No. 865,758. PATENTED SEPT. 10, 1907.

J. F. BROWN.

ASH PAN FOR LOCOMOTIVES.

APPLICATION FILED MAY 23, 1906.

Fig. 1.

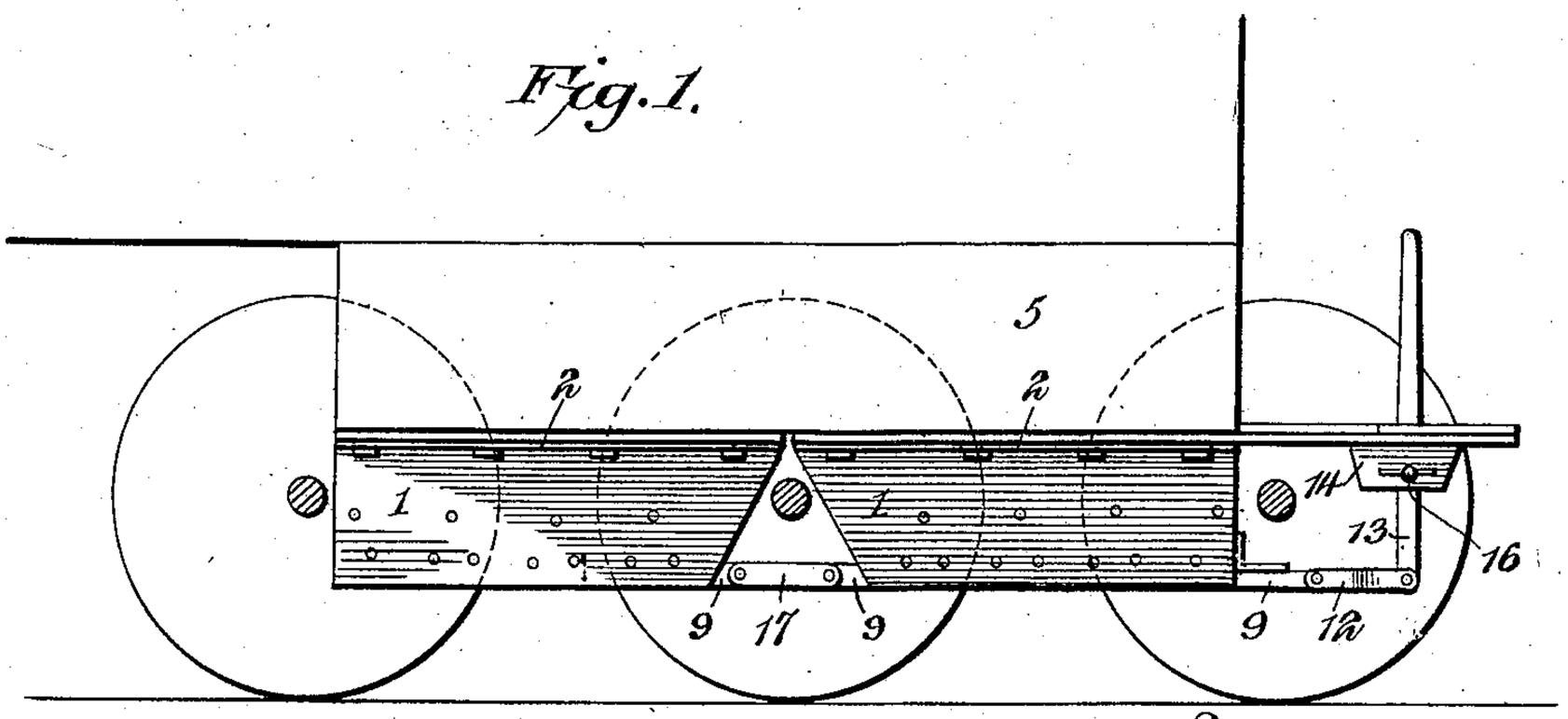


Fig. 2.

