Miller & Ketting,

Car Ventilator,

No. 33,259. Patented Sep. 10, 1861.

Fig. 1.

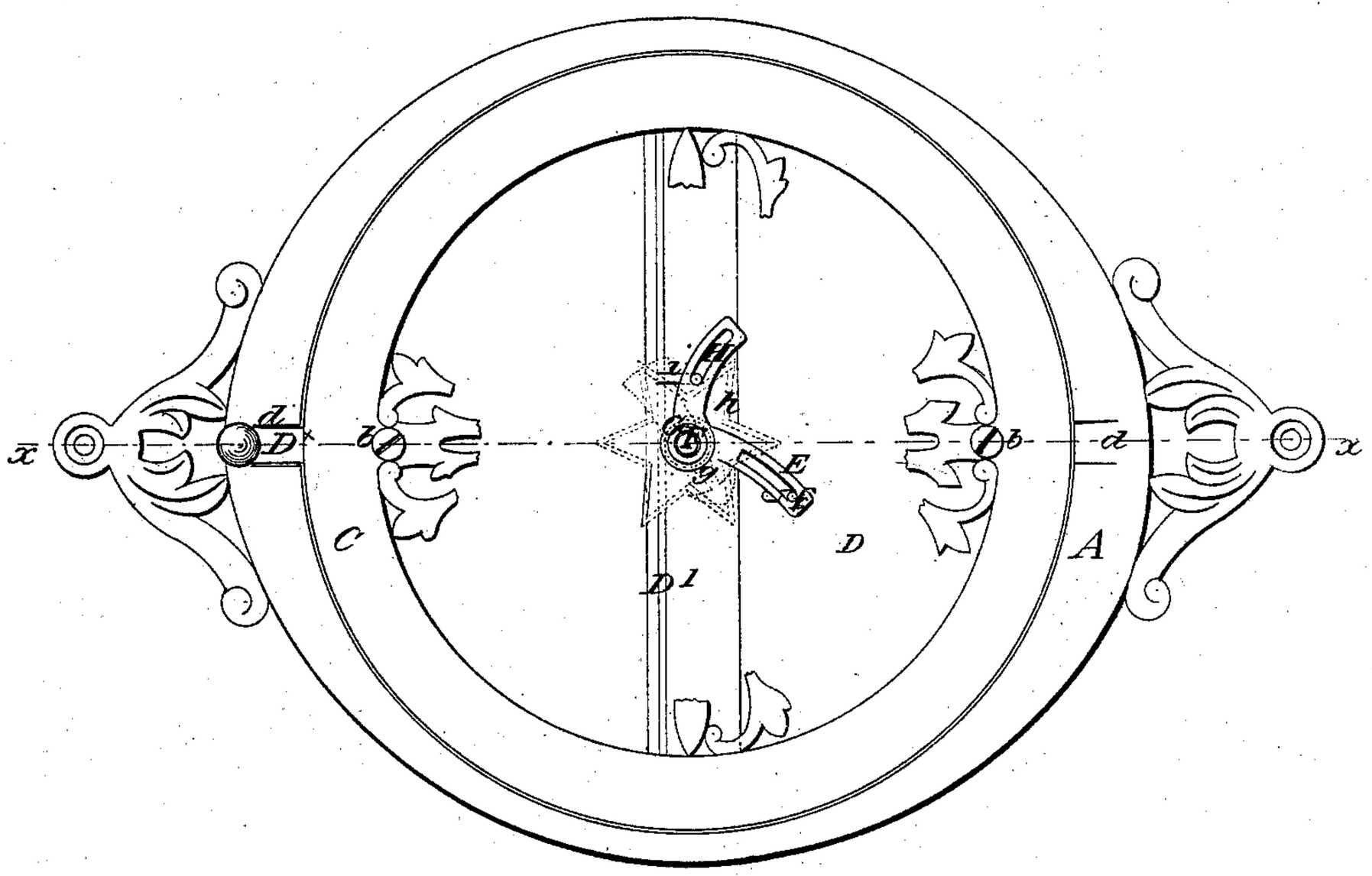
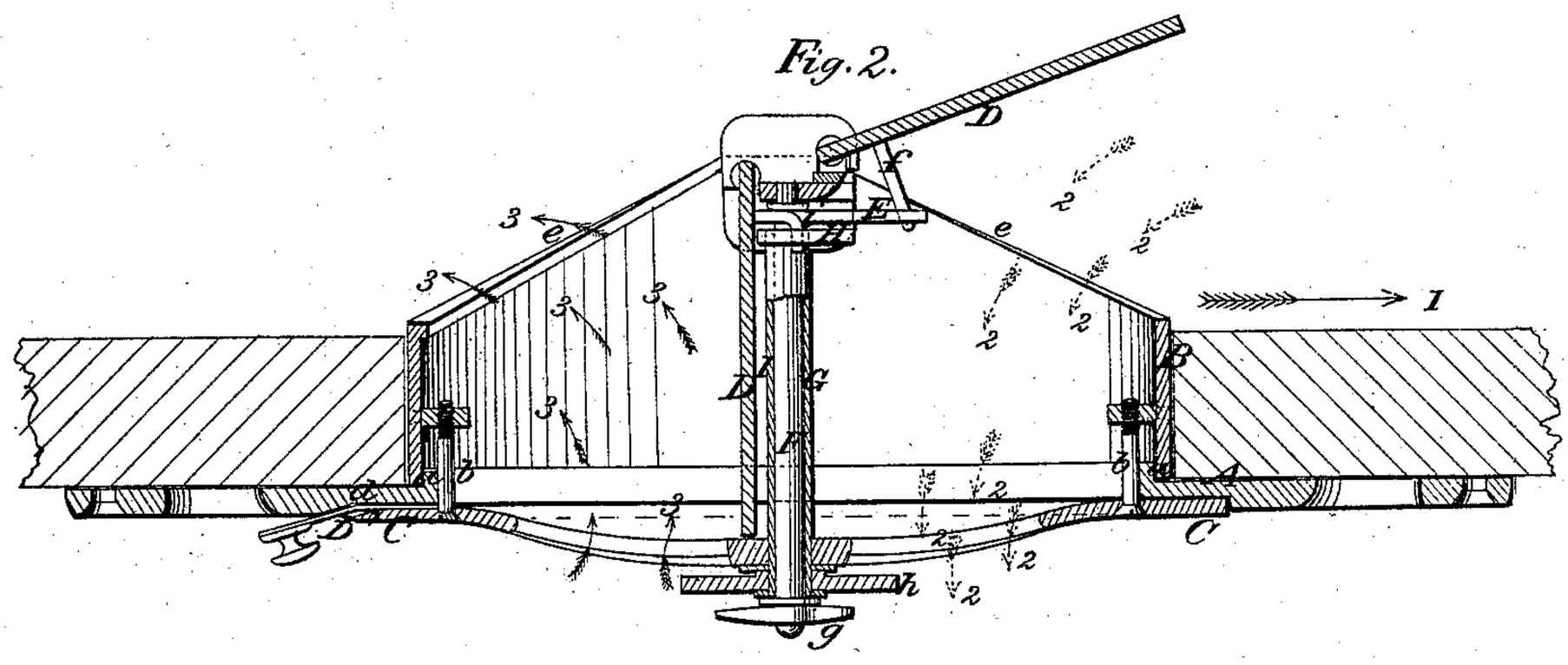


