

M. I. SHAPIRO.
VENTILATING APPARATUS.
APPLICATION FILED JUNE 23, 1910.

970,403.

Patented Sept. 13, 1910.

Fig. 1.

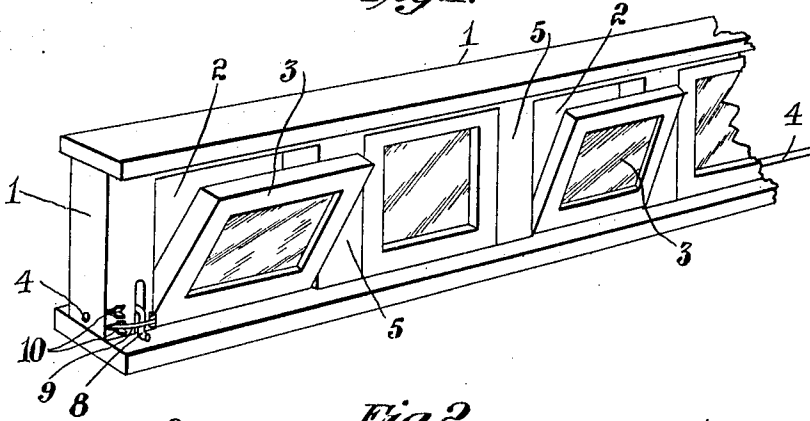


Fig. 2.

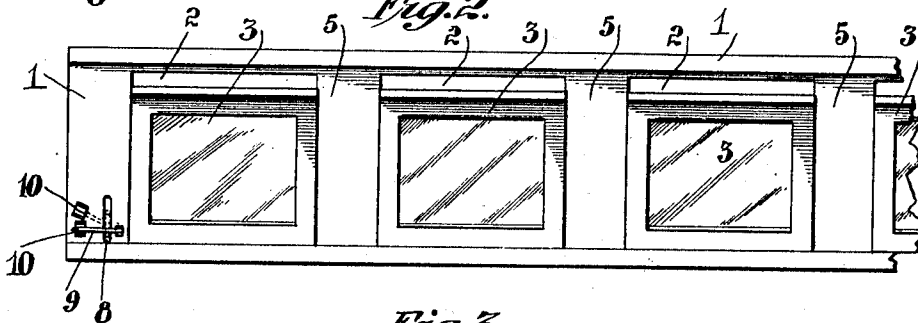


Fig. 3.

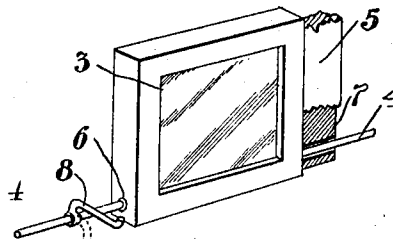
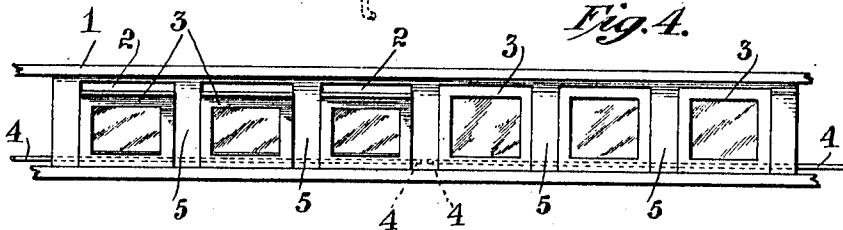


Fig. 4.



Attest:

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VENTILATING APPARATUS.

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To all whom it may concern:

Be it known that I, MAURICE I. SHAPIRO, a subject of the Czar of Russia, residing at Haverstraw, in the county of Rockland, State of New York, have invented new and useful Improvements in Ventilating Apparatus, of which the following is a specification.

This invention relates to an improvement in ventilating devices and more especially to operating devices for opening and closing ventilating windows such as are used in cars and the like.

One of the objects is to provide means for simultaneously opening or closing a number of ventilators from one point of the car.

Another object is to provide ventilating controlling means which is concealed from view.

Other objects are to provide means which will be simple in construction and operation and which will be practically impossible to get out of order.

Other objects will be in part obvious and in part pointed out hereinafter.

In the accompanying drawings showing illustrative embodiments of this invention and in which the same reference numeral refers to similar parts in the several figures, Figure 1 is a perspective view of a portion of a car showing one embodiment of the device. Fig. 2 is a front elevation of a slightly modified form of construction. Fig. 3 is a detail view in perspective, parts being broken away for the sake of clearness. Fig. 4 is a front elevation of still another modification.