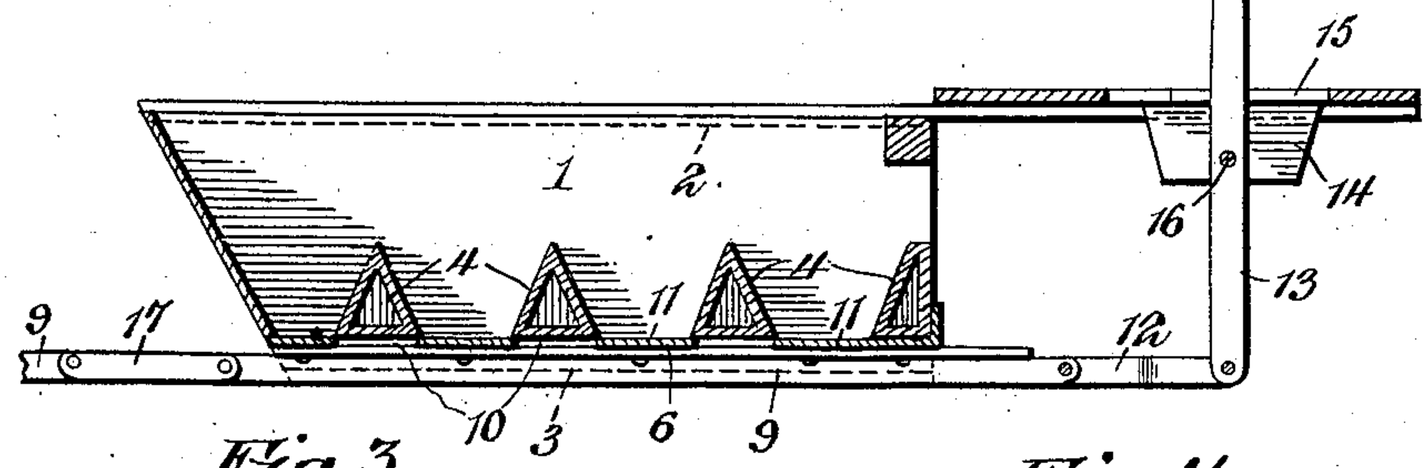


Fig. 3

Fig. 4.

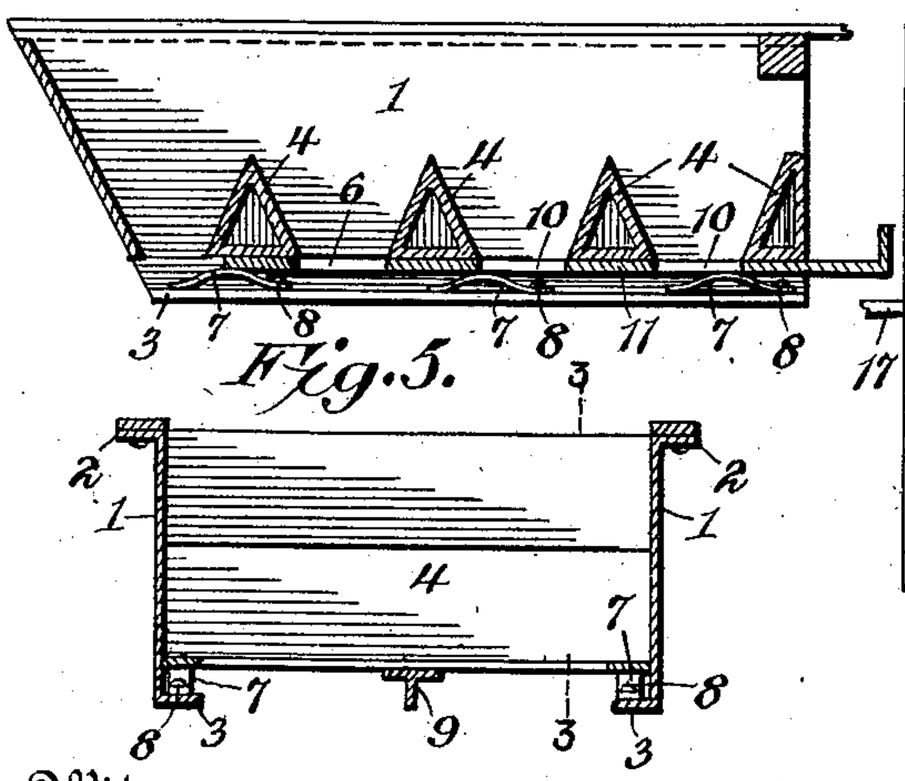
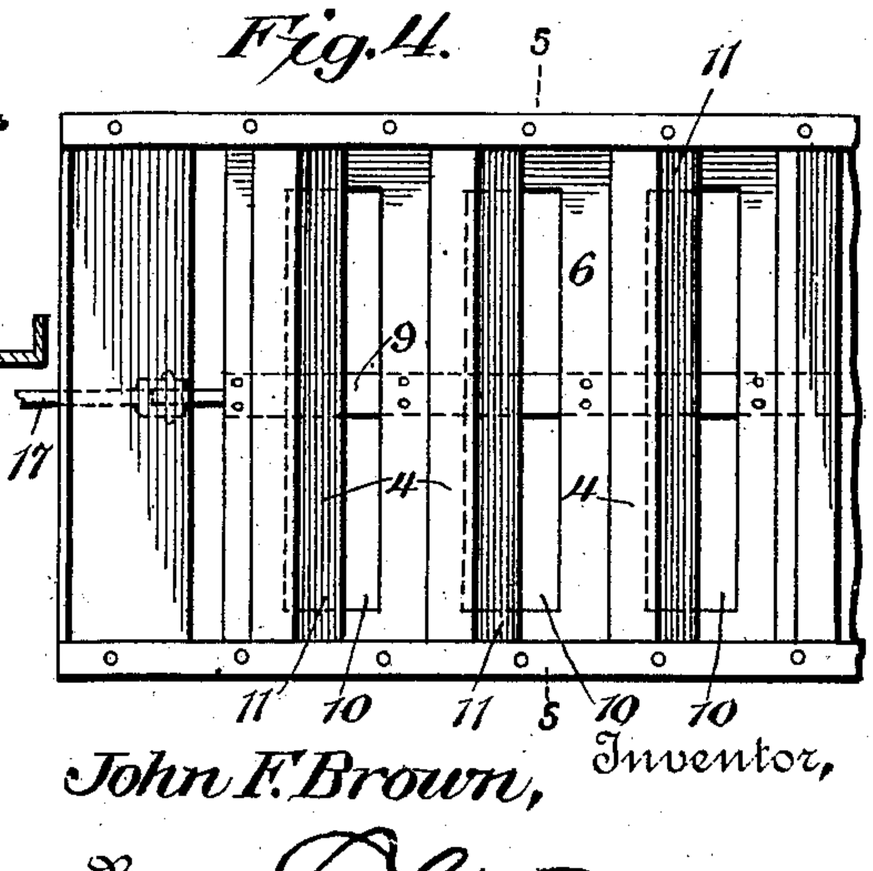


