C. H. CLARK.

ORE DUMP CAR.

APPLICATION FILED NOV. 5, 1909.

944,232.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 1.

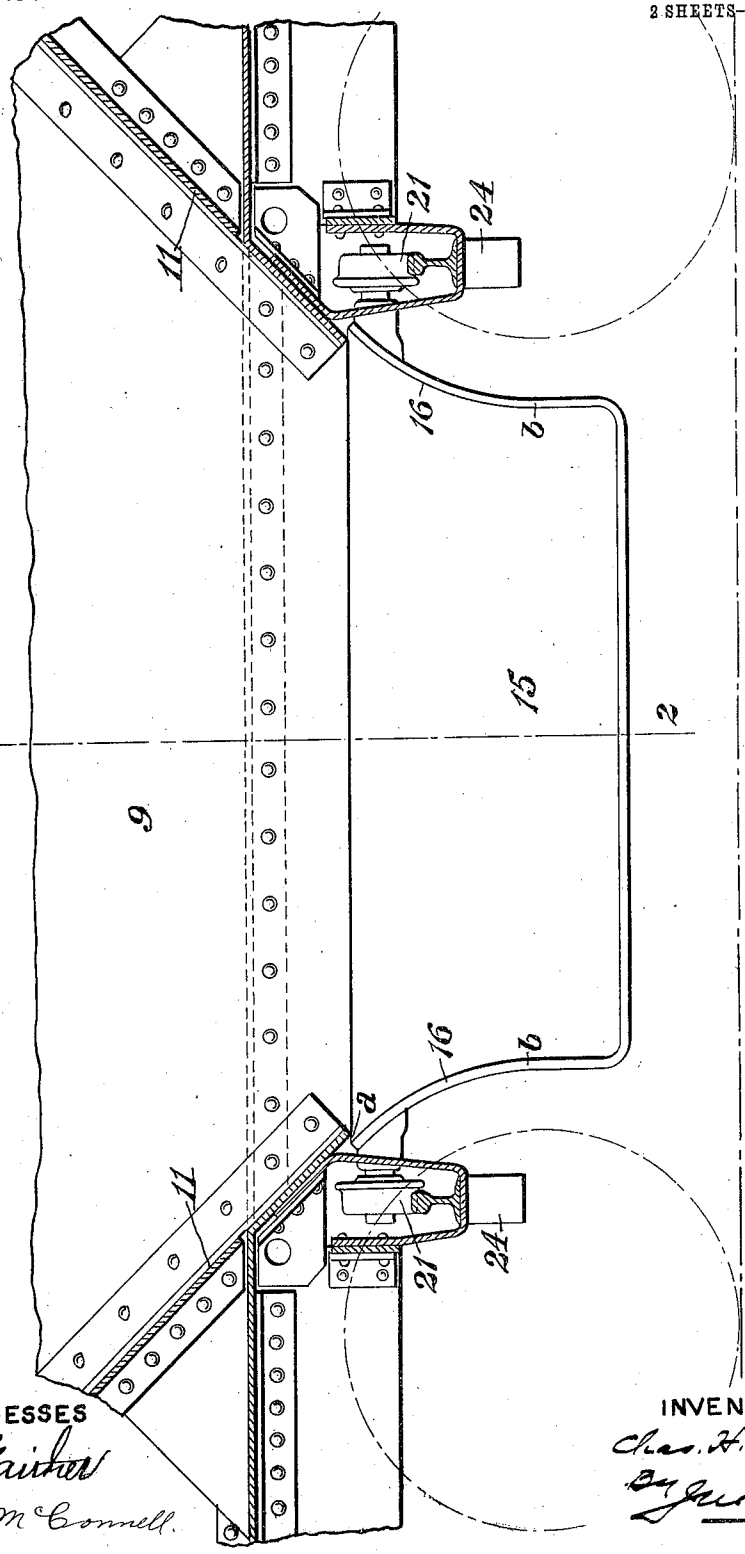

FIG. 1.

WITNESSES

F. E. Gaither

Ellen McConnell.

