No. 735,300. PATENTED AUG. 4, 1903.

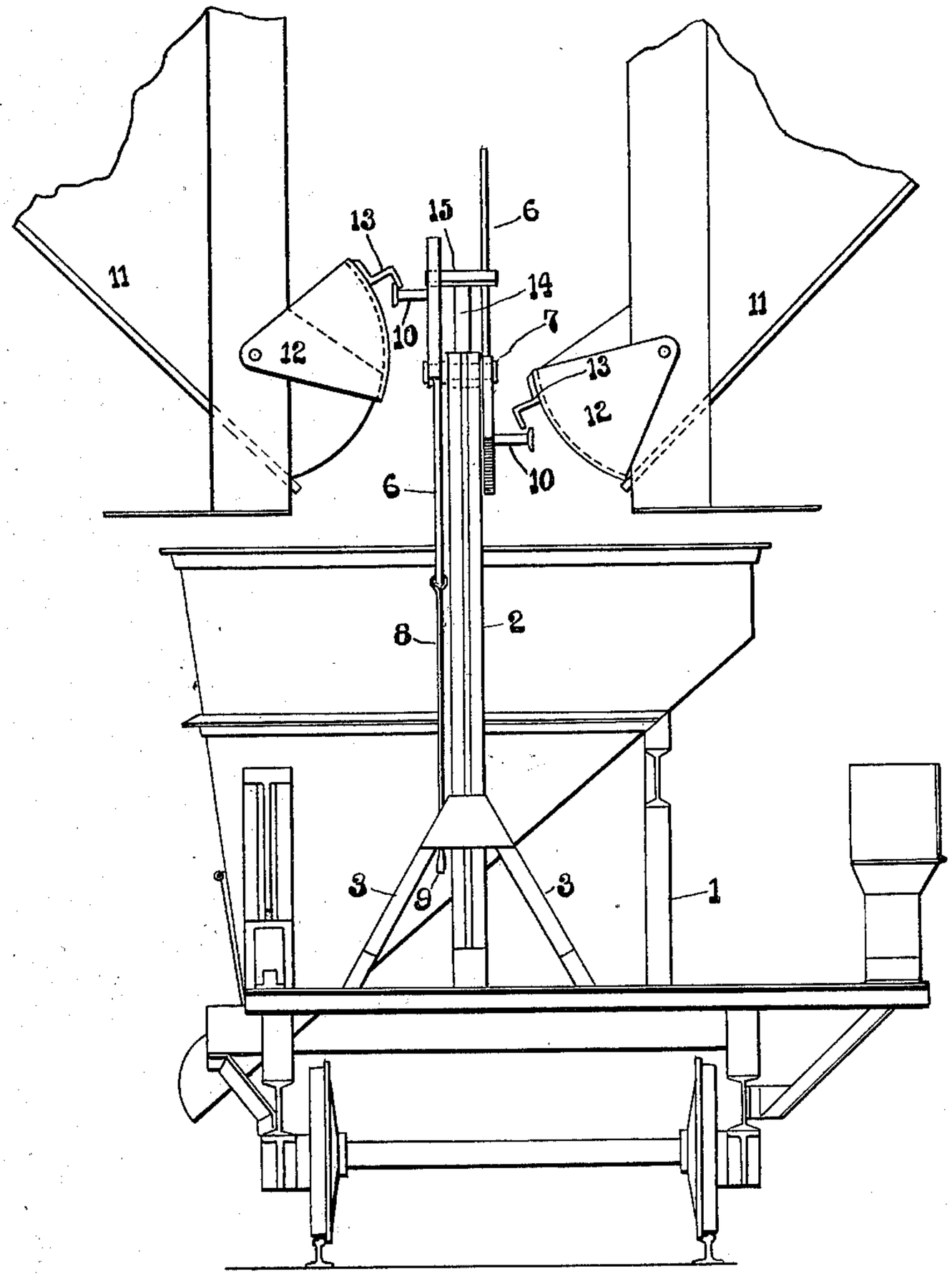
F. C. ROBERTS.

TRANSFER STOCK CAR.

APPLICATION FILED JAN. 20, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

Geo. H. Harvey.

