

(No Model.)

2 Sheets—Sheet 1.

G. W. MILLER.
CONVERTIBLE DUMPING CAR.

No. 600,694.

Patented Mar. 15, 1898.

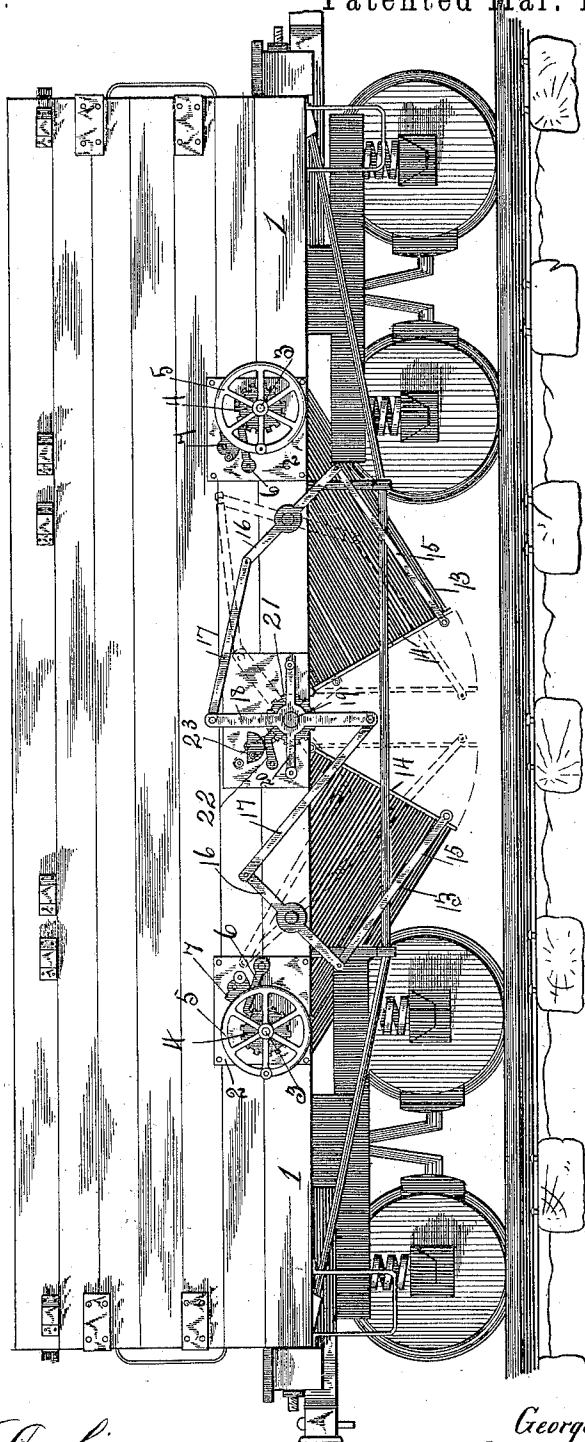


Fig. 1.

