

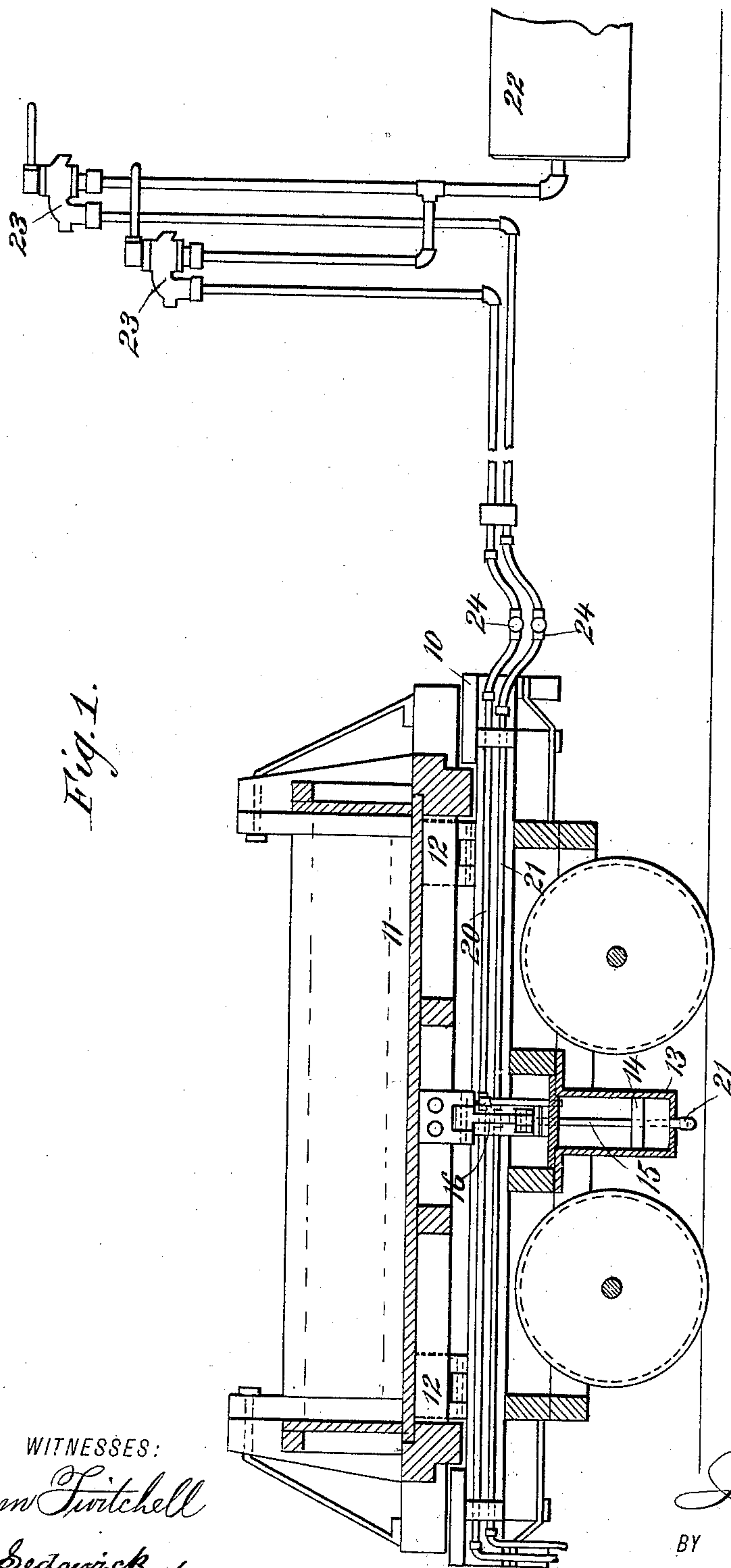
(No Model.)

2 Sheets—Sheet 1.

J. H. GEARHART.
DUMPING CAR.

No. 409,954.

Patented Aug. 27, 1889.



WITNESSES:

Donn Fitchell
C. Sedgwick

INVENTOR

J. H. Gearhart

BY

Munn & Co.

