J. W. HENDERSON & J. E. SHERIFF.

MUCK CAR.

APPLICATION FILED SEPT. 18, 1907.

919,863.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 1.

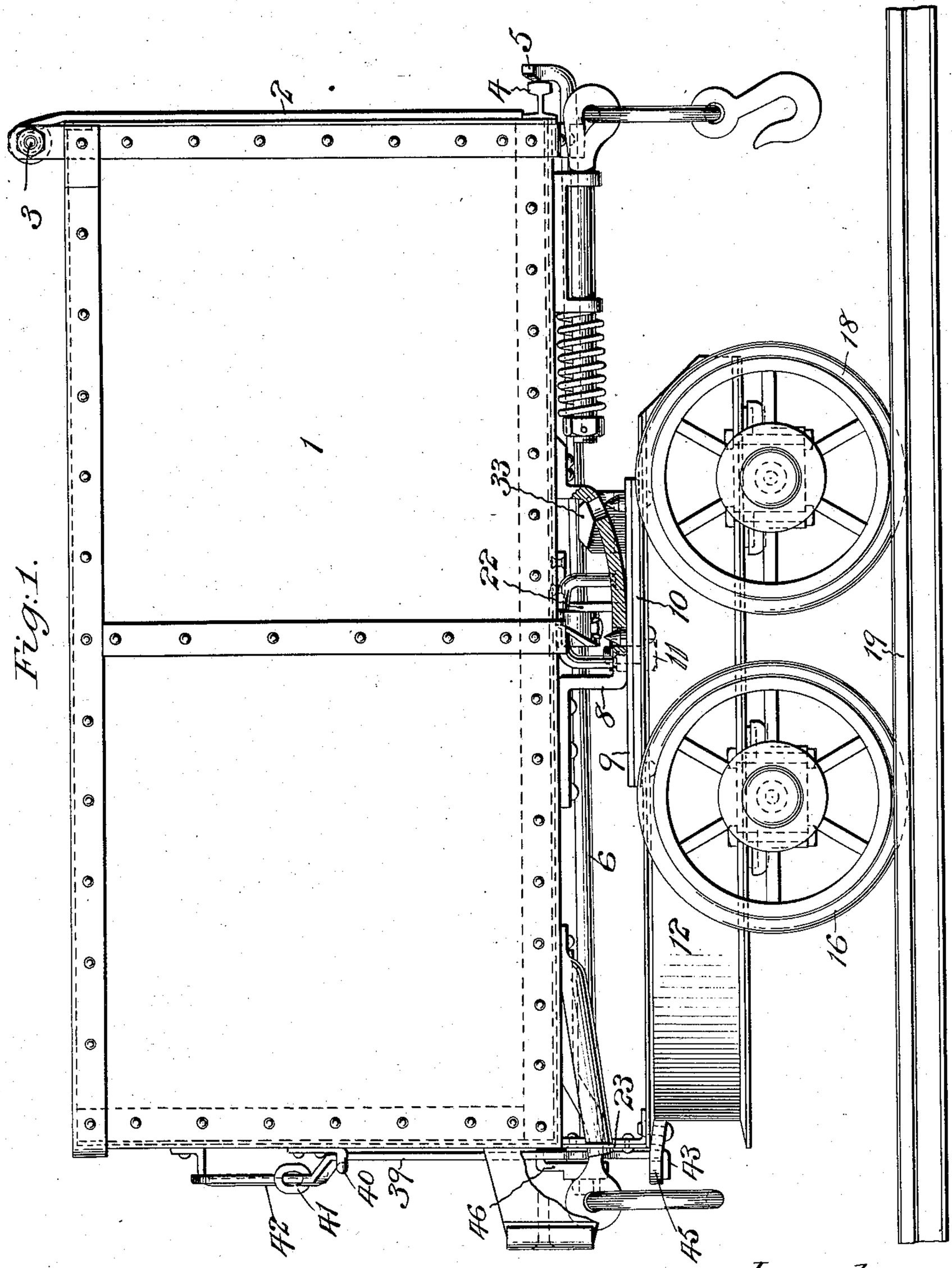


Fig. 1.

