U. G. McQUEEN.

VENTILATOR.

APPLICATION FILED APR. 24 1917.

1,324,973.

Patented Dec. 16, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

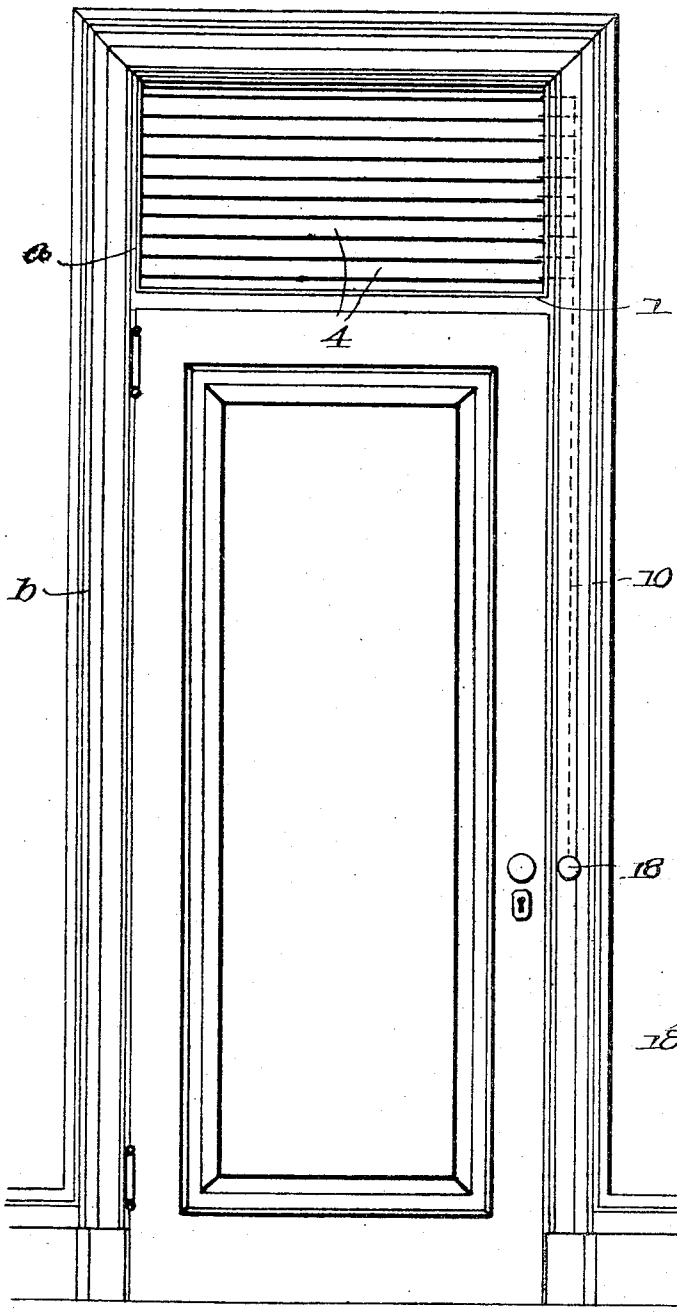
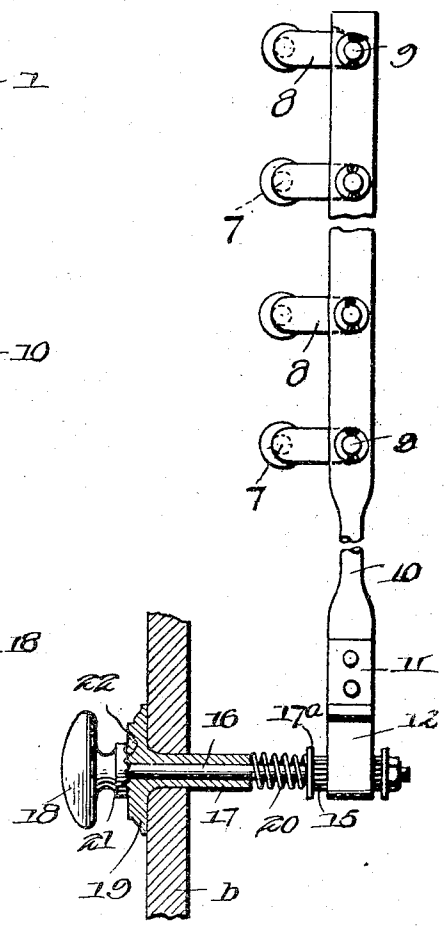


Fig. 5.



