H. L. B. Lewis,

Car Ventilator,

No. 13,725. Patented Oct. 30, 1855.

Fig. 1.

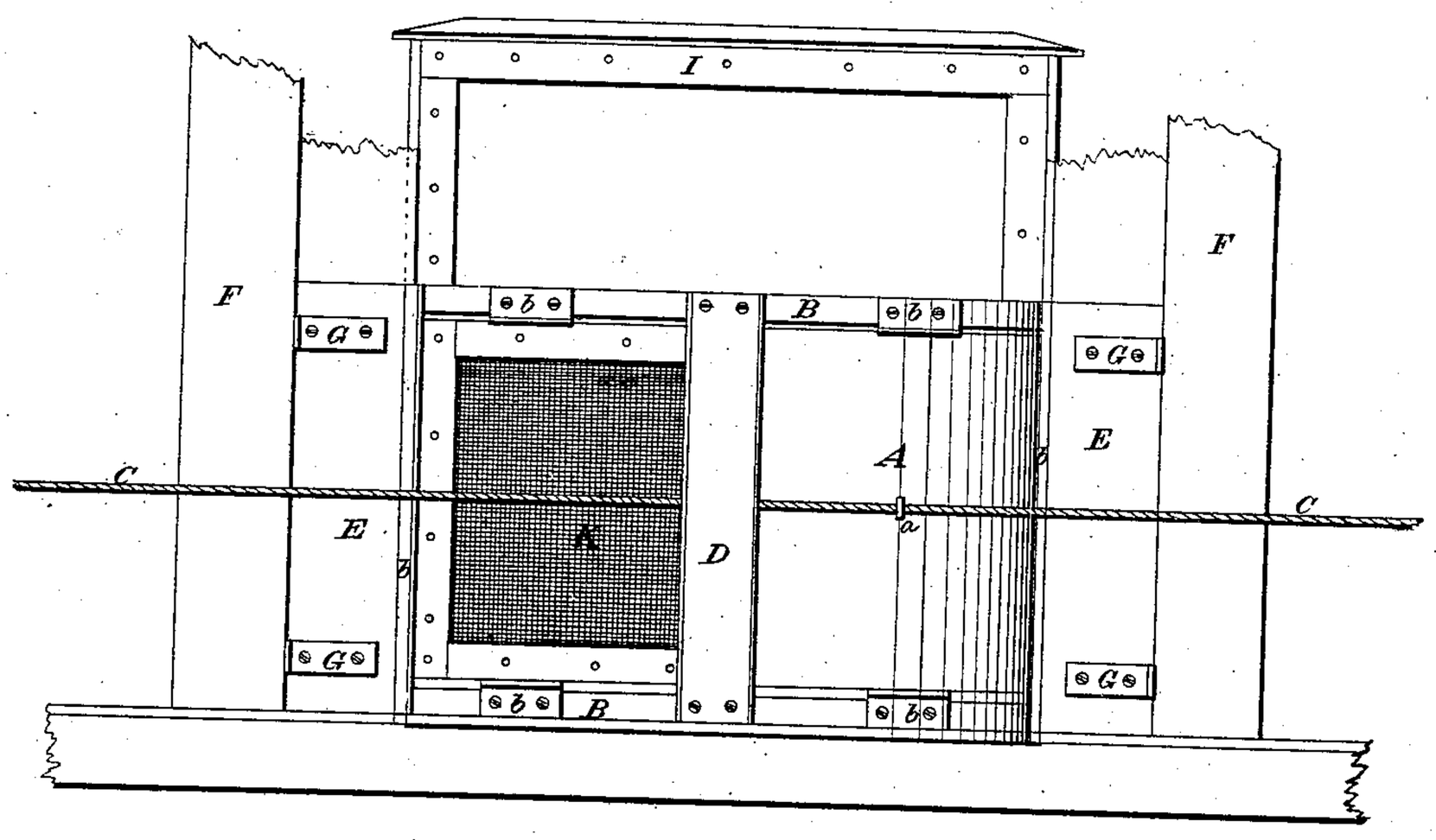
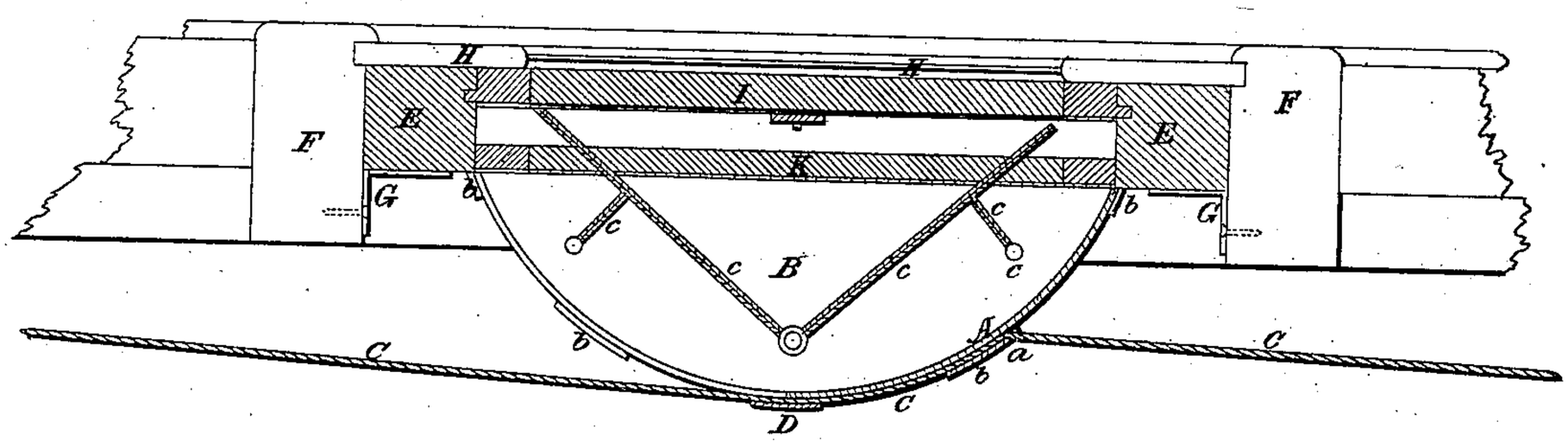


