

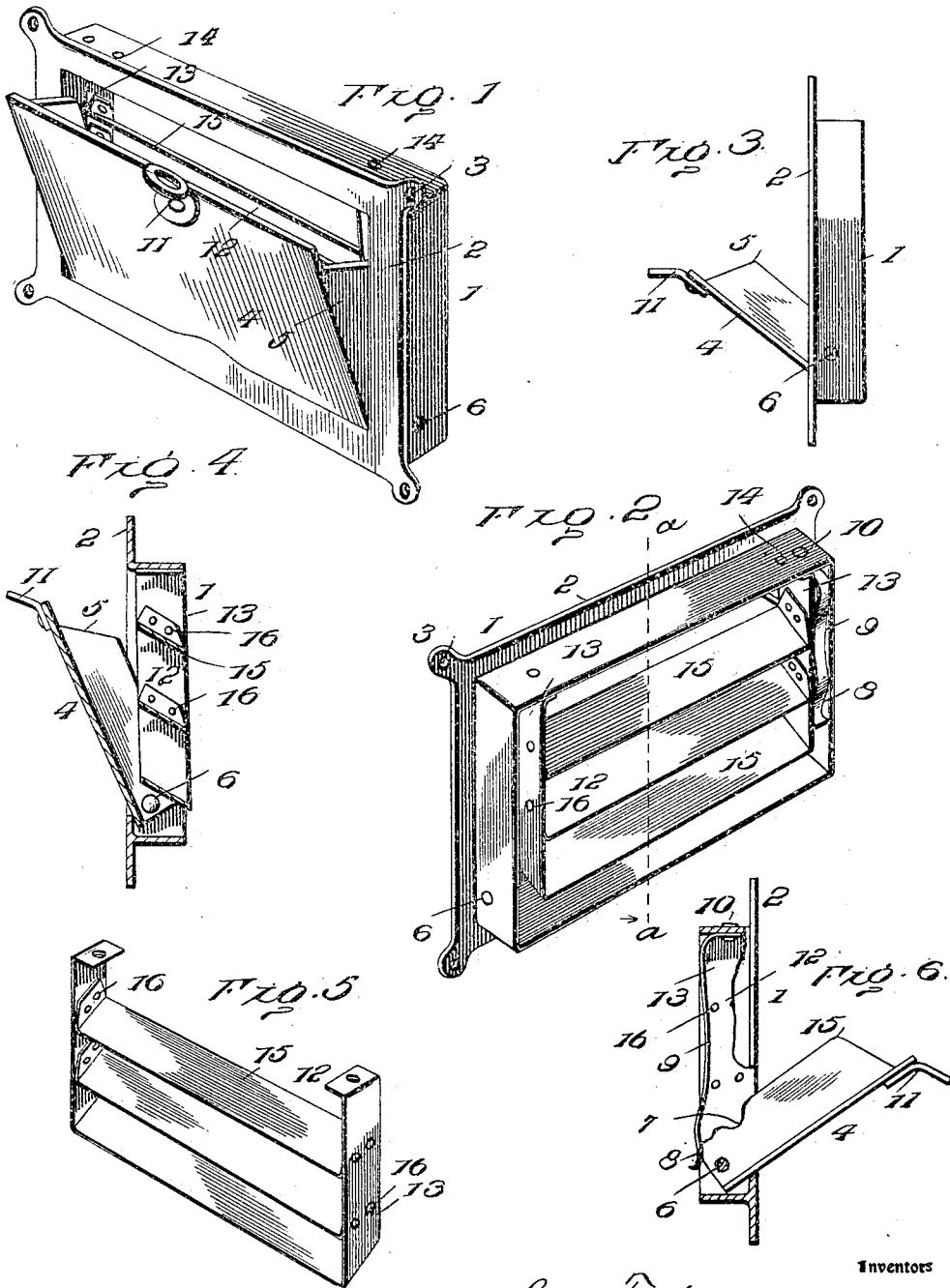
No. 787,997.

PATENTED APR. 25, 1905.

R. TAYLOR & W. G. CREAMER.

VENTILATING DEVICE.

APPLICATION FILED AUG. 10, 1904.



Witnesses

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UNITED STATES PATENT OFFICE.

ROSS TAYLOR AND WILLIAM G. CREAMER, OF NEW YORK, N. Y., AS-
SIGNORS TO AUTOMATIC VENTILATOR COMPANY, OF NEW YORK, N. Y.,
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VENTILATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 787,997, dated April 25, 1905.

Application filed August 10, 1904. Serial No. 220,223.

To all whom it may concern:

Be it known that we, ROSS TAYLOR and WILLIAM G. CREAMER, citizens of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Ventilating Devices; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to certain new and useful improvements in ventilating devices for railroad-cars and other compartments, and particularly to that class shown and described in Letters Patent No. 755,485, granted March 22, 1904.

