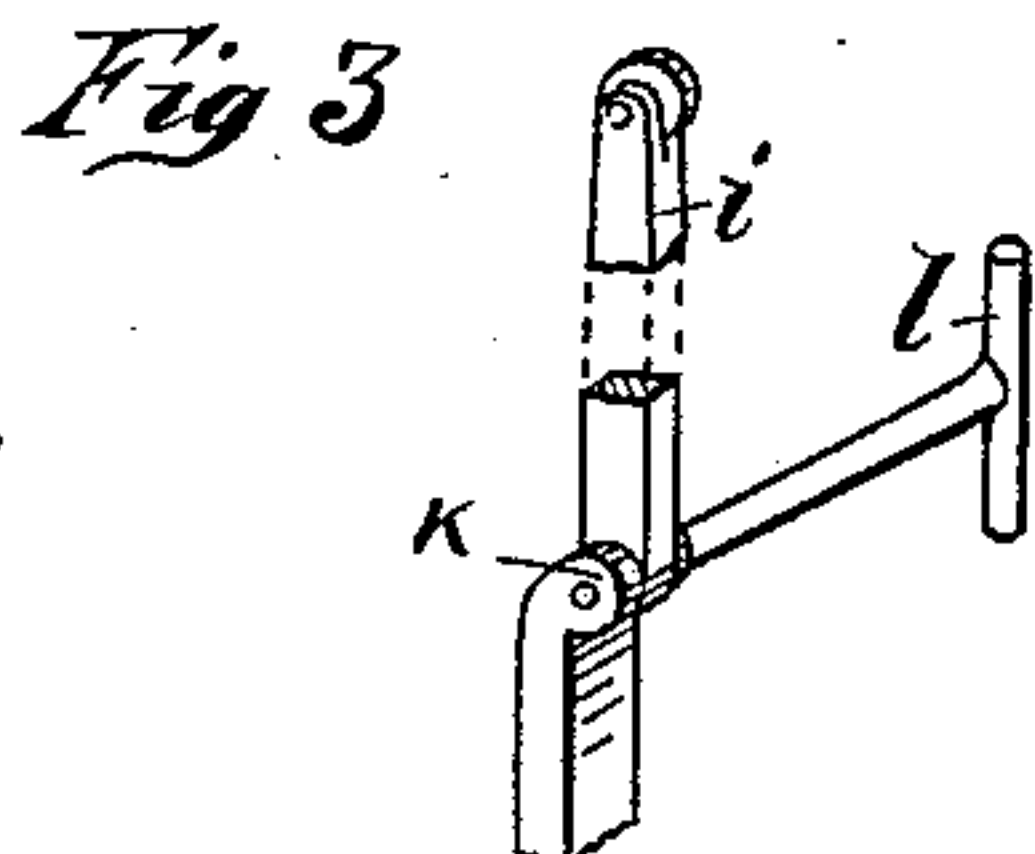
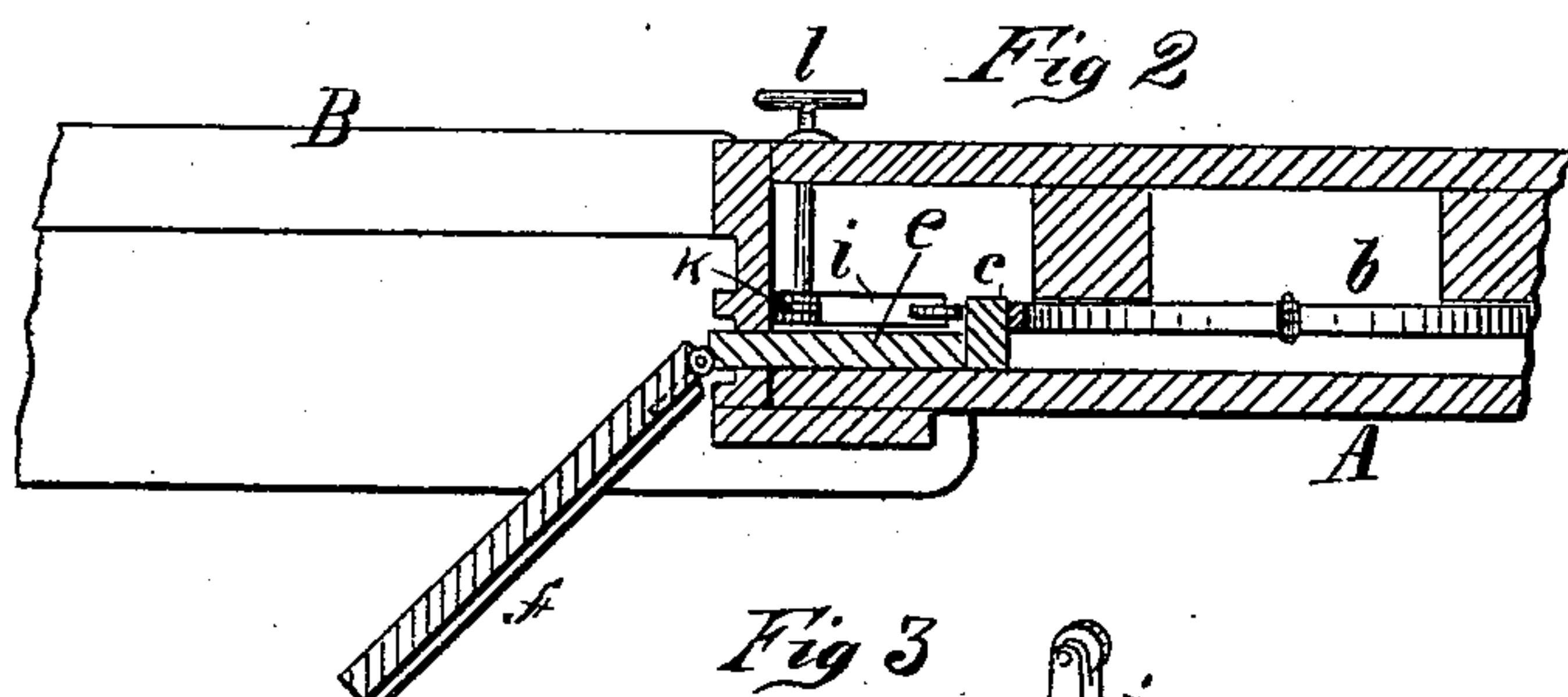