Witnesses:
F. George Barry
Henry D. Heims

Inventors:
John W. Henderson and
James E. Sheriff
By
Brown Seward
their Attorneys.

J. W. HENDERSON & J. E. SHERIFF.

MUCK CAR.

APPLICATION FILED SEPT. 18, 1907.

919,863.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 2.

Fig. 3.

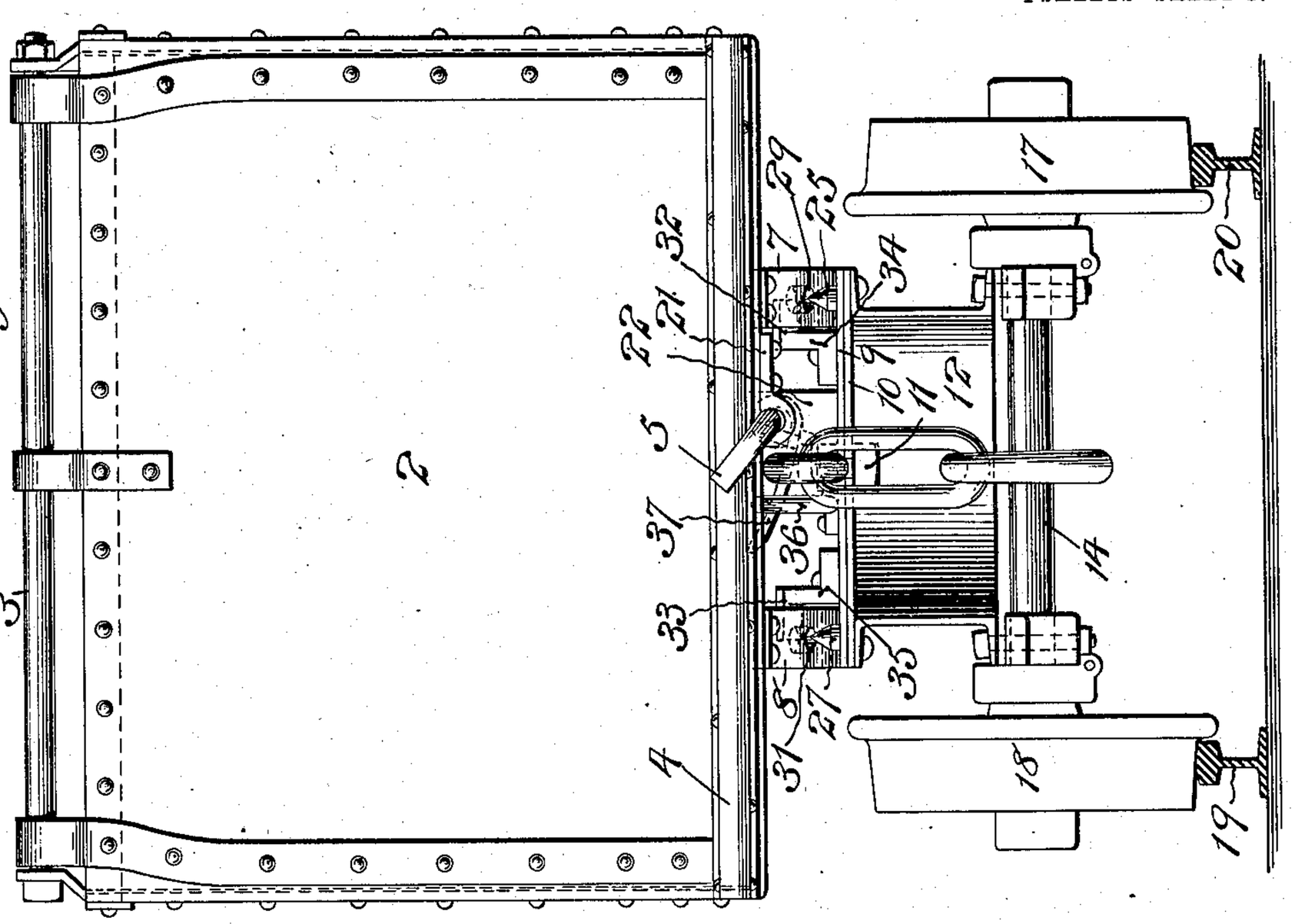
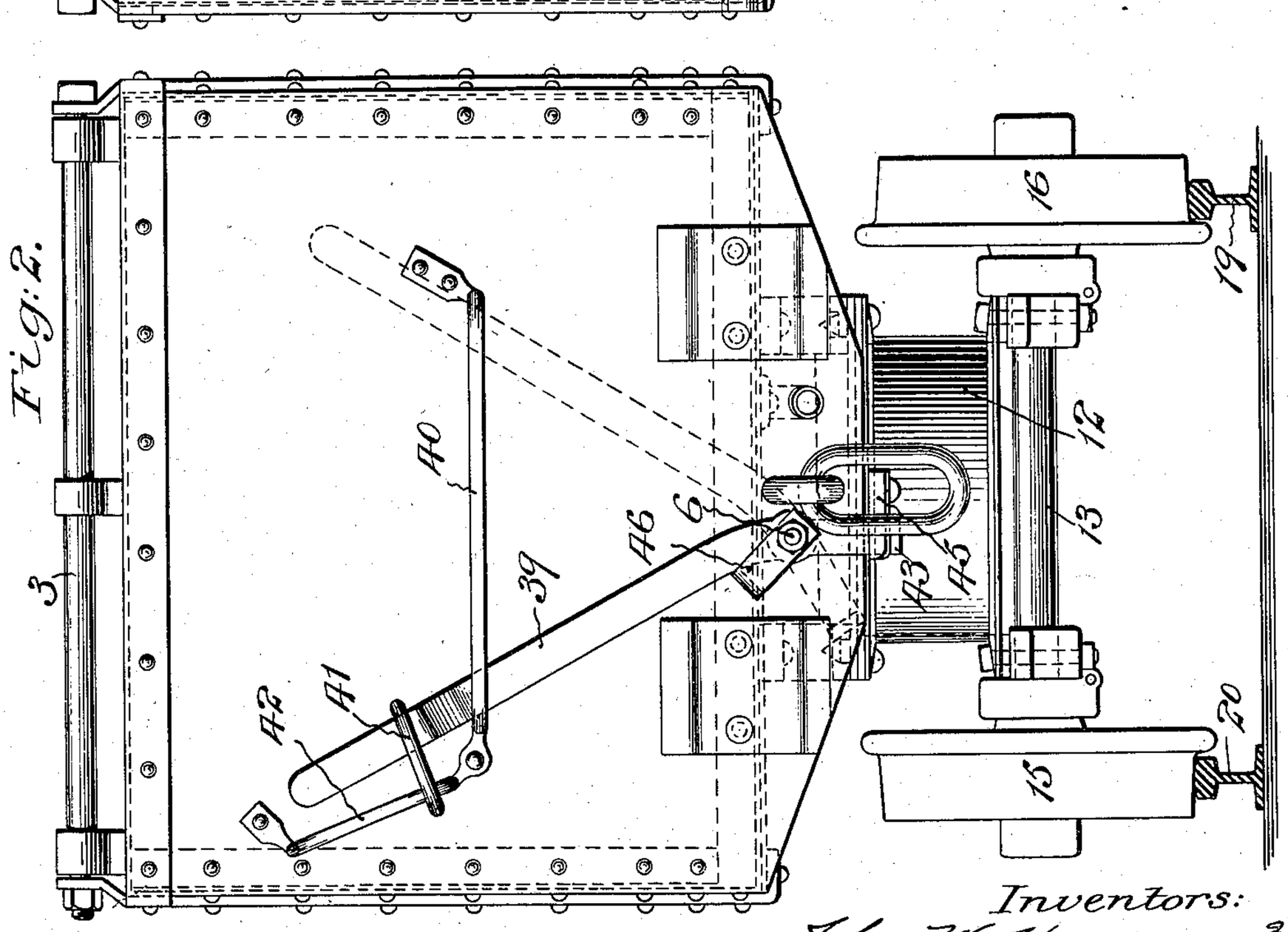


Fig. 2.