Witnesses
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Inventor
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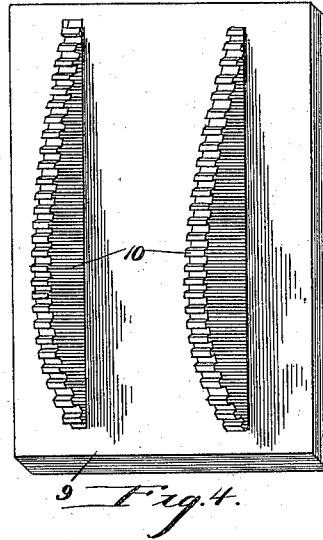
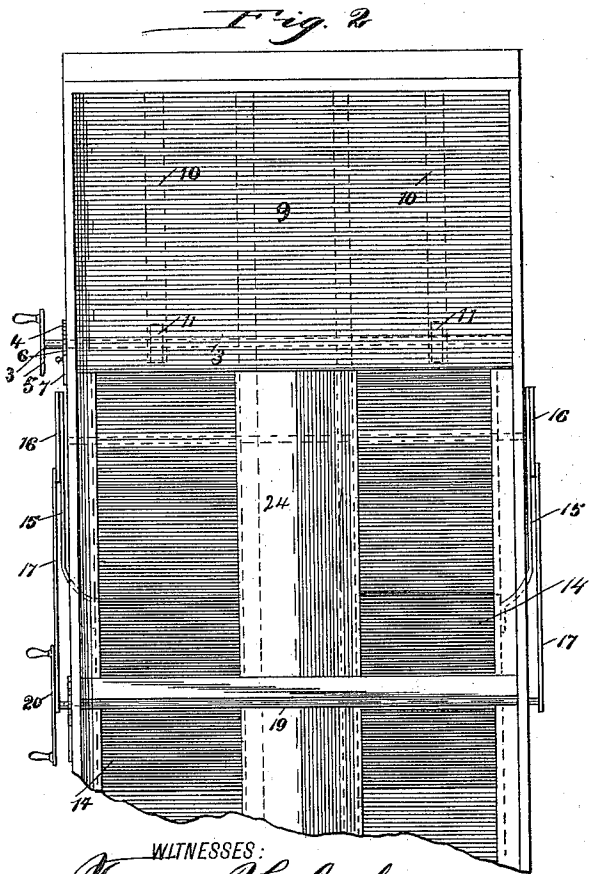
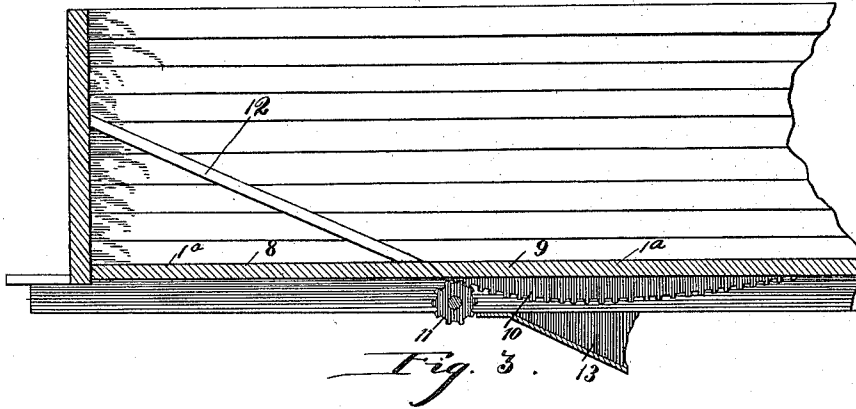
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WITNESSES:
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UNITED STATES PATENT OFFICE.

GEORGE W. MILLER, OF MCKEE'S ROCKS, PENNSYLVANIA.

CONVERTIBLE DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 600,694, dated March 15, 1898.

Application filed August 16, 1897. Serial No. 648,359. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MILLER, a citizen of the United States of America, residing at McKee's Rocks, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Convertible Dumping-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in cars, and more particularly to that class known as "freight-cars," and has for its object to construct a car of this class which may be readily changed from
15 an ordinary flat-bottom gondola to a car representing that type known as "hopper-bottoms," thus permitting the use of the car for the hauling of various articles, which is not obtained with the use of the ordinary gondola car.

20 The invention further resides in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and particularly pointed out in the claims.

Briefly described, the invention consists in
25 a divided floor wherein two sections of the same are operated from the outside of the car, so as to leave the same in an inclined position at each end of the car to form the hopper-bottom type, and in the novel means
30 whereby these sections of the car-floor are returned to their flush position with the remainder of the floor to obtain the car of the flat-bottom type, together with the novel arrangement for opening the gates of the hoppers when it is desired to unload the car.

