(No Model.) 2 Sheets—Sheet 1.

S. F. CUMMINGS.

LOCOMOTIVE ASH PAN.

No. 578,546. Patented Mar. 9, 1897.

Fig. 1.

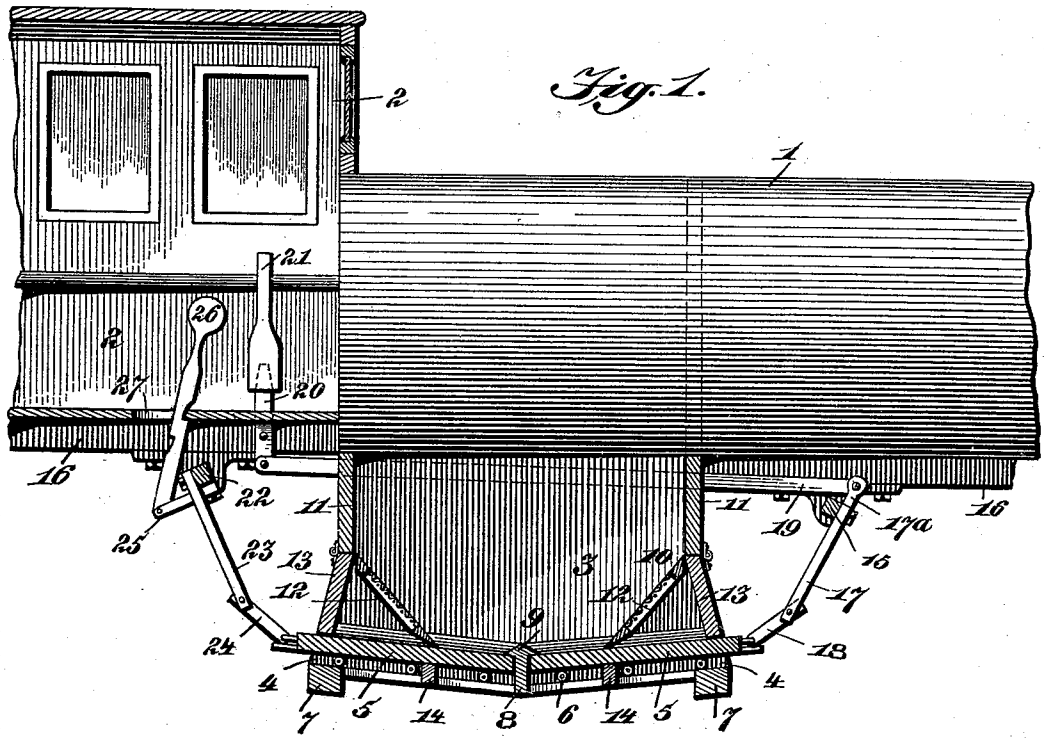
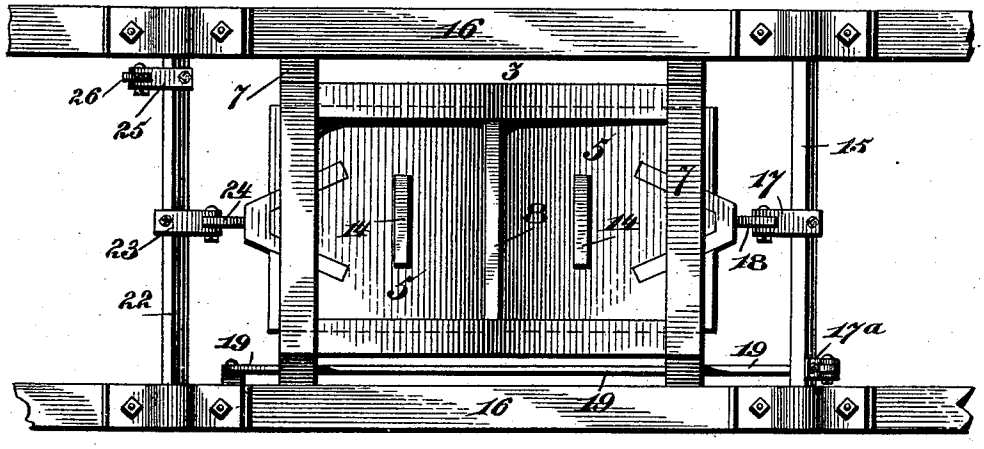


Fig. 2.



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Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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No. 578,546. Patented Mar. 9, 1897.

Fig. 3.

