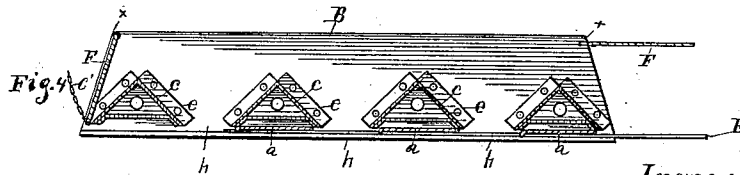
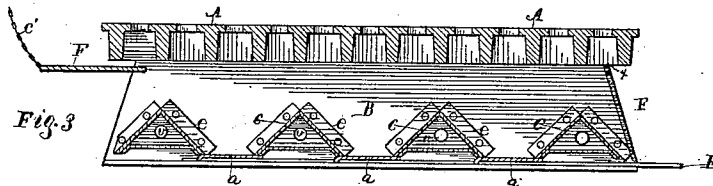
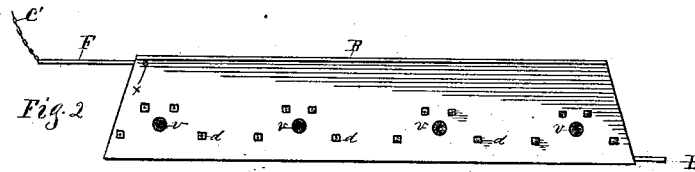
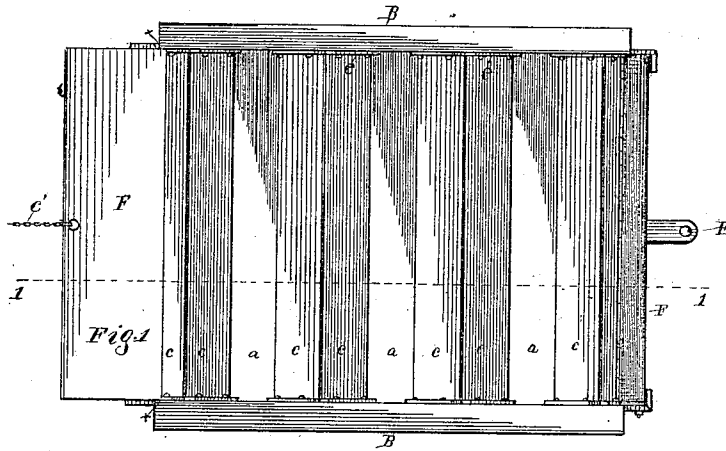


(No Model.)

C. K. DODGE.  
LOCOMOTIVE ASH PAN.

No. 270,541.

Patented Jan. 9, 1883.



Attest.  
John C. Perkins  
R. B. Wheeler

Inventor.  
Caleb K. Dodge  
By Rover B. Wheeler  
Att'y

# UNITED STATES PATENT OFFICE.

CALEB K. DODGE, OF NILES, MICHIGAN.

## LOCOMOTIVE ASH-PAN.

SPECIFICATION forming part of Letters Patent No. 270,541, dated January 9, 1883.

Application filed June 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, CALEB K. DODGE, of the city of Niles, county of Berrien, and State of Michigan, have invented a certain Improvement in Locomotive Ash-Pans, of which the following is a specification.

My invention belongs to that class of inventions known as "locomotive ash-pans," being attached directly under the fire-grates of the boiler, so that all ashes, clinkers, and unconsumed coal or fire dropping from the grates will fall into the pan, and there be held until desired to empty, when the contents of the pan may be readily discharged by the engineer from his cab without alighting from his train or going under his locomotive to rake out, as is now done. My pan is also arranged with fore and aft dampers, for the purpose of regulating the draft to fire, whether the engine be going forward or backward, and by a simple construction of the bottom a direct upper draft may be obtained, all of which will be hereinafter described.

In order to aid others skilled in the art to which my invention belongs to make and use it, I will proceed to describe its construction and operations by reference to the several drawings as lettered, respectively.

Figure 1 represents a top plan view of my ash-pan with bottom closed, having one end damper, F, raised. Fig. 2 is a side elevation of the same, showing vent-holes *v* through the sides and rivets *d* securing the aprons C to the sides of the pan. Fig. 3 is a sectional view on dotted line 1, (see Fig. 1,) also a cross-sectional view of the fire-grates A over the pan. Fig. 4 is a sectional view of the ash-pan with the slides *a a a* drawn under the aprons C C C, leaving the bottom open at *h h h*, showing also the back damper F as raised and the supporting-strip E as drawn out in opening the bottom.

The pan is made of sheet-iron, having two perpendicular sides, B, and joining the sides across the bottom is a series of triangular-shaped guards or aprons, C. These aprons are placed parallel with each other, crossing and joining the sides, being placed a small distance apart, leaving longitudinal openings *h* in the pan. The guards or aprons, being tri-

angular in form, give two sloping upper sides, while the under side is flat. The sloping sides cause all material falling into the pan to work downward, thus making it self-discharging, as shown in Figs. 1 and 4. The aprons C are riveted through the sides B. The ends of the aprons are bent at right angles, forming flanges *e*, (see Figs. 1 and 4,) through which the rivets *d* pass. Through the sides B of the pan is a series of vent-holes, *v*, which allow a free passage of air through the aprons, for the purpose of preventing the heat from the hot embers falling upon them from warping them, as the heat might otherwise do.

Each end of the pan is provided with a pivoted damper, F, extending across the pan, being pivoted at *x* to the sides of the pan B. A chain, C', is secured to each damper, from which a rod extends to the engine-cab, where the operator may at will close or open them.

In order to retain the refuse falling upon the aprons from discharging through the longitudinal openings *h h h*, I provide the pan with a sliding bottom, consisting of a frame having parallel slides crossing from side to side of the frame. These slides *a a a* are a little wider than the openings between the aprons C. The sliding bottom is secured to the under side of the pan, and is supported by means of the flange formed on the lower edge of the sides of the pan.

Secured to the slides *a a a*, across the center, is a supporting-strip, E, extending beyond the rear end of the pan, to which a rod is attached, so as to be operated by the engineer in his cab, and by sliding the parallel strips *a a a* over the openings *h h h* the pan will be closed, as shown in Fig. 3, and drawing the slides under the aprons *c c c*, as shown in Fig. 4, opens the pan, when its contents discharge through the openings *h h h*. To obtain a direct upper draft through the fire-grates A, I first draw the sliding bottom, emptying the pan. Then, closing partially the slides over the openings and closing the end damper F, I obtain a direct upper draft, thus being able to obtain a live fire over all the grates A.

To save fuel, when the engine is not in motion I close the bottom slides and leave the dampers F also closed.

Having thus described my invention, what I claim as new, and desire Letters Patent therefor, is—

5 1. In a locomotive ash-pan, the triangular hollow aprons, in combination with vertical sides having a series of vent-holes, as and for the purposes specified.

2. In a locomotive ash-pan having triangu-

lar or sloping aprons and vertical perforated sides, the dampers F and sliding bottom, substantially as and for the purposes specified. 10

CALEB K. DODGE.

Witnesses:

ROSCOE B. WHEELER,  
LEONIDAS HOLMES.