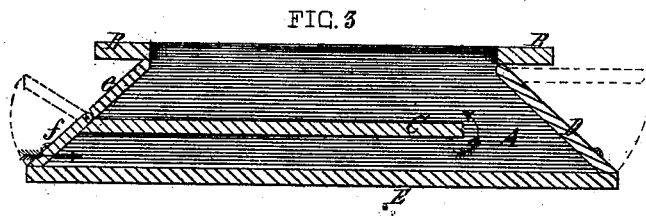
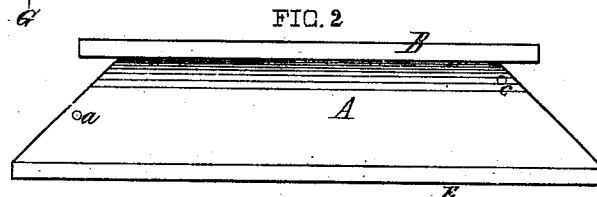
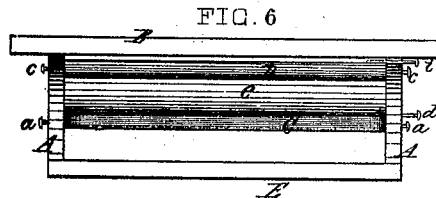
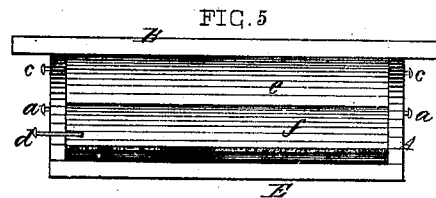
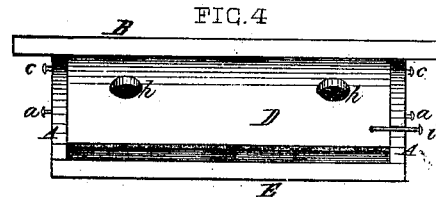
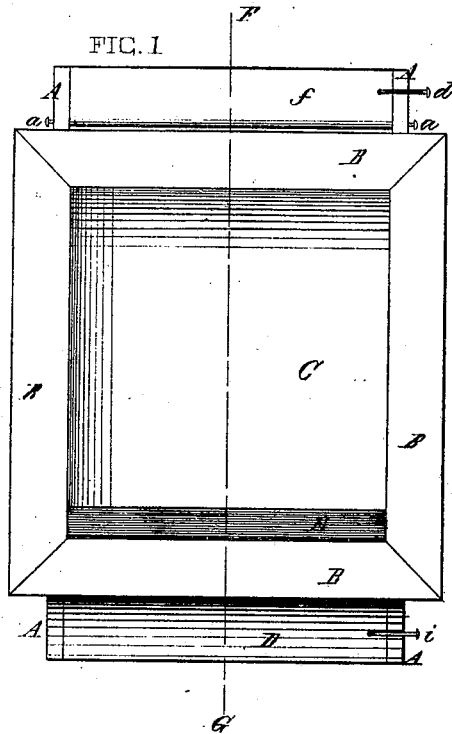


*H. A. Stoddard,*

*Locomotive Ash Pan.*

*No. 107,117.*

*Patented Sept. 6. 1870.*



Witnesses:  
*J. A. Smith*  
*Clarence Buckland*

Inventor:  
*Henry A. Stoddard*

# United States Patent Office.

HENRY A. STODDARD, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 107,117, dated September 6, 1870.

## IMPROVEMENT IN LOCOMOTIVE ASH-PAN.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, HENRY A. STODDARD, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improved Locomotive Ash-Pan; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a plan view of my invention.

Figure 2 is a side view of the same.

Figure 3 is a vertical longitudinal section through line F G of fig. 1.

Figure 4 is an end view, showing the back damper partially closed.

Figure 5 is an end view, showing the front damper partially closed.

Figure 6 is an end view, showing both dampers open.