Witnesses:
F. George Barry
Henry Thieme.

Inventors:
John W. Henderson &
James E. Sheriff
By Brown & Seward
their Attorneys.

J. W. HENDERSON & J. E. SHERIFF.

MUCK CAR.

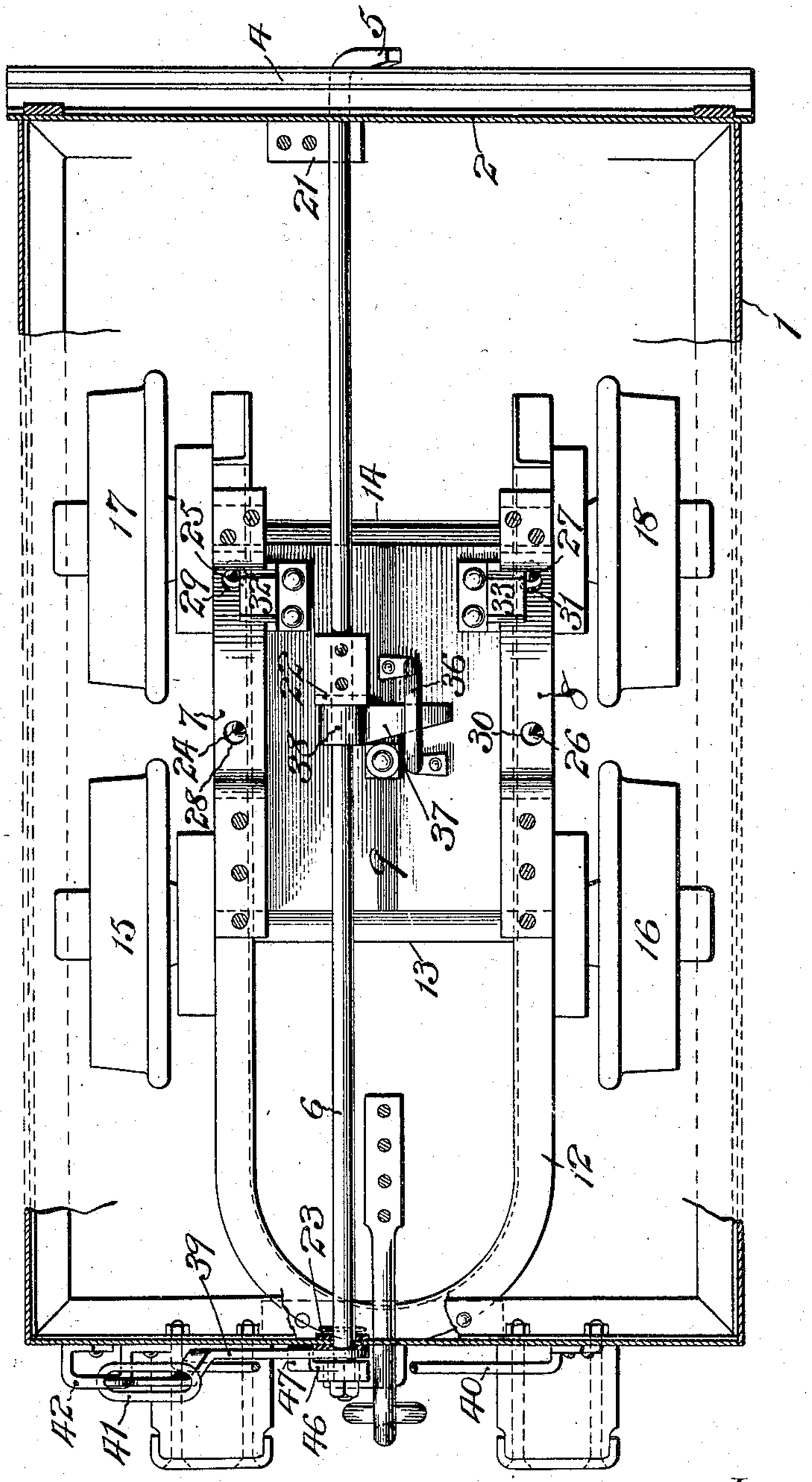
APPLICATION FILED SEPT. 18, 1907.

