No. 688,779. Patented Dec. 10, 1901.

C. P. HARVEY.

WEIGHT REGISTERING COAL CHUTE WAGON.

(Application filed May 13, 1896. Renewed Aug. 16, 1899.)

(No Model.)

Fig. 1.

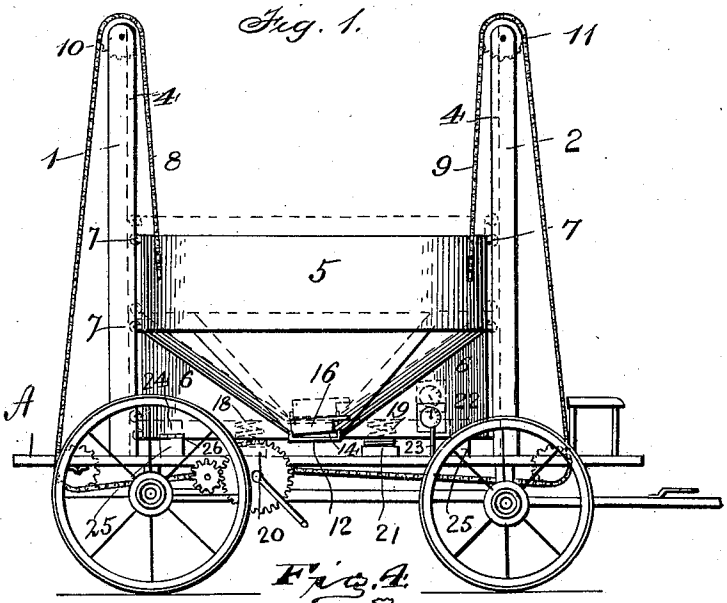


Fig. 4.

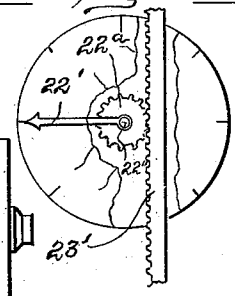


Fig. 2

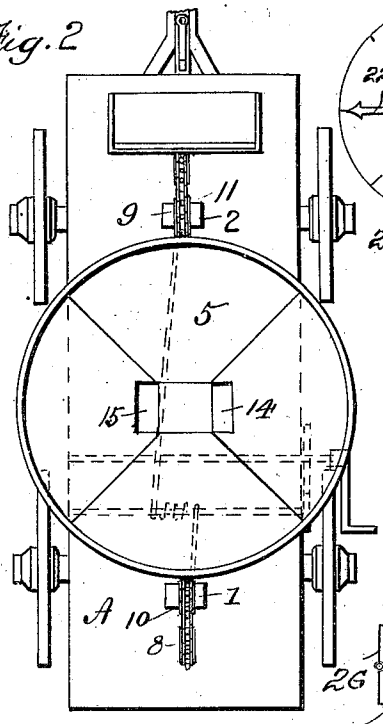


Fig. 3.

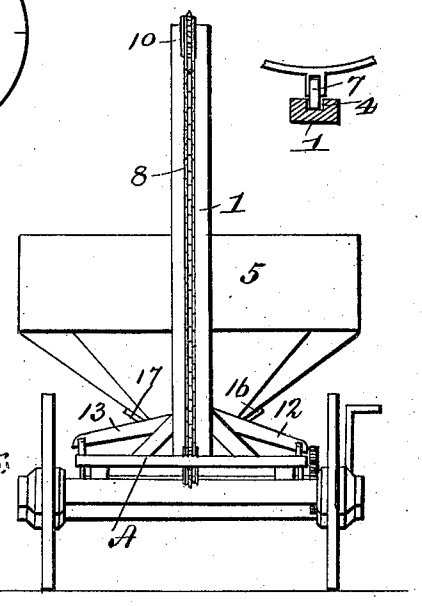
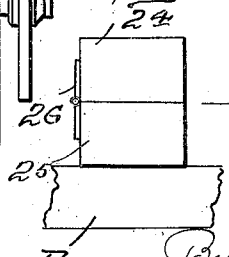


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

CASSELLS P. HARVEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO FERDINAND KELLER, OF PHILADELPHIA, PENNSYLVANIA.

WEIGHT-REGISTERING COAL-CHUTE WAGON.

SPECIFICATION forming part of Letters Patent No. 688,779, dated December 10, 1901.

Application filed May 13, 1896. Renewed August 16, 1899. Serial No. 727,446. (No model.)

To all whom it may concern:

Be it known that I, CASSELLS P. HARVEY, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Weight-Registering Coal-Chute Wagons; 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 that class of coal-wagons which are provided with a coal-receptacle, means for elevating the same, and a chute down which the coal gravitates when the coal-receptacle is elevated.

