

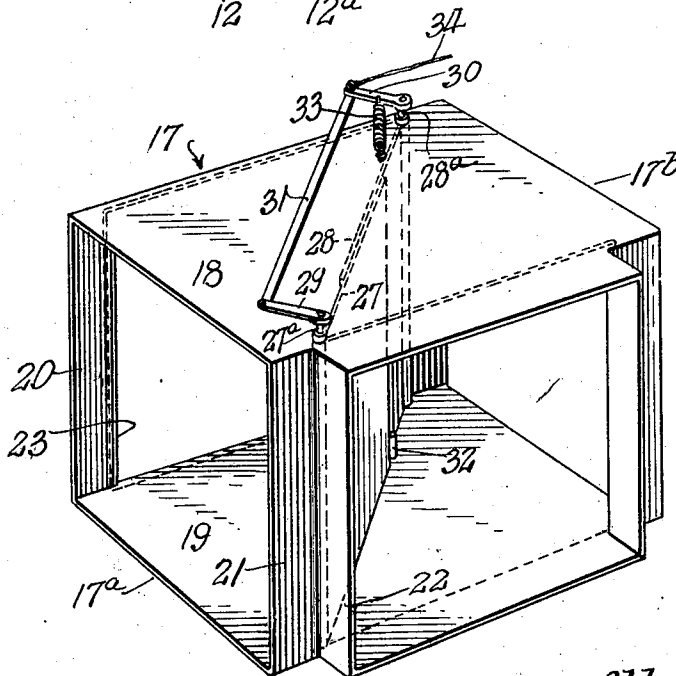
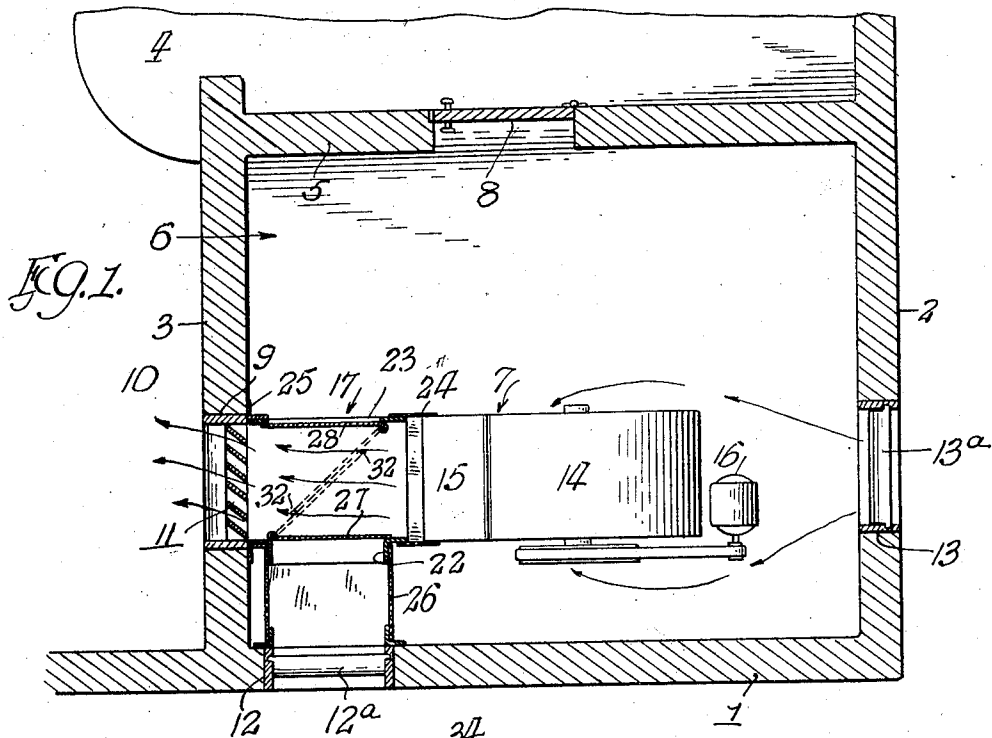
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VENTILATING APPARATUS

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UNITED STATES PATENT OFFICE.