INVENTOR

Chas. H. Clark

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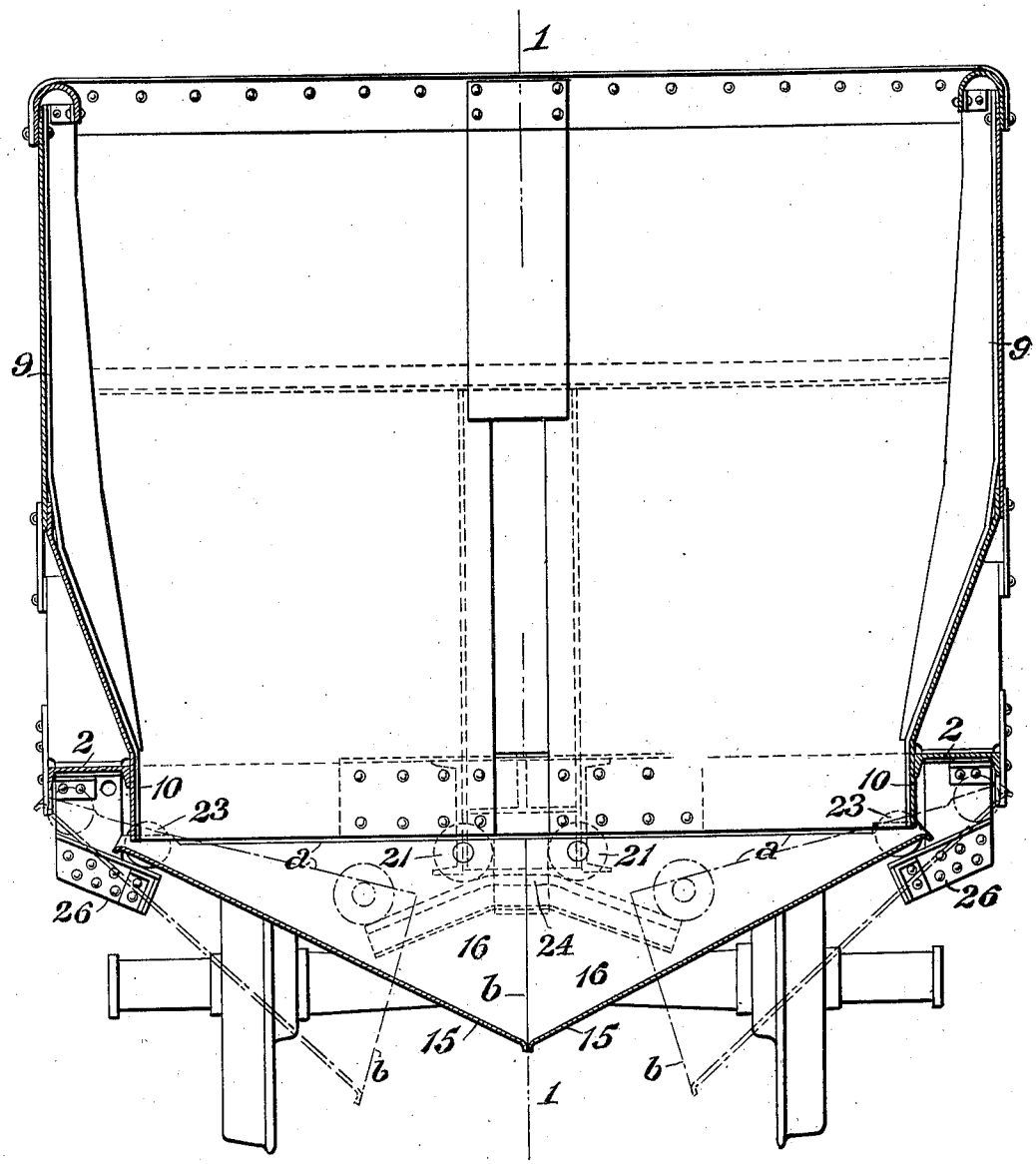
2 SHEETS—SHEET 2.

FIG. 2.



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UNITED STATES PATENT OFFICE.

CHARLES H. CLARK, OF CRAFTON, PENNSYLVANIA.

ORE DUMP-CAR.

944,232. Specification of Letters Patent. Patented Dec. 21, 1909.

Original application filed October 5, 1908, Serial No. 456,277. Divided and this application filed November 5, 1909. Serial No. 526,404.

To all whom it may concern:

Be it known that I, CHARLES H. CLARK, a resident of Crafton, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Ore Dump-Cars, of which the following is a specification.

This is a division of my application Serial No. 456,277, filed October 5, 1908, and has particular reference to doors of novel form for the bottom opening. The doors close beneath said opening, and one object is to provide the doors with wall-forming portions for the door-inclosed space.