In the class referred to an outside deflector is arranged between two adjacent passages through the wall or roof of the car which are provided with diffusion-boxes having louvers therein and an interior adjustable plate or door for controlling the ingoing and outgoing currents of air induced by the exterior deflector, all as fully set forth in the Letters Patent referred to.

Our present invention relates to certain novel features of construction of the louvers and in providing means for securing the interior adjustable plate or door in any desired position.

With these ends in view our invention consists in the details of construction and arrangement of parts hereinafter more fully set forth.

In order that those skilled in the art to which our invention appertains may know how to make and use the same and fully appreciate its advantages, we will proceed to describe the same, referring by numerals to the accompanying drawings, in which—

Figure 1 is a front perspective view of a diffusion-box with our improvements attached thereto. Fig. 2 is a rear perspective view. Fig. 3 is an end view with the plate or door in its extreme open position. Fig. 4 is a vertical section taken on the line *a a* of Fig. 2. Fig. 5 is a perspective view of the louvers removed from the diffusion-box, and Fig. 6 is

an end view similar to Fig. 3 with the box-casting partially broken away to expose the relation between the plate or door and the spring for retaining it in adjusted positions.

Similar reference-numerals indicate like parts in the several figures of the drawings.

1 is the open diffusion-box, made of cast metal and formed with a flange 2 of any ornamental design and provided with suitable screw-holes 3, through which screws may pass for securing the box in position within the wall of the car or other compartment.

4 is a plate or door formed with returned ends 5 and adapted to be pivotally connected at the lower corners, as shown at 6, with the end portions of the diffusion-box 1.

The edge of one of the returned ends of the plate or door 4 is formed with a series of recesses or depressions 7, adapted to receive a projection 8 near the free end of a flat spring 9, the opposite end of which is secured by a rivet 10 to the upper portion of the diffusion-box. The relation between the spring and the plate or door enables the latter to be held in adjusted open positions to control the direction of the ingoing and outgoing currents of air and to hold it also in closed position when it is desired. 11 is a suitable lug or handle by means of which the adjustable plate or door is manipulated.

The spring 9 prevents the plate or door from accidentally swinging upon its pivot under the jarring or vibration which necessarily occurs.

Within the diffusion-box are arranged a series of louvers 12, which serve to divide and direct the currents of air. These louvers are composed of sheet metal and consist of an outside piece 13, bent into rectangular form and with its upper returned ends secured by rivets 14 to the diffusion-box 1, and 15 designates parallel pieces of sheet metal having their ends bent at a right angle and secured by rivets 16 to the end portions of the part 13, all as clearly shown. The proportions of these louvers relatively to the diffusion-box are such that a space occurs at each end between the louvers and the end of the diffusion-

box in order that the returned ends of the plate or door 4 may be free to vibrate therein.

From the construction shown and described it will be readily appreciated that we are enabled to produce our improved device with great economy and that when in position the air-currents may be readily controlled and maintained by the adjustment of the vibrating plates or doors 4.

When a car supplied with ventilating devices of the type described is in motion, the plates or doors of the diffusion-boxes in front of the exterior deflectors are opened to such an extent as to cause the ingoing currents of air to be deflected upward and toward the roof, and the plates or doors of the diffusion-boxes on the opposite sides of the outside deflectors are preferably turned to their lowermost position in order that the outgoing currents induced by the partial vacuum occurring on the rear side of the outside deflectors will travel in a plane below that at which the ingoing currents enter the car, thus effectually separating the fresh and vitiated air and avoiding all disagreeable drafts upon the passengers.

Having described the construction, operation, and advantages of our improved ventilating device, what we claim as new, and desire to secure by Letters Patent, is—

1. The diffusion-box having a flange and adapted to be secured in position within the wall or other part of a car, in combination with an interior plate or door having returned

ends pivotally connected at its lower portion to the box, and with a series of recesses or depressions in the edge of one of said ends; and a flat metal spring with one end secured to the upper portion of the box, and its free end provided with a projection adapted to cooperate with the recesses or depressions in the end portion of the plate or door, substantially as and for the purposes set forth.

2. In a diffusion-box such as described, in combination with the box, vibrating plate or door, and spring for holding the latter in adjusted positions, louvers arranged within the box and terminating longitudinally in a plane away from the ends of the diffusion-box, whereby a space is provided for the ends of the vibrative plate or door, substantially as hereinbefore set forth.

3. In a diffusion-box such as described, louvers secured therein and consisting of an outer rectangular frame secured at its upper end to the diffusion-box, and parallel strips with returned ends attached to the ends of the rectangular frame portion, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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WILLIAM G. CREAMER.

Witnesses:

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