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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ASH-PAN FOR LOCOMOTIVES.

No. 865,758. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed May 23, 1906. Serial No. 318,408.

To all whom it may concern:

Be it known that I, JOHN FINLEY BROWN, a citizen of the United States, residing at Florence, in the county of Lauderdale and State of Alabama, have invented a new and useful Ash-Pan for Locomotives, of which the following is a specification.

The invention relates to improvements in ash pans for locomotives.

The object of the present invention is to improve the construction of ash pans for locomotives, and to provide a simple, inexpensive and efficient ash pan designed for use on locomotives having four, six or eight driving wheels, and adapted to avoid the accidents, which result from going beneath locomotives for cleaning the ash pan.

A further object of the invention is to provide a device of this character, which will be adapted to save time and labor in cleaning the ash pans of locomotives and which will not interfere with the draft of the same.

With these and other objects in view, the invention consists of the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a side elevation of an ash pan constructed in accordance with this invention, and made in sections to clear the axles of a locomotive having six driving wheels. Fig. 2 is a central longitudinal sectional view of one of the sections of the ash pan, illustrating the arrangement of the operating mechanism. Fig. 3 is a similar view taken on the line 3—3 of Fig. 5, and illustrating the manner of yieldably mounting the movable bottom of the ash pan. Fig. 4 is a transverse plan view. Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 4.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

The ash pan is designed for use on locomotives having four or more driving wheels, and when used on a locomotive having only four driving wheels, the fire box extends down between the axles and the ash pan made in one section. However, when the ash pan is used on a locomotive having six or eight driving wheels, the fire box is located above the axles, and it is necessary to construct the ash pan in sections, or to employ a plurality of ash pans, as illustrated in Fig. 1 of the drawing. Each ash pan or section is composed of two vertical side walls 1, provided at their upper and lower edges with outwardly and inwardly extending horizontal flanges 2 and 3, and connected by fixed transverse bars 4, arranged at intervals and suitably secured to the side wall 1. The upper flanges 2, which project upwardly from the wall 1, are perforated at intervals for the reception of bolts, or other suitable fastening devices, for securing the ash pan to the bottom of the fire box 5 of a locomotive; the lower flanges 3, which extend inwardly, form horizontal guides or supports for a movable bottom 6, which is snugly held against the lower face of the cross bars 4 by springs 7.

