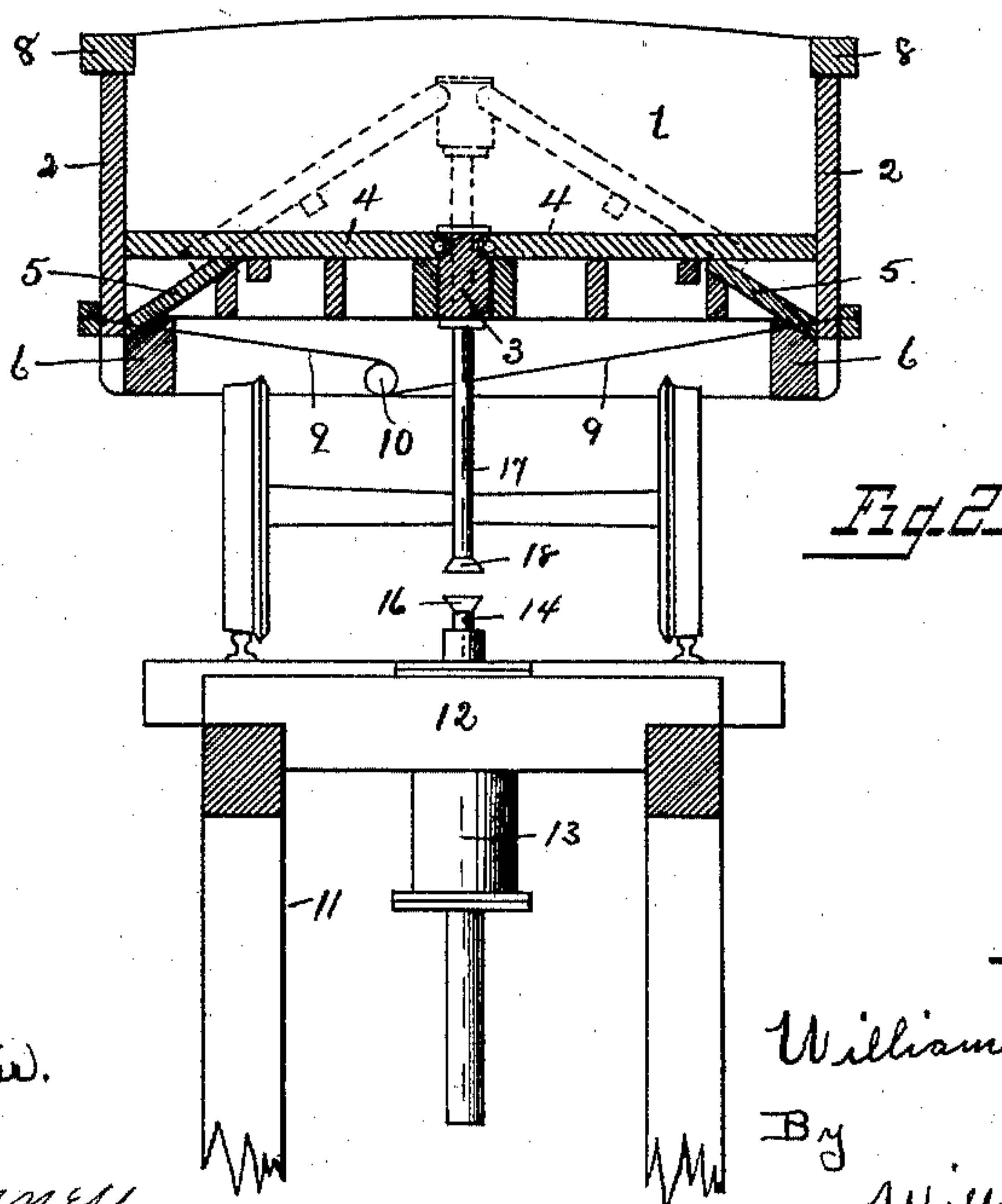