My object is to provide an improved and simplified coal-wagon of the class described which will automatically indicate the amount of coal carried, so that the customer can see at a glance that he has been given legal weight.

A further object is to provide an improved coal-receptacle from which the coal can be discharged from either side of the wagon.

Having these objects in view, my invention consists of certain novel features and combinations, as will appear more fully hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my complete invention, dotted lines representing the position of the parts when the coal-receptacle is filled; Fig. 2, a plan view; Fig. 3, an end elevation; Fig. 4, a detail view of the indicating mechanism, and Fig. 5 a like view of one of the receptacle-supporting rests.

The usual wagon-body is designated by the letter A.

From the wagon-platform arise two guide-standards 1 and 2, which are provided with longitudinal grooves 4, that face each other.

My improved coal-receptacle is shown at 5. It is an inverted conical structure lined with sheet metal and provided with vertical flanges 6. The fore and rear sides of the receptacle are provided with sets of guide-rollers 7, which are adapted to run in the guide-grooves in the standards. Sprocket-chains 8 and 9, connected to the receptacle midway of its height and passing over respective sprockets 10 and 11 on the upper extremities of the guide-standards and on the usual gear, crank, and ratchet mechanism, afford means whereby the coal-receptacle may be raised when necessary. The opposite sides of the coal-receptacle are provided with the usual discharge openings or mouths and with swinging rests 12 and 13, which have lips for attachment to the coal-chute, that is normally carried on the wagon in a folded condition. The discharge-mouths 14 and 15 have the usual cut-off gates 16 and 17.

I employ steel coil-springs 18 and 19, which are seated in cups 20 and 21, that are secured to the wagon-platform. These springs press against the bottom of the flanges 6 and tend to keep the receptacle in raised position when empty.

In one of the flanges of the coal-receptacle is secured a register 22. This register has two faces and two indicating-hands, so that the weight indicated may be observed from both sides of the wagon. This register has a large black face having white figures thereon, which indicate different weights. The indicating-hands 22′ are also preferably white, and said hands are carried by a spindle 22″, on which is located a pinion 22^a. The register is actuated by a rod 23, having a rack 23′ at its upper end which meshes with the pinion.

In order to relieve the pressure on the coil-springs during transportation of the coal, I provide sets of rests, each consisting of two blocks 24 and 25, hinged together at 26. The lower blocks are secured to the wagon-platform near the standards, while the coal-receptacle rests on the upper blocks. When the destination is reached, the upper blocks are dropped over, so that the register will indicate properly when resting on the weighing-springs.

The operation is as follows: As the receptacle is filled it begins to descend against the action of the large coil-springs, meanwhile actuating the register. When entirely filled, it is at its lowest point, as shown in full lines in Fig. 1, while dotted lines represent it in slightly-raised position. When the place of delivering is reached, the chute is attached

and the receptacle raised as high as desirable. The coal can then be discharged as usual. After the coal has been discharged the receptacle remains in elevated position ready for refilling.

The advantages of my device may be briefly enumerated as follows: The coal is discharged from the side of the wagon instead of its end, as is usual, so that the street is not blocked, as is commonly the case. The purchaser can tell at a glance when the wagon arrives at the place of delivery whether he is receiving the amount of coal he paid for or not. The coal can be delivered from either side of the wagon. Furthermore, owing to the peculiar arrangement and construction of the parts it is possible to elevate the coal-receptacle above the upper ends of the standards, so that coal may be delivered across a very broad space.

Having thus described my invention, what I claim as new is—

1. In a coal-wagon, the combination with a gravity-operated coal-receptacle, and guides therefor extending above the receptacle, of mechanism beneath the receptacle adapted to yieldingly resist the downward movement thereof, means carried by the receptacle and operated by the downward movement thereof for indicating the weight of the load, and hoisting mechanism connected with the guides for raising and lowering the receptacle and holding the same in an elevated position out of engagement with the resistance devices.

2. In a coal-wagon, the combination with a gravity-operated coal-receptacle having a door-covered discharge-opening in its bottom, and a wagon body or platform, of springs resting on the platform and forming a yielding seat for the receptacle and adapted to resist the downward movement thereof, a weight-indicator operated by the movement of the receptacle, and rests comprising hinged members which rise from the platform and are adapted to support the receptacle or which may be swung out of the path of the receptacle to allow the receptacle to descend, substantially as described.

3. In a coal-wagon, the combination with a vertically-movable coal-receptacle having an inclined bottom and vertical flanges extending downward therefrom, of vertically-disposed coiled springs forming yielding supports for said flanges and operating to resist the downward movement of the receptacle, an indicator carried by the coal-receptacle and mounted on one of said flanges, said indicator comprising a movable indicating-hand and an actuating rack-bar operated by the downward movement of the receptacle, and hoisting mechanism for raising and suspending the receptacle.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CASSELLS P. HARVEY.

Witnesses:

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