35 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like figures of reference indicate similar parts throughout the several views, in which—

40 Figure 1 is a side elevation of my improved car. Fig. 2 is a top plan view of a portion of the same, showing one section of the car-bottom moved to its inclined position at the end of the car. Fig. 3 is a longitudinal sectional
45 view of a portion of the car-body, showing same arrangement of the movable section of the floor; and Fig. 4 is a perspective view showing underneath side of one of these movable sections.

50 Referring now to the drawings by refer-

ence-figures, 1 denotes the beam of the frame, on the sides of which are secured plates 2, forming the bearings for shafts 3, journaled therein and carrying operating-wheels 5 on
55 their ends, with ratchet-wheels 4 mounted on the shafts between the operating-wheels and the plates, the shafts being retained in the desired position by pawls 6, pivotally secured to the bearing-plates and engaging said ratchet-
60 wheels, said pawls being held in their engagement by a cam 7, pivotally secured to the said plates.

The bottom or bed 1^a of the car is divided into four sections, the two end sections 8 8
65 being stationary and the two center sections 9 being movable and having secured on their underneath face rack-bars 10, tapering toward one end, so that when the shaft 3 is operated the gear-wheels 11, mounted on said shaft, will
70 engage the rack-bars 10 and by reason of the incline formed on said bars elevate the end of the section 9 onto the inclined supports 12 provided on the inner face of the car and as the operation of the shaft is continued carry the
75 said section up to an inclined position at the end of the car for use as a hopper-bottom. This arrangement is of course the same at each side of the car and for each end thereof, and when
80 the center sections have been so removed the inclined ends communicate directly with the inclined chutes 13, suitably suspended underneath the car and closed by gates 14, fulcrumed at the upper ends of the inclined
85 chutes and at their lower ends held by arms 15, the opposite ends of which are pivotally secured to one end of levers 16, fulcrumed to the side of the car, and the opposite end of
90 which is pivotally connected to an arm 17, having its other end pivotally secured to one arm of the operating-lever 18, the other arm of said lever having the corresponding arm
95 17 for operating the other gate attached thereto. The said lever 18 is secured on a shaft 19 and is provided with operating-handles 20, while mounted upon said shaft, between the operating-lever and bed, is a ratchet 21, engaged by pawl 22, held in position by cam 23,
100 as in the device for elevating the removable sections of the bottom.

The beams of the car are provided with a hood 24, which serves to protect the same

when the hopper-bottom is used, and I also show keepers affixed around the bed near the top thereof to receive racks for converting the car into the form for coke and the like.

5 Assuming that the car is in the flat-bottom form and it is desired to convert the same into the hopper form, the pawls 6 will be disengaged from the ratchet 4, when the shafts may be operated to cause the spur-gears carried thereby to engage the racks 10 and carry 10 the removable sections up to their inclined position at the ends of the car, and the gates for the chutes are opened by releasing the dog from engagement with the operating- 15 shaft, the movement thereof being shown in dotted lines. By this arrangement it will be noted that the car may be readily converted into several different forms, thereby saving considerable in the rolling-stock now necessary for the equipment of a road, and it will 20 also be noted that various other changes may be made throughout the details of construction without departing from the general spirit of my invention.

25 Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a car of the class described, the combination with the car-bed having a floor divided into sections two of which are movable, 30 rack-bars secured to the underneath face of the movable sections, and gear-wheels for moving said sections to an inclined position at each end of the car, substantially as shown and described.

2. In a car of the type described, the combination with the car-bed having a bottom 35 formed in sections, two of which are movable, racks and gears for elevating said movable sections to an inclined position at each end 40 of the car, gates for closing the chutes of said car, and lever mechanism on either side of the car for opening and closing said gates, substantially as shown and described.

In testimony whereof I affix my signature 45 in presence of two witnesses.

GEORGE W. MILLER.

Witnesses:

A. M. WILSON,
WILLIAM E. MINOR.