

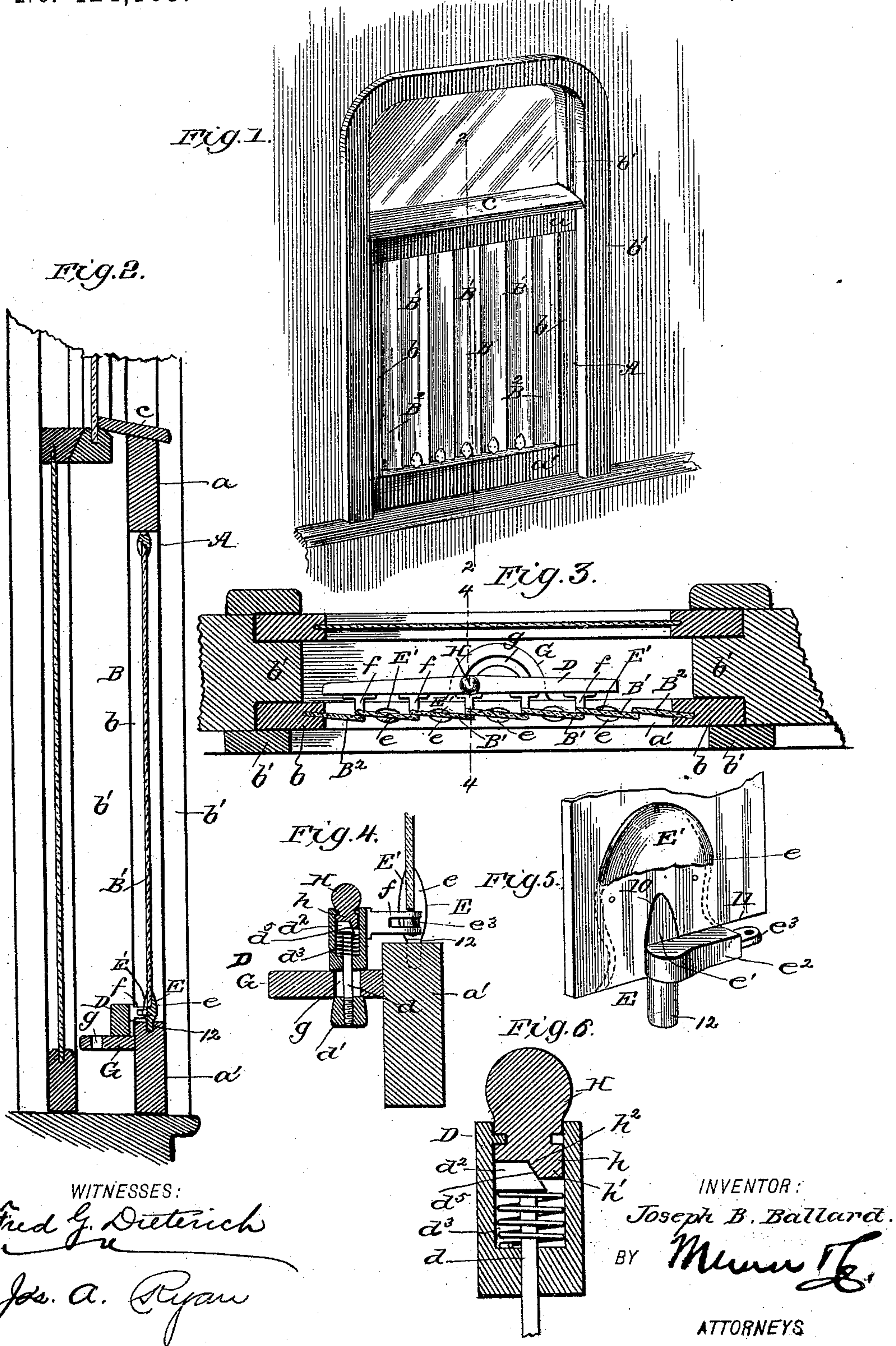
(No Model.)