ATTORNEY

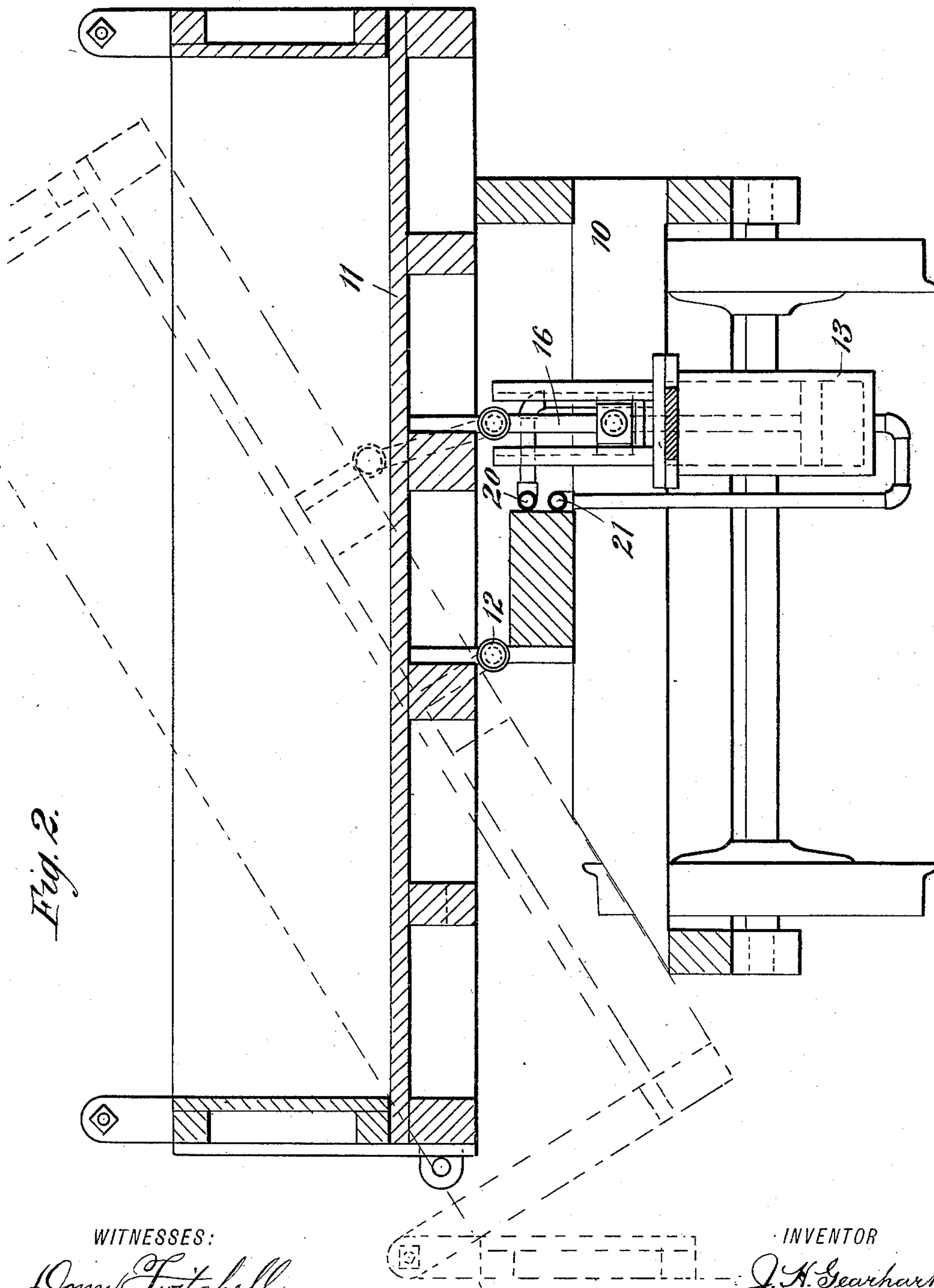
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UNITED STATES PATENT OFFICE.

JOEL H. GEARHART, OF LEADVILLE, COLORADO, ASSIGNOR TO HIMSELF AND
WILLIAM A. THACHER, OF SAME PLACE.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 409,954, dated August 27, 1889.

