C. M. GOODRICH.

LOCOMOTIVE CAB WINDOW VENTILATOR.

APPLICATION FILED JAN. 16, 1909.

925,329. Patented June 15, 1909.

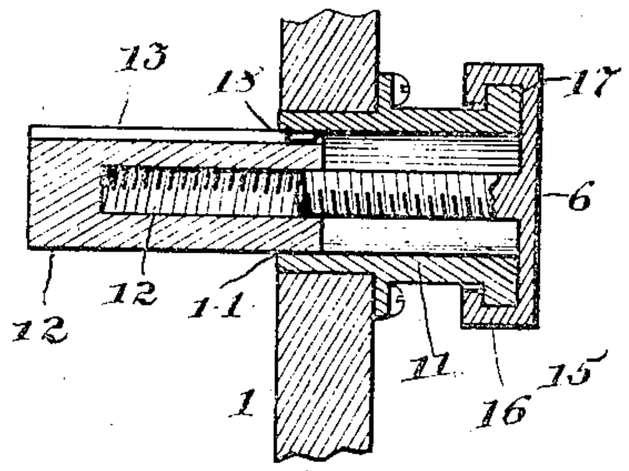


Fig. 5.

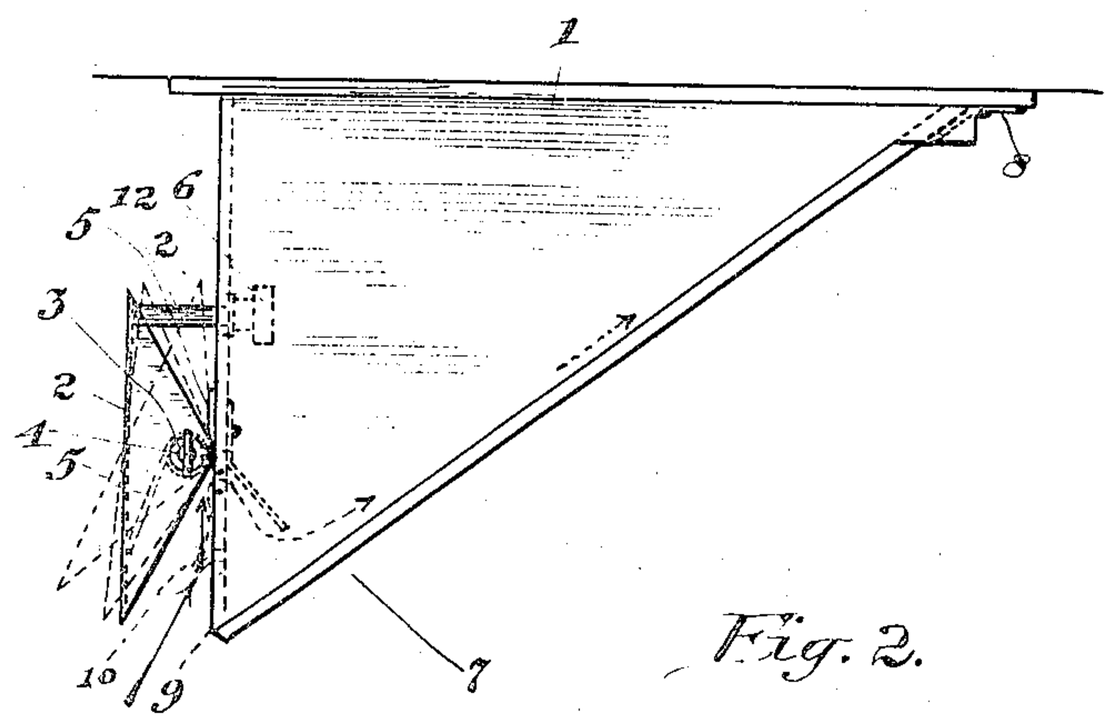


Fig. 2.