WITNESSES:

A. V. Doyle

Hugh H. Hall

INVENTOR

U. G. McQueen

BY

James A. D. Keech

ATTORNEY

U. G. McQUEEN.

VENTILATOR.

APPLICATION FILED APR. 24, 1917.

1,324,973.

Patented Dec. 16, 1919.

2 SHEETS—SHEET 2.

Fig. 2.

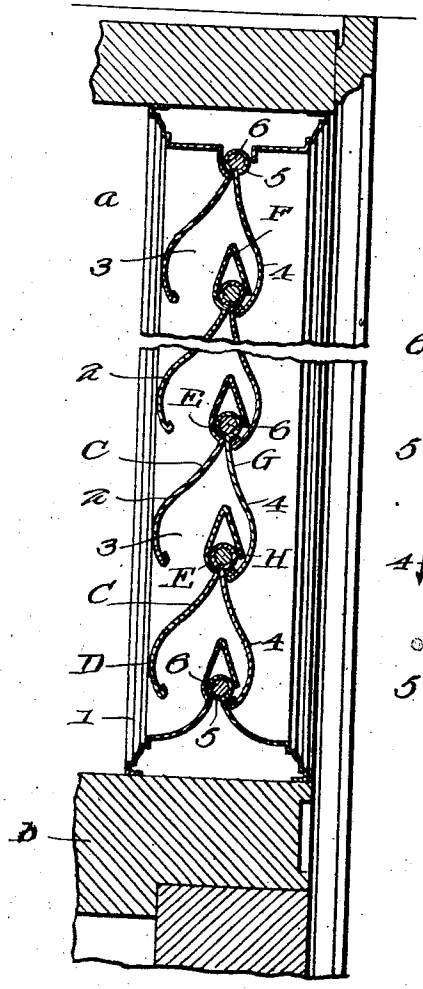


Fig. 3.

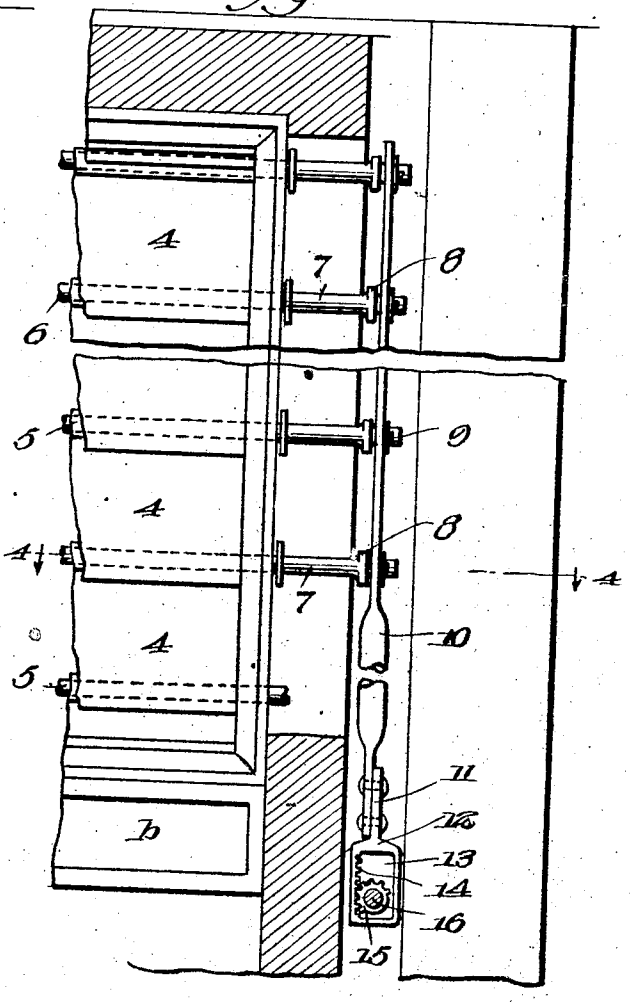
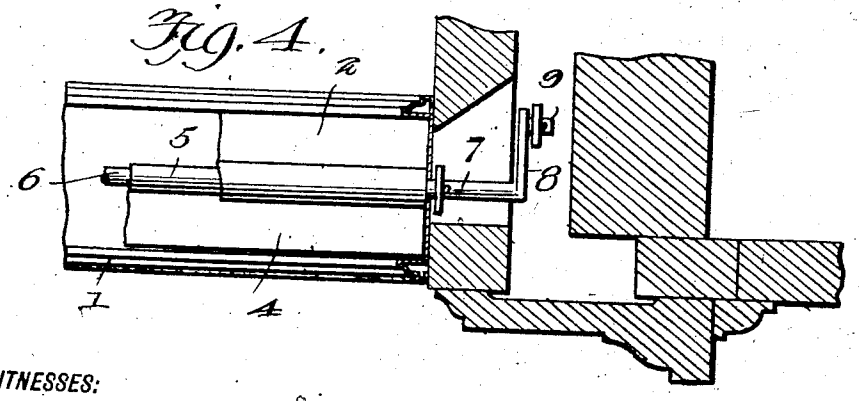


