

Dana Estes

D. Estes,

House Ventilator,

N^o 61,820.

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Fig. 1

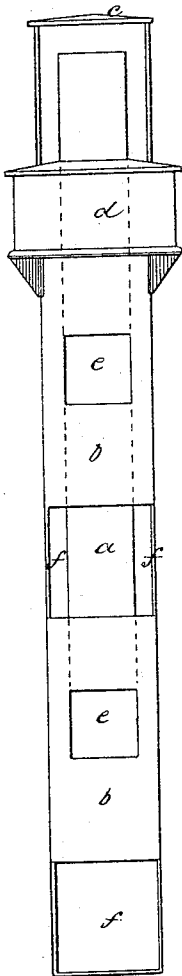
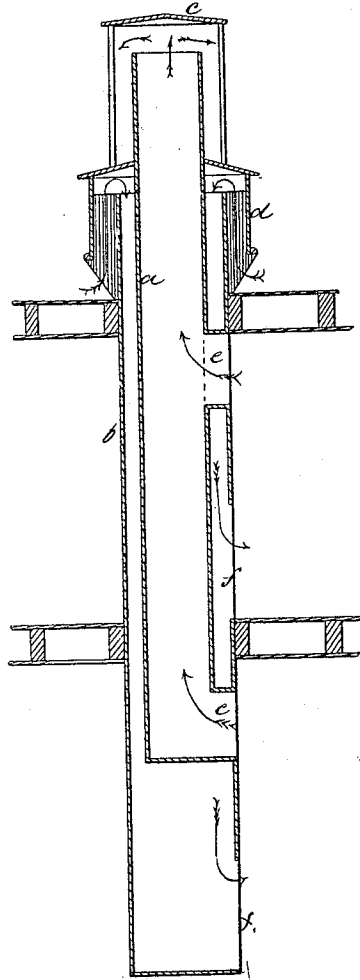


Fig. 2



Witnesses
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My invention consists in the employment, for the purpose of changing the air in an enclosed space, of one single conduit, located within and surrounded by another of considerably greater cross-section, when an opening is made from the internal conduit through the external one and into the space to be ventilated, preferably at or toward the upper part thereof, and when an opening is made from the exterior conduit into said space, preferably at or toward the bottom thereof, both of the conduits opening into the external atmosphere, the outer one in such a manner as to receive the air currents from any point of the compass.

Figure 1 of the drawing shows in elevation a ventilator embodying my invention; and

Figure 2 illustrates the same in vertical section.

The ventilator is made from two single conduits or flues, *a* being the inner flue, and *b* being the outer flue containing and surrounding the inner flue. The inner flue is preferably made to extend, at its top, beyond the outer flue, as seen in the drawing, and it is also preferably covered by a roof or protector, *c*, to prevent the outgoing current from being disturbed by wind currents. The outer flue is preferably hooded or protected, as seen at *d*, the form of hood being such as to prevent the direct ingress of wind currents, while allowing free ingress of air through the outer flue to take the place of the heated or vitiated air escaping through the inner flue. Openings, *e*, are made from the inner flue, through the outer flue, into the enclosed spaces to be ventilated, these being preferably above the openings *f*, from the outer flue into said spaces, the former being located in rooms near the ceiling, and the latter near the floor.

This construction of one single flue within the other cheapens the application of a ventilating system to enclosed spaces, as it costs no more to insert in or attach to the walls of such spaces the compound flue than it does a single ingress or egress flue. Moreover, in many cases the additional stiffness attainable with a small amount of material in the double construction is a matter of great convenience in applying my ventilator to buildings. In cases where the inner flue is made of sheet metal, considerable of the caloric passing outward through the inner flue is communicated to the incoming current descending through the outer flue and in contact with the material of the inner flue, and thus a portion of the heat passing off with the vitiated air is saved and returned to the apartment from which it was escaping. On the drawing, the direction of the ventilating currents obtaining in the use of my compound ventilator are clearly shown by the arrows marked thereon.

I claim a ventilator made of two separate flues, one located within and surrounded by the other, when each flue is provided with independent openings into the enclosed space which is to be ventilated, and is otherwise constructed and arranged substantially as described.