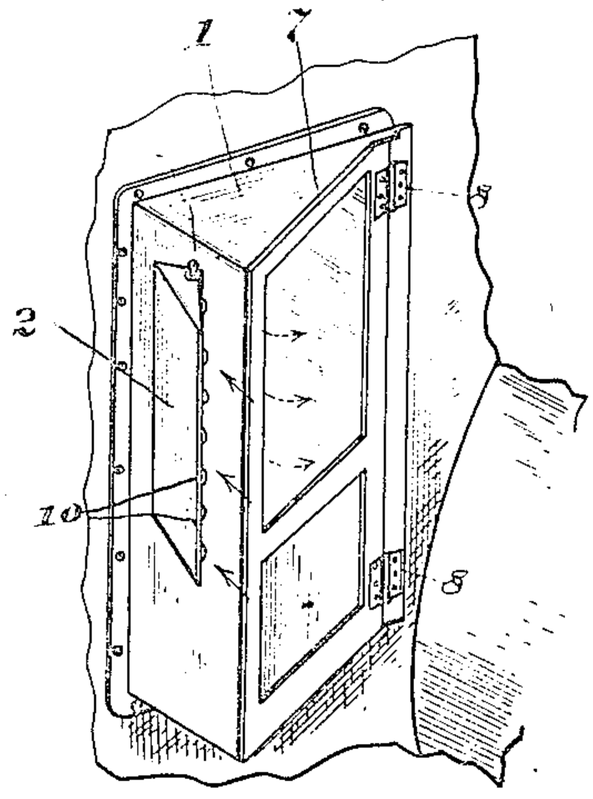


Fig. 1.

