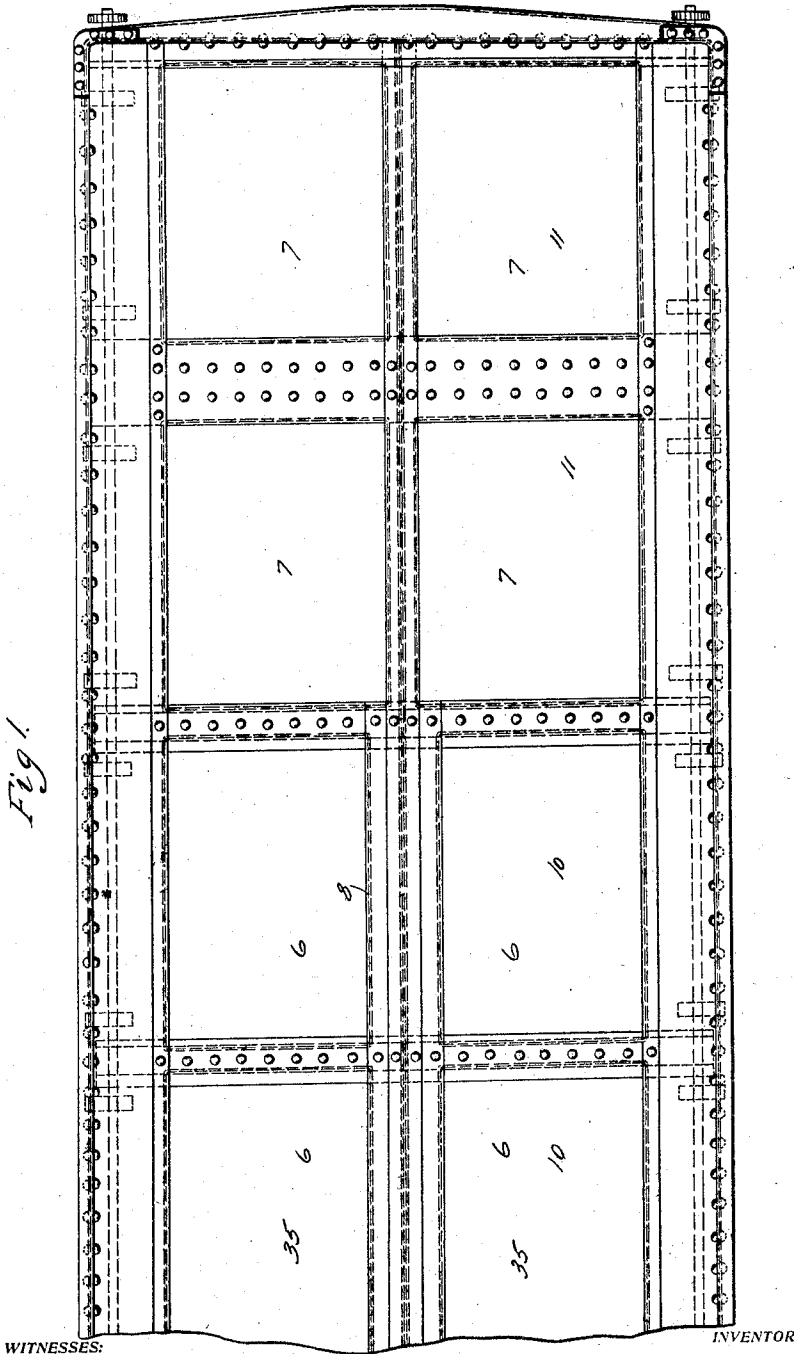


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RAILWAY DUMP CAR.  
APPLICATION FILED APR. 28, 1910.

974,642.

Patented Nov. 1, 1910.

