G. E. CHALFANT.

DEVICE FOR UNLOADING AND DELIVERING COAL FROM VEHICLES.

APPLICATION FILED SEPT. 22, 1908.

922,390. **Patented May 18, 1909.**

2 SHEETS—SHEET 1.

Fig. 1.

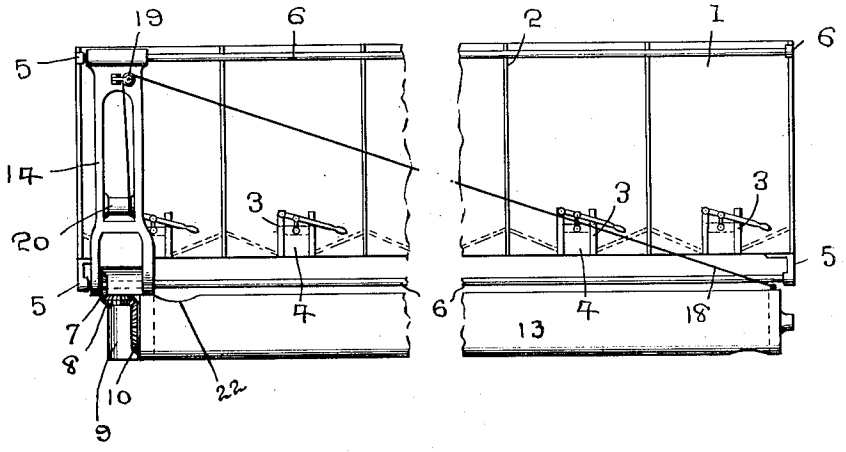


Fig. 2.

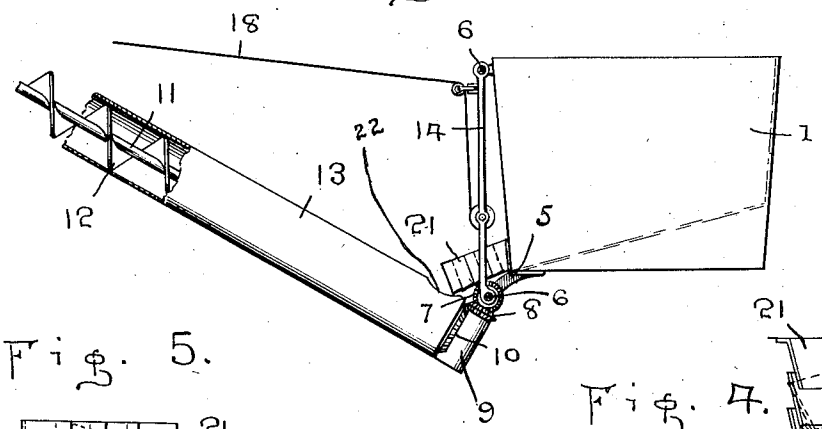


Fig. 5.

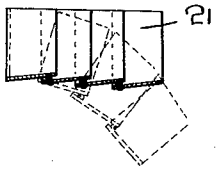


Fig. 4.

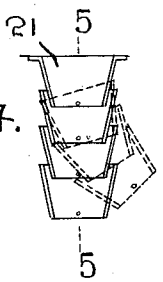
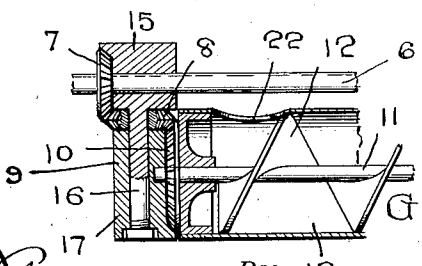


Fig. 3.