919,863.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 3.

Fig. 4.



Witnesses:

F. George Barry.

Henry Thieme.

Inventors:

John W. Henderson and

James E. Sheriff

By

Brown & Durand

their Attorneys.

J. W. HENDERSON & J. E. SHERIFF.

MUCK CAR.

APPLICATION FILED SEPT. 18, 1907.

919,863.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 4.

Fig. 6.

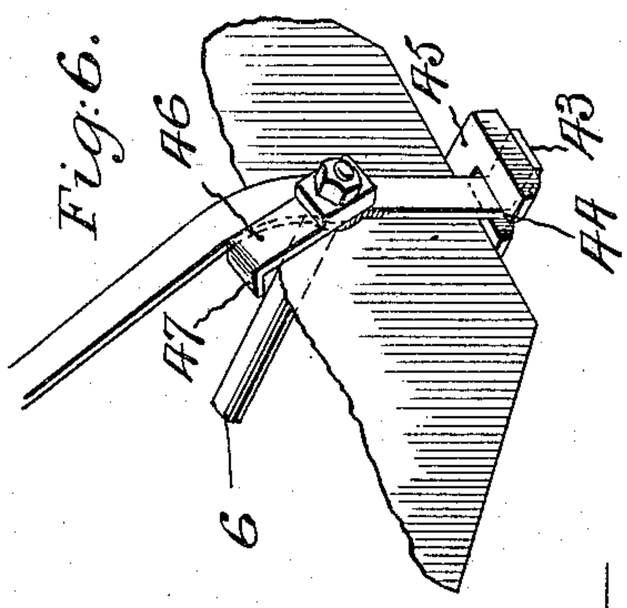


Fig. 5.

Witnesses:
F. George Barry.
Henry J. Heime.

Inventors:
John W. Henderson 3d
James E. Sheriff
By Brown & Ward
their Attorneys.

UNITED STATES PATENT OFFICE.

JOHN W. HENDERSON AND JAMES E. SHERIFF, OF OURAY, COLORADO.

MUCK-CAR.

No. 919,863. Specification of Letters Patent. Patented April 27, 1909.

Application filed September 18, 1907. Serial No. 393,452.

To all whom it may concern:

Be it known that we, JOHN W. HENDERSON and JAMES E. SHERIFF, citizens of the United States, and residents of Ouray, in the county of Ouray and State of Colorado, have invented a new and useful Improvement in Muck-Cars, of which the following is a specification.

Our invention relates to a muck car with the object in view of providing a muck car which will dump automatically and in which a forty-five degree angle for dumping the load either endwise or sidewise may be obtained while maintaining the height of the car sufficiently low for convenient loading and the wheels sufficiently large for easy traveling.

A practical embodiment of our invention is represented in the accompanying drawings, in which,

Figure 1 is a view of the car in side elevation, showing one of the rockers partly in section, Fig. 2 is a view in rear end elevation, Fig. 3 is a view in front end elevation, Fig. 4 is a top plan view of the running gear and operating parts of the car, the body being shown in its position relative thereto, partly in section and partly in dotted lines, Fig. 5 is a partial vertical section showing the body in full lines in partially tilted position and in dotted lines in full tilted position, and Fig. 6 is a view in detail showing the dumping lever and the arm for returning the latch rod to its normal position when swinging the dumping lever to its position.

The car body is denoted by 1. It is here shown of oblong rectangular form and has at its forward end a door 2 hinged to a cross bar 3 at the top, its bottom being provided with a rail 4 for receiving the bent end 5 of the latch rod 6. The body is mounted by means of a pair of rockers 7 and 8 on the upper section 9 of a turn-table, the latter being held in position with respect to the lower section 10 of the turn-table by a king bolt 11, the turn-table itself being supported upon a skeleton truck frame 12, in the present instance a metallic frame of U-shape as clearly shown in Fig. 4, the said frame being provided with axles 13, 14, each carrying a pair of wheels, in the present instance flanged wheels, for traveling on track rails.