4 SHEETS—SHEET 1.



WITNESSES:

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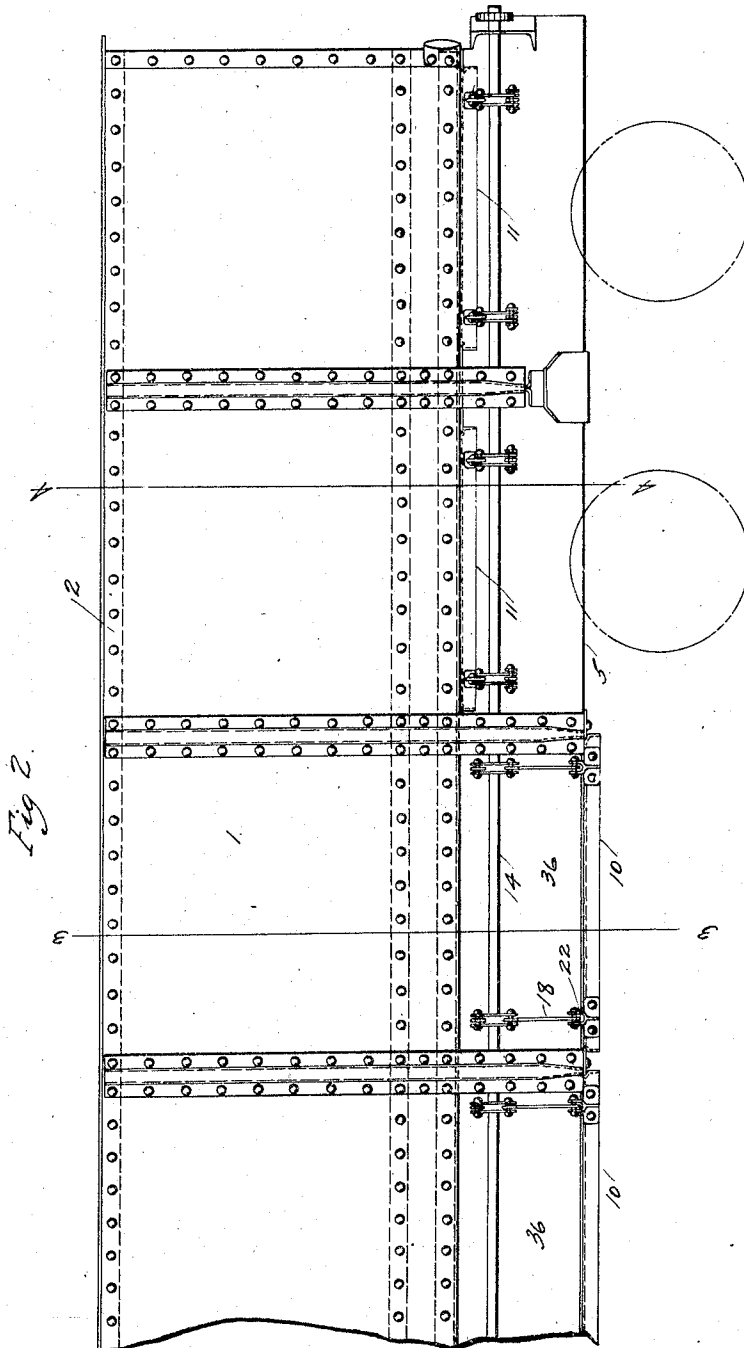
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4 SHEETS—SHEET 2.



WITNESSES:

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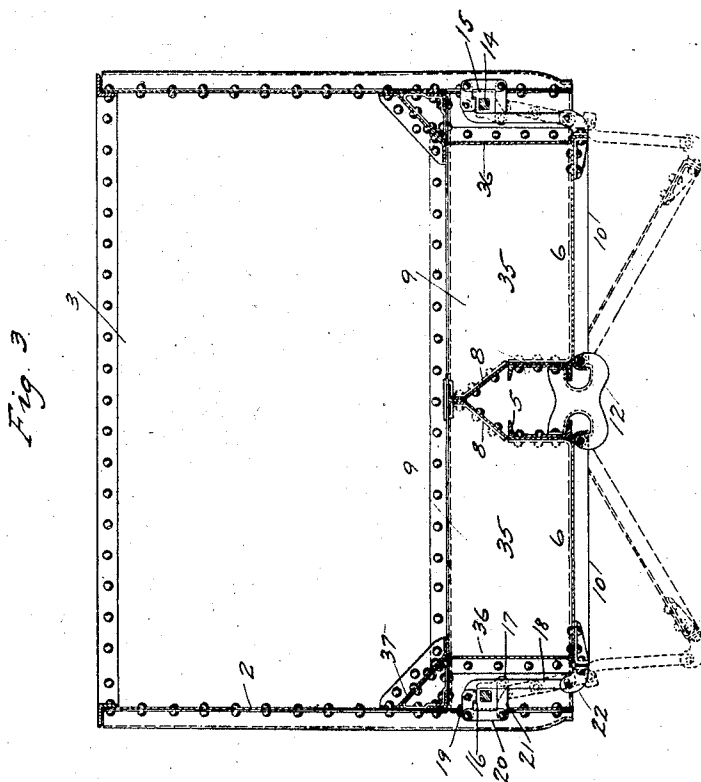
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4 SHEETS—SHEET 3.



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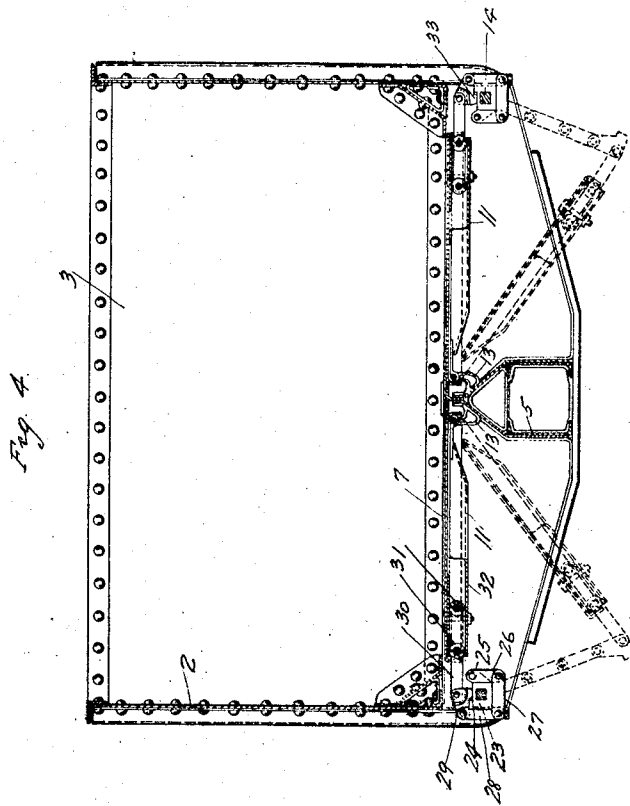
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4 SHEETS-SHEET 4.



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# UNITED STATES PATENT OFFICE.

ARGYLE CAMPBELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO ENTERPRISE RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## RAILWAY DUMP-CAR.

974,642.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed April 28, 1910. Serial No. 558,153.

*To all whom it may concern:*

Be it known that I, ARGYLE CAMPBELL, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway Dump-Cars, of which the following is a specification.

My invention relates to improvements in dump cars.

10 The object of the invention is to provide an improved construction of dump car by means of which the load carrying space or capacity of the car will be utilized to the fullest extent, and wherein also the door  
15 operating mechanism may at the same time be made as simple and direct operating as possible.

My invention consists in the means I employ to practically accomplish this object or result, as herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a plan view of a dump car embodying my invention, only one half of the car being shown  
25 for additional clearness of illustration, as both halves of the car are identical. Fig. 2 is a side elevation. Figs. 3 and 4 are cross sections on lines 3—3 and 4—4 respectively  
30 of Fig. 2.

In the drawing, 1 represents the body of a dump car, the same being represented as of the type having upright side sheets 2, upright end sheets 3 center sills 5 and with a  
35 series of dump door openings 6, 6, separated from each other longitudinally by the central longitudinal member or hopper sheets 8, and transversely by the transverse members 9, the door openings 6 being at the  
40 middle portion of the car or between the trucks, and the door openings 7 being at the end portions of the car body or over the trucks.

