

(No Model.)

A. A. BISSELL.

ASH PAN FOR LOCOMOTIVES.

No. 307,084.

Patented Oct. 28, 1884.

Fig. 1.

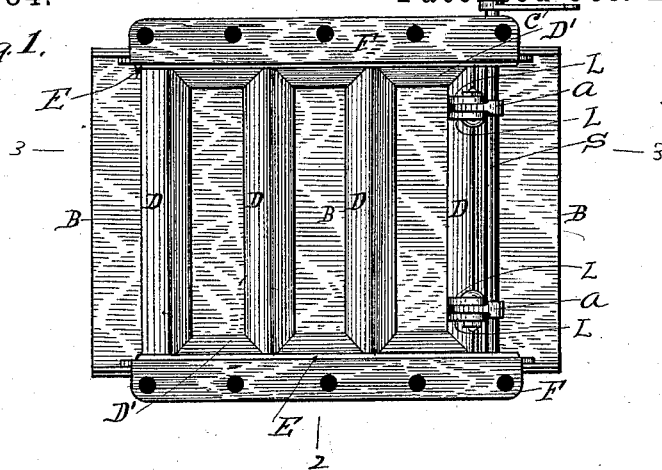


Fig. 2.

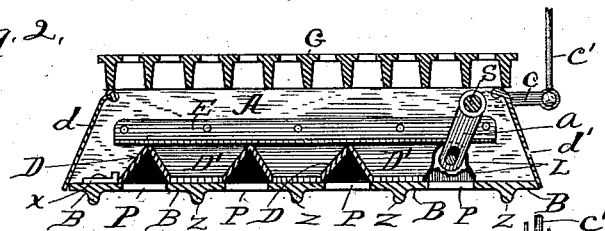


Fig. 3.

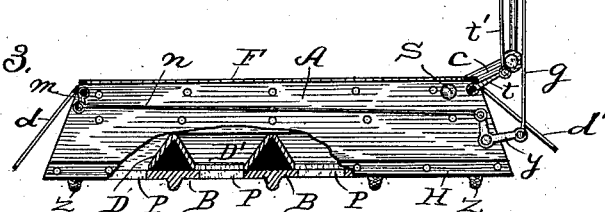
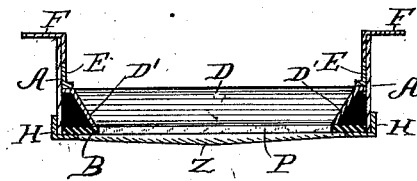


Fig. 4.



Witnesses.

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ASH-PAN FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 307,084, dated October 28, 1884.

Application filed June 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. BISSELL, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Ash-Pans for Locomotives, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a top plan view; Fig. 2, a vertical longitudinal section; Fig. 3, a side view, having a portion broken away to look in the interior; and Fig. 4 a vertical cross-section on line 2 of Fig. 1.

This invention relates to certain improvements in ash-pans for locomotive-engines, which improvements are fully set forth and explained in the following specification and claim.

Referring to the drawings, G is the grate of the fire-box of a locomotive.

A is the ash-pan sides, formed of sheet-iron or boiler-iron, having a cast-iron bottom, B, the two being riveted together by means of the flanges H. The angle-iron strip F furnishes means for securing the device to the grate above and for holding in the apron D by means of the flanges E. The bottom B of the ash-pan is stationary, and is provided with a series of equidistant cross-slots, P, designed to be opened and closed by the vibration of the apron D, and furnishing means for the ashes and cinders to fall through as they are alternately opened and closed by the apron.

D is the reciprocating apron, designed to be made of cast-iron in the form shown in Fig. 1. Its cross-bars and ends and also its sides D' slope toward each other, and thereby cause the ashes to more readily fall through between them when the apron reciprocates. Reciprocating motion is given the apron D by means of the arm a, pivoted to it between its integral ear-lugs, L, attached at one end, as shown in Fig. 1. The other end of said arm is keyed to the rock-shaft S, which runs across the pan and journals in its sides. Arm c also is keyed to said shaft and has

attached to its outer end the rod c', which passes up into the cab of the engine, where it may be operated by the engineer. Vertical motion of the rod c' will reciprocate the aprons on the top of the slotted bottom B of the pan A. Each end of the pan is provided with a damper, d and d'. Damper d is opened and closed by means of its attachment to rod g by means of the bell-crank y, rod n, and crank m. Damper d' is opened and closed by means of the rod t', attached to the arm t, attached to said damper. These dampers are for the purpose of regulating the draft up through the grate.

The advantage to be derived by reciprocating the aprons instead of having them stationary and reciprocating the bottom of the pan or a slide is that when the slotted bottom is reciprocated under the aprons the aprons hold up the cinders and ashes so they will not feed down between them and out through the slots P. When the aprons reciprocate, they move and displace the whole body of ashes and cinders, and cause them to be broken up and feed through readily.

I am aware of the use of an ash-pan for locomotives having aprons similar to these, and a slotted bottom under them, in which the slotted bottom is vibrated or reciprocated and the aprons above it stationary. Such construction I do not claim. By this arrangement the slots P in the bottom are designed to be closed by the aprons while the locomotive travels, to hold the ashes until its destination is reached, when they are dropped through said slots by reciprocating the aprons, as stated, so the ashes and cinders will not be strewn all along the track. The apron D and slotted bottom B are both intended to be made of cast-iron so that their meeting surfaces can be planed up, so they will work smoothly together. The slots P left in the bottom B would weaken it. For that reason strengthening-ribs Z are used to pass under it for its support. These ribs may be cast integral with said bottom or be separate and bolted thereto by means of bolts.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

The combination of the pan A, having the stationary bottom B, provided with the discharge-slots P, with the apron D, having the triangular-shaped cross-bars described and adapted to reciprocate on said bottom B, rock-

shaft S, arms *a* and *c*, lugs L, and rod *c'*, all adapted to operate substantially as and for the purpose set forth.

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Witnesses:

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