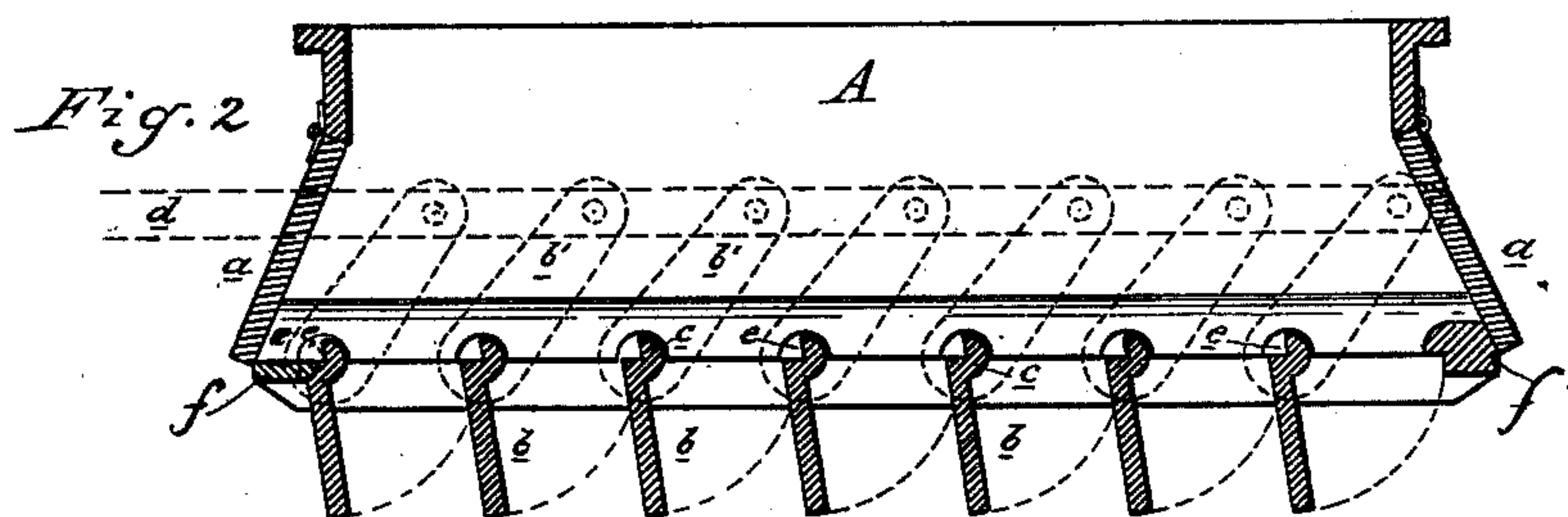
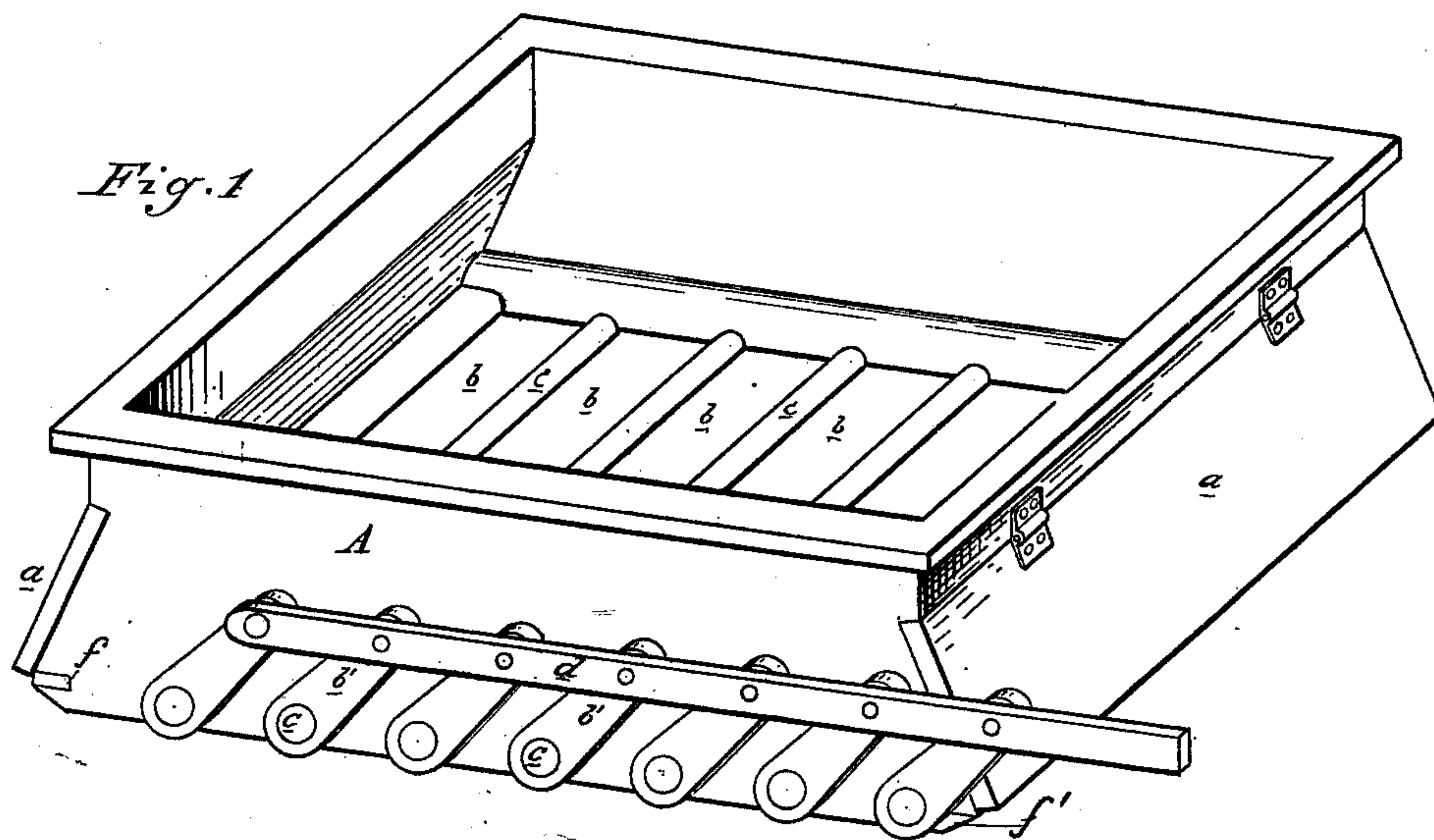