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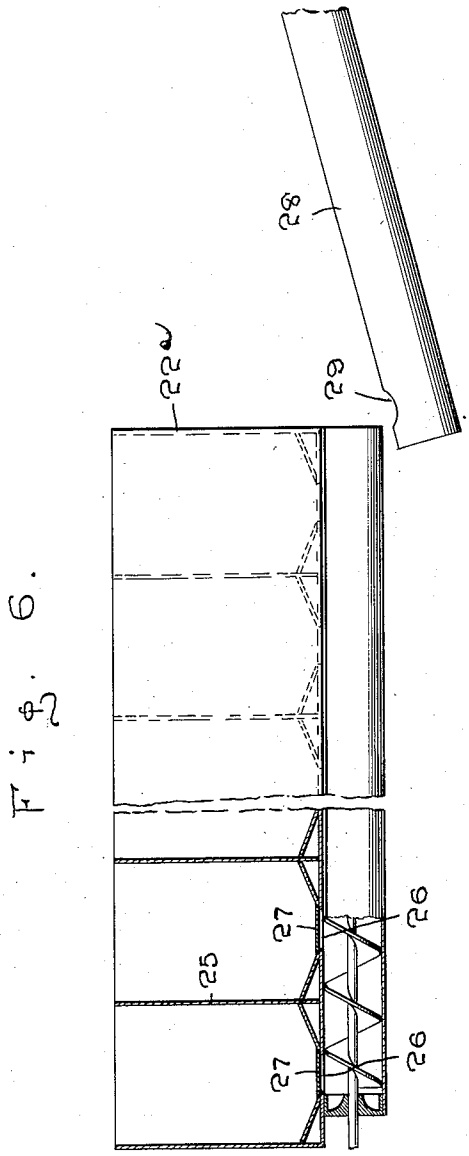


Fig. 6.

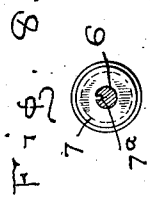


Fig. 8.

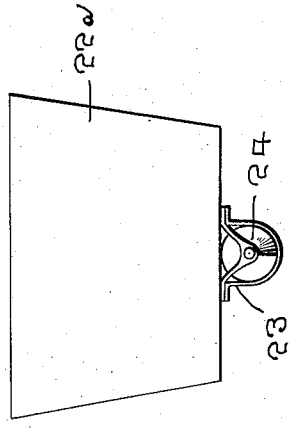


Fig. 7.

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UNITED STATES PATENT OFFICE.

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DEVICE FOR UNLOADING AND DELIVERING COAL FROM VEHICLES.

No. 922,390. Specification of Letters Patent. Patented May 18, 1909.

Application filed September 22, 1908. Serial No. 454,237.

To all whom it may concern:

Be it known that I, GEO. E. CHALFANT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Unloading and Delivering Coal from Vehicles; 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.

This invention relates to new and useful improvements in unloading devices, and it has relation more particularly to devices of this character adapted to be employed in conjunction with vehicles for the discharge of the contents thereof.

It is an object of the invention to provide a novel device of this character whereby a vehicle containing coal or other contents of different quantities or grades, may unload any of said quantities or grades independently of the remainder.

It is also an object of the invention to provide a novel device of this character which may be easily adjusted with relation to the body of the vehicle.

It is also an object of the invention to provide a novel device of this character which will be simple in construction, efficient and advantageous in practice, and comparatively inexpensive to manufacture.

With the above and other objects in view, the invention consists in the details of construction and in the novel arrangement and combination of parts to be hereinafter more particularly referred to.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of the specification, wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is an inside view in elevation of a vehicle with the invention applied thereto, the delivery mechanism being shown in an inoperative position. Fig. 2 is an end elevation of a vehicle showing the delivery device in an operative position. Fig. 3 is an enlarged fragmentary sectional view illustrating the operation of the delivery means. Fig. 4 is a view in top plan detached of a chute employed in conjunction with the invention. Fig. 5 is a sectional view thereof. Fig. 6 is a longitudinal sectional view illustrating a slightly modified form of the invention. Fig. 7 is an end view of the form shown in Fig. 6. Fig. 8 is a detailed cross-sectional view disclosing more especially the feather or spline connection between the shaft or rod 6 and the gear-wheel 7.

In the drawings, 1 denotes the body of a vehicle which is divided tranversely by the partitions 2, into a series of compartments, and each series is provided with the discharge opening 3, which is controlled by the sliding door 4 in a side of the vehicle.