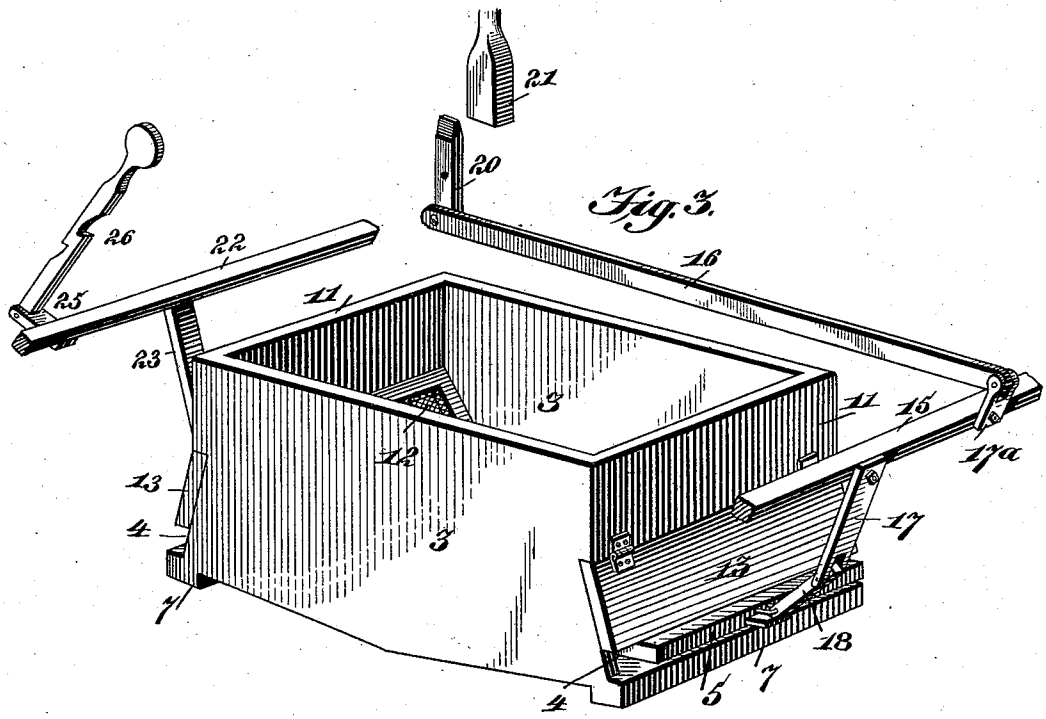


Fig. 4.

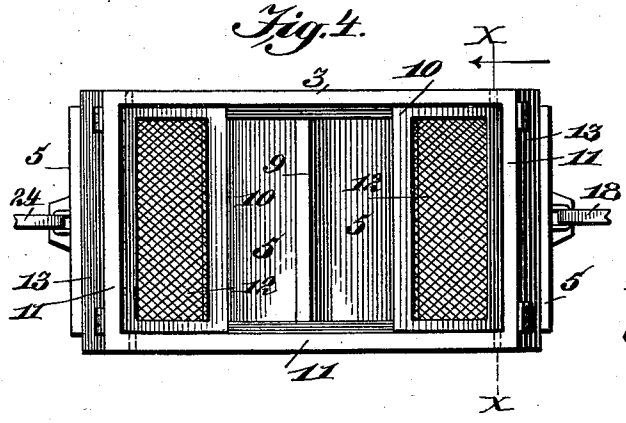
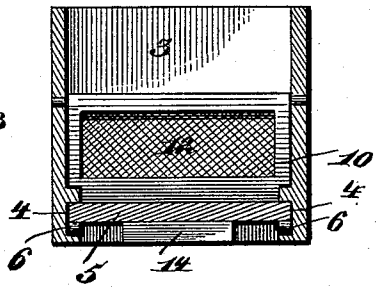


Fig. 5.



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UNITED STATES PATENT OFFICE.

SUMMER FIELD CUMMINGS, OF DEL RIO, TEXAS.

LOCOMOTIVE ASH-PAN.

SPECIFICATION forming part of Letters Patent No. 578,546, dated March 9, 1897.

Application filed August 29, 1896. Serial No. 604,302. (No model.)

To all whom it may concern:

Be it known that I, SUMMER FIELD CUMMINGS, a citizen of the United States, residing at Del Rio, in the county of Valverde and State of Texas, have invented a new and useful Locomotive Ash-Pan, of which the following is a specification.

This invention relates to that class of locomotive ash-pans which are cleared of ashes and cinders without necessitating the stopping of the engine or requiring the fireman or other person going beneath the engine to relieve the ash-pan of its contents, thereby saving expense in labor and obviating loss of time in long runs.

An object of the improvement is to facilitate the operation of the ash-pan bottom when moving it to discharge the ashes and cinders, and to provide for ventilating and the gaining of access to the ash-pan and scraping the movable bottom thereof, whereby the accumulating of ashes, scale, &c., is obviated.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a detail view showing the invention applied. Fig. 2 is a view of the bottom side thereof. Fig. 3 is a detail perspective view of the ash-pan and the means for operating the sectional bottom thereof. Fig. 4 is a top plan view of the ash-pan. Fig. 5 is a section on the line X X of Fig. 4, looking in the direction of the arrow.