Application filed May 9, 1889. Serial No. 310,158. (No model.)

To all whom it may concern:

Be it known that I, JOEL H. GEARHART, of Leadville, in the county of Lake and State of Colorado, have invented a new and Improved
5 Dumping-Car, of which the following is a full, clear, and exact description.

This invention relates to dumping-cars, the object of the invention being to arrange for the dumping of the car from the engine and
10 for the return of the car to its normal horizontal position.

To the ends named the invention consists, essentially, of a pivotally-mounted car-body, a cylinder, a piston arranged within the cyl-
15 inder, a connecting-link which is secured to the car-body and to the piston-stem, and connections whereby steam or compressed air may be admitted at will either above or below the piston, all as will be hereinafter more
20 fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate
25 corresponding parts in both views.

Figure 1 is a longitudinal sectional view of a car embodying my invention, and Fig. 2 is a cross-sectional view of the same.

In the drawings, 10 represents a platform
30 or truck to which there is hinged a car-body 11 by hinges 12. Beneath the platform 10, I mount a cylinder 13, in which there is arranged a piston 14, having an outwardly-extending stem 15, to which there is hinged a
35 connecting rod or link 16, the outer end of said link or rod being hinged to the car-body, as shown.

In connection with the cylinder 13, I arrange two systems of pipes, of which one system—such as that shown at 20—enters the
40 cylinder above the piston 14, and the other system, which is shown at 21, enters the cylinder below the piston. The two pipe systems are connected with a compressed-air reservoir 22, which is carried by a locomotive-
45 engine, and in the two systems there are arranged valves 23, such valves being, by preference, the same as are employed in connection with the Westinghouse automatic brake,
50 and designated as “engineers’ brake-valves;”

but it will of course be understood that any other proper form of valve could be employed.

Instead of using a compressed-air reservoir, the two systems of piping might be connected to the boiler of a locomotive-engine.

From the construction above described it will be seen that if compressed air or steam be admitted to the cylinder 13 through the piping 21 the piston 14 will be raised and the car-body will be moved to the position indicated by dotted lines in Fig. 2—that is, to a
55 dumping position; and it will also be seen that to return the car-body to the position in which it is shown in full lines in Fig. 2 compressed air would be admitted through the
60 piping 20 above the piston. When the car is in the position shown in full lines in Fig. 2, it is held to place by any proper arrangement of catches, or by keeping air-pressure on the
65 pipe-line 20.

In order that a number of cars embodying my invention may be coupled in a manner such that they may be dumped from the engine, I provide for the coupling of the pipes
70 20 and 21 carried by each car, the ordinary form of coupling, such as shown at 24, being employed for this purpose.

By means of the attachment above described the engineer is able to dump the cars while running at full speed and at such points as
80 may be desired, and the cars having been dumped may be returned to their normal positions without stopping the train.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—
85

1. The combination, with a truck, of a car-body hinged or pivotally connected thereto, a cylinder having inlet-ports at both ends, a piston mounted therein, connections between the piston and the car-body, and a means,
90 substantially as described, for subjecting both sides of the piston to pressure, as and for the purpose stated.

2. The combination, with a truck, of a car-body hinged or pivotally connected thereto,
95 a cylinder carried by the truck, a piston arranged within the cylinder and provided with an outwardly-extending stem, a connecting link or bar hinged or pivotally connected to the piston-stem and hinged or pivotally con-
100

5 nected to the car-body, a system of piping which communicates with the upper portion of the cylinder, a second system of piping which communicates with the lower portion
10 of the cylinder, a pressure-tank, connections between the pressure-tank and the pipe systems, and valves arranged in connection with the pipe systems, substantially as described.

10 3. The combination, with a truck or platform, of a car-body pivotally connected or hinged thereto, a cylinder carried by the truck

or platform, a piston mounted within the cylinder, a stem extending outward from the piston, a link or bar connecting the stem and the car-body, and two systems of piping, each system being provided with pipe-connections, substantially as described. 15

JOEL H. GEARHART.

Witnesses:

PHIL. O'FARRELL,
JOHN A. SPRUNG.