F. N. Barber

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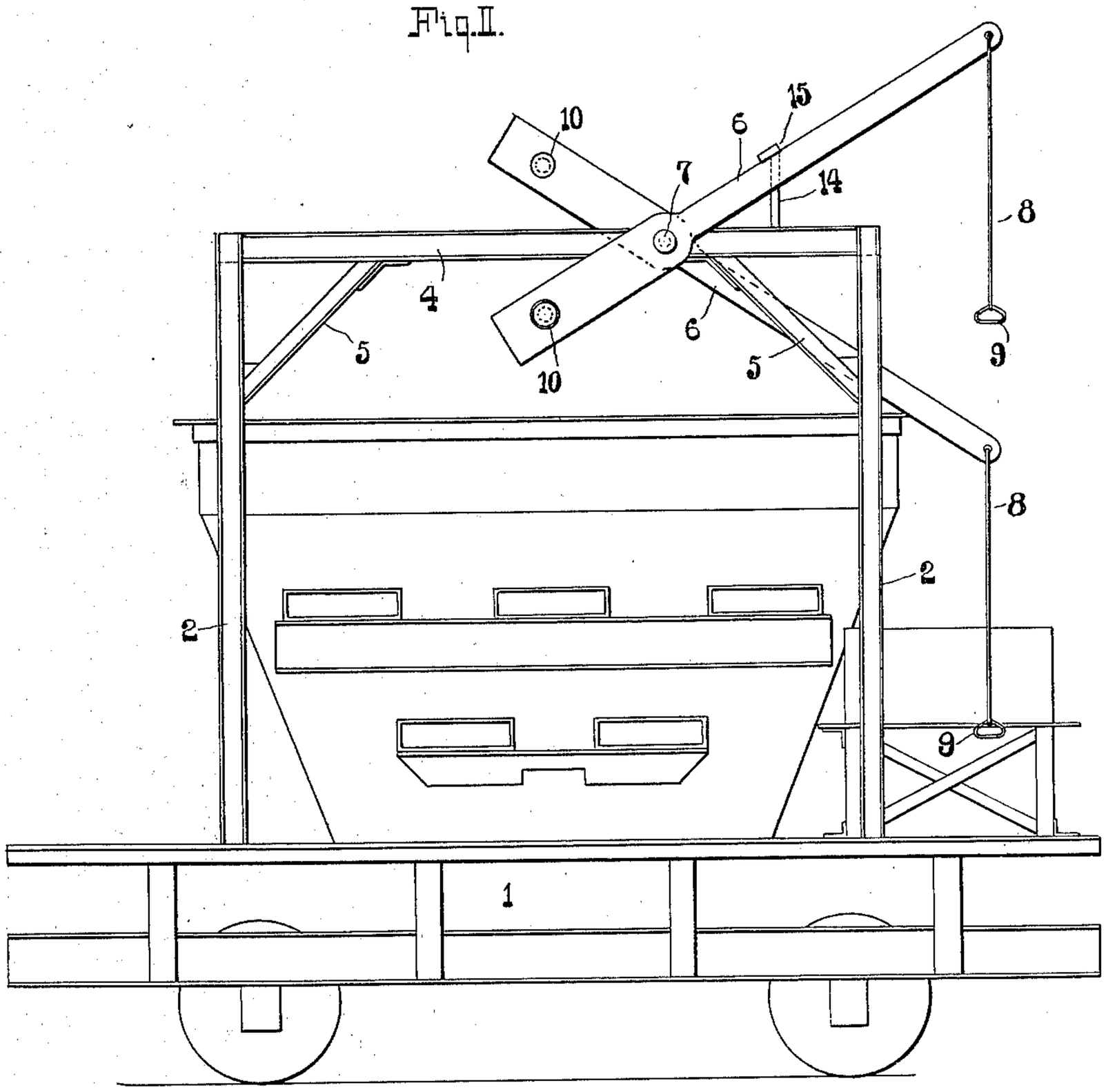
NO MODEL. 2 SHEETS—SHEET 2.

Fig. II.



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UNITED STATES PATENT OFFICE.

FRANK C. ROBERTS, OF PHILADELPHIA, PENNSYLVANIA.

TRANSFER STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 735,300, dated August 4, 1903.

Application filed January 20, 1902. Serial No. 90,474. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. ROBERTS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented or discovered new and useful Improvements in Transfer Stock-Cars, of which the following is a specification.