Wheels on the axle 13 are denoted by 15, 16, and those on the axle 14, by 17, 18.

The track rails are denoted respectively by 19, 20.

The latch rod 6 extends from the front to the rear of the car underneath the body of the car and has a bearing in a bracket 21 at the front of the car and in the vertical leg of a bracket 22 about mid-way of the car and again in a plate 23 at the rear end of the car, the leg 22 of the mid-way bracket as well as the bearing plate 23 at the rear serving to assist the rockers 7 and 8 as supports when the car body is in its horizontal position, as shown in Fig. 1.

The rockers 7 and 8 are retained in position on the turn-table by pointed lugs, two for each rocker, those for the rocker 7 being denoted by 24, 25, and those for the rocker 8 being denoted by 26, 27, which lugs register with perforations in the rockers, the rocker 7 being provided with perforations 28, 29, for the reception of the lugs 24, 25, and the rocker 8 being provided with perforations 30, 31, for the reception of the lugs 26, 27.

When the car is in its horizontal position, as shown in Fig. 1, the lugs 24 and 26 are engaged in the perforations 28 and 30. When the car is partially tilted, as shown in full lines, Fig. 5, each rocker is engaged by both lugs and when in full tilted position, shown in dotted lines, Fig. 5, the lugs 25 and 27 will engage the perforations 29 and 31. The car body is held against vertical displacement both in its horizontal position and in full tilted position by means of lugs 32, 33, which project outwardly from Z-bars 34, 35, fixed to the upper section 9 of the turn-table, the said lugs projecting over the upper sides of the rockers 7 and 8 and having their under faces slanted to conform to the position of the rocker when the body is horizontal and when the body is in full tilted position. There is also fixed to the upper section 9 of the turn-table an inverted U-shaped piece 36 under which the free end of an arm 37 extends, the said arm 37 being fixed by means of a collar 38 to the latch rod 6, the position of said collar being in proximity to the face of the vertical supporting bracket 22 and serving by its position, to take the endwise thrust on the latch rod due to the outward pressure of the lower edge of the door 2 when the car is loaded. The height of the U-shaped piece 36 is such that the free end of the arm 37 will engage the body of said U-shaped piece when the car approaches its full tilted adjustment and will thereby cause the latch rod 6 to turn and unlatch the door 2, leaving the load free to slide out of the

body as the body reaches its full tilted position.

At the rear of the car there is located a lever 39 mounted loosely on the rearwardly projecting end of the latch rod 6 and free to swing within prescribed limits within a keeper 40 fixed to the rear end of the car. A link 41 held in sliding adjustment on a keeper 42 serves to hold the lever 39 in position to lock the car body in its horizontal position and the said link may be slid upwardly to free the lever 39 whenever desired. The lever 39 has its lower end projected downwardly and provided with a retaining lip 43 which, as the lower end of the lever enters a slot 44 (see Fig. 6) in a bracket 45 fixed to a flange at the top of the truck frame 12, passes under the said bracket and so locks the rear end of the body down. There is further fixed on the rear end of the latch rod 6 a short arm 46 provided with a lip 47 which projects into the path of the lever 39 so that when the lever 39 is swung back into position to lock the car body in its horizontal position, it will, by its engagement with the arm 46, lock the latch rod 6 sufficiently to throw the bent end 5 of the latch rod upwardly into engagement with the guard track 4 at the lower edge of the car door 2 and hence lock the door in position for loading the car. As the lever 39 is mounted loosely on the latch rod, the lever may be rocked into the position shown in dotted lines, Fig. 2, to release the car body without rotating the latch rod and hence without unlocking the door of the car, the latter remaining closed until it is automatically unlatched by the engagement of the latch arm 37 with the inverted U-piece 36 as has been hereinabove described.

The car may be provided with any well known or approved means for attaching it to adjacent cars.