Fig. 4.



WITNESSES:

A. V. Doyle

Hugh H. Hall

INVENTOR

U. G. McQueen

BY

James A. D. Keachy

ATTORNEY

UNITED STATES PATENT OFFICE.

ULYSSES G. McQUEEN, OF NEW YORK, N. Y.

VENTILATOR.

1,324,973. Specification of Letters Patent. Patented Dec. 16, 1919.

Application filed April 24, 1917. Serial No. 164,201.

To all whom it may concern:

Be it known that I, ULYSSES GRANT McQUEEN, citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

This invention relates to ventilators, and particularly to transom structures, and has for its principal object the provision of means for effectually establishing communication between a room and an adjoining ventilating or fresh air space, adjacent hallway or the like and at the same time obstructing the line of vision through the transom so that it will be impossible for one to see through the same, irrespective of the view angle which may be selected for such purpose.

A still further object of the invention resides in the provision of a ventilating structure of the described character which will be positive in action, simple in construction and active for a free ventilation of air to the room without creating undue drafts.

A further object of the invention resides in the provision of a ventilator consisting of a frame which may be readily mounted in the transom opening of an ordinary door structure without requiring any material changes thereto.

Another object of the invention is to provide a transom or other ventilator which will consist of fixed louvers and swinging louvers, and relating all of said louvers whereby to prevent the swinging louvers from being adjusted from the outside.

Another object of the invention resides in the provision of a plurality of swinging louvers, a plurality of mating fixed louvers and mechanism which will be arranged in convenient reach of the operator for moving said swinging louvers with relation to the fixed louvers.

In the drawings:—

Figure 1 is an elevation of a door structure showing the application of the ventilator thereto.

Fig. 2 is a vertical section therethrough showing parts broken away.

Fig. 3 is an inner face view of a part of the structure.

Fig. 4 is a horizontal section on the line 4—4, of Fig. 3.

Fig. 5 is a side view of the operating mechanism.

While the ventilating structure herein designed is intended primarily to be used in connection with the usual transom opening of an ordinary door structure, I, by no means, desire to limit myself to such application. For instance, it may be applied directly to the door or it may be arranged in the wall, or above windows or at any other points in a building construction where perfect ventilation can be established satisfactorily but with an obstruction to the line of vision between adjoining rooms, hallways and the like.

The door structure illustrated specifically in Fig. 1, is of the ordinary well-known type. In the transom opening *a*, of the frame *b*, is mounted a metallic casing 1, open respectively at its opposite sides as clearly disclosed in Fig. 2, of the drawings. Angularly disposed within the casing and fixed in any suitable well-known manner thereto, are baffle plates or vision obstructing elements 2, which are arranged in superposed relation and spaced from each other so as to define uniform air passages 3, therebetween. These elements are in the form of louvers and each is curved outwardly at C, and then downwardly and inwardly at D. Above the portion C, said louvers are formed to provide sockets E, and inverted V shaped view-obstructing extensions F, the latter being vertically disposed.

