T. W. HEINTZELMAN.

LOCOMOTIVE ASH PAN.

APPLICATION FILED OCT. 29, 1908.

916,150.

Patented Mar. 23, 1909.

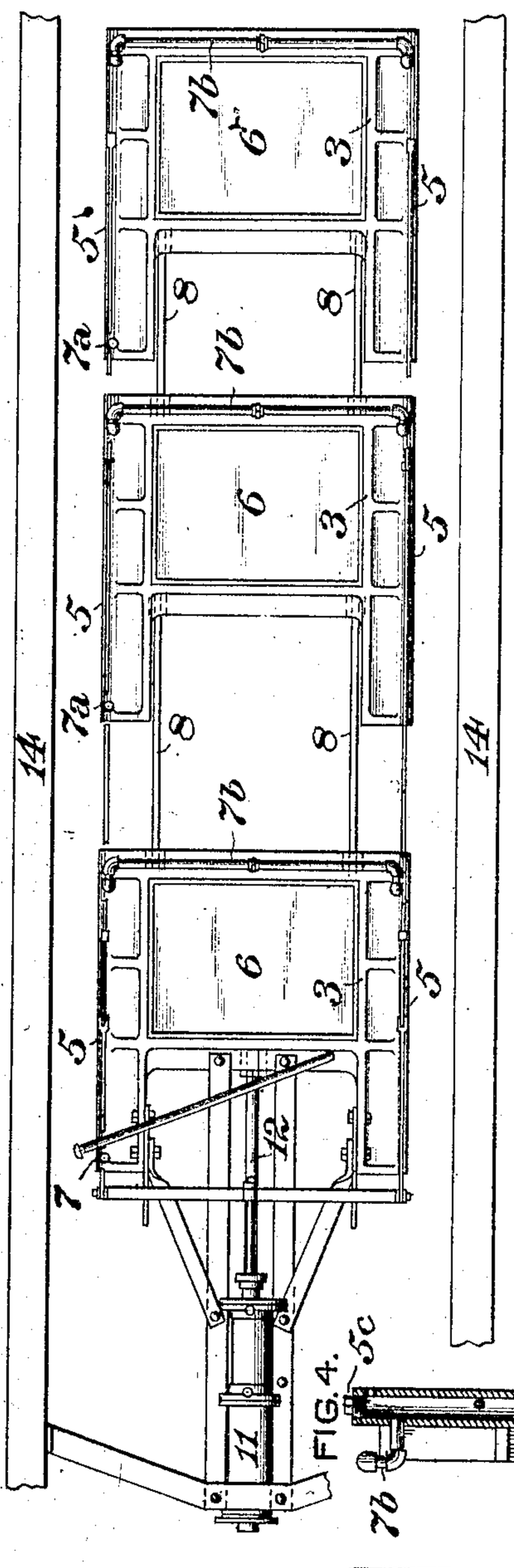

FIG. 2.

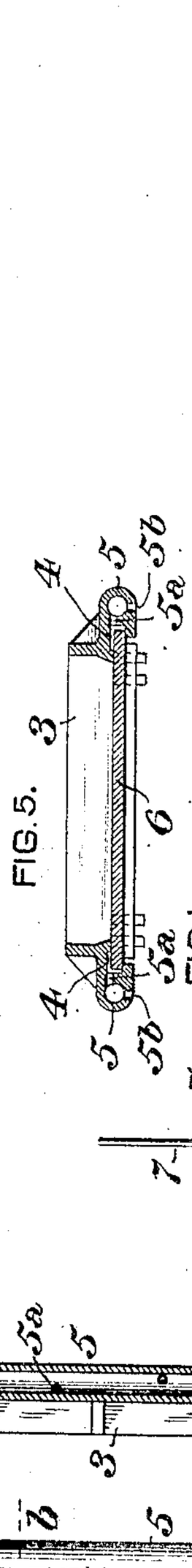

FIG. 5.

