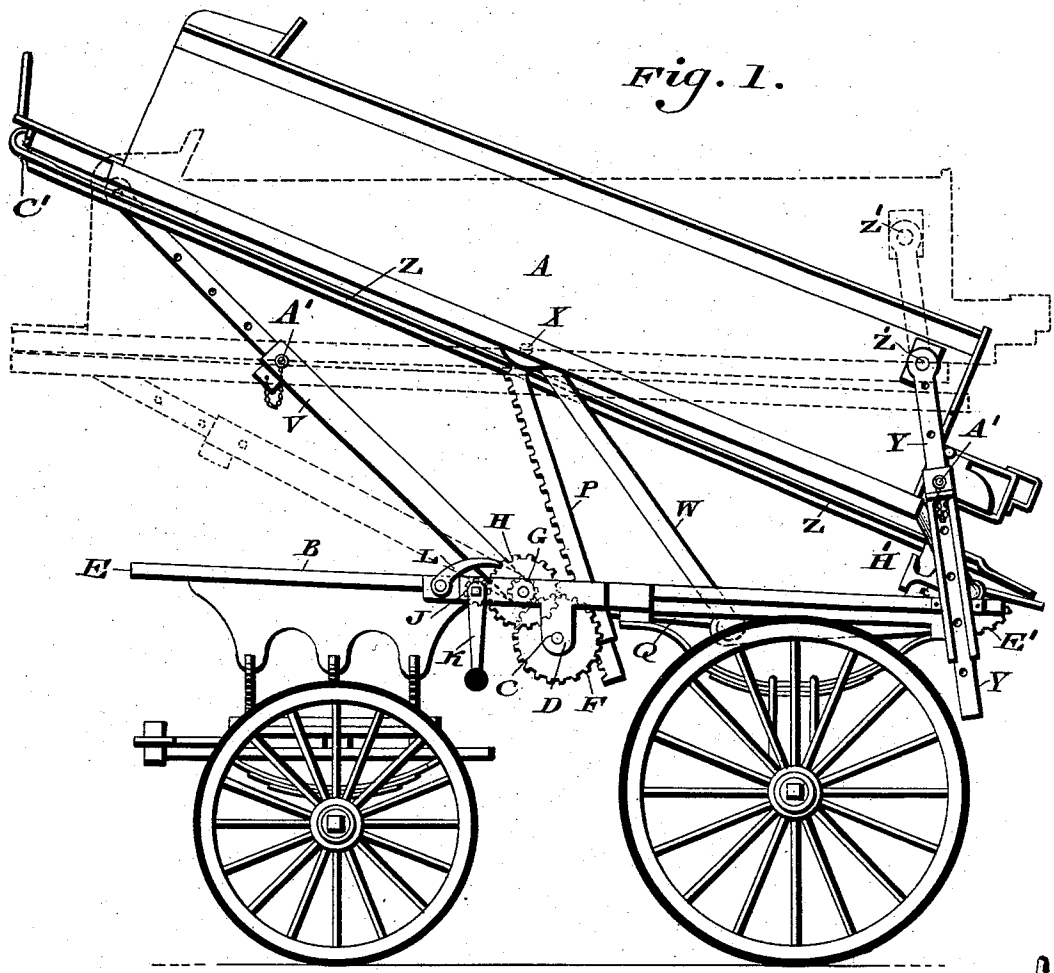
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W. RODENHAUSEN.

DUMPING WAGON.

No. 588,882. Patented Aug. 24, 1897.

Fig. 1.



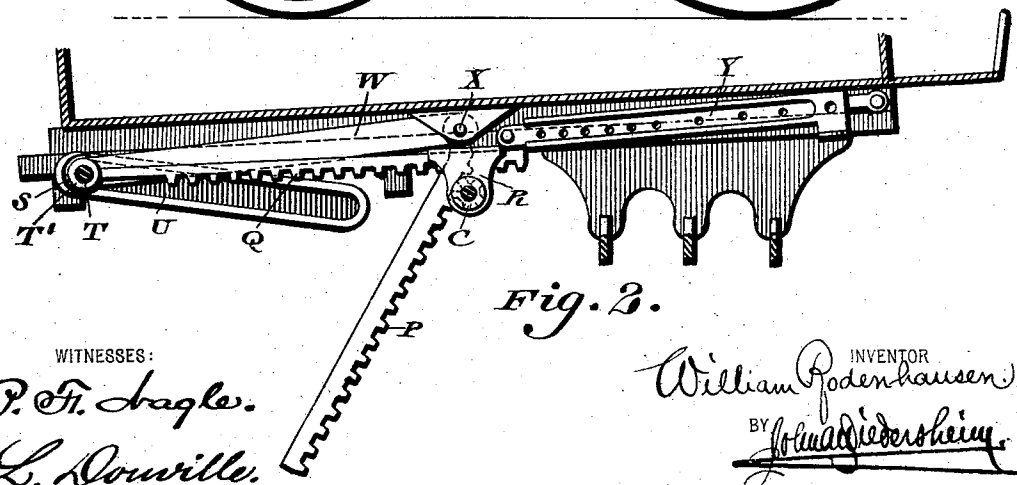


Fig. 2.

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Fig. 3.