Swinging louvers 4, are mounted at one side of said fixed louvers and each is provided with a loop 5, which fits in the socket E, of the next adjacent fixed louver from which point it is adapted to move in hinge fashion. Each of said swinging louvers is curved downwardly and outwardly at G, and then inwardly and downwardly at H, in the direction of the vertical center of the frame or casing 1. The supported looped ends of the swinging louvers are positioned relatively whereby all of said swinging louvers are adapted to come in overlapping engagement as shown in full lines in Fig. 2. Through this arrangement, movement of the swinging louvers toward the fixed louvers will be limited. When the swinging louvers are opened as shown in dotted lines in Fig. 2, substantially inverted V shaped passages are defined between the respective fixed and pivoted louvers and the air coming into the

angular passages between the fixed louvers is obstructed by the mentioned vertical extensions F, and deflected from its course and discharged into the passages defined by the swinging louvers where it finally finds its escape. The extensions are therefore depended upon to perform more than the mere function of obstructing the horizontal line of vision through the transom incident to their association with said fixed and swinging louvers.

Rods 6, are journaled in the end walls of the frame 1, and also extended through the loops E. These rods are extended at 7, into the casing structure as shown in Fig. 4, and they are provided with crank-arms 8, having studs 9. This last named construction is combined with an operating rod 10, concealed in the casing structure and the combination furnishes means whereby the swinging louvers can be adjusted at the will of the operator. Said operating rod is operatively connected with a power transmitting mechanism which is shown to consist of a plate 11, having a head 12, in which a vertical slot 13, is formed. One wall of said slot is provided with rack-teeth 14, which mesh with a pinion 15, on a shaft 16. Said shaft is free to rotate in a sleeve 17, mounted in the door casing. At the front of said casing, the shaft carries a hand knob or the like 18. The sleeve 17, is fixed to a face plate 19, and mounted against said sleeve is one end of a spring 20, the opposite end thereof having engagement with a fixed washer 17a, on the shaft 16, whereby to move the latter in one direction and thus operate to normally hold the ratchet surface 21, on the shaft 16, in co-acting engagement with a similar surface 22, on the plate 19. By moving the knob in an outward direction, it draws the surface 21, away from the surface 22, and the shaft is then free to be rotated and the rod moved to adjust the swinging louvers. The ratchet mechanism described and the rack and pinion 14 and 15, constitute a locking device for positively preventing the movable louvers from being turned from the outside.

From the foregoing description, it follows that means are provided for readily establishing communication between the room and adjacent or adjoining hallway or the like, and incident to the peculiar arrangement of the mentioned fixed and movable louvers, substantially sinuous or inverted V shaped ventilating passages are formed in the structure so that the air currents are, to a very desired extent, deflected from a straight horizontal course in their passage through the transom. The louvers all have the office of baffles and the air will be deflected in a downward direction thereby, where it will be free to intermix with a lower stratum of inert air at the inside of the room. Objectionable drafts are thus eliminated and a very fine circulation of air will be established. The hinged louvers are proportioned so that their lower edges come below the plane of the adjacent fixed louvers normally and when opened they never come above said positions and in this manner, all lines of vision through the transom, are destroyed without interfering with a proper circulation of air therethrough. When said swinging louvers are closed and brought into overlapping relation with each other, the joints between the same are securely closed and the device rendered dust and draft proof.

The structure is also designed to eliminate the unsightly appearance of the common controlling mechanism for operating the transom, as it is observed, on reference to the accompanying drawing, that all of the active or moving parts of such mechanism may be concealed within the vertical stile of the door casing and only the small actuating means exposed. Aside from the described advantages found in the structure thus designed, simplicity of operation of the transom is a salient feature and the ease with which the shutter plates can be opened and closed should not be lost sight of.

What is claimed as new is:—

1. A ventilator embodying a frame open at both sides, anguarly disposed fixed relatively spaced superposed louvers mounted in said frame between the open sides thereof, each of said louvers having a vertically rising terminal socket provided with walls which are disposed above the lower edge of the next superposed louver to provide an obstruction in the direct line of vision between the adjacent louver, and swinging louvers freely overlapping each other and mounted to swing from said sockets of the fixed louver.

2. A ventilator embodying a frame open at both sides, angularly disposed fixed relatively spaced superposed louvers mounted in said frame between the open sides thereof, each of said louvers having a vertically rising terminal socket provided with walls which are disposed above the lower edge of the next superposed louver to provide an obstruction in the direct line of vision between the adjacent louver, swinging louvers freely overlapping each other and mounted to swing from said sockets of the fixed louver, shafts carried by the socket supported ends of the swinging louvers, said shafts having terminals extending to one side of the frame, and an adjusting mechanism connected with all of said terminals.

ULYSSES G. McQUEEN