

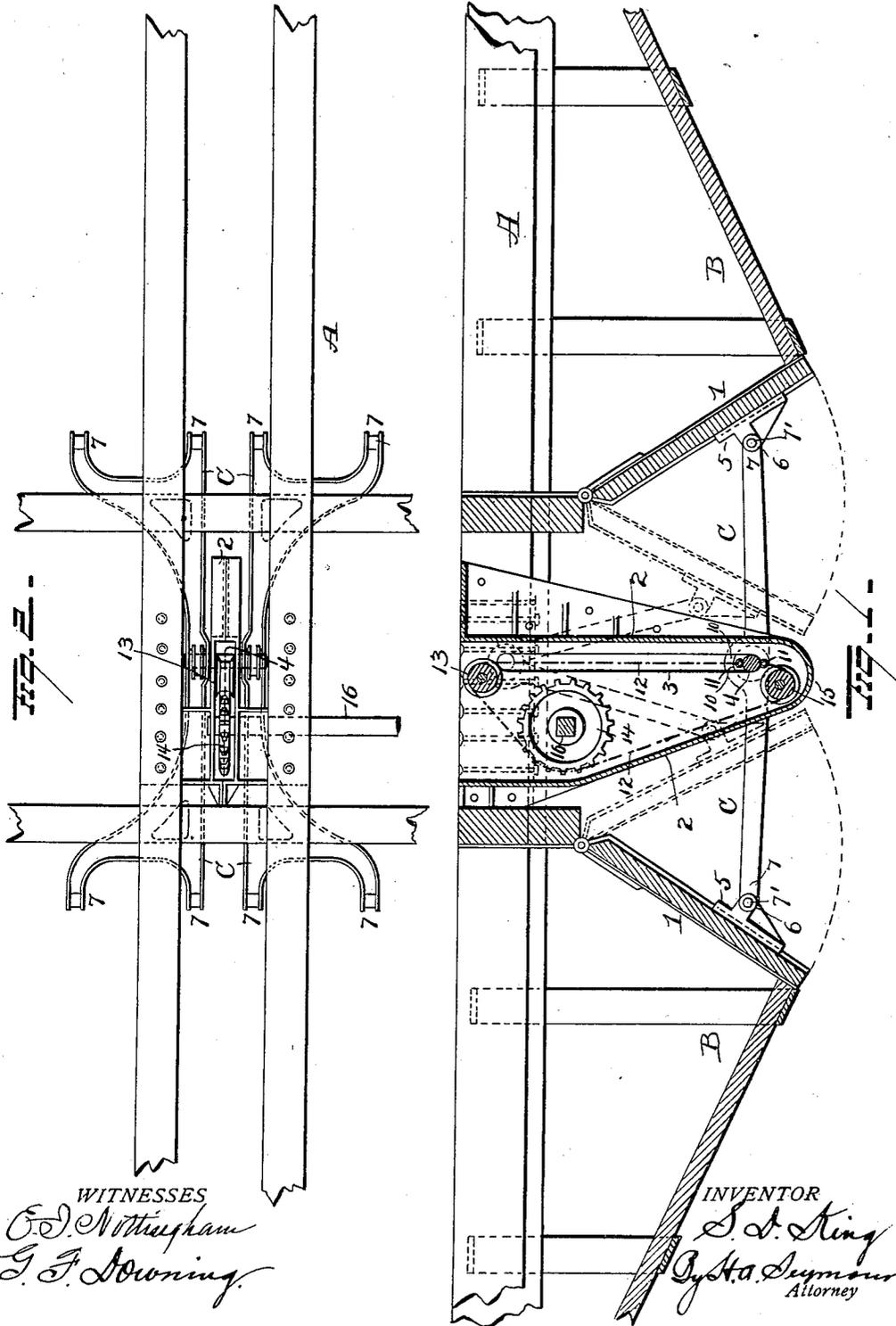
No. 650,538.

