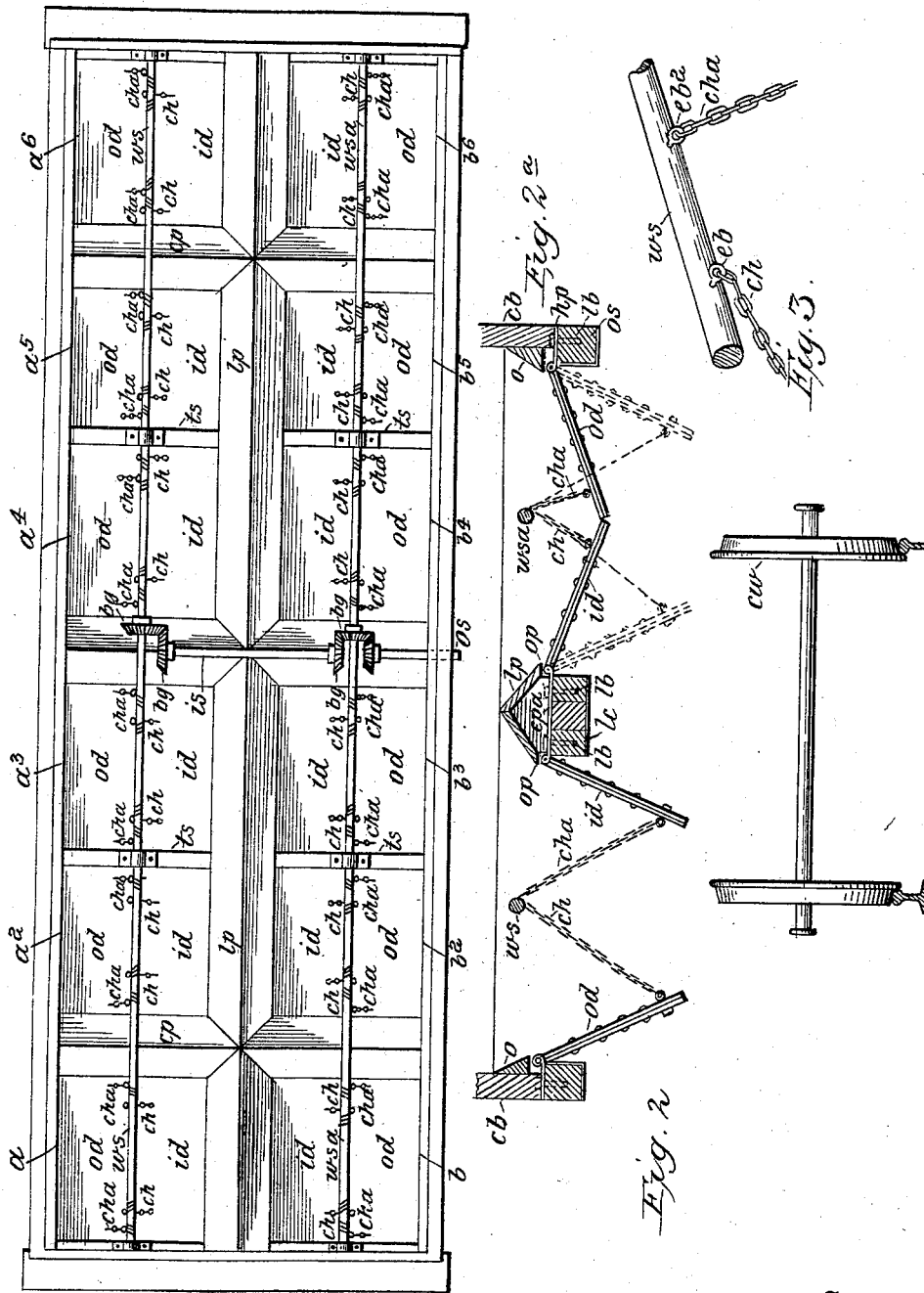


J. J. SOUDER.
DUMPING RAILWAY CAR.

(Application filed Aug. 24, 1900.)

(No Model.)



Witnesses
Frank L. Curran,
J. B. Malnati,

Fig. 1.

Inventor
Jacob James Souder
By *J. J. Souder*
Attorney

UNITED STATES PATENT OFFICE.

JACOB JAMES SOUDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

DUMPING RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 676,101, dated June 11, 1901.

Application filed August 24, 1900. Serial No. 27,948. (No model.)

To all whom it may concern:


Be it known that I, JACOB JAMES SOUDER, a citizen of the United States, and a resident of the city of Washington, in the District of Columbia, have invented new and useful Improvements in Dumping Railway-Cars, of which the following is a correct description.

The object of the invention is to provide for use in railway traffic a dumping-car which shall be of such construction that in discharging its contents they shall be distributed uniformly throughout the entire area covered by the car. To effect this object, the entire horizontal surface of the car in the plane of its bed-frame is made practically a discharging-space—that is to say, it is provided throughout with discharge-openings which are or may be inclosed at all times except when the car is to receive the burden to be transported.

