

IMPROVED CAR VENTILATOR.

We have the satisfaction of announcing that the intolerable nuisance of dust in railroad cars is about to be abated. The annexed engravings represent a plan for ventilating cars, which is now in practical operation on the New York and New Haven and the Hartford and New Haven railroads, and on the express train between this city and Boston. It operates perfectly, excluding all the dust, and ventilating the car in the most completely successful and satisfactory manner. The window was invented by Edward Hamilton, of Bridgeport, Conn., and George Neilson, of Boston, Mass., and the invention was purchased by Nelson Goodyear, who was experimenting with ventilators at the same time. The injector is an old and unpatented device. This invention is the greatest blessing that has been bestowed on the traveling community since the introduction of railroads.

Fig. 1 represents the exterior of the window, the two sides, A and B, being placed at an angle with the side of the car, by which the air is deflected, and produces a strong outward current through the small window, C, which is parallel with the side of the car, and placed between the sloping or angular sides.

Fig. 3 represents the exterior of the injector, several of which are placed upon the roof of the car at the center of its width.

Fig. 4 shows the lower part of the injector as it appears when the cap is removed for the introduction of water.

Fig. 2 is a vertical section of the injector. The force of the air entering at the mouth, E B, moves the hinged flap, C, to the opposite side or mouth, and the air is turned downward in the direction of the arrow, depositing the dust and cinders in the water, while the pure air passes onward and enters the top of the car through the adjustable blind or register, D, from whence it passes to the deflecting window and escapes at the small central door, C.

This system is now in use on the cars of the several roads named above, and the letters of those who have had the longest experience, show conclusively the advantages derived from the adoption of this mode of ventilation which may be stated briefly as follows:—

1. The small central window, C, is readily opened or closed by each passenger, as required.
2. When opened, the person in the rear of the window is not exposed to a draught of air.
3. When the window is open the current of air is outward, and dust cannot enter.
4. In winter, when stoves are in use, the temperature is easily regulated.
5. Neither dust or cold air can enter around the casings of the window, as it does in the windows now in use.
6. In summer, the free passage of air from the windows keeps the air cool.
7. The window frames are made of cast iron, and the glass is not liable to be broken.
8. View of the country is facilitated by the angular position of the glass plates forming the sides of the window.
9. The sill of the window affords a broad space for the arm of the passenger.

10. The heads and arms of passengers are not endangered.

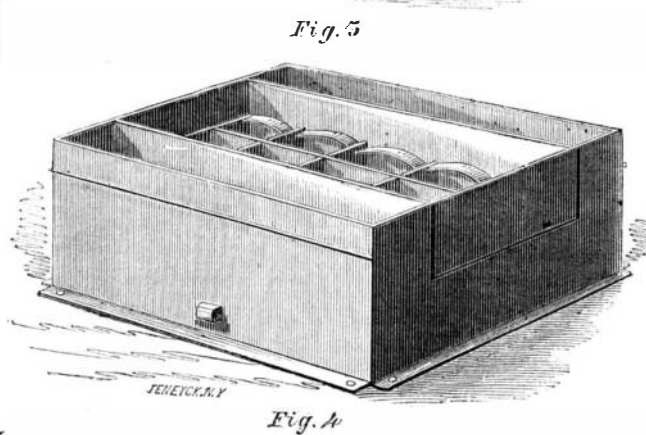
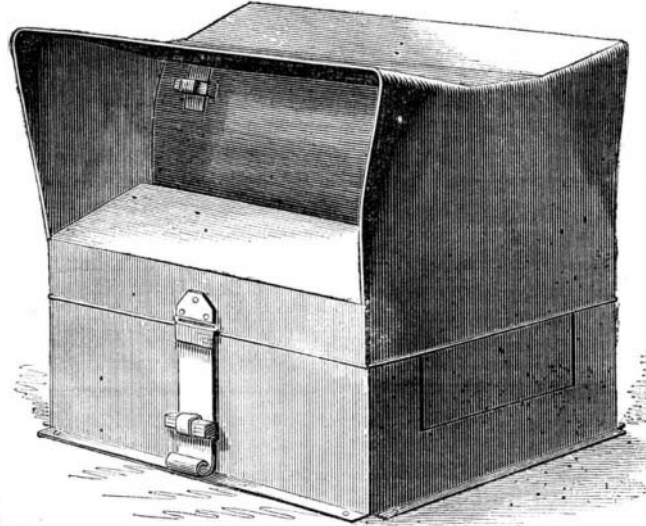
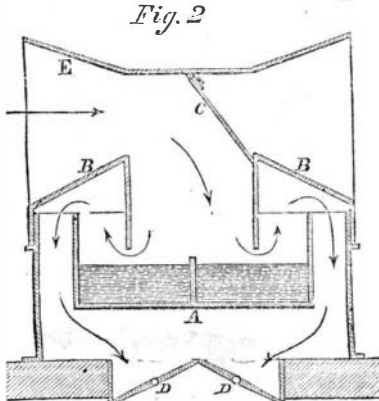
Now that the inventors have done their duty in giving us the means of traveling without being smothered in dust and having our lungs filled with the foul air which has come directly from the throats of our fellow travelers,