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN MILLER AND WILLIAM KETTING, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN RAILROAD-CAR VENTILATORS.

Specification forming part of Letters Patent No. **33,259**, dated September 10, 1861.

To all whom it may concern:

Be it known that we, JOHN MILLER and WILLIAM KETTING, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Railroad-Car Ventilator; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an outer face view of our invention, and Fig. 2 a vertical central section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improved ventilator to be inserted in the upper parts of the sides of railroad-cars for the purpose of admitting fresh air and allowing the foul air to escape.

The object of the invention is to obtain a device of simple construction for the purpose specified, and one which may be readily adjusted to suit the movement of the cars or the direction in which they are traveling.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents a plate, which is secured in the side of the car and forms a means for securing the ventilator thereto. This plate is of annular form, and it has a flange *a* projecting from its outer side all around its inner edge. (See Fig. 2.)

B represents a drum or hollow cylinder, which is connected by screws *b b* to an annular plate or ring C at the inner side of the plate A, the screws *b b* passing through nuts *c c* at the inner side of the drum or cylinder B. To the ring C there is attached a spring-catch $D^{\times}$, which retains the drum or cylinder B in either of two positions by fitting in either of two recesses *d d* at opposite points in the ring C, as shown in Fig. 1. The interior of the ring C is filled with open or fret work to admit of the air passing through.

The outer end of the drum or cylinder B is of a double beveled form, having two angular or oblique surfaces *e e'*, as shown in Fig. 2. These oblique surfaces are provided each with a door or flap, (designated by D D',) the flap D opening outward and the flap D' opening inward. (See Fig. 2.) The flap D is opened and closed by means of a pin *f*, which is attached to said flap and is fitted in a slotted arm E, secured to the outer end of a rod F, which is placed centrally in the drum or cylinder B and is allowed to turn freely therein. The rod F passes through the center of the fret-work of the ring C and has a button *g* attached for the convenience of turning it.

G is a pipe or tube, which encompasses the rod F and also extends through the center of the fret-work of the ring C and has a button *h* on its end. The pipe or tube G has a slotted arm H attached, in which a curved pin *i*, which projects from the flap D', fits.

The operation is as follows: When the car is moving in the direction as indicated by the arrow 1 in Fig. 2, the flaps D D' are both opened. The flap D', in consequence of opening inward, forms when open a central partition in the cylinder B, and the fresh air, as the car moves along, enters the car through the space allowed by the open flap D, as indicated by the red arrows 2, while the foul air passes out from the car through the space allowed by the open flap D', as indicated by the black arrows 3. When the car moves in the opposite direction, the ring and drum are turned a half-revolution, so that the catch $D^{\times}$ will engage with or fit into the opposite recess *d*. When no ventilation is required, both flaps D D' are closed, the flaps being operated by turning the buttons at the inner sides of the car.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the reversible drum B with the flaps D D', when the latter are arranged, as shown, to admit when open and by the same ventilator of the escape of the foul air from the car and the admission of fresh air therein, substantially as described.

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Witnesses:
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