

No. 672,488.

Patented Apr. 23, 1901.

C. H. MILLER.
VENTILATOR FOR BUILDINGS.

(No Model.)

(Application filed June 21, 1900.)

2 Sheets—Sheet 1.

Fig. I.

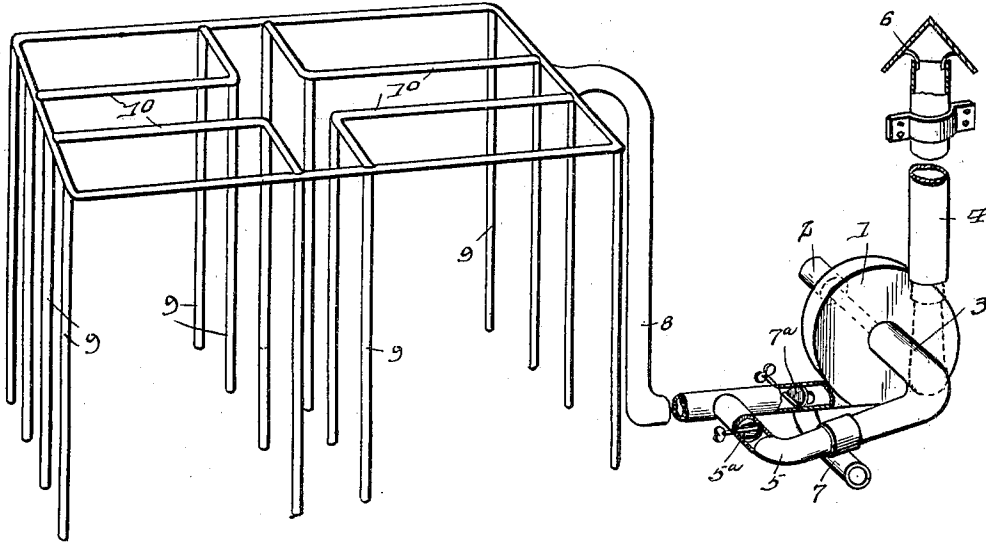


Fig. 4.

Fig. 5.

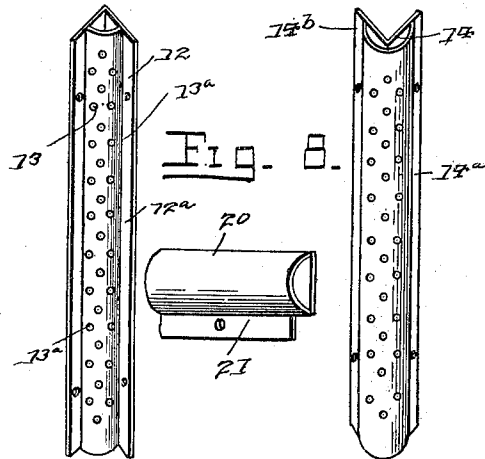


Fig. 6.

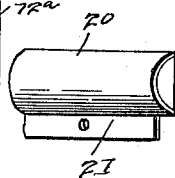


Fig. 7.

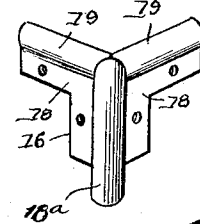
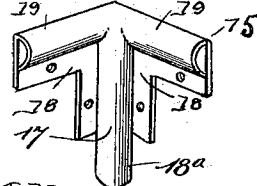


Fig. 8.



Witnesses
F. E. Alden
H. J. Riley

C. H. Miller, Inventor

by C. A. Snow & Co.
Attorneys

No. 672,488.

Patented Apr. 23, 1901.

C. H. MILLER.
VENTILATOR FOR BUILDINGS.

(No Model.)

(Application filed June 21, 1900.)

