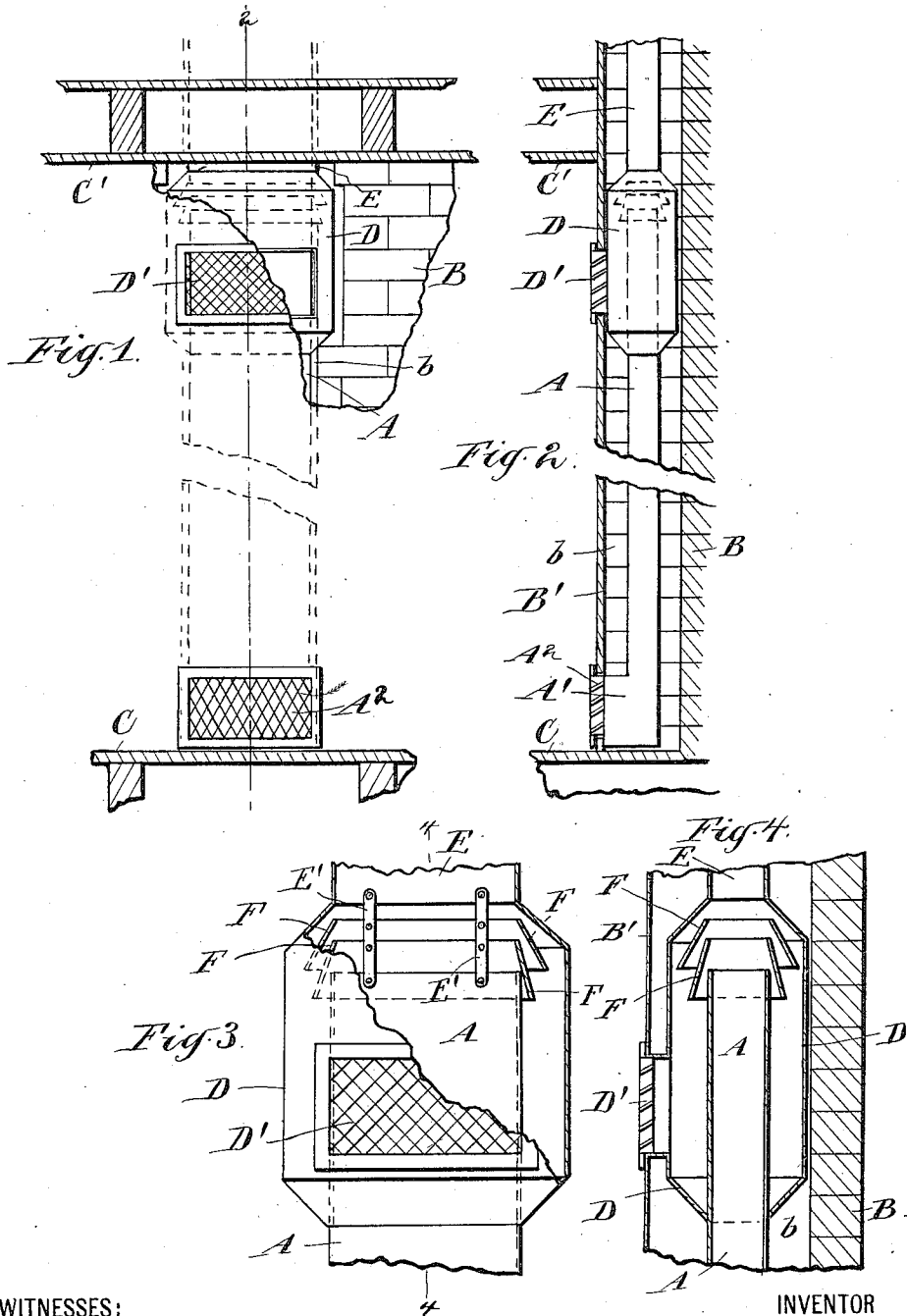


M. W. GRISWOLD.
VENTILATING APPARATUS.
APPLICATION FILED JUNE 14, 1912.

1,045,835.