J. B. BALLARD.

COMBINED DUST GUARD AND VENTILATOR FOR CAR WINDOWS.

No. 424,163.

Patented Mar. 25, 1890.



UNITED STATES PATENT OFFICE.

JOSEPH B. BALLARD, OF BALLARDSVILLE, MISSISSIPPI.

COMBINED DUST-GUARD AND VENTILATOR FOR CAR-WINDOWS.

SPECIFICATION forming part of Letters Patent No. 424,163, dated March 25, 1890.

Application filed December 26, 1889. Serial No. 335,073. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. BALLARD, residing at Ballardsville, in the county of Itawamba and State of Mississippi, have invented certain new and useful Improvements in Combined Dust-Guard and Ventilator for Car-Windows, of which the following is a specification.

My invention has for its object to provide a suitable attachment for car-windows which will prevent the smoke, dust, and cinders passing into the cars while being ventilated, and also to prevent the passage of very strong currents of air into the car during motion while the window is raised.

To this end my invention consists in certain novel features of construction and peculiar combination of parts, all of which will hereinafter be fully described in the annexed specification and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improvement as applied to a car-window. Fig. 2 is a vertical section taken on the line 2 2, Fig. 1. Fig. 3 is a horizontal sectional view of the device. Fig. 4 is a detail section on the line 4 4, Fig. 3; and Figs. 5 and 6 are detail views hereinafter specifically referred to.

In the accompanying drawings, A indicates a frame of sufficient width and length to fit the window and extend as high as the bottom of the upper sash, or of such length as may be deemed best for the particular kind of window with which it may be used. This frame, which is formed of the upper and lower transverse strips $a a'$ and the side pieces $b b$, is placed as near the outside of the car-window as possible, and so placed as to be capable of being raised when necessary. To this end I adjust the side pieces $b b$ between cleats $b' b'$ of the window-frame.

c denotes an inwardly-projecting strip secured upon the upper edge of the upper cross-piece a , which extends close up to the upper sash, so as to prevent cinders from falling between the said frame and the car-window.

It is obvious that in case my improved combined dust-excluder and ventilator is used in place of the lower sash, as in some instances it may be found preferable to so construct it, the strip C may be dispensed with.

B denotes the window portion of the frame A, which is formed of a series of transparent slats B' , preferably glass, all of which, except the end ones $B^2 B^2$, are pivotally supported in the upper and lower cross-pieces $a a'$, as most clearly shown in Figs. 3 and 4 of the drawings, so as to readily admit of their being opened and closed in a manner well understood, such pivoted slats and the end slats being so arranged that when they are closed in they will lap each other, so as to prevent dust or cinders passing between them. The pivotal slats are of such width that when they are turned edgewise they will project beyond the edge of the cross-pieces $a a'$, so as to permit of their convenient connection to the operating-lever D, such connection being preferably made as shown in Figs. 4 and 5 of the drawings, from which it will be observed that I provide the ends of the slats with a central notched portion 10 and a cut-out portion 11, which extends from said notched portion 10 to one edge of the slat.

$E E'$ denote the pivot-plates, which are formed with an extension or winged portion e , which laps the sides of the slat, as shown, being provided with an enlarged portion e' , which projects into the notched part 10 of the slat, and with an extension e^2 , which fits the cut-away part 11 of the slat, said plates being secured in place by passing rivets through the wings e and the slats, said plates E having pintles 12, which engage the cross-pieces $a a'$, as shown.