Patented May 29, 1900.

S. D. KING.
COAL OR GRAIN CAR.
(Application filed Feb. 20, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

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FIG. 3.

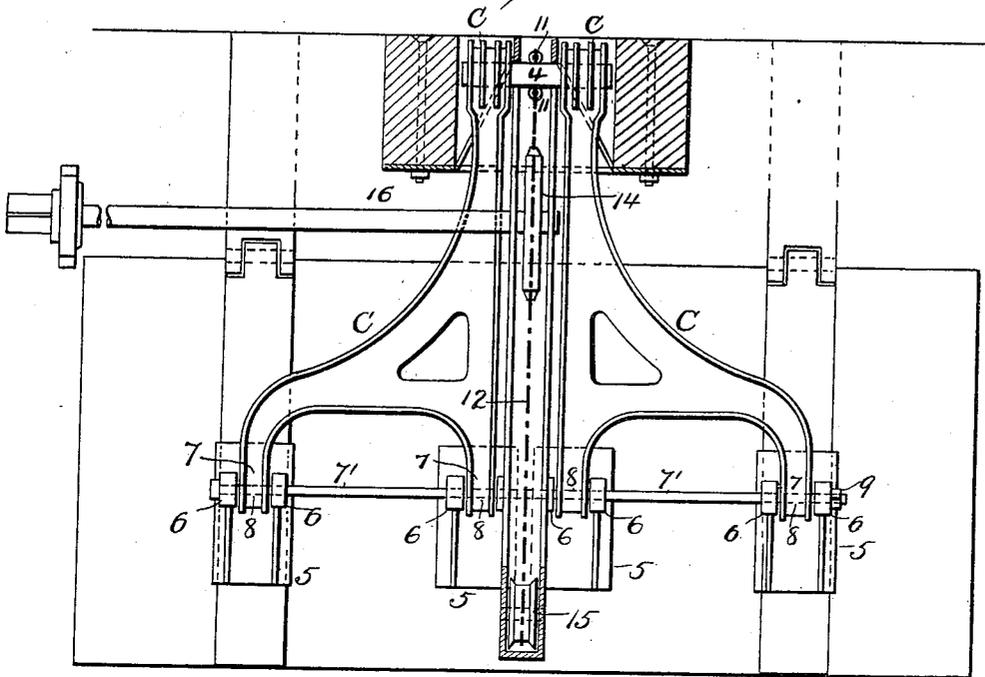
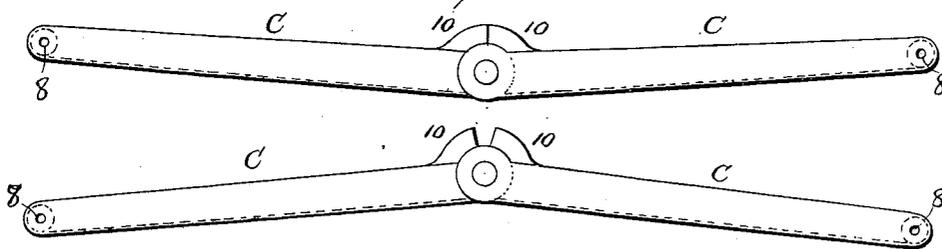


FIG. 4.



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UNITED STATES PATENT OFFICE.

SIDNEY D. KING, OF DUNMORE, PENNSYLVANIA, ASSIGNOR TO THE KING CAR COMPANY, OF SCRANTON, PENNSYLVANIA.

COAL OR GRAIN CAR.

SPECIFICATION forming part of Letters Patent No. 650,538, dated May 29, 1900.

Application filed February 20, 1900. Serial No. 5,944. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY D. KING, a resident of Dunmore, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Coal or Grain Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in coal or grain cars, the object of the same being to provide a car of this character with double hoppers and improved means for operating the doors for said hoppers.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in longitudinal section, illustrating my improvements. Fig. 2 is a plan view. Fig. 3 is a side view, and Fig. 4 shows detail views of the braces.