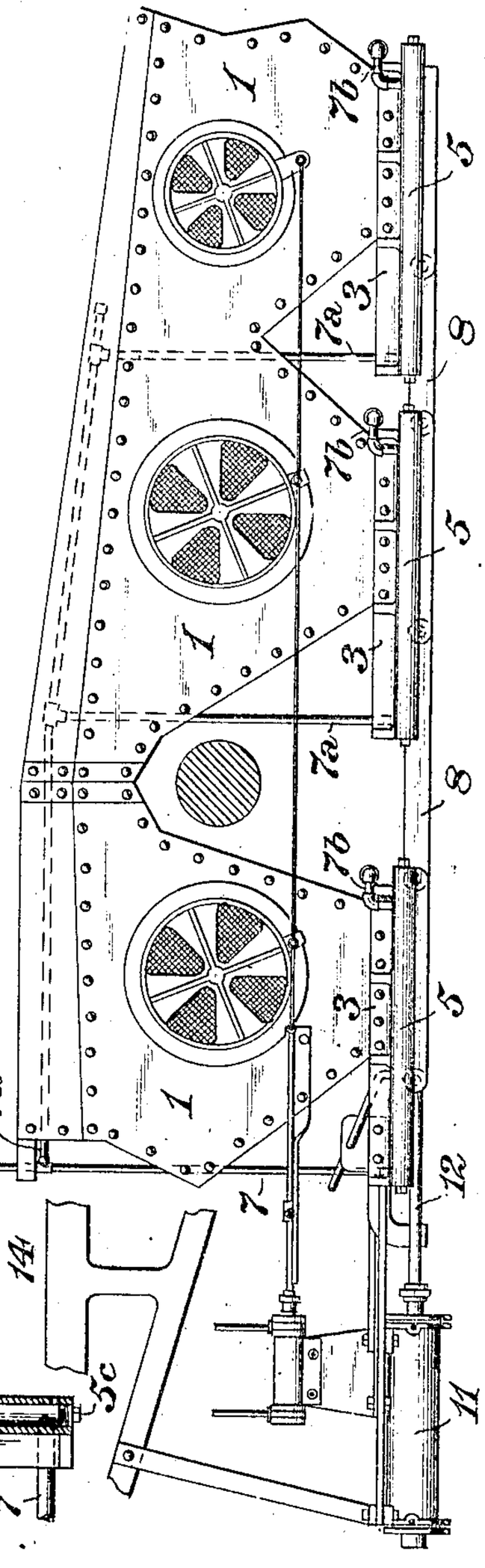

FIG. 1.

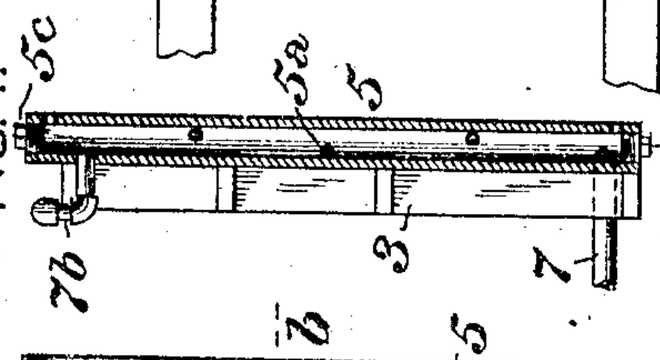

FIG. 4.

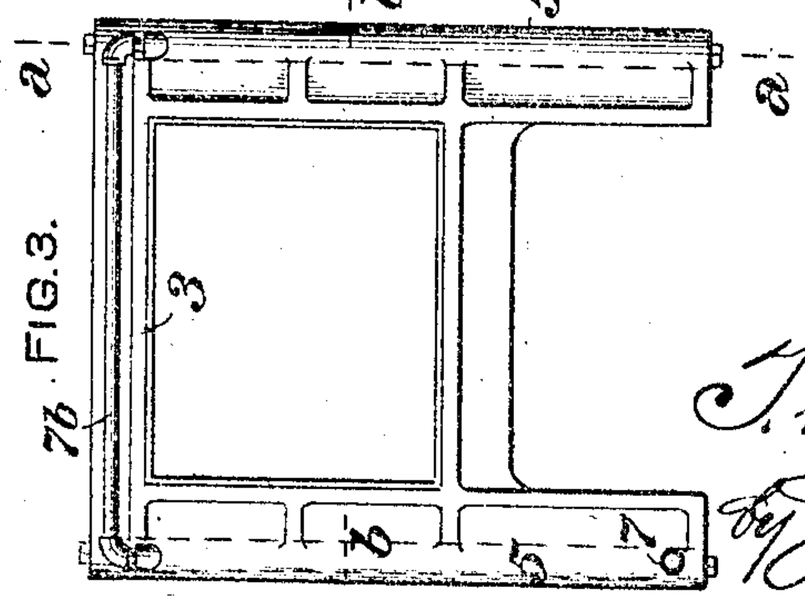

FIG. 3.

WITNESSES

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LOCOMOTIVE ASH-PAN.

No. 916,150. Specification of Letters Patent. Patented March 23, 1909.

Application filed October 29, 1908. Serial No. 460,008.

To all whom it may concern:

Be it known that I, TAYLOR W. HEINTZELMAN, of Sacramento, in the county of Sacramento and State of California, have invented a certain new and useful Improvement in Locomotive Ash-Pans, of which improvement the following is a specification.