The door openings 6, 7 are closed by  
45 hinged doors 10, and 11 respectively. The middle doors 10 which close the middle door openings 6, or those located between the car wheels, are hinged below the center sills so as to thus utilize the carrying space to the  
50 depth of the center sills at the middle portion of the car. These doors 10, as illustrated in the drawings, are hinged at their inner edges to brackets 12 secured to the

center sills, the car illustrated in the drawing being thus adapted for side dumping. 55

The doors 11 which close the openings 7 at the end portions of the car body, or those above the trucks, are hinged above the center sills so that these doors may thus have room to properly swing down sufficiently  
60 for dumping without obstruction by the trucks. These doors 11, as illustrated in the drawing, are represented as being hinged at their inner edges to suitable brackets 13 secured to the car body above  
65 the center sills.

The lower or middle set of doors 10, those hinged below the center sills, are opened and closed by operating shafts 14 at the side of the car, having preferably four sided or  
70 polygonal winding drums 15, each having a locking shoulder 16 on the uppermost face of the drum when the door is closed and pivot lugs 17 connected by links 18, 19, 20 and 21 with the bar 22 at the outer or swing-  
75 ing edge of the doors.

The doors 11 which close the openings 7 at the end portions of the car body above the trucks, these being the doors which are hinged above the center sills, are prefer-  
80 ably opened and closed from the same operating shafts 14 as those employed to operate the doors 10, and which shafts 14 are provided with similar polygonal winding drums 23, each having a shouldered lock-  
85 ing face 24 and pivot lugs 25 which are connected by links 26, 27, 28 and 29 with a sliding bar 30, carrying rollers 31, traveling in guide ways 32 on the outer or swinging ends of the doors 11. Each of the links 29  
90 has a shouldered locking face 33 for engagement with the shouldered locking face 24 of the drum, and as the doors 11 are above the operating shaft 14 when closed, they rest, through the sliding bar 30 and link  
95 29, upon and are supported by the winding drum and operating shaft.

The doors 10 which close the middle openings 6 which are below the operating shaft are suspended from the operating shaft by  
100 the connecting links and drum.

In practicing my invention, I prefer to employ a single continuous operating shaft on each side of the car for both the doors 6 which are below the operating shaft and the  
105 doors 7 which are above it, instead of em-

playing two separate operating shafts for the upper and lower sets of doors, as this would necessitate the use of a separate operating mechanism for each shaft or means for gearing the two shafts together.

5 In the drawing, I have illustrated the door operating mechanism which I prefer to employ in practicing my invention, but I desire it to be understood that my invention is not limited to any particular construction of door operating mechanism.

10 As illustrated in the drawing, the increased or depressed load space 35 on each side of the center sills is formed by longitudinal sheets 36 having inclined members 37 secured to the upright side sheets 2.

I claim:—

1. In a dump car, the combination with a dump car body having a middle set of door openings at the middle portion of the car between the trucks, and further door openings at the end portions of the car body above the trucks, doors for closing the middle openings hinged at their inner longitudinal edges below the center sills and doors for closing the openings at the end portions of the car above the trucks hinged at their inner longitudinal edges above the center sills, substantially as specified.

30 2. In a dump car, the combination with a dump car body having a middle set of door openings at the middle portion of the car between the trucks and further door openings at the end portions of the car body above the trucks, doors for closing the middle openings hinged below the center sills and doors for closing the openings at the end portions of the car above the trucks hinged above the center sills, and operating shafts for opening and closing said doors located above the level of the middle doors and below the level of the upper doors, substantially as specified.

45 3. In a dump car, the combination with a dump car body having a middle set of door openings at the middle portion of the car between the trucks and further door openings at the end portions of the car body above the trucks, doors for closing the middle openings hinged at their inner longitudinal edges below the center sills and doors for closing the openings at the end portions of the car above the trucks hinged at their inner longitudinal edges above the center sills, and common operating shafts for both the upper and lower sets of doors extending longitudinally of the car at each side thereof, substantially as specified.