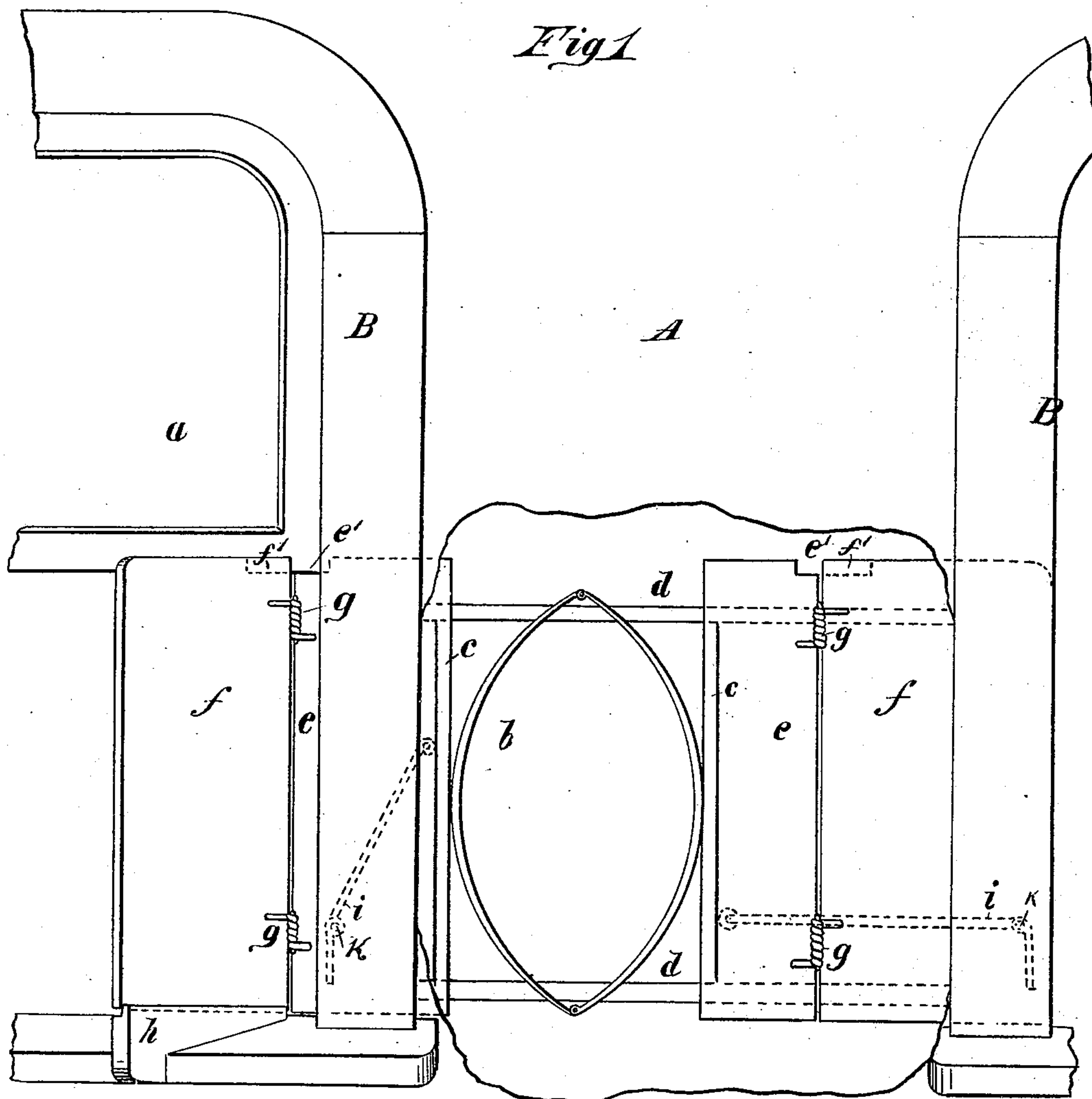