By thus securing the pivot-plates to the slats I am enabled to make a strong connection therewith when they are made of glass. The outer ends of the extensions e^2 of the lower set of plates $E E'$ are formed with apertured ears $e^3 e^3$, which are pivotally connected with a series of apertured lugs $f f$, projected inward from the reciprocating operating-lever D, which is supported on an inwardly-projecting plate G, secured upon the cross-piece a' of the frame, such bar being capable of being locked in any portion of its movement on said plate by means of a suitable locking device, most clearly shown in Fig. 6 of the drawings, by reference to which it will be seen that I provide the plate G with a segmental slot g and the bar with a downwardly-projecting bolt d , which projects through said slot and is pro-

vided with a head portion d' , which normally has a frictional contact with the lower face of the plate G.

To form a convenient lock I make said bolt 5 spring-actuated and provide it with a head portion d^2 , which operates in a socket d^3 , formed in the lever D, and dispose a spiral spring about said bolt between its head and the bottom of said socket. I also form the 10 said head d^2 only half-round and bevel the top, as shown at d^5 , and in the upper end of said socket is inserted, to turn therein, an operating-button H, the shank portion h of which is formed with a semicircular projec- 15 tion h' , having its lower end beveled at h^2 , such projected portion adapted, when the knob is turned in either direction, to engage and depress the spring-bolt d' , and thereby release its lower head d^2 from frictional con- 20 tact with the plate G and permit the slides to be opened to any desired extent, and when in such position, by simply turning the knob slightly in a reverse direction, the bolt d will lock the parts in the desired position. To 25 make a good frictional contact I roughen the lower edge of the plate G and the upper edge of the head d^2 , as shown.

From the foregoing description, taken in connection with the drawings, the advantages 30 of my improvement will readily appear. It will be observed that the same is exceedingly simple in construction and operation, can be made at a very small cost, and be readily ad- 35 justed to car-windows of ordinary construction.

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

1. The combination, with the main frame 40 A, composed of the cross-pieces $a a'$, the side strips $b b$, and the inwardly-projecting strip c , secured upon the inner side of the upper cross-piece a , said frame adapted for vertical adjustment on the window-frame outside 45 the lower sash, of the fixed end slats B^2 and the intermediate pivotal slats B' , said slats $B' B^2$ adapted to lap each other when folded together, substantially as and for the purpose described.

2. The combination, with the frame A, formed 50 of the side and end pieces $a a' b b$, and the slats B' , formed with notches 10 and cut-away portions 11 in their ends, of the pivotal plates $E E'$, formed with winged portions e , lapping the ends of the slats B' , enlarged portions e' 55 e^2 , fitting the notches 10 and cut-away portions 11, and the pintles 12, adapted to engage the cross-pieces $a a'$, all arranged substantially as and for the purpose described.

3. The combination, with the frame A, 60 formed of the side and end pieces $a a' b b$, the slats B' , formed of transparent material, and the pivotal plates $E E'$, secured upon the ends of said slats B' , the lower plates E' provided with ears $e^3 e^3$, of the operating-lever D, pro- 65 vided with a series of lugs f , pivotally secured to said ears, whereby the oscillation of said lever will open or close said slats, and locking devices for holding said lever in ad- 70 justed positions, substantially as shown and described.

4. The combination, with the frame A, con- 75 sisting of the side pieces $b b$ and the cross-pieces $a a'$, the lower cross-piece having a horizontally-disposed inwardly-extended plate G, provided with a segmental slot, of the slats $B' B'$, 80 pivoted in the cross-pieces $a a'$, the lower ends of said slats having lateral ears $e^3 e^3$, the operating-lever D, provided with inwardly-extending lugs $f f$, pivotally connected to said 85 ears $e^3 e^3$, and a locking device for holding said lever in adjusted positions, consisting of a vertically-adjustable bolt projected from said lever through said segmental slot, hav- 90 ing an enlarged head normally engaging the lower face of said projection, the upper end of said bolt operating in a recess in said lever and having a semicircular beveled head, a spring interposed between said beveled head and the base of the recess, and an unlocking- 95 button H, having a semicircular beveled extension h' , adapted when turned to engage and depress the bolt, all arranged substantially as and for the purpose described.

JOSEPH B. BALLARD.

Witnesses:

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