In the illustrative embodiment of the invention shown in Fig. 1, 1 indicates a portion of the frame-work of the car provided with spaced openings, 2, with which ventilators, 3, register in the usual manner. In the embodiment shown in this figure, alternate openings in the framework are fitted with movable ventilators, the remaining openings being fitted with closed windows. The operating means by which the ventilators are simultaneously opened or closed comprises a rod, 4, which extends lengthwise of the car and passes through the portions, 5, of the framework which are positioned between the openings. The rod, 4, also passes through the movable ventilators and the fixed windows. While by way of illustration the rod is shown as passing through the lower portion of the ventilator, it will, of course, be understood that it could pass

through the upper portion thereof if so desired.

The ventilators are preferably provided with bushings, 6, as shown in Fig. 3, through which the rod 4 passes and with which it frictionally engages so that any movement of the rod will cause a corresponding movement of the ventilators. The passages, 7, formed in the portions 5 of the frame, and the corresponding passages formed in the fixed windows are somewhat larger than the rod, as indicated in Fig. 3, in order that the latter may rotate freely therein.

It will be seen from the above description that the rod is entirely concealed from view, thus presenting a neat appearance within the car. At any suitable point, preferably, at either end of the car, an inwardly extending opening is formed in the framework through which a suitable handle, 8, extends. The inner end of the handle is firmly secured to the rod, as indicated in Fig. 3, while the outer end thereof extends into the car whereby it may be grasped by a person who wishes to open or close the ventilators. Operatively associated with the handle there is preferably arranged a locking device of any suitable construction, the one shown comprising a pin, 9, pivoted to the framework at one side of the handle and a plurality of clips, 10, positioned upon the opposite side thereof.

The operation of the device which should be largely obvious from the above description is as follows: When it is desired to open the ventilator it is merely necessary to grasp the outwardly extending handle 8 and move the same downward, thus rotating the rod 4 and with it the movable ventilators 3 to the position shown in Fig. 1. By swinging the pivoted pin 9 across the handle and engaging it in the lowermost clip 10 the parts are locked securely in position and the ventilators cannot be closed by any jarring movement of the car. When it is desired to close the ventilators it is merely necessary to swing the pin 9 out of its locking position, move the handle 8 upward, thus rotating the bar 4 in the opposite direction to close the ventilators and then the pin 9 may be moved under the handle and into engagement with the uppermost clip, 10, thereby locking the parts in the closed position.

Although in Fig. 1 a construction is shown in which every other opening in the framework may be used for ventilating purposes,

it will of course be understood that if desired every opening may be supplied with a movable ventilator, 3, as shown in Fig. 2.

In Fig. 4 a construction is shown in which
5 two rods are employed, each rod extending throughout one half the length of the car, it being understood, of course, that in this instance, each rod will be provided with a handle 8. By means of this construction, it
10 will be possible to open ventilators at either end of the car, leaving the ventilators at the other end of the car closed. The construction otherwise is the same as described above with respect to the other figures.
15 It will be seen from the above description that a device of this character is provided which is extremely simple in construction and in operation. It will furthermore be understood that there is practically nothing
20 to get out of order. Furthermore, by having the rod concealed, not only is a neat appearance presented but the space usually occupied by ventilating operating mechanism is available for other purposes.
25 Having described this invention in connection with the illustrative embodiments to the details of which disclosure the invention is not of course to be limited, what is claimed as new and what is desired to be secured by
30 Letters Patent is set forth in the appended claims.

1. In combination, a series of ventilators,

a rod supporting the same, said rod passing through said ventilators, and means for rotating said rod to open and close said ventilators. 35

2. In combination, a series of ventilators, a rod supporting the same, said rod passing through said ventilators, a handle for rotating said rod to open and close said ventilators and means for locking said handle in either of its alternate positions. 40

3. In combination, a series of ventilators, each ventilator having a bushing extending therethrough, a rod passing through said bushings and frictionally engaging the same and means for rotating said rod to open and close said ventilators. 45

4. In combination, a frame provided with openings therein, said openings being spaced from one another whereby portions of the frame extend between adjacent openings, a rod passing through said portions of the frame, ventilators registering with said openings and mounted upon said rod, and means for rotating said rod to open and close said ventilators. 50 55

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAURICE I. SHAPIRO.

Witnesses:

WILLIAM P. JONES,
W. P. BURKE.