Mounted in the brackets 5, projecting from the side of the vehicle 1, are the rods 6, which extend longitudinally of the vehicle, and slidably engaging the rods 6, is the slide 14. The lower rod 6 is adapted to be rotated by any desired means, and this rod 6 has slidably arranged thereon within the slide 14, a gear-wheel 7, which meshes with a gear-wheel 8 carried by a casting 9 and which gear wheel 7 is also adapted to have rotatable connection with said rod, being feathered thereon, as at 7^a. This gear-wheel 8 is a double gear, and also meshes with a gear-wheel 10 fixed to the shaft 11, of a spiral conveyer 12, said conveyer 12 being positioned within a casing 13. Also mounted within the slide 14 and embracing the lower rod 6, is the block 15, said block 15 being provided with a depending pin 16, which serves as the shaft for the gear-wheel 8, and as a pivot for the casting 17, said casting 17 supporting one end of the shaft 11. By this means it is thought to be apparent that the conveyer 11 can be swung to any desired angle with relation to the pivot 16, and that through the medium of the slide 14, it can be positioned at any point longitudinally of the vehicle body 1. It is also thought to be apparent by having the block 15 loosely engaging the lower rod 6, the conveyer can also be readily swung vertically as well as horizontally. In order to support the free end of the conveyer, and to limit its movement vertically, one end of a flexible connection 18 is secured adjacent the free end of the conveyer, and said flexible connection passes over a pulley 19, pivotally secured to the slide 14, and has its opposite end secured to a suitably operating drum 20, the operation of which being, it is thought, obvious.

When it is desired to discharge the contents of any one of the compartments formed by the partitions 2, it is only necessary that the slide 14 be moved along the

rod 6, until the conveyer 12 is positioned beneath the door 4 thereof. When this position of the slide is assumed, the flexible chute 21 is placed in position as shown in Fig. 2, and said chute 21 discharges within an opening 22 in the casing 13 adjacent the upper end thereof.

The operation of this invention is thought to be obvious without a detailed description thereof, it being stated however that in Fig. 1 a form of invention is shown which is employed with motor vehicles, or other vehicles having small supporting wheels.

In Fig. 6, is shown a form of invention which is positioned centrally of the width of the body of the vehicle, and extending longitudinally thereof. In this form of invention the body 22^a has secured to its end surface the casing 23, in which is mounted the suitably operating spiral conveyer 24. The body 22^a is divided by the partitions 25 into a series of compartments each of said compartments having an opening 26 in communication with the casing 23, said opening 26 being controlled by suitable door or closure 27. The operation of this form of invention is also believed to be obvious. It is also well to further state however, that the conveyer 24 acts in conjunction with a second conveyer 28, which is employed in the storage of the contents of the compartments of the body 22^a, said conveyer having an opening 29 in its casing, through which the conveyer 24 delivers.

It is thought to be apparent that in the foregoing arrangement it is possible to empty any one of the compartments independently of the other. This in practice is of great benefit, as in the case of delivery of coal, various quantities may be put into the different compartments and said compartments can be unloaded without any inconvenience.

I claim:

1. A device of the character described, comprising a compartment vehicle body having laterally delivering openings, a conveyer arranged to receive the contents of said compartments, rod members applied to said body, a slide arranged upon said rods, a slidable member carried upon one of said rods and controlled by the first-referred to slide member, the latter slide member having arranged thereon a support for one end of the shaft of said conveyer, means for intergearing one of said rods and the shaft of said conveyer and means for slidably actuating said conveyer.

2. A device of the character described, comprising a vehicle body having a number of compartments provided with laterally delivering openings, a conveyer adapted to receive the contents of said compartments through said delivery openings, longitudinal rods arranged upon said vehicle body, a slidable bracket arranged upon said rods, said slidable bracket carrying a bearing block for one end of one of said rods and having a pendent stem, an additional bearing carried by said stem and supporting one end of the shaft of said conveyer, one of said rods being equipped with the gear wheel, said stem having a double beveled gear wheel intergeared with the aforesaid gear wheel, and said conveyer shaft having a beveled gear wheel also geared with said double beveled gear wheel, and means for manually sliding said conveyer upon one of said rods.

3. A device of the character described, comprising a vehicle body having a number of compartments provided with laterally delivering openings, a conveyer adapted to receive the contents of said compartments from said openings, longitudinal rods carried by said vehicle body, a slidable bracket arranged upon said rods, a bearing block for one end of one of said rods and having a stem provided with a tubular bearing supporting one end of the shaft of said conveyer, one of said rods carrying a beveled pinion, the stem of said bearing block being equipped with the double beveled gear wheel and said conveyer shaft having a beveled wheel, all of said beveled wheels being indicated for coöperating means for sliding said conveyer and a flexible chute delivery from a compartment of said vehicle body into said conveyer.

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

GEORGE E. CHALFANT.

Witnesses:
JOHN DONNELLY,
ROBERT L. CHALFANT.