2 Sheets—Sheet 2.

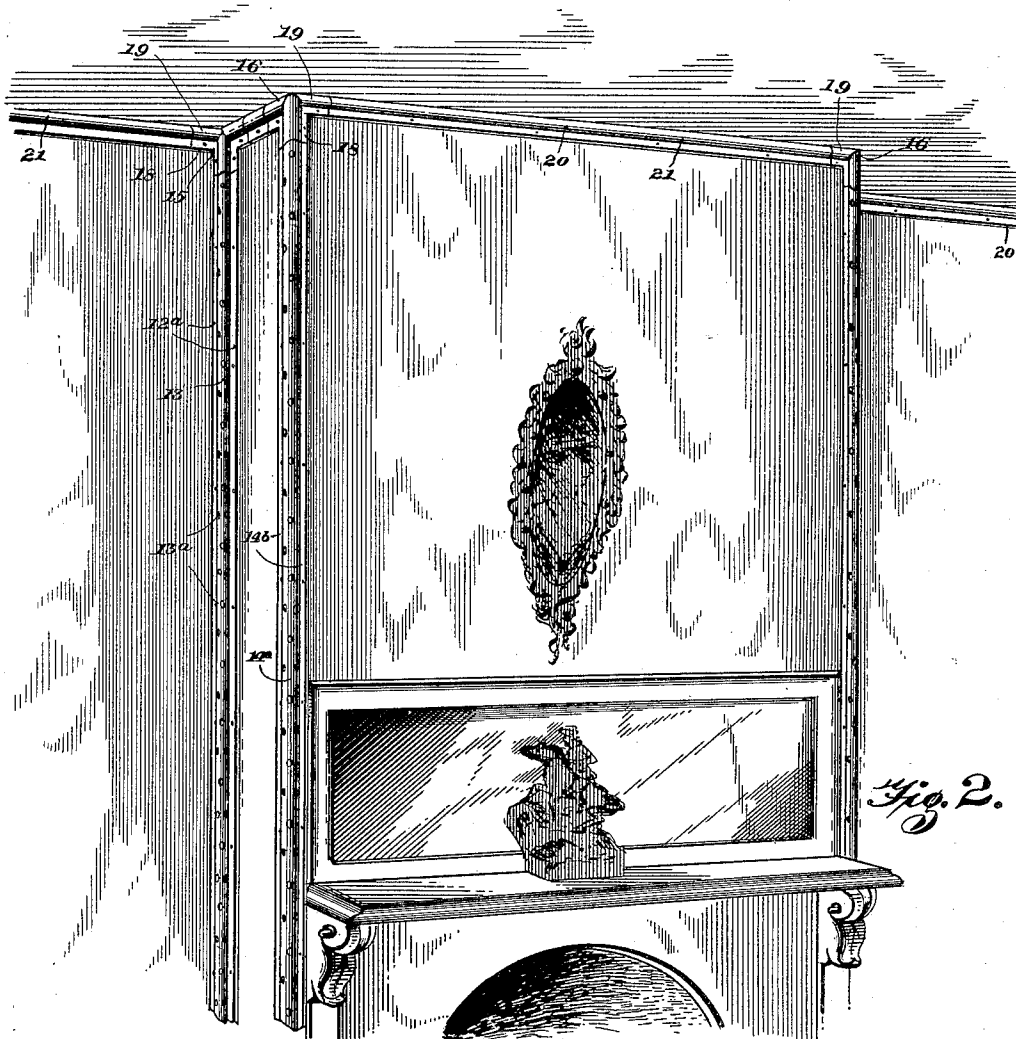


Fig. 2.

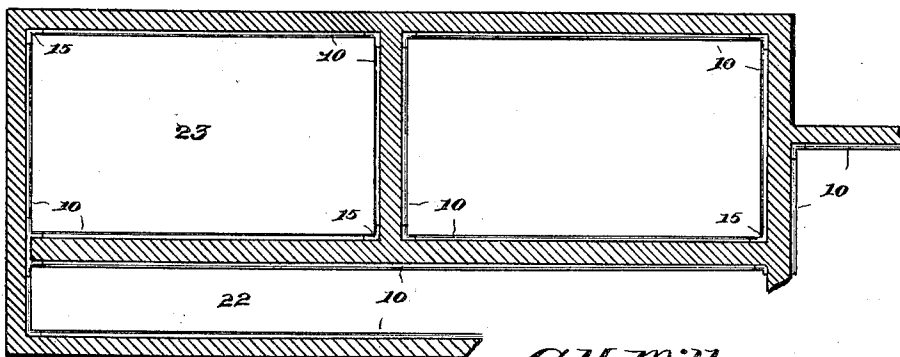


Fig. 3.

Witnesses
John Dondoro
H. H. P. Day

C. H. Miller, Inventor
by *Chas. Snowles*
Attorneys

UNITED STATES PATENT OFFICE.

CHARLEY H. MILLER, OF LOGTOWN, MISSISSIPPI.

VENTILATOR FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 672,488, dated April 23, 1901.

Application filed June 21, 1900. Serial No. 21,094. (No model.)

To all whom it may concern:

Be it known that I, CHARLEY H. MILLER, a citizen of the United States, residing at Logtown, in the county of Hancock and State of Mississippi, have invented a new and useful Ventilator for Buildings, of which the following is a specification.

The invention relates to improvements in ventilators for buildings.

One object of the present invention is to improve the construction of ventilators and to provide a simple and comparatively inexpensive one designed for use in buildings where it is impossible, owing to the number of rooms or apartments, to obtain the necessary ventilation by windows and doors and adapted for driving pure fresh air into a building and for distributing the same through the various rooms and apartments to the desired extent and capable of being readily arranged for drawing off foul and damp air.