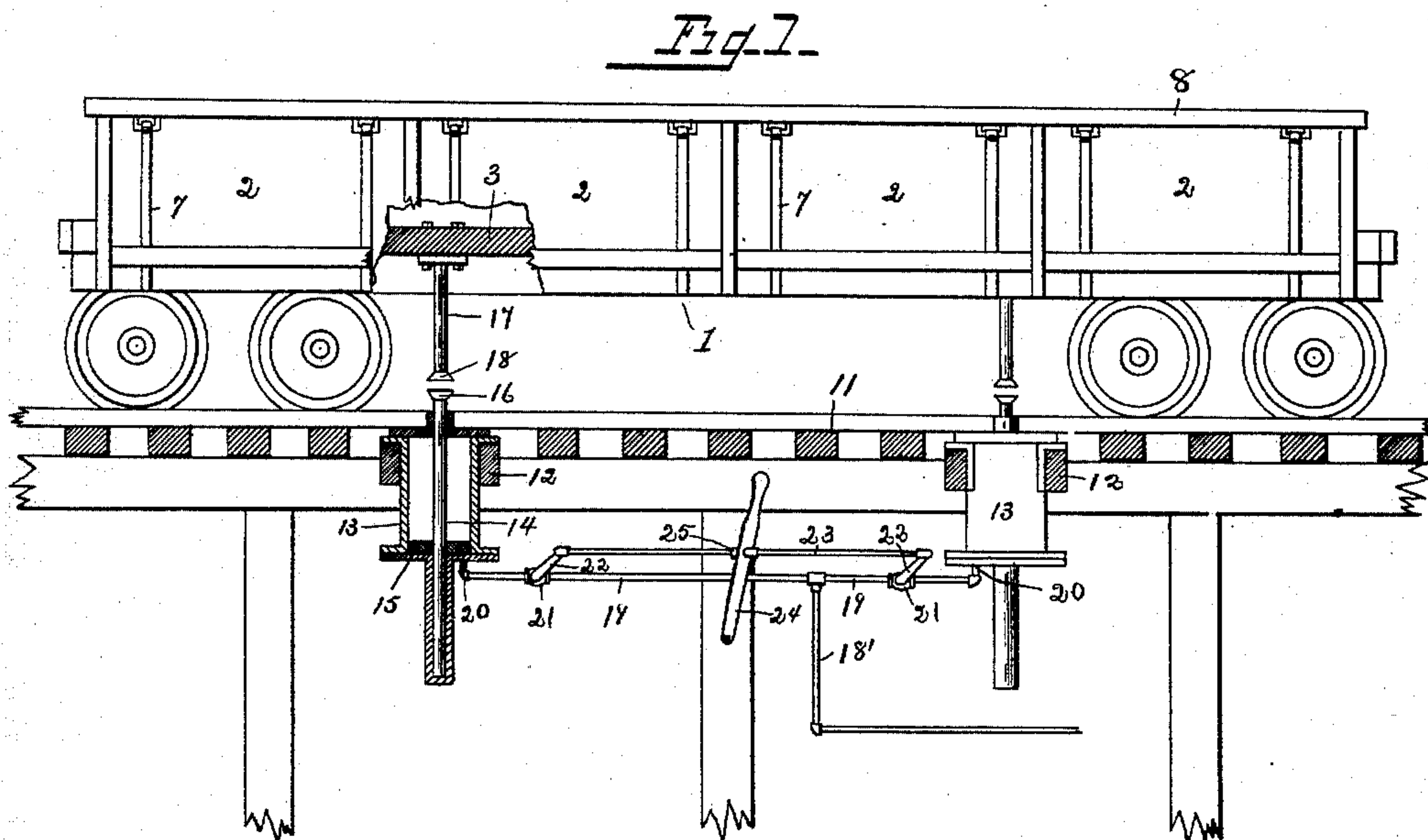