My invention relates to the device usually attached to locomotives beneath the fire-box, for the purpose of serving as a receptacle for the ashes which fall through the grate of the fire-box, and which is also arranged to regulate the draught of air to the fire; and

It consists of a box closed at the bottom and sides.

A short distance above the bottom is a partition extending parallel with the bottom, entirely across the whole width of the box, and extending longitudinally from one end nearly to the other end.

Above this partition the box is closed upon the two sides and at one end, leaving a space at the rear end of the partition, so that the spaces above and beneath the said partition may communicate.

A small damper is pivoted at one end of the box, which, when raised, allows the air to pass into the space beneath the partition, and a larger damper, pivoted at the other end of the box, when raised, allows the air to pass into the space both above and below the partition.

Small draught-holes may be made in the larger damper to allow the air to pass in from behind, assisting in and giving direction to the air which passes through the space beneath the partition, as it comes from the other end of the box, and passes to the fire.

That others skilled in the art may be able to make and use my invention, I will proceed to describe its construction and mode of operation.

In the drawing—

B represents a frame, which may be attached to the fire-box of a locomotive, to which frame are attached the perpendicular sides A A.

To the lower edge of these is secured the bottom E, and a short distance above the bottom E is secured the partition C, which extends entirely across

the whole width of the box, and is attached to the two sides A A.

This partition C extends out flush with one end of the box, and this end, above the partition, is closed by the piece e.

Below the partition the piece *f* is pivoted at *a*, so that this piece *f* may swing outward and upward, as shown by the dotted lines in fig. 3.

This part C does not extend longitudinally the entire length of the box, but stops short of it, leaving a space between the end of said partition and the back damper D, which is pivoted to the sides *a a* at *c*, so that said damper may be swung outward and upward, as shown in dotted lines in fig. 3.

An iron, *i*, may be attached to the back damper D, by means of which to operate it, and also to the front damper *f*, as shown at *d*, for the same purpose.

The whole may be secured to the locomotive, beneath the fire-box, by means of bolts passing through the frame B, or in any other convenient or desirable manner.

Small holes, *h*, may be made in the damper D, to allow the inward passage of air, if desirable.

Having thus described the construction of my invention, I will now proceed to describe the mode of its operation.

The device is secured to the locomotive with the end having the small damper *f* forward, and, when it is desired to have a draught of air pass into the fire, the small damper *f* is raised. The air is then free to pass in at the opening, as indicated by the arrow in fig. 3, passing along beneath the partition C to the rear of the same, and thence upward to the fire.

The inclined position of the back damper D, when shut, tends to give direction to the air in its passage forward and upward to the fire.

If the two holes *h* are made in the back damper D, the air, passing in through the same, tends to drive the air, which passes in at the forward end and beneath the partition, still further forward, when it reaches the space above the said partition, causing it to be more equally and generally distributed over the whole surface of the fire.

The same effect might be produced by attaching a curved sheet of metal to the inside of the back damper D.

The amount of air passing in at either or both ends may be regulated to any desired degree, by opening or closing either or both of the said dampers *f* and D.

It will be seen that the partition C, being immediately beneath the fire, becomes very much heated, so that the cold air admitted through the opening at *f* becomes in a measure heated as it passes along beneath the partition C, so that, when it comes in contact with the fire, it does not chill the fire.

It will be perceived that in this device the ash-pan

is fire-proof, as all the cinders and coal which may drop through the grate are caught by and remain upon the partition C, and cannot pass out of the ash-pan to the ground without being removed therefrom, so that all danger of fire by coals dropping out of the ash-pan upon the timbers or floors of bridges or platforms is entirely removed.

The holes *h* in the damper D may be made larger or smaller, and of any number desirable. I consider two, however, to be quite sufficient, each, say, three inches in diameter.

Having thus described my invention,

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

A locomotive ash-pan, having the horizontal partition C therein, and the dampers *f* and D, all constructed and operating substantially as described.

HENRY A. STODDARD.

Witnesses:

T. A. CURTIS,

CLARENCE BUCKLAND.