In the accompanying drawings, which make part of this specification, Figure I is an end view of a car and a set of bins equipped with my invention. Fig. II is a side view of a car provided with my invention.

My invention relates to bins and cars for transferring ore, coke, coal, limestone, or other material therefrom to furnaces or other places of deposit.

Heretofore it has been necessary to provide the several bins along a track with separate gate-lifting devices. Ordinarily the gates of the bins are opened by levers attached to the front of the bins and it is necessary to have one of such levers for each gate. With a large number of bins, necessitating a great number of gates, the cost is quite an item. At some furnaces each gate is operated by compressed air and at others by steam. By my apparatus all such mechanism is dispensed with and the levers for operating the gates are attached directly to a frame on the car.

1 designates as a whole a car of ordinary construction, provided with the usual weighing mechanism and hopper-shaped box. Secured to the ends of the car are standards 2 2, held vertical by braces 3 3 and tied together by a cross-bar 4, extending longitudinally of the car and at a convenient distance above it for the purposes hereinafter specified. Braces 5 5 prevent movement of the standards lengthwise of the car. Levers 6 6 are pivoted on opposite sides of the cross-bar 4 by means of the pin 7. Each lever has at one end a pendent cord or hand-pull 8, provided with a stirrup 9 at its lower end. At the end of each lever, opposite the cord 8, is a horizontal pin or dog 10, which extends outwardly away from the cross-bar.

Sufficiently above the car-track to allow the cars to pass thereunder are two opposite rows of bins 11 11, the end bin only of each row being shown. Each bin has a gate 12 of sufficient weight to be closed by gravity. Fastened on the front of each bin is a Z-shaped lug 13, having its free bent edge extending downwardly. The ends of the levers carrying the pins 10 are heavier than the other ends, so that they normally occupy the position of the lever at the front of Fig. II. 14 is a post standing between the levers 5 5 and provided with a cross-arm 15, reaching laterally over each lever as a stop therefor.

When a transfer-car is run on the track, the frame composed of the standards 2 2 and the cross-bar 4 extends up between the rows of bins or along by the side of a line of bins, if there is but a single row of them.

The operation is as follows: An empty car is run under the bins and stopped with a pin or dog 10 under a bar 13 on a gate 12. The operator then pulls down on the stirrup 9, causing the lever to rock and the dog 10 to lift the gate. Upon letting go of the stirrup the gate falls by its own weight and cuts off the flow of ore. If there is a row of bins on each side of the car, the gate on each side can be operated without moving the car, as the bars 13 on the gates are directly opposite.

While I have shown one form which my invention may assume, I do not desire to be limited to the precise details thereof, as many modifications as to form, proportions, or arrangement may be readily made by those skilled in the art to which it relates.

Having described my invention, I desire to secure by Letters Patent of the United States—

1. A substantially horizontally traveling conveyer, a stationary receptacle having a gate which when opened delivers the contents of the receptacle into the conveyer, and means carried by the conveyer and having movement relatively thereto, said means being adapted by such movement to positively open said gate.

2. A traveling conveyer, a projection thereon, a stationary receptacle having a gate, which when opened delivers the contents of the receptacle into the conveyer, and means carried by the conveyer and having movement relatively thereto, said means being adapted by such movement to positively open said gate.

3. A stationary receptacle having a gate, a traveling conveyer, and a pivoted device on

the latter, said pivoted device being adapted during the movement thereof on its pivot to open said gate for operating said gate.

4. A stationary receptacle having a gate, a traveling conveyer, a lever thereon, and means on the lever for engagement with said gate.

5. A stationary receptacle having a gate, a traveling conveyer, a lever thereon, and a dog secured to the lever and engageable with said gate.

6. A traveling conveyer, stationary receptacles on opposite sides thereof, each receptacle having a gate, and means carried on the conveyer and having movement independent thereof, the said movement being capable of positively operating said gates.

7. In a device for operating opposite gates, a traveler, a standard thereon, levers on the standard, means on each lever for engagement with a gate.

Signed at Philadelphia, Pennsylvania, this 16th day of January, 1902.

FRANK C. ROBERTS.

Witnesses:
L. KRYDER LACHMAN,
I. G. BAYLEY.