new and Improved Ventilator; 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 a part of this specification, in which—

Figure 1, is a vertical central section of my invention. Fig. 2, is a plan or top view of the same. Fig. 3, an inverted plan of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a novel way of ventilating apartments that are heated by stoves. The object of the invention is to ventilate such apartments by allowing the impure air to escape into the pipe of the stove by which the apartment is heated, the impure air escaping through the stove pipe together with the products of combustion from the stove. The invention consists in the peculiar means employed for effecting such result as will be hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a sheet metal cylinder which is inserted in the ceiling of the apartment to be ventilated or in a partition thereof at any point where the stove pipe is to pass through.

B, is a cast metal plate which is provided at its under side near its edge with an annular flanch *a*, around which the upper end of the cylinder A, is fitted, the plate B, resting on the flooring C, immediately above the apartment to be ventilated, see Fig. 1.

D, is a cast metal plate which is provided at its upper side with an annular flanch *b*, around which the lower end of cylinder A, fits, said plate D, being against the ceiling E, of the apartment to be ventilated, the cylinder A, being made of a length or depth to correspond to the thickness of the flooring C, ceiling E, and the space between them. The plate D, has holes or openings *c*, made in it, as shown in Fig. 3, and on the upper surface of plate D, within the flanch *b*, a circular plate F, is placed, said plate F, having holes *d*, made through it corresponding to the holes *c*, in plate D, and forming a register. The plate F, is turned by means of a pendant *e*, which projects down through one of the holes or openings *c*, in plate D.

G, is a bell-shaped casting which is fitted within the cylinder A, and has its lower edge resting on the plate D. The plate D, is secured to this casting G, by means of hooks *e'*, attached to the flanch *b*, said hooks fitting over inclined projections *f*, on the outer side of the casting. The upper end of the casting G, is provided with or terminates in a neck *g*, of such diameter as to receive the end of the stove pipe A', above the flooring C, and on the neck *g*, spiral flanches *h*, are formed or attached, underneath which flanches, projecting corners *i*, at the edges of the opening in plate B, bear, see more particularly Fig. 2. Near the center of plate D, there is an annular flanch *j*, said flanch forming the boundary of an opening in which the stove pipe H, fits, said pipe H, leading from the stove and extending upward within the chamber I, formed by the casting G, nearly to the neck *g*, a space *k*, being allowed between the orifice of pipe H, and the neck to admit the upper stove pipe A', to communicate with chamber I, which is formed by the bell-shaped casting G, as shown clearly in Fig. 1. On the flanch *j*, a cup J, is fitted. This cup may be constructed of sheet metal and its upper edge extends outward to within a short distance of the inner sides of the casting G. To the inner side of the upper part of the casting G, plates *l*, are attached to serve as bearings for the upper end of pipe H, and retain said pipe in proper position.

From the above description it will be seen that this invention serves to protect the wood work in the ceiling from the heat of the stove pipe, for the space between the bell-shaped casting G, and cylinder A, communicates with the external air by opening $a^{\times}$, around the neck *g*, of the casting and it will also be seen that by adjusting the plate or register F, the foul air in a room may escape through the holes *e*, *d*, into the chamber I, and thence into the pipe A', at the same time the smoke from the stove ascends freely up the pipes H, A'. The cup J, catches all soot that may fall from A'. The casting G, is secured to the plate D, by turn-

ing it so that its inclined projection *f*, will fit snugly under the hooks *e'*, and the plate B, is turned so that its projections *i*, which are underneath the spiral flanches *h*, will draw the plate D, snugly against the ceiling E.

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

In combination with the cylinder A, bell-shaped casting G, and plates B, D, the cup J, and register F, for the purpose specified.

GEO. D. GREENLEAF.

Witnesses:
HIAL. S. FARNSWORTH,
MILTON E. ROBERTS.