(No Model.)

W. E. LUDLOW.
MEANS FOR DUMPING CARS.

No. 483,360.

Patented Sept. 27, 1892.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM EDGAR LUDLOW, OF TOLEDO, OHIO.

MEANS FOR DUMPING CARS.

SPECIFICATION forming part of Letters Patent No. 483,360, dated September 27, 1892.

Application filed January 12, 1892. Serial No. 417,808. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDGAR LUDLOW, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful
5 Improvements in Dumping-Cars; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference
10 being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to a dumping-car, and has especial relation to the mechanism for
15 elevating the sections composing the bottom of the car, which when raised automatically dump the load.

The object of the invention is to so hinge
20 the bottom of the car to a central beam and apply power thereto by a piston operated by pressure that when the piston is raised the beam will be elevated, and consequently the sections of the bottom, causing the load to dump by gravity.

25 The invention consists in the parts and combination of parts, as shown in the drawings, described in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a longitudinal
30 vertical section of a trestle with the cylinder and steam connections employed to operate the same, also a car thereon, all constructed in accordance with my invention. Fig. 2 is transverse section of the same.

35 1 designates a car pivoted with hinged sides 2, a vertically-movable beam 3, extending the length of the car and having hinged thereto the sections of the bottom 4, the outer edge of each section resting on the inclined
40 chutes 5, attached to the sill 6.

7 designates hinges attached to the upper
beams 8 and to the sides 2, and 9 designates chains secured to the lower edge of the sides 2 and passing to and around the drum 10, so
45 that when the load is dumped the drum being revolved will wind up the chain and pull the sides to place, holding them in a closed position. No claim being laid to these parts, a detailed description is deemed unnecessary.

50 11 designates a trestle on which are the

rails on which the car runs, and to beams 12 are attached the steam-cylinders 13, the lower head having a casing for the piston, which acts also as a guide.

14 designates the piston-rod, on which is
55 the piston-head 15, the upper end of the piston-rod having a head 16, which when brought in vertical alignment with the downwardly-extending rod 17, securely bolted to the beam 3 and having a head 18, and raised, will move
60 the beam, as will be described.

18' designates a steam-pipe, and 19 designates branch pipes leading to the cylinders, it being understood that I may employ as
65 many cylinders as desired without departing from the spirit of my invention. Branch pipes 19 are tapped into the cylinders at 20 and are provided with cut-off valves 21, having levers 22, which are connected by means
70 of a rod 23, it being understood that both cylinders act in unison.

24 designates a hand-lever pivoted at its lower end to the trestle and being pivotally-secured to the rod 23 at 25.

In operation the car is run on the trestle-
75 work until the point desired is reached, or when the head 18 of the rod 17 is directly over the head 16 of piston-rod 14. The drum 10 is then allowed to revolve and open the sides, dumping a part of the load. The hand-
80 lever 24 is then given a pull, causing the rod 23 to move, turning the levers 22 and opening the valves, admitting steam into the cylinders 13, the pressure of which on the piston-head 15 will cause the same to rise, elevating
85 piston-rod 14, rod 17, beam 3, and the sections 4, comprising the bottom, as shown in dotted lines, Fig. 2, when the load of its own pressure will slide down the inclined sections of the bottom, dumping the remainder, when the
90 steam is allowed to exhaust from the cylinder 13, allowing the piston-head 15 to lower, and consequently the bottom, until it resumes its normal lowered position, when the drum is revolved and secured from turning, hold-
95 ing the sides to place.

It will thus be seen that I have provided a cheap, easily-operated, and convenient means for dumping a car, and that by providing means for admitting the same amount of 100

steam to both cylinders at the same time unequal strain to the bottom is avoided.

While I have used the term "steam" as an agent for actuating the pistons, I may employ
5 hydraulic or air pressure if desired.

What I claim is—

1. In a dumping-car, a central longitudinal vertically-movable beam and bottom-sections pivotally secured thereto, in combination
10 with vertically-movable pistons to raise the beam and incline the bottom-sections.

2. In a dumping-car, a central longitudinal vertically-movable portion secured thereto, rods secured to the under side of the central
15 portion, cylinders provided with pistons coincident to the depending rods, a pipe connecting the cylinders and the source of power,

and coincidently-acting valves for controlling the pistons simultaneously.

3. In combination with a dumping-car having a central longitudinal beam and side sections pivoted thereto, a trestle provided with tracks to receive the car, and vertically-movable pistons in alignment with the central section, whereby to raise the same and incline the side sections, and means for raising
25 the pistons.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

WILLIAM EDGAR LUDLOW.

Witnesses:

WILLIAM WEBSTER,
CARROLL J. WEBSTER.