The cross bars 4 are approximately triangular in cross section, and present inclined side faces and sharp upper edges, so as to divide the ashes and cause the same to drop through the bottom of the ash pan, when the latter is open. They preferably extend upwardly from the bottom of the ash pan about one half the height of the side walls, but they may be of any desired size, as will be readily understood. The cross bars, which are hollow, may be constructed of any suitable material, such as sheet iron or other sheet metal, or they may be made of cast metal. The lower faces of the cross bars are horizontal and are spaced from the bottom flanges 3.

The springs 7, which are located at opposite sides of the ash pan, are curved or bowed upwardly and have their terminals arranged upon the bottom flanges 3. Each spring is secured at one end by a rivet 8, or other suitable fastening device, to the supporting bottom flanges 3, and its other end is free. The upwardly bowed intermediate portions of the springs receive and support the movable bottom 5, and hold the same snugly against the cross bars, and at the same time the said springs permit the bottom 6 to be depressed to prevent it from becoming clogged by the ashes, and to enable it to slide freely when it is operated to open and close the ash pan.

The bottom may be constructed of any suitable material, such as heavy sheet metal, and it is reinforced at the center by a longitudinal bar 9, which is T-shaped in cross section. The bar 9 consists of a vertical longitudinal web or flange and oppositely disposed upper horizontal webs or flanges, which are suitably secured to the movable bottom 6. The movable bottom 6 is provided with transverse openings 10 and transverse solid portions 11, either of which are adapted to be brought opposite or beneath the spaces between the cross bars 4, as illustrated in Figs. 2 and 3 of the drawing. The cross bars 4 are of a width slightly in excess of the width of the openings 10, so as to snugly close the bottom of the ash pan, as illustrated in Fig. 2 of the drawing.

The rear end of the central longitudinal bar 9 is connected by a short link 12 with an operating lever 13, fulcrumed between its ends, between depending flanges 14, and extending upwardly through a slot 15 of the deck of the locomotive. The flanges 14 depend from opposite sides of the slots 15, and are pierced by a bolt or pin 16, which forms the pivot of the lever 13. When two or more sections or ash pans are employed,

the central longitudinal bars are connected together by a link 17, so that the movable bottoms may be simultaneously operated by the lever.

When it is desired to "knock" or put out the fire of a locomotive, it is only necessary to open the bottom of the ash pan, and shake the fire through the same onto the ground. The ash pan is adapted to obviate the necessity of going beneath a locomotive to clean out the ashes, and it avoids the accidents resulting from going beneath locomotives for this purpose, and it effects a great saving in both time and labor. The ash pan is exceedingly simple and not liable to get out of order, and it does not interfere with the draft of a locomotive.

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

1. An ash pan comprising side walls, horizontal cross bars arranged at intervals and connecting the side walls, said cross bars being provided with inclined side faces and having horizontal bottom faces, a slidable horizontal bottom provided at intervals with openings, and means for yieldably holding the slidable bottom against the lower faces of the cross bars and for permitting the bottom to be depressed, whereby the same is prevented from becoming clogged with ashes and is enabled to reciprocate freely.

2. An ash pan comprising opposite side walls, fixed cross bars connecting the side walls and having horizontal lower faces, a slidable bottom fitted against the lower faces of the cross bars and provided at intervals with openings, and bowed springs extending longitudinally of and located beneath the bottom, said springs yieldably supporting the bottom for holding the same snugly against the cross bars and for enabling the bottom to be depressed when operated, whereby it is enabled to slide freely and is prevented from becoming clogged with ashes.

3. An ash pan comprising opposite side walls having inwardly extending horizontal bottom flanges, fixed cross bars having horizontal lower faces spaced from the flanges and connecting the side walls, bowed springs arranged upon the upper faces of the bottom flanges and secured at one end to the same and presenting upper convex faces, and a slidable bottom yieldably supported by the springs and held against the cross bars by the same, said springs permitting the bottom to be depressed to permit the same to slide freely and to prevent the bottom from becoming clogged with ashes.

4. An ash pan comprising a plurality of sections having slidable bottoms, central longitudinal bars having laterally extending flanges secured to the slidable bottoms, said longitudinal bars being also provided with depending flanges, a link pivotally connected with the depending flanges of the longitudinal bars, an operating lever, and a link connecting the operating lever with one of the depending flanges.

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

JOHN FINLEY BROWN.

Witnesses:
SAMUEL BUFORD KEY,
WILLIAM PICKENS KEY.