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

H. L. B. LEWIS, OF PHILADELPHIA, PENNSYLVANIA.

VENTILATING RAILROAD-CARS.

Specification of Letters Patent No. 13,725, dated October 30, 1855.

To all whom it may concern:

Be it known that I, H. L. B. LEWIS, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful improvement in the apparatus for ventilating rail road cars through the side windows thereof and precluding the entrance of sparks and dust; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a front or outside view of the apparatus, applied to the window of a car, and Fig. 2, a horizontal longitudinal section of the same, like letters indicating like parts when in the different figures.

My invention consists of a peculiar construction and arrangement of an adjustable curved deflector, applied to a box or case of peculiar form and in which case or box is fitted a pair of wire-gauze screens, said case being adapted also for attaching to the outside of the window frame of each side window of a rail road car, so that by pulling an end which is also attached to each deflection on both sides of the car, the said deflection of each ventilating apparatus so applied may be instantly adjusted so as to compel a current of air to pass from the outside through the screens thereof into the car, where the latter is in progressive motion, or under way.

Referring to the drawings, A, is the curved deflection; B, B, the top and bottom segment pieces of the case or box around the curved edges of which the deflection is capable of being moved by means of the cord (C) which is attached to the outside of the said deflector, (at *a*,) the deflector (A) being in length equal with half the length of the curve of the segments. D is a strengthening piece which connects the two segment pieces at the middle of their curves, and is so applied thereto as to allow the said curved deflector (A) with the attached cord (C) to pass freely, both to the right and left, behind the same. The inner edges of the curves of the segment pieces are rabbeted so as to form races for the deflector to slide in; and the pieces (*b*, *b*,) are small strips of tin applied to the outside of the curved edges of the said segments, so as to guide the curved deflector, and also keep it in place when moved or stopped on either side of the central piece D. The segment pieces project outwardly from a frame (E) which is adapted in width to fit in between or against the outside uprights (F, F,) of the car window, so as to rest upon the side piece thereof, and be secured also thereto, or to the uprights (F, F,) so that the inner side of said frame shall come in contact with the sliding sash (H) of the car, and yet allow the said sash to be easily raised to the top of the ventilating case. Within this frame (E), two wire gauze screens are placed. The inner one (I), being of finer meshes, is made so as to be capable of being raised at the pleasure of the passenger, as shown by the dotted lines of Fig. 1, or in the same manner as the sash H. The outer one (K) being of coarser meshes is fixed so as to leave a space of an inch (more or less) between it and the movable screen I.

c—*c* are grooves and holes in the lower segment piece, for allowing rain water to pass out.

Each side window of a car is to be fitted with one of these ventilating cases, so that not only currents of air will be driven through the windows thereby, but so that the said currents shall also pass through one or both the screens as described.

Operation: The apparatus described and set forth being applied to each of the side windows of a railroad car as described; the curved deflectors (A) thereof are each connected to the cord (C) which is stretched along on each side of the car as described, so that its ends may be attached securely at each end of the same, or to any part of the car which may be suitable and convenient to the operator, so that by his pulling the said cord, all the deflectors thus connected may be moved simultaneously from one side to the other along the curved edges of the segment projections of each case, as before described, and the said deflectors being thus permanently adjusted or fixed to suit the direction in which the cars are to progress—that is, so as to close the rear and open the forward part of each case or box, an open mouth of larger area will be presented for receiving and deflecting the outside air so as to force it through the screens in the ventilating apparatus, without objectionably obstructing the view

through the windows, than has heretofore been effected by any other device of this character, while at the same time, it is convenient, more easily and cheaply constructed and applied and not liable to get out of order, and besides, the outside projecting part of each apparatus, having a curved form, presents a more free passage for the air around the same, so that it may freely enter the mouth of the next succeeding one. If there is dust in the air, the inner or finer screen (I), may be kept closed down; but if there are only sparks, or if more air is wanted the passenger may raise the finer screen, as described, the coarser one (K) being sufficient to prevent the entrance of the sparks, and at the same time to admit an abundant supply of fresh air into the car.

The size of each ventilating box or case is adapted, in length, to correspond with the width of the car window between the upright (F F)—the height being about from 6 to 9 inches—and the curved pieces or segments projecting about one or two inches beyond the projection of the roof of the car.

I do not claim the use of a ventilating box or case like that of Nelson Goodyear; nor do I claim the use of one or more sheets of wire gauze, or screens through which to pass the air so as to preclude the entrance of sparks and dust, as these have been used before. But

What I claim as my invention, and desire to secure by Letters Patent is—

1. The peculiar construction and arrangement of the ventilating box or case as described and set forth.

2. I claim a reciprocating curved deflector (A) adapted to be moved only horizontally to right or left, for directing currents of air into the car, in the specific manner set forth and described.

H. L. B. LEWIS.

Witnesses:
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