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VENTILATING APPARATUS.

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This invention relates to improvements in ventilating apparatus and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

5 The primary object of the invention is to provide an improved combination exhausting and blow-in casing adapted for attachment to the neck of a blower whereby certain advantages later to appear are attain-
10 able.

Another object of the invention is to provide such a casing having a plurality of mouths and including a plurality of dampers so arranged that either mouth may be employed as a discharge mouth and one may
15 be employed as an exhaust mouth when the other is employed as the discharge.

The above mentioned objects of the invention as well as others, together with the
20 many advantages thereof will more fully appear as I proceed with my specification.

In the drawings:

Fig. 1 is a horizontal plan sectional view through a typical blower room of a theatre
25 in which is embodied one form of my invention.

Fig. 2 is a perspective view of a certain discharge mouth casing embodied in my improved apparatus.

30 Referring now in detail to that embodiment of the invention illustrated in the accompanying drawing, 1 indicates one of the side walls of a theatre building, 2 indicates the rear wall thereof, 3 indicates a wall at the front of the stage 4 and 5 indicates a
35 wall parallel with the side wall and connecting the rear and stage walls. The various walls define a normally closed compartment 6 which is commonly termed "blower" room in which is located a ventilating apparatus
40 7, access being had to said room from the stage through a door and doorway 8.

In the stage wall 3 is provided a rectangular opening 9 connecting the blower room 6
45 with the auditorium 10 of the theatre and in said opening is arranged a plurality of louver like deflecting blades 11. In the side wall 1 near the stage wall and in the rear wall opposite the opening 9 in the stage
50 wall 3 are provided rectangular openings 12 and 13 respectively. The two last mentioned openings have louvers 12^a and 13^a respectively by which they may be closed against the passage of air therethrough
55 when so desired.

In the blower room and resting on the floor thereof is a blower casing 14 arranged parallel with the side wall in the plane of the opening 9 in the stage wall, said casing having a neck 15 extending toward said
60 opening. In said casing which has the usual side inlets, is a fan (not shown) driven by a motor 16 at the rear of the casing.

Between the neck of the blower casing 14 and the stage wall I interpose a casing
65 17 of peculiar construction which in effect forms a continuation of said neck. Said casing is rectangular in both plan and cross section and includes top and bottom walls 18 and 19 and side walls 20 and 21 respectively, thus leaving the casing open at both
70 of its ends 17^a—17^b respectively. In the side wall 20 is provided a short lateral open extension 22 and in the other side wall is provided an opening 23 of the same length and
75 area as that of the extension just mentioned, and said areas approximate the cross sectional area of the open ends of the casing which in turn approximate that of the
80 blower neck.

The open rear end 17^b of the casing is herein shown as connected by a flexible canvas duct 24 to the blower casing neck 15 while the front end of the casing is shown as directly connected by an angle bar 25
85 to the opening 9 in the stage wall 3. The lateral extension 22 is shown as connected by a canvas duct 26 to the opening 12 in the building wall 1. The connections described are to be considered as illustrative only so
90 that other connections suitable to the installation to be made, may be employed in their stead without departing from the spirit of the invention.