My present invention relates to locomotive ash pans of the general class or type set forth in Letters Patent of the United States Nos. 620,707 and 634,728, granted and issued to me under dates of March 7, 1899 and October 10, 1899, respectively; and its object is to provide means for preventing the discharge slides which control the lower openings of the ash pan from being clogged by accumulations of snow or ice in the grooves of their guide frames and for enabling them to be readily thawed out if any water should freeze between the adjoining faces of the discharge slides and guide frames.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings: Figure 1 is a side view, in elevation, of a locomotive ash pan, illustrating an application of my invention; Fig. 2, a plan or top view of the guide frames and their connections, with the ash pan body removed; Fig. 3 a plan or top view, on an enlarged scale, of a guide frame detached; Fig. 4, a vertical longitudinal section through the same, on the line *a a* of Fig. 3; and, Fig. 5, a transverse section on the line *b b* of Fig. 3.

My invention is herein shown as applied in connection with a locomotive ash pan, the body of which, as in the Letters Patent aforesaid, is in the form of three connected sheet metal hopper sections, 1, 1, 1, of proper thickness, each of which is open at its top, and is tapered inwardly and downwardly to a discharge opening at its lower end, around which is secured a guide frame, 3, in lateral grooves or guideways, 4, of which, a discharge slide, 6, which governs the discharge opening, is fitted to traverse longitudinally. The body of the ash pan may be secured to the top rails of the engine frame, 14, or may be supported in any other suitable and preferred manner. The discharge slides, 6, are connected by pairs of links, 8, with each other, and with the piston rod, 12, of a fluid pressure cylinder, 11, by the movements of the piston and rod of which, they are traversed longitudinally in the grooves of the guide frames, 3, to open and close the discharge openings of the hopper sections, as from time to time required to release ashes therefrom, substantially as in Letters Patent No. 620,707, aforesaid.

In the practice of my present invention, I provide each of the guide frames, 3, with a pair of steam chambers, 5, which extend longitudinally on its sides, outside of and adjacent to the guideways 4. Discharge holes, 5^a, extend, through the inner walls of the steam chambers, into the guideways, and drain holes, 5^b, are formed in the bottoms of the steam chambers, for the escape of water of condensation therefrom. To facilitate casting, as well as to enable access to be had to the inside of the steam chambers if desired, their ends are preferably closed by removable plugs, 5^c.

A steam supply pipe, 7, leads from a connection to the boiler of the locomotive, controlled by a cock or valve within convenient reach of the engineer to one of the steam chambers, 5, of the guide frame of the rear hopper section of the ash pan body, and is continued by branch supply pipes 7^a, to connections with steam chambers of the guide frames of the other hopper sections. The opposite steam chambers of each guide frame are connected by transverse pipes, 7^b, so that steam admitted through the supply pipe 7, will be fed to all the steam chambers of the ash pan.

It will be seen that any accumulation of snow or ice on or between the adjacent surfaces of the guideways and discharge slides, may be quickly and completely removed by heating the parts by steam admitted to the chambers, 5, and discharged therefrom into the guideways, and by keeping the chambers constantly warm by the admission of a small quantity of steam, in freezing weather, the liability to freezing of any water on their surfaces or on the surfaces of the discharge slides will be avoided, and the latter will be always in condition to be moved freely.

The cost of the improvement is inconsiderable, and it can be applied without interference with any of the members connected with or adjacent to the ash pan.

I claim as my invention and desire to secure by Letters Patent:

1. In a locomotive ash pan, the combination of a body having a discharge opening, a hollow guide frame fixed to the bottom of the body, a discharge slide fitted to traverse longitudinally in the guide frame, and means

for introducing a heating medium in the guide frame.

2. In a locomotive ash pan, the combination of a body having a discharge opening, hollow guide frames fixed on each side and to the bottom of the body and provided with lateral guideways communicating therewith, a discharge slide fitted to traverse longitudinally in the guideways, and means for introducing a heating medium in the hollow frames and heating the adjacent surfaces of the guideways and discharge slide.

3. In a locomotive ash pan, the combination of a body having a discharge opening, a guide frame fixed to the bottom of the body and provided with lateral guideways and steam chambers adjacent to and communicating with the guideways, a steam supply pipe leading from the boiler of the locomotive to the steam chambers, and a discharge slide fitted to traverse longitudinally in the guideways.

4. In a locomotive ash pan, the combination of a body having a lower discharge opening, a guide frame fixed to the bottom of the body and provided with lateral guideways, steam chambers on the guide frame having discharge holes leading into the guideways, a steam supply pipe leading from the boiler of the locomotive to the steam chambers, and a discharge slide fitted to traverse longitudinally in the guideways.

5. In a locomotive ash pan, the combination of a body comprising a plurality of hopper sections, each having a lower discharge opening, guide frames fixed to the bottoms of the hopper sections and provided with guideways on their opposite sides, steam chambers formed in the guide frames adjacent to the guideways, pipes connecting the opposite steam chambers of each guide frame, a steam supply pipe leading from the boiler of the locomotive to a steam chamber of one of the guide frames, branch steam pipes leading from the supply pipe to a steam chamber of each of the other guide frames, and discharge slides fitted to traverse longitudinally in the guideways of the several guide frames.

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Witnesses:

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