The invention consists in the various novel elements or combinations of elements involved in the construction of a car of the character thus generally indicated, as will appear from the following detailed description thereof and as distinctly summarized in the paragraphs which succeed such detailed description.

In the accompanying drawings, which constitute a part of this specific description, Figure 1 represents a plan view of the floor or supporting portion of the car. Fig. 2 is a transverse vertical section. Fig. 2^a is a detail in perspective representing the winding-shaft and the elevating-chains connected to such shaft. Fig. 3 is an elevation representing the relation of the car-wheels *ew* to the bed-frame of the car, its discharge-openings, and their closing doors.

As will be seen in Figs. 1 and 2, the bed-frame of the car is divided by longitudinal central sill *lc* and by transverse sills *ts* and their covering and directing plates *lp* and *cp*, respectively, into discharge-openings *a*, *a*², *a*³, *a*⁴, *a*⁵, and *a*⁶ at one side and *b*, *b*², *b*³, *b*⁴, *b*⁵, and *b*⁶ at the opposite end. These openings are each provided with hopper-forming doors, the outer, *od*, of which is connected to a hinge-plate *hp*, which is secured by lag-bolts *lb* to the body of the outer sill *os* and the inner, *id*, of which is secured to a center plate *cpa*, which is made fast by similar

bolts to the compound longitudinal central sill *lc*. Above the hinges of the doors *od* overhangs *o* are secured to the vertical walls of the car-body *cb*, and the projections *op* of the covering-plates *tp* serve as overhangs for the hinges of the inner doors. Centrally along the discharge-openings extend the winding-shafts *ws* and *wsa*, which are operatively supported upon the transversely-extending sills and to which are attached, by means of the eyebolts *eb* and *eb*², the lifting-chains *ch* and *cha*, the latter of which is slightly shorter than the former. The shafts *ws* and *wsa* are provided with gears *bg* at their mid-length, and an intermediate transverse shaft *is*, having like gearing at each extremity, is actuated by an outwardly-extending transverse shaft *os*, to which power is applied to simultaneously close all the doors of both series of discharge-openings, causing them to meet edge to edge in hopper form in the manner indicated at the right in Fig. 2—that is to say, with the upper corner of the edge or margin of each door in actual contiguity with the corresponding angular corner of the opposite door—while an intermediate open -shaped space is left below such point of contact.

It will be understood that the described car is adapted to be employed in the conveyance of coal, coke, ores, and other like coarse material, and it will be apparent that the projecting guards or overhangs *o* and *op* by their peculiar formation serve the twofold purpose of directing the contents of the car toward the discharge-openings and of preventing the accumulation of the finer portions of the material within the space between the outer hinges and the body of the car and within the space above the compound center sill and the longitudinal covering and guiding plates.

In practice the power-shaft will be provided with a suitable toothed surface for engagement by a pawl or equivalent detent mounted upon the car.

The described invention in all its details has been embodied in a thirty-six-foot car, and the operations of closing the twenty-four doors simultaneously and of discharging the contents, consisting of sixty thousand pounds

of coal, instantly have been effected repeatedly with entire success.

The invention having been thus described, what is claimed is—

- 5 1. A dumping railway-car the entire horizontal area of which is provided with discharge-openings, such openings being divided into two longitudinal side-by-side series, each series of which extends from end to end of
10 the bed-frame; and each discharge-opening being provided with oppositely-placed hinged drop-doors which when closed constitute hopper-like receptacles; as shown and described.
- 15 2. A dumping railway-car which is provided with discharge-openings, and with coincident, hinged, oppositely-moving drop-doors or dumping-sections which in closing form a hopper-like bottom; and which are moved to their
20 closing adjustment by lifting-chains, each of which is connected at one end to a winding-shaft, and at its opposite end to such door; the chains upon opposite doors being connected to the winding-shaft in the same plane,
25 but being of dissimilar length, as described, to compensate for the difference in the extent of their plane of movement, and thereby insure contiguity of their upper angular outer corners, when in their closed position;
30 as set forth and shown.
3. In a dumping railway-car having a series

of discharge-openings, each opening being provided with two oppositely-placed closing doors which in closing form a hopper-like bottom; the combination with the outer doors, 35 of the fixed guard or overhang *o*, overlying the hinge or hinges of such doors, and thereby preventing the accumulation of material upon the hinges, or in the space behind such hinges; substantially as specified. 40

4. In a dumping railway-car which has in its horizontal portion a series of discharge-openings, each opening being provided with two oppositely-placed closing doors which form when closed a hopper-like bottom or section, the combination with such oppositely-placed doors, of the described outer guards or overhangs *o*, fixed to the side walls of the car; and the described inner double inclined directing-plates *lp*, resting upon the longitudinal 45 central sill, and having projections *op*, overhanging the hinges of the inner doors, as and for the purposes set forth. 50

In testimony whereof I have hereunto, on this 23d day of August, 1900, affixed my signature in presence of two subscribing witnesses. 55

JACOB JAMES SOUDER.

Witnesses:

HORACE A. DODGE,
DUDLEY E. BURDINE.