In the casing I provide a plurality of co-
95 acting movable dampers 27 and 28 respectively, so arranged that when they are in one limit of their movements, they will close off the opening 23 in the side wall 20 and the opening of said extension 22 so as to
100 leave the casing open from end to end, and when they are in the other limit of their movement, their ends extend diagonally of the casing in overlapping relation to close the casing and connect the rear end thereof
105 with the lateral extension. The damper 27 is fixed to a rod 27^a pivoted in the top and bottom walls of the casing near the side wall 21 at the forward end of the lateral extension 22, while the other damper is fixed to a
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rod 28^a pivoted in the top and bottom walls near the side wall 20 in the plane of the rear side of the lateral extension. The top ends of the rods 27^a—28^a project above the top wall 18 of the casing and to said ends are secured arms 29 and 30 respectively, said arms being connected together by a link or rod 31. In the bottom and top wall of the casing are opposed pins 32 arranged in a plane connecting said rods, the same acting as stops to limit the movement of said dampers in one direction. A spring 33 fixed at one end to the arm 30 and at the other end to the top wall of the casing normally acts to hold the dampers in a position parallel with the side walls of the casing and a cord 34 is fixed to said arm 39 by which said arms may be actuated against the spring from a remote control station or place within or without said room.

The operation is as follows: Assume that it is desired to blow fresh outside air into the theatre auditorium. With the blower in operation, the louvers 13^a in the opening 13 would be arranged to permit a passage of air therethrough and the dampers 27—28 would be in the full line position shown in Fig. 1 wherein they are parallel with the side walls of the casing and close off the opening 23 and lateral extension 22. Air would then pass into the blower room and into the side inlets of the blower and out through the neck 15, and casing 17 and through the opening 9 into the auditorium. To exhaust air from the auditorium and discharge it to atmosphere, the opening 13 is closed and the dampers swung into the overlapping diagonal position up against the stop pins 32. Thus air is drawn from the auditorium through the opening 9 in the wall 30 into the casing 17 where it passes through the opening 23 into the room 6. From this room it enters the inlets of the blower and passes to the neck 15 and from there into the rear end of the casing where the dampers act to direct the same through the lateral extension 22 and through the opening 12, to the atmosphere. Thus the casing permits either the blowing in of fresh air to the auditorium or the exhausting of stale air therefrom. The apparatus is simple in construction and may be readily installed in place. It is noiseless and includes but a few movable parts which cannot readily get out of order.

While in describing my invention, I have referred in detail to the form and arrangement of the parts thereof, the same is to be considered as illustrative only so that I do not wish to be limited thereto except as may be pointed out in the appended claims.

I claim as my invention:

1. In combination with building walls de-

fining a compartment and having apertures therein, one leading to a room to be ventilated and other being closable and leading to atmosphere, a blower in said compartment and having a discharge neck; tubular means providing a continuation of said neck and connected to said first named aperture, said continuation having an opening in one side and a lateral extension on the other side connected to one of said other apertures, and a damper arrangement in said continuation and operable to either close off said opening and extension from said continuation or to connect said extension only with said neck through said continuation.

2. An apparatus of the kind described embodying therein a casing open at opposite ends, and having openings in its sides, a pair of dampers in said casing, arranged to swing from a position parallel with said sides to close the openings therein, to a position extending diagonally of the casing, to connect one end of the casing with one opening and the other end of the casing with the other opening.

3. An apparatus of the kind described embodying therein a casing open at opposite ends, and having openings in its sides, a pair of dampers in said casing, arranged to swing from a position parallel with said sides to close the openings therein to a position extending diagonally of the casing wherein associated ends overlap one another and act to connect one end of said casing to the opening in one side thereof and connect the other end of said casing with said opening in the other side of said casing.

4. An apparatus of the kind described embodying therein a casing open at opposite ends and having openings in its sides, a pair of dampers one normally arranged parallel with each side and closing the opening therein, and capable of being swung into overlapping relation in a plane extending diagonally of the casing and means in said casing adapted to be engaged by said dampers to limit their positions in said overlapping relation.

5. An apparatus of the kind described embodying therein a tubular casing open at its ends and having an opening in one side and a lateral tubular extension on the other side, a damper pivoted in said casing near one end of said opening in said one side and a second damper pivoted in said casing near the diagonally opposite end of said extension, said dampers normally closing said opening and extension and capable of swinging toward each other into substantially the same plane to connect said lateral extension with one end of said casing.

In testimony whereof, I have hereunto set my hand, this 20th day of May, 1927.

ALLEN A. FEINBERG.