American Patent Agency, March 20, 1860, and further information in relation to it may be obtained by addressing the inventor, Dixen Brown, at Norfolk, Va.

CEMENT FOR HOLES IN CASTINGS.—The best cement for this purpose is made by mixing one part of sulphur in powder, two parts of sal-ammoniac, and eighty parts of clean iron turnings. Sufficient water must be added to make it into a thick paste, which should be pressed into the holes or seams which are to be filled up. The ingredients composing this cement should be kept separate, and not mixed until required for use. It is to be applied cold, and the casting should not be used for two or three days afterwards. Sal-ammoniac is the chloride of ammonium, and these ingredients make a cheap cement.

CIDER—HOW TO STOP IT FROM SOURING.—The following is Professor Horsford's plan for stopping the fermentation of cider at any given point, by which the desired degree of acidity becomes fixed, and the liquid have a pleasant flavor—better than cheap wines:—When the cider in the barrel is undergoing a lively fermentation, add as much white sugar as will be equal to half or three-quarters of a pound to each gallon of cider, and let the fermentation proceed until the liquid attains the right taste to suit, then add an eighth to a quarter of an ounce of sulphite (not sul-

phate) of lime to each gallon of cider in the cask; first mixing the powder in about a quart of the cider, and then pouring it back into the cask, and giving it a thorough shaking or rolling. After standing bunged up a few days, for the matter added to become incorporated with the cider, it may be bottled or used from the cask.



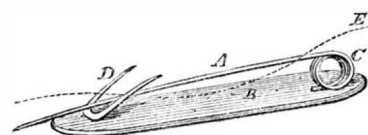
HAMILTON & NEILSON'S IMPROVED CAR VENTILATOR.

it is to be hoped that railroad directors and superintendents will have the judgment and enterprise to adopt this great improvement. If they do not care for travelers generally, let them consider that their own lungs, and those of their wives and children, are as liable to be affected by sand and carbonic acid as the lungs of any stranger. On every route where there is competition, the most efficient ventilator must of course be adopted, and we have no doubt that on even monopoly lines the increased travel will more than pay the expense.

More information can be obtained by addressing J. L. Howard & Co., agents and manufacturers, Hartford, Conn.; H. B. Goodyear, New Haven, Conn.; or Woods & Neilson, Boston, Mass.

BROWN'S IMPROVED SHAWL PIN.

The annexed cut represents an improvement in the mode of constructing pins for fastening shawls. One end of the pin, A, is soldered to the plate, B, and is coiled into a spring, C, which tends to press the point of the pin against the plate. At the opposite end of the plate is secured the claw, D, with its two prongs inclined as shown, and with one on each side of the needle. The



fabric to which the pin is secured is represented by the dotted line, E; the pin passing through the fabric and returning between the prongs of the claw, which is also hooked through the fabric as shown.

The patent for this simple but probably money-making invention (for frequently these little things are the most profitable) was secured through the Scientific



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