Patented Dec. 3, 1912.



WITNESSES:

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VENTILATING APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MERRITT W. GRISWOLD, a citizen of the United States, residing at Highwood, in the county of Bergen and State of New Jersey, have invented a certain new and useful Improvement in Ventilating Apparatus, of which the following is a specification.

The invention relates to means for removing vitiated air from rooms and apartments, and the object of the invention is to provide simple, automatically-operated means for removing the warm or light air in the upper portion of the room and utilizing the current thus produced, through the medium of a simple form of ejector, in drawing the heavy, vitiated cold air from the lower portion of such room, thus effecting the desired ventilation and also equalizing the temperature in the room.

The invention consists in certain novel features of construction and arrangement by which the above objects are attained, to be hereinafter described and pointed out in the claims.

The accompanying drawings form a part of this specification and show an apparatus by which the invention may be carried out successfully.

Figure 1 is a view of a portion of the interior wall of a room, showing the apparatus in front elevation with certain portions broken away, and other portions in vertical section, and Fig. 2 is a vertical section taken on the line 2—2 in Fig. 1, and partly in elevation. Fig. 3 is a front elevation of the ejector, partly in vertical section and on a larger scale than the preceding figures, and Fig. 4 is a corresponding vertical section taken on the line 4—4 in Fig. 3.

Similar letters of reference indicate the same parts in all the figures.

A is a pipe or flue of sheet metal received in a recess *b* provided in the wall B and concealed by a covering of lath and plaster or other finishing material as at B¹. It extends from the floor C nearly to the level of the ceiling C¹ and has a branch A¹ at the lower end opening into the room through a grating or register A², and at the upper end is received in a casing D in an enlarged portion of the recess.

From the upper end of the casing extends a pipe or flue E similar to the pipe A and

forming a continuation of the same, leading to a flue, not shown, or to the exterior of the building in any suitable manner. The casing has an opening near the ceiling communicating with the interior of the room and protected by a grating or register D¹ and carries in its interior a plurality of inverted funnels F, one above the other, supported by strips E¹ extending from the pipe A to the pipe E, and serving as an ejector. The skirt of the lowermost funnel overhangs and partially incloses the open upper end of the pipe A and is itself similarly inclosed by the succeeding funnel.

Warm air near the ceiling enters the casing D through the opening D¹ and escapes to the pipe E through the spaces between the funnels, the current thus established serving to induce an upward current in the pipe A thus drawing in the cooler or heavier air near the floor through the opening at A² and forcing it into the pipe E mingled with the warm air from the upper part of the room. Thus the vitiated warm air near the ceiling is carried away, and with it the cool heavy air near the floor, laden with carbonic acid gas and other heavy impurities, and by drawing simultaneously upon both the warmest and coolest layers of air an equalization of temperature throughout the height of the room is effected.

The apparatus operates automatically and may be easily installed. As shown in the drawings it is concealed in the wall, but it will be understood that in factories and other situations in which exposure is not objectionable, the apparatus may stand wholly exposed in the room, with or without the casing D.

I claim:—

1. In an apparatus of the character described, a flue extending from the floor nearly to the ceiling and having its upper end open, a pipe leading from said open end, said pipe having a lateral opening at its lower end near the floor, a casing surrounding the said pipe near the ceiling and having a lateral opening and a plurality of inverted funnels spaced apart and supported upon said pipe within the casing.

2. A ventilating pipe extending from the floor nearly to the ceiling and having an opening near the floor, a plurality of inverted funnels one within the other sup-

ported above the open upper end of said pipe, a casing surrounding the upper end of said pipe and said funnels, a flue leading from the upper end of the casing, and an outlet from said casing into the room below said funnels.

In testimony that I claim the invention

above set forth I affix my signature, in presence of two witnesses.

MERRITT W. GRISWOLD.

Witnesses:

CHARLES R. SEARLE,
CORA M. FREDERICKS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