Another object of the invention is to provide a ventilator of this character adapted to be readily applied to the exterior of the walls of the rooms or apartments of a building and to present the appearance of ornamental molding, so that the building will be ornamented and not disfigured by the invention.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view illustrating a ventilator constructed in accordance with this invention. Fig. 2 is a perspective view of a portion of the interior of a room, illustrating the arrangement of the distributing-tubes. Fig. 3 is a horizontal sectional view illustrating the arrangement of the distributing-tubes when the same are disposed within the hall and rooms of a building. Figs. 4 and 5 are detail perspective views of the corner tubes or conduits. Figs. 6 and 7 are similar views of the T-shaped couplings or connecting-pieces. Fig. 8 is a detail view of a portion of one of the horizontal pipes or conduits for connecting the vertical corner pipes or conduits.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a fan-casing designed to be provided with a rotary fan adapted to be driven in either direction for utilizing the pipes or conduits, hereinafter described, for supplying pure fresh air to the interior of buildings or for drawing off foul or damp air, as may be desired. The fan-shaft is provided with a pulley 2, located at one side of the fan-casing and designed to be driven by any suitable motive power. A swiveled elbow 3 is arranged at the other side of the casing and is adapted to be connected with a vertical supply-pipe 4, as illustrated in dotted lines in Fig. 1 of the accompanying drawings, and with a branch pipe 5, as shown in full lines in the said figure, accordingly as it is desired to supply fresh air or draw off foul air. The vertical supply-pipe 4, which extends upward from the fan-casing, may be supported in any suitable manner, and as the means of mounting it do not form a part of the present invention it is thought that illustration thereof is unnecessary. The movable pipe or elbow 3 may telescope into the lower end of the vertical supply-pipe, and the branch pipe 5 may extend into the elbow; but any other suitable means may be provided for coupling the parts. The upright supply-pipe 4 is designed to extend a sufficient distance above the house or other building to be ventilated to obtain pure air, and it is provided at its upper end with a conical cap or hood 6 to prevent rain or snow from beating into it. The fan-casing is also provided with a short discharge-pipe 7, which is employed when the elbow is connected with the branch pipe 5 for arranging the ventilator for drawing off foul air, and dampers or cut-offs 5^a and 7^a are provided for closing the branch pipe 5 and the discharge-pipe 7. The branch pipe 5 is closed when the elbow 3 is connected with the vertical supply-pipe 4, as illustrated in dotted lines in Fig. 1 of the accompanying drawings.

The branch pipe 5 communicates with a main conduit or pipe 8, which extends inward from the fan-casing, as clearly shown in Fig. 1, and this main pipe or conduit 8 is connected with a series or system of pipes or conduits. The cut-off 7^a is mounted in the main conduit or pipe 8 and is adapted to close the same when the discharge-pipe 7 is open, and when the discharge-pipe 7 is closed the main con-

duit or pipe is open. The arrangement illustrated in Fig. 1 of the accompanying drawings is designed for the interior of rooms, the vertical pipes 9 being located in the corners of the room and the horizontal pipes 10 being arranged in the angles or corners formed by the walls and the ceiling. The pipes or conduits for distributing fresh air to the building and for drawing off the foul air may be arranged on the interior of the various rooms and in the halls or intervening spaces between the rooms, and in Fig. 2 of the accompanying drawings the pipes or conduits are shown applied to a portion of a house. The arrangement in the hall 22 will be substantially the same as in the rooms 23, the vertical pipes being located at the corners and the horizontal pipes at the angles formed by the walls and the ceiling. These pipes or conduits present the appearance of molding and may be made in any ornamental manner to represent wood-work or other trimming. When the pipes or conduits are arranged in the angles or corners, they are constructed as shown in Fig. 4 of the accompanying drawings, and they consist of a flanged back 12 and a curved front 13, connecting the sides of the back, and provided with perforations 13^a. The sides of the back are arranged at an angle to each other to suit the angle formed by the walls, and they preferably extend beyond the curved front 13 to form flanges 12^a, and these extended portions or flanges may be perforated for the reception of suitable fastening devices for securing the pipes or conduits to the walls and ceiling; but the said pipes and conduits may be attached in any other suitable manner.