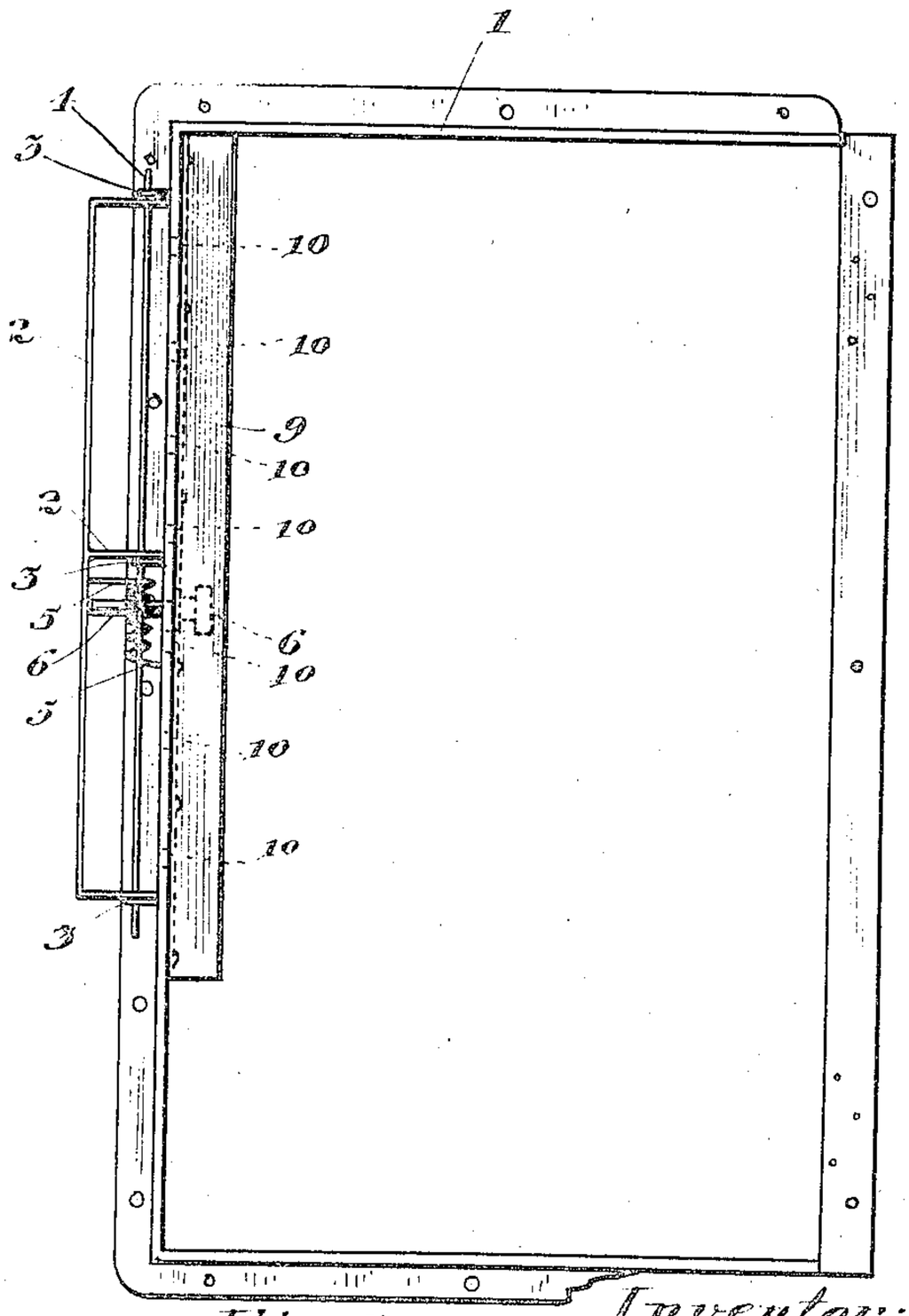


Fig. 3.

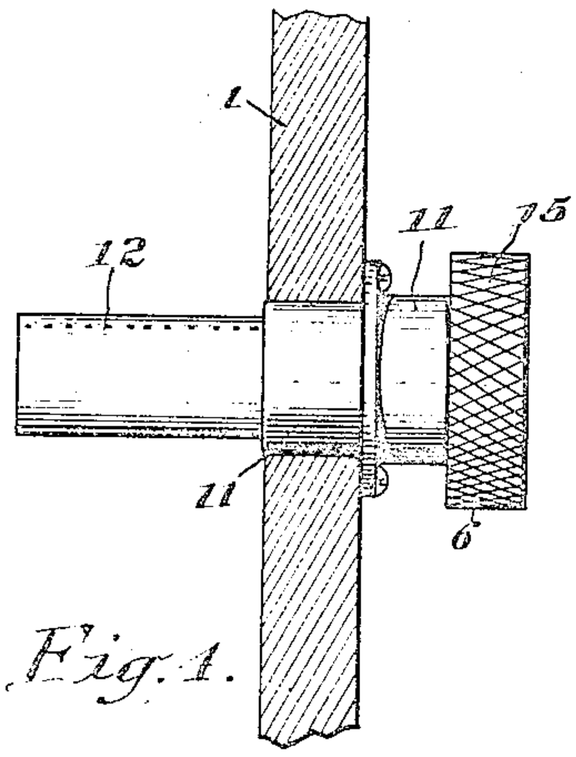


Fig. 4.

Witnesses:

W. C. Smith

R. C. Pretchy

Inventor:

Charles M. Goodrich

By Joshua R. H. Potts

Attorney.

# UNITED STATES PATENT OFFICE.

CHARLES M. GOODRICH, OF CLINTON, IOWA.

## LOCOMOTIVE-CAB-WINDOW VENTILATOR.

No. 925,329. Specification of Letters Patent. Patented June 15, 1909.

Application filed January 16, 1909. Serial No. 472,729.

*To all whom it may concern:*

Be it known that I, CHARLES M. GOODRICH, a citizen of the United States, residing at Clinton, county of Clinton, and State of Iowa, have invented a new and useful Locomotive-Cab-Window Ventilator, of which the following is a specification.

My invention relates to a locomotive cab window ventilator, and has for its main object to provide a ventilator adjacent to the windows of the cab so arranged that cold atmospheric air may be conducted to the inner side of the windows to prevent frost from forming thereon in cold weather.

A further object of my invention is to provide a ventilator especially adapted to be used in combination with the locomotive cab window patented December 1st, 1908, Serial No. 905,417, the general form of which is reproduced in the accompanying drawings.

Other objects will appear hereinafter.