The functions of the several parts have been so fully stated in connection with the description of them that a detailed statement of operation would be in the nature of repetition. Briefly stated: The car body, when the place where the load is to be dumped is reached, may be dumped endwise by simply throwing the lever 39 over into the position shown in dotted lines, Fig. 2, and releasing the car body, giving it a slight upward lift, the intention being that the car body shall be substantially balanced when in horizontal position. As the car body tilts, its point of support on the rockers 7 and 8 will gradually travel forwardly until it finally rests at an angle of 45° more or less and as it approaches this position, the door at the forward end of the car will be automatically unlocked by the latch arm 37 and the load will be free to slide out. As the car body is returned to its horizontal position, the car door 2 will swing back into its normal position, the latch arm 37 by its engagement with the upper section of the turntable rocking the latch rod 6 a little way but not sufficient to lock the door, the locking being completed by throwing the lever 39 over into the position shown in full lines, Fig. 2, and thereby, by its engagement with the arm 46, rocking the latch rod into its full locking position. If the load is to be dumped at the side, the car body may be swung around at right angles to its normal position and then the dumping action will take place as hereinabove stated.

It is obvious that changes might be resorted to in the form and structure of the several parts without departing from the spirit and scope of our invention; hence we do not wish to limit ourselves strictly to the structure herein set forth, but

What we claim is:—

1. A muck car comprising a suitable truck and a body mounted on rockers tending to change its point of support as it tilts and means projecting into the plane of the rockers for limiting the vertical movement of the car body in both its full tilted and horizontal positions.

2. A muck car comprising a suitable truck and a turn-table supported on the truck, a car body mounted on rockers on the turntable and means projecting into the plane of the rocker for limiting the vertical displacement of the car body in its tilted and horizontal positions.

3. A muck car comprising a suitable truck, a turn-table mounted on the truck, a car body provided with rockers resting on the turn-table and lugs secured to the turn-table in position to engage the rockers in their full tilted and horizontal positions to prevent vertical displacement of the body.

4. A muck car comprising a suitable truck, a turn-table mounted on the truck, a car body supported on rockers on the turn-table and Z-bars terminating in lugs in position to engage the rockers to limit the vertical displacement of the bar in full tilted and horizontal positions.

5. A muck car comprising a suitable truck, a car body mounted on the truck, the said car body being provided with a swinging door, a latch for holding the door closed, a latch operating piece connected to the truck and a latch operating rod extending from the latch to the opposite end of the car and provided with means for connecting it with the latch operating piece to unlock the door as the car body is tilted, and further provided with means for operating it and hence the latch manually.

6. A muck car comprising a suitable truck, a turn table mounted on the truck, a car body mounted on the turn table and provided with a swinging door, a rocking latch for holding the car door closed, a latch operating arm at the opposite end of the car body

connected with the rocking latch for operating the latch manually, a second latch operating arm connected with the latch and a piece fixed to the turn table for engaging the said last-named arm to automatically release the latch as the car body is tilted.

7. A muck car comprising a suitable truck, a turn-table on the truck, a car body mounted on the turn-table and provided with a swinging door at one end, a latch rod extending lengthwise of the car and provided with a bent end for locking and releasing the door, the said rod being provided with operating arms fixed thereon, means for engaging one of the arms to rock the latch rod and release the door when the body is tilted and means for engaging the other arm on the latch rod and rocking the rod to lock the door when the body is in its horizontal position.

8. A muck car comprising a suitable truck, a turn-table on the truck, a car body mounted on rockers on the turn-table and provided with a swinging door at one end thereof, a latch rod provided with a latch at one end for locking and releasing the door, the said rod extending underneath the body of the car to the opposite end of the car, a lever mounted on said latch rod for locking the car body in its horizontal position and releasing it therefrom, an arm fixed on said latch rod in position to engage the said lever when the lever is swung in a direction to lock the car body in its horizontal position, a fixed stop and a second arm on the latch rod in position to engage the fixed stop to rock the latch rod in a direction to release the car door when the body is tilted.

In testimony, that we claim the foregoing as our invention, we have signed our names in presence of two witnesses, this 3rd day of September 1907 and 10th day of September 1907.

JOHN W. HENDERSON.
JAMES E. SHERIFF.

Witnesses for John W. Henderson:
E. C. MATTES,
E. E. WHEELER.

Witnesses for James E. Sheriff:
THOS. G. KENNEDY,
F. S. SCOBIE.