60 4. In a dump car, the combination with a dump car body having a middle set of door openings at the middle portion of the car between the trucks and further door openings at the end portions of the car body above the trucks, doors for closing the middle openings hinged at their inner longitudinal edges below the center sills and doors for closing the openings at the end portions of the car above the trucks hinged at their inner longitudinal edges above the center sills, and common operating shafts for both the upper and lower sets of doors extending longitudinally of the car at each side thereof, substantially as specified.

tudinal edges below the center sills and doors for closing the openings at the end portions of the car above the trucks hinged at their inner longitudinal edges above the center sills, and common operating shafts for both the upper and lower sets of doors extending longitudinally of the car at each side thereof, winding drums on said shafts and connecting links for operating said lower sets of doors at the middle portion of the car and winding drums on said shafts and connecting links for operating said upper sets of doors, substantially as specified.

5. In a dump car, the combination with a dump car body having a middle set of door openings at the middle portion of the car between the trucks and further door openings at the end portions of the car body above the trucks, doors for closing the middle openings hinged below the center sills and doors for closing the openings at the end portions of the car above the trucks hinged above the center sills, and common operating shafts for both the upper and lower sets of doors, winding drums on said shafts and connecting links for operating said lower sets of doors at the middle portion of the car and winding drums on said shafts and connecting links for operating said upper sets of doors, said upper sets of doors having sliding bars at their outer swinging edges for connection with said links, substantially as specified.

6. In a dump car, the combination with a car body having at the middle portion of the car body a depressed load receiving space on each side of the center sills, and furnished with lower door openings, said car body at the end portions thereof above the trucks having a further set of door openings at a higher level, a lower set of doors for closing said first mentioned openings, and an upper set of doors for closing said second mentioned openings, said operating shafts extending longitudinally of the car and said doors being all hinged at their longitudinal edges substantially as specified.

7. In a dump car, the combination with a car body having at the middle portion of the car body a depressed load receiving space on each side of the center sills, and furnished with lower door openings, said car body at the end portions thereof above the trucks having a further set of door openings at a higher level, a lower set of doors for closing said first mentioned openings, an upper set of doors for closing said second mentioned openings, and operating shafts and connecting means for operating said doors, said operating shafts extending longitudinally of the car and said doors being all hinged at their longitudinal edges substantially as specified.

8. In a dump car, the combination with a car body having at the middle portion of the

car body a depressed load receiving space on each side of the center sills, and furnished with lower door openings, said car body at the end portions thereof above the trucks 5 having a further set of door openings at a higher level, a lower set of doors for closing said first mentioned openings, an upper set of doors for closing said second mentioned openings, and common operating 10 shafts for opening and closing the upper and lower sets of doors, said operating shafts extending longitudinally of the car and said doors being all hinged at their longitudinal edges substantially as specified.

15 9. In a dump car, the combination with a car body having at the middle portion of the car body a depressed load receiving space on each side of the center sills, and furnished with lower door openings, said 20 car body at the end portions thereof above the trucks having a further set of door openings at a higher level, a lower set of doors for closing said first mentioned openings, an upper set of doors for closing said 25 second mentioned openings, and common operating shafts for opening and closing the upper and lower sets of doors, said com-

mon operating shafts being located between the upper and lower sets of doors, substantially as specified.

30 10. In a dump car, the combination with a car body having at the middle portion of the car body a depressed load receiving space on each side of the center sills, and furnished with lower door openings, said 35 car body at the end portions thereof above the trucks having a further set of door openings at a higher level, a lower set of doors for closing said first mentioned openings, an upper set of doors for closing said second 40 mentioned openings, common operating shafts for opening and closing the upper and lower sets of doors, said common operating shafts being located between the upper and lower sets of doors, and provided with 45 drums and connecting links extending to the lower doors and further drums and connecting links extending to the upper doors, substantially as specified.

ARGYLE CAMPBELL

Witnesses:

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H. M. MUNDAY.