With these objects in view my invention consists generally in a ventilator which may be adjusted for regulating the volume of incoming cold air or entirely cutting off the supply of same.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a fragmentary perspective view showing a portion of the cab and the cab window to which my improved ventilator is attached. Fig. 2 is a top elevation of the cab window and ventilator. Fig. 3 is a front elevation showing the ventilator and window frame, the window being removed for clearness of illustration. Fig. 4 is a detail sectional view showing the ventilator adjusting knob in elevation, and Fig. 5 is a sectional view of said knob.

Referring now to the drawings 1 indicates the window frame and 2 the body of the ventilator hinged thereto by means of the eye-screws 3 and the hinge rod 4. The body 2 of the ventilator is preferably of sheet metal and comprises triangular central and end portions integral therewith and perforated to receive the hinge rod 4. The hinge rod 4 is vertically disposed and mounted thereon is a helical spring 5 having one end in engagement with the body 2 and the other with the window frame 1 and adapted to maintain the rear edge of the body 2 in close engagement with the adjusting rod 6.

In Fig. 3 the window 7 and hinges 8 are removed in order that a deflecting angle plate 9 may be exposed to view, said angle plate being vertically disposed and secured to the inner side of the frame 1 and serving to deflect the cold air entering through the perforations 10 of the frame 1 onto the glass of the window 7, the direction of the incoming air being indicated by arrows in Figs. 1 and 2. By this means it will be readily seen that air on each side of the window glass will be maintained at approximately the same temperature thus preventing water of condensation from collecting on the glass. In this manner frosty windows are prevented and the engineer's vision is not obstructed however cold the weather may be.

It is obvious that when the locomotive is running at a high speed that a larger volume of air may enter the cab than is required to produce the desired effect, when the ventilator is open to its fullest capacity, hence the adjusting rod 6 is provided to regulate the opening. The knob 6 is within the reach of the engineer and by turning the same the ventilator may be properly adjusted.

The adjusting knob 6 comprises a sleeve 11 screwed to the window frame 1 and a slidable bolt 12 provided with a longitudinally extending peripheral groove 13 and tapped to receive the screw 14 integral with the knob proper 15. An internal circular groove 16 is provided in the knob 15 to receive the flange 17 formed on the sleeve 11. A tooth 18 in the sleeve 11 extends into the groove 13 and prevents the bolt 12 from rotating. The periphery of the knob 15 may be knurled as shown in Fig. 4, and the relative movement of the parts of the knob is obvious from Fig. 15.

While I have shown what I deem to be the preferable form of my locomotive cab window ventilator, I do not wish to be limited thereto, as there might be minor changes made in the details of construction and arrangement of parts without departing from the spirit of my invention.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a locomotive, a cab having a window frame and a window angularly arranged therein, said frame being provided with a plurality of perforations arranged adjacent said window, and means for directing at-

mospheric air through said perforations onto the glass of said window, substantially as and for the purposes set forth.

2. In a locomotive, a cab having a window frame provided with an angularly arranged window, a ventilator having a vertically disposed body provided with perforated triangular portions disposed perpendicular thereto, eye-screws secured in said frame the eyes of which are arranged to register with the perforations in said triangular portions, a hinge-rod passing through said perforations and said eyes, a helical spring arranged on said rod, an adjusting knob mounted in said frame adapted to contact with the rear of said body, said spring being adapted to maintain the rear portion of said body in close engagement with said knob, said frame being provided with a plurality of perforations arranged adjacent to said window, and a vertical deflector disposed at an angle to said frame and adapted to direct the incoming air against the inner surface of the window glass, substantially as and for the purposes set forth.

3. In a locomotive, a cab having a window frame comprising an angularly disposed window, a ventilator having a body hinged to the outside of said frame, said frame being provided with perforations for the entrance of air to be deflected upon the window glass for preventing the formation of frost thereon, a helical spring connected with the hinge of said body, an adjusting knob mounted in said frame, said spring adapted to maintain said body in constant engagement with said knob, said knob comprising a sleeve secured in said frame, a bolt slidably and non-rotatably mounted on said sleeve and provided with a screw extension, and said bolt being tapped to receive said extension, substantially as and for the purposes set forth.

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

CHARLES M. GOODRICH.

Witnesses:

JOSHUA R. H. PARRS,

HELEN F. LILLIS.