(No Model.)

H. B. MEARS.
CAR WINDOW DEFLECTOR.

No. 272,738.

Patented Feb. 20, 1883.



WITNESSES:

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HENRY B. MEARS, OF PHILADELPHIA, PENNSYLVANIA.

CAR-WINDOW DEFLECTOR.

SPECIFICATION forming part of Letters Patent No. 272,738, dated February 20, 1883.

Application filed April 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. MEARS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Dust and Cinder Deflectors and Ventilators for Railroad-Car Windows, of which the following is a full, clear, and exact description.

The object of my invention is to provide the windows of railroad-cars with dust and cinder deflectors that can be moved in and out of position readily and conveniently, and which, when not in use, shall be out of the way and protected from injury.

The nature of my invention consists in the combination and arrangement of parts, substantially as hereinafter more fully set forth.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a portion of the side of a car having the improved dust and cinder deflectors applied. Fig. 2 is a horizontal section at the side of one window-frame, and Fig. 3 is a perspective view of the operating-crank used for moving back the deflectors.

A represents the side of a car, and B B are the windows, fitted with sliding sashes *a*, as usual. The dust and cinder deflectors are fitted at both sides of each window-frame in a straight line, for movement in and out of the space between the inner and outer sides of the cars, as follows.

b is the elliptic or bow spring, attached at each side to vertical bars *c c*, that are fitted to slide between the parallel guide-bars *d d*.

e e are strips of suitable width, attached rigidly to the slide-bars *c c*; and *f f* are the dust and cinder deflectors or blinds, hinged to the outer edges of the strips *e e* by spring-hinges *g g* of any suitable character. The window-jambs are slotted between the stop-strips of the sash to allow projection of the deflectors into the opening when the sash is raised, and the deflectors are to be equal in length to the distance which the sash opens. The deflectors are moved by the pressure of the spring entirely out of the slot, so that the outer edges of the strips *e* shall project slightly, and the deflectors thus left free to be turned outward to the extent desired by the action of

their coil-springs. The strips serve to sustain the deflectors rigidly in their outward position. Their upper ends are formed with rabbets *e'*, and the upper ends of the deflectors are correspondingly rabbeted at *f'*, so that the sashes can be dropped slightly below the upper ends of the deflectors. At their lower ends the deflectors take against stop-blocks *h*, fixed on the window-sills, which limit their movement and close the space between the blinds and sills.

To move the deflectors inward and retain them, I provide levers *i*, pivoted at one end to the inside of the jamb, and bearing at their upper ends upon the vertical bars *c c*, the ends being provided with friction-rollers. The joint-pins *k* of the levers are formed to receive a key, *l*, which is inserted from the inside of the car through an opening provided for the purpose. To withdraw the deflector, the sash is to be raised to clear the slot, and the lever then turned with the key, which forces the whole apparatus into the space. This compresses the spring, so that the deflectors will be thrown or forced out thereby when required for use.

The deflectors on the sides of the windows toward the head of the train only are required for use, and those in the sides toward the rear of the train must be held in by turning the key toward the center of the space.

With cars not having sufficient space between the windows to admit of the placing of the working parts of the two deflectors in a straight line they will be placed side by side across the space, with the vertical bars *c* fastened to the inner and opposite sides of the jambs, the slots in the jambs being cut to correspond, so as to allow the deflectors *f* to pass out on opposite sides. This allows the application of the deflectors and parts to very narrow spaces.

It will be understood that the deflectors are automatically turned by the coil-springs *g* out of the windows on the sides toward the head of the train at an oblique angle, and extending toward the rear of the train. The windows being then lowered so that their bottoms rest in the rabbets *e'* of strips *e* and the rabbets *f'* in the upper ends of the deflectors, the deflectors are held securely in the oblique position. The position of the deflectors at the angle described with their tops above the bottoms of the windows and their bottoms rest-

ing against the stop-blocks *h*, effectually prevents dust and cinders from entering the open windows, and by the exhaustion of air an outward draft will be created, which will serve to ventilate the cars.

The deflectors, when not in use, and having the levers *i* turned back against the jambs, will press on the edges of the window-sashes, and thus serve as means for holding the window-sashes in any desired position.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The spring *b*, slide-bars *c e*, and hinged blind or deflector *f*, combined with a car having a slotted window-jamb and a stop, substantially as described, for operation as specified.

2. The lever *i* and key *l*, in combination with

the sliding deflector, substantially as and for the purposes set forth.

3. The combination of the two sliding deflectors, fitted in a straight line between the car-windows for projection by a spring placed between them, substantially as described.

4. The combination of the springs *g* with hinged deflectors *f*, for moving the deflectors outward at an angle to the windows, substantially as described.

5. The combination of sliding strip *e*, formed with rabbet *e'*, the hinged deflector *f*, provided with rabbet *f'*, and sliding sash *a*, substantially as described.

HENRY B. MEARS.

Witnesses:

WM. SHARP,

J. EWING MEARS.