C. BRESNAHAN.  
Locomotive Ash Pans.

No. 231,208.

Patented Aug. 17, 1880.



Attest:  
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# UNITED STATES PATENT OFFICE.

CORNELIUS BRESNAHAN, OF DETROIT, MICHIGAN.

## LOCOMOTIVE ASH-PAN.

SPECIFICATION forming part of Letters Patent No. 231,208, dated August 17, 1880.

Application filed March 27, 1879.

*To all whom it may concern:*

Be it known that I, CORNELIUS BRESNAHAN, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Locomotive Ash-Pans, of which the following is a specification.

The nature of my invention relates to new and useful improvements in the construction of ash-pans for locomotive fire-boxes, whereby the contents thereof may be dumped from the cab and at will.

The invention consists in the peculiar construction of such ash-pans and their connections, by means of which the bottom of the pans may be opened at will by the operator on the cab, for the purpose of discharging the debris of the fuel which falls through the grates of the fire-box.

In the drawings, Figure 1 is a perspective view of my improved ash-pan with its attachments. Fig. 2 is a longitudinal section, showing the bottom of the ash-pan open for discharge of ashes.

In the accompanying drawings, which form a part of this specification, A represents a rectangular ash-pan provided with the usual front and rear dampers, *a a*.

The bottom is constructed of a series of overlapping slats, *b*, eccentrically journaled at each end in the sides of the pan. Upon one side these journals *c* project through the box, and each has secured to it a crank, *b'*. To the opposite ends of these cranks is secured pivotally the lever *d*, which is extended with an upward curvature to a point within reach of the operator, who will occupy the cab.

The parts are so arranged that a movement of the lever will produce a simultaneous movement of the slats, and open or close them all at the same time.

To render this bottom tight when the slats are closed, the free edges of each fold into recesses *e*, cut in the opposite edges of the adjoining slats, as shown.

At one end the ash-pan is provided with a stop-bar, *f*, which fits into the recess *e* of the

nearest slat, and prevents further movement of the slats when they are fully open, while a recessed bar, *f'*, at the other end of the ash-pan limits the closing movement of the slats.

The operation of this can be so readily seen that a further description thereof is deemed unnecessary.

I am aware that a locomotive ash-pan having an open bottom and a series of plates arranged therein, which plates are centrally journaled in the sides of the ash-pan, and each provided with a link screwed at its upper end to a common connecting-bar, has heretofore been employed; and I therefore lay no claim, broadly, to such construction, in which, in discharging the ashes through the bottom of the pan, that portion of the ashes in the pan resting on one side of the axes of revolution of the plates has to be raised in operating the connecting-bar to discharge the ashes, whereas in my construction, in which the swinging plates are hinged to the ash-pan at their upper edges, this disadvantageous result is entirely obviated, and the weight of the ashes will cause their discharge with a slight movement of the connecting-rod, and without raising any part of the ashes in the ash-box.

What I claim as my invention is—

1. The combination, with the ash-pan A, having an open bottom, of the slats *b*, each journaled in the opposite sides of the pan and in the line of the upper edge of the slat, cranks *b'*, and connecting-rod *d*, substantially as described, and for the purpose set forth.

2. The combination, with the ash-pan A, having an open bottom, of the flat slats *b*, each journaled at its upper edge in the lower part of the ash-box, and each provided with an enlarged upper edge, and recess *e* in said edge, beveled stop-bar *f*, recessed stop-bar *f'*, cranks *b'*, and connecting-bar *d*, substantially as described, and for the purpose set forth.

CORNELIUS BRESNAHAN.

Witnesses:

H. S. SPRAGUE,  
CHARLES J. HUNT.