A further purpose is to so form the doors as to prevent material from overflowing the door ends when discharging from the hopper.

Still a further purpose is to provide doors which may move to and from full open position without interfering with other parts of the car adjacent the doors.

In the accompanying drawings, Figure 1 is a vertical section of a dump car, taken on line 1—1 of Fig. 2, and Fig. 2 is a vertical cross-section on line 2—2 of Fig. 1, the doors being shown open in dotted lines.

Referring to the drawings, 2 are the side sills, 9 the side sheets or girders, and 11 the sloping end floor sheets which meet the lower vertical portions 10 of sheets 9 to form the hopper mouth which bounds the bottom opening.

In the present adaptation the bottom opening is closed by doors located therebeneath, the space between said opening and the doors increasing in depth from each side inwardly to the center where the doors close together. Two oppositely inclined bodily movable doors 15 are shown, each supported at its ends by wheels 21 and 23 secured to the door ends 16, wheels 21 moving on inclined tracks 24 at the center of the car, and wheels 23 on inclined tracks 26 at opposite sides of the car. The doors may be actuated by any suitable mechanism. In the present adaptation the upwardly extending end portions 16 of the doors are of substantially triangular shape, their top edges *a* being horizontal when closed to fit the lower extremities of end sheets 11, and their inner edges *b* vertical and closing together, as shown. The upwardly extending portions 16 thus form end walls for the door-inclosed space beneath the hopper opening, and when open they prevent the outflowing material from spilling at the door ends, the doors thus forming effective chutes. To insure free movement of the doors when opening and closing I prefer to contract longitudinally their inner or meeting portions, and the length of said portions being less than the length of the hopper opening, the upwardly extending door ends 16 are flared outwardly as shown, sufficiently to inclose said opening when the doors are closed. Also, the flared ends direct the discharging material onto the longitudinally contracted portions of doors when open. Doors of the form shown, longest at the most elevated portions adjacent the car sides and decreasing in width toward their inner lower edges, may move to and from full open position without interfering with other parts of the car having fixed position relatively to the doors.

I claim:

1. A door for a dump car located beneath the hopper opening and having wall-forming portions extending upwardly to the hopper when the door is closed.

2. A door for a dump car located beneath the hopper opening and inclined when closed and having wall-forming end portions extending upwardly to the hopper when the door is closed.

3. Doors for a dump car closing together below the plane of the hopper opening and having upwardly extending portions forming walls for the door-closed space.

4. Oppositely inclined doors for a dump car located beneath the hopper opening and having wall-forming end portions extending upwardly to the hopper when the doors are closed.

5. Oppositely inclined doors for a dump car beneath the hopper opening and meeting at their lowermost edges when the doors are closed, the doors having wall-forming end portions extending upwardly to the hopper.

6. A door for a dump car located beneath the hopper opening, the inner portion of the door being shorter than said opening, the door having end portions extending upwardly and outwardly to opposite edges of the hopper opening when the door is closed.

7. A door for a dump car located beneath the hopper opening, the inner portion of the door being shorter than said opening and increasing in length toward the outer

portion of the door, the door having end portions extending upwardly and outwardly to opposite edges of the hopper opening when the door is closed.

8. Oppositely inclined doors for a dump car beneath the hopper opening and meeting at their inner edges when closed, the doors at their inner edges being shorter than the hopper opening, the doors having end portions extending upwardly and outwardly to opposite edges of the hopper opening when the doors are closed.

9. Oppositely inclined doors for a dump car beneath the hopper opening and meeting at their inner edges when closed, the doors at their inner edges being shorter than the hopper opening and increasing in length toward their outer edges, the doors having wall-forming end portions extending upwardly and outwardly to opposite edges of the hopper opening when the doors are closed.

10. Oppositely inclined bodily movable doors for a dump car beneath the hopper opening, the doors at their inner edges being shorter than the hopper opening and increasing in length toward their outer edges, the doors having end portions extending upwardly and outwardly to opposite edges of the hopper opening when the doors are closed.

11. A door for a dump car inclined when closed with its higher portion intersecting the plane of the hopper opening and its lowest portion beneath said plane, the door having upwardly extending wall-forming end portions whose top edges conform to the contour of those portions of the hopper adjacent said edges when the door is closed.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. CLARK.

Witnesses:
J. M. NESBIT,
F. E. GAITHER.