A represents the base of a dumping-car, provided with an inclined bottom having two hoppers B B formed therein and closed by doors 1 1, hinged at their upper edge, as clearly shown in Fig. 1.

Between the hoppers B and secured to the bottom of the car is a casing 2, provided in each side with a longitudinal slot 3, in which is mounted a pintle 4.

The doors 1 1 are provided at a short distance above their lower extremity upon their exterior face with a series of hinge-plates 5, (preferably four,) provided each with two perforated lugs or bifurcations 6 6, between which is received an extremity 7 of braces C, spaced a suitable distance apart and having their outer ends made in the form of circular bearings 8 for the reception of a single rod 7', passed through all of said bearings 8 and lugs 6 and held in place by suitable locking-nuts 9. At their opposite ends the braces are themselves bifurcated or formed with hinge-openings to receive the pintle 4, heretofore referred to. Each brace is provided on its upper edge with an enlargement or shoulder 10,

which when the braces are in their lower or locked position are disposed against each other and prevent any possibility of pivotal movement of the braces, and hence maintain the doors in their closed position, regardless of the weight thereon.

The pintle 4 is provided on its upper and lower face with an eye 11, and a sprocket-chain 12 is secured at one end to the upper eye 11, is passed over a pulley 13, thence against one side of a sprocket-wheel 14, where it is engaged by several teeth on said wheel 14, and then passes down and around another pulley 15 and up in a vertical line to and secured to the lower eye 11 on the pintle 4.

The sprocket-wheel 14 is mounted on a shaft 16, projecting to the outside of the car, and provided with suitable means for turning the same to operate the chain 12 and raise and lower the pintle 4 and the inner end of the braces C C to open and close the doors 1 1.

It will be seen that the section of the chain 12 which exerts a direct pull on the pintle is in a straight or vertical line. Thus when the sprocket-wheel 14 is turned a direct pull is applied on either the top or bottom of the pintle to operate the doors positively in opening and closing. It will also be seen that the braces C when in position to hold the doors in a closed position are so disposed that their inner ends, which are attached to the pintle 4, will be in a lower plane than their outer ends, thus preventing any possibility of the doors being forced open by the weight of the contents of the car.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a car-body and two doors for controlling the discharge of mate-

rial from the bottom thereof, of braces connecting said doors and constituting a toggle-lever, a chain having its ends attached to said toggle-lever, and means for operating
 5 said chain to raise or lower the toggle-lever for opening and closing said doors.

2. The combination with a car-body having two outlets and a door for each outlet, of
 10 braces connected at their outer ends to the doors and connected together at their inner ends, and a chain connected with the inner ends of the braces and adapted to raise and
 lower the same to open and close the doors.

3. The combination with a car-body having
 15 two outlets and a door for each outlet, of a casing disposed between said doors and having vertical slots therein, a pintle in said slots, braces connected at their respective
 20 ends to the doors and pintle, a sprocket-chain connected at its ends to the pintle at diametrically-opposite points, pulleys disposed above and below said pintle and over which the chain passes, a sprocket-wheel adapted to

engage said chain and means for turning said sprocket-wheel. 25

4. The combination with a car-body having two outlets, of a door for each outlet, braces
 30 connected at one end to the doors and connected together at their other ends, shoulders on the upper inner ends of the braces adapted to lock the inner ends of said braces against
 downward movement when said inner ends of the braces are slightly below the plane of
 their outer ends, a chain attached at its ends to the inner pivoted ends of the braces and a
 35 sprocket-wheel for moving said chain for raising and lowering the inner ends of said
 braces to open and close the doors.

In testimony whereof I have signed this specification in the presence of two subscrib- 40
 ing witnesses.

SIDNEY D. KING.

Witnesses:

A. B. BAKER,
 CHARLES W. BOGART.