Corresponding and like parts are referred to in the following description and indicated in the several views of the accompanying drawings by the same reference-characters.

The invention in its general application is designed for locomotive-engines of any style and construction, and the movable bottom of the ash-pan is operated by a system of levers and connections from the cab of the engine or from any convenient point.

In the drawings the numeral 1 represents the boiler, and 2 the cab, of a locomotive of ordinary construction, and 3 indicates the ash-pan pendent therefrom, the bottom edges of the ash-pan inclining upwardly in opposite directions from an intermediate point and having guideways 4 at the inner faces of its sides to give proper direction to and support the movable sections 5, forming the ash-pan bottom. Rollers 6 in sufficient number are located within the guideways 4 to support and relieve the friction incident to the movements of the parts 5, whereby the latter are caused to move easily, when operated, even though a great weight of ashes and cinders is imposed thereon.

The sides of the ash-pan are strengthened and braced at their lower edges by cross-bars 7 and 8, the cross-bar 8 being located centrally with respect to the ash-pan and having a cap 9, which inclines in opposite directions and overlaps the inner ends of the parts 5, constituting the sectional bottom of the ash-pan. Similar frames 10 incline inwardly toward their lower ends and have pivotal connection at or near their upper edges adjacent to the ends 11 of the ash-pan, and are closed by wire fabric 12, by means of which air is admitted to the ash-pan for ventilating and other purposes. The lower edges of the frames 12 are beveled to provide scraping edges, which engage with the top side of the parts 5 and clear the same of all ashes and cinders when the said parts 5 are moved outward.

Doors 13 guard openings in the ends 11 directly opposite the pivoted frames 10 and normally close the said openings, but admit of access being had to the ash-pan when required. The bottom sections 5 are limited in their inward movement by engaging with the cross-bar 8 and in their outward movement by stops 14, secured to the lower side of the parts 5 and engaging with the cross-bars 7.

A shaft 15 is journaled at its ends to the sills or side beams 16 of the engine and has a radius-bar 17, which is connected at its lower end by a link 18 with the front bottom section 5, and a connecting rod or bar 19 extends from the upper end of a radius-bar 17^a to the lower end of a lever 20 within convenient reach of the engineer or fireman. The

lever 20 is adapted to be lengthened by having a section or handle 21 applied thereto and which is laid aside, so as to be out of the way when it is not required to operate the lever 20. A shaft 22 is similarly journaled to the sills 16 and has a radius-arm 23, connected by a link 24 with the rear bottom section 5, and is supplied with an arm 25, to the outer end of which an operating-handle 26 is pivotally connected, said handle having notches to engage with the ends of a slot 27 in the floor of the cab. To withdraw the rear bottom section 5 so as to discharge the ashes or cinders lodged thereon, the handle 26 is pulled upon, and by pressing upon the said handle the said section is projected across and closes the opening designed to be protected thereby.

By having the sections 5 of the ash-pan bottom inclining upwardly and outwardly they will normally remain closed without requiring the provision of any locking mechanism, and this tendency to remain closed will be proportionately increased according to the load imposed upon and carried by the said parts 5.

Having thus described the invention, what is claimed as new is—

1. In a locomotive ash-pan, the combination of a bottom composed of sections inclining upwardly in opposite directions from an intermediate point, means for operating the sectional bottom, and a cross-bar forming a stop for the inner ends of the bottom sections and having a cap to extend thereover, substantially as set forth.

2. In a locomotive ash-pan, the combination of a bottom slidably mounted, a cross-bar limiting the inner movement of the said bottom, rollers for supporting the bottom and relieving the friction incident to its sliding movements, a frame protected by wire fabric and pivoted at its upper edge and normally inclining from the perpendicular, and having its lower edge resting upon the slidable bottom, and a door closing an opening in the end of the ash-pan directly opposite the pivoted frame, substantially as described.

3. In a locomotive ash-pan, the combination of bottom sections inclining upwardly in opposite directions from an intermediate point, independent actuating mechanism for each section, a cross-bar forming a stop to limit the inner movement of the said sections and having a cap to extend thereover, pivoted frames oppositely inclining and having their openings protected by wire fabric, and doors closing openings in the ends of the ash-pan directly opposite the pivoted frames, substantially as shown and described.

4. In a locomotive ash-pan, the combination of movable bottom sections, independent actuating mechanism for sliding the said bottom sections, oppositely-inclining frames pivotally supported and having their lower edges resting upon the respective bottom sections and forming scrapers, and having their openings protected by wire fabric, and doors closing openings in the ends of the ash-pan directly opposite the said pivoted frames, substantially as shown for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SUMMER FIELD CUMMINGS.

Witnesses:

I. A. DEWEES,

Mrs. I. A. DEWEES.