When the pipes or conduits are arranged on the angles formed by two hall-walls, they are constructed as shown in Fig. 5, the flanged back 14 being reversed to fit the corner. This form of pipe or conduit may of course be employed in large rooms having projecting mantels and the like forming projecting corners, and the curved front 14^a is provided with perforations and extends around the angle of the back and is secured to the sides of the same at the outer faces. The back forms a recess for the projecting corner, and the sides of the back extend beyond the edges of the curved front 14^a to form projecting longitudinal side flanges 14^b. The horizontal and vertical pipes or tubes are connected by T-shaped couplings 15 and 16, arranged to fit in and to extend around corners and angles and having an open lower end for the vertical pipe or conduit and provided with open laterally-disposed arms for the reception of the adjacent horizontal pipes or conduits. The T-shaped coupling, which is illustrated in Fig. 6 of the accompanying drawings, is adapted to fit within a corner, and the depending portion 17 of the coupling is constructed similar to the pipe or conduit illustrated in Fig. 4. The sides or arms of the couplings 15 consist of back plates 18 and semitubular front walls 19 to fit the form of horizontal tube or conduit

20 illustrated in Fig. 8 of the drawings. The tubular portion of the vertical arm of the T-shaped coupling 15 extends below the side plates or flanges to provide a projecting portion 18^a to fit into the upper end of the adjacent vertical tube, and, if desired, the laterally-extending horizontal arms of the T-shaped couplings may be similarly constructed. The T-shaped coupling 16 extends around the corner or angle and is constructed substantially the same as the coupling 15, with the exception that the tubular portions are arranged on the exterior of the angle formed by the coupling. In the coupling 15 (illustrated in Fig. 6 of the accompanying drawings) the semitubular pipes or portions are located within the angle formed by the coupling. Also the couplings at the opposite faces of a wall may be connected by short tubes, if desired, and this short connecting-tube will then extend through the wall. The horizontal tube or conduit 20 consists of a back plate and a semitubular or curved front wall 21, which is extended beyond the curved wall to form an attachment-flange. The horizontal pipes or conduits which connect the vertical distributing pipes or conduits may be either perforated or imperforate, as may be found necessary or desirable. The lower ends of the vertical pipes or conduits are preferably closed by arranging them upon the floor of the house or building. The arrangement of the approximately quadrant-shaped vertical tubes or conduits is clearly illustrated in Fig. 3 of the accompanying drawings; but it will be readily apparent that the number and arrangement of the tubes or conduits will be varied to suit the character of the building to be ventilated and the number and arrangement of the rooms or apartments, and I desire it to be understood that various changes in the form, proportion, and minor details of construction within the scope of the appended claims, such as providing sliding cut-offs for one or more of the pipes or conduits, so that the rooms or apartments may be ventilated to a greater or less extent, may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention. When sliding cut-offs are provided, they may be used for shutting off the air in rooms or apartments where the same is not required, and the force of the air will be correspondingly increased in the other rooms or apartments.

What I claim is—

1. An apparatus of the class described comprising a fan having a casing, a main pipe or conduit extending from the casing and having a branch pipe; a discharge-pipe arranged at the casing and extending from the main pipe or conduit, a supply-pipe, a swiveled elbow mounted on the casing and arranged to be connected to the branch pipe or to the supply-pipe, and cut-offs for controlling the passage of air through the branch pipe and the discharge-pipe, substantially as described.

2. An apparatus of the class described provided with a pipe or conduit designed to be arranged at an angle of the room and comprising a V-shaped back portion having sides arranged at an angle, and a curved front wall provided with perforations, substantially as described.

3. An apparatus of the class described provided with a pipe or conduit designed to be arranged at an angle of a building and composed of a flanged back having sides disposed at an angle to each other, and a curved front provided with perforations and connected with the sides of the back, the said sides being extended beyond the curved front, substantially as described.

4. An apparatus of the class described provided with a pipe or conduit composed of a substantially V-shaped back, and a curved front provided with perforations and arranged between the sides of the back, said sides being extended beyond the curved front, substantially as described.

5. An apparatus of the class described provided with a pipe or conduit having a substantially V-shaped back adapted to fit over a corner, and a curved front provided with perforations and connected with the said sides at the outer faces thereof, substantially as described.

6. An apparatus of the class described comprising

a fan-casing, a main pipe or conduit extending from the fan-casing and having a discharge-pipe and provided with a branch pipe, a supply-pipe, a movable pipe mounted at the fan-casing and communicating with the same and arranged to swing to and adapted to be connected with either the branch pipe or the supply-pipe, cut-offs for controlling the passage of air through the pipes, and tubes or conduits connected with the main pipe or conduit and designed to be arranged at the angles and corners of the interior of a building and provided with perforations, substantially as and for the purpose described.

7. An apparatus of the class described comprising horizontal pipes or conduits, vertical pipes or conduits, said pipes or conduits being designed to be arranged at the angles and corners of a room or hall, and an approximately T-shaped coupling connecting the pipes or conduits, said coupling having a depending stem composed of a flange or substantially V-shaped back and a curved front wall, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLEY H. MILLER.

Witnesses:

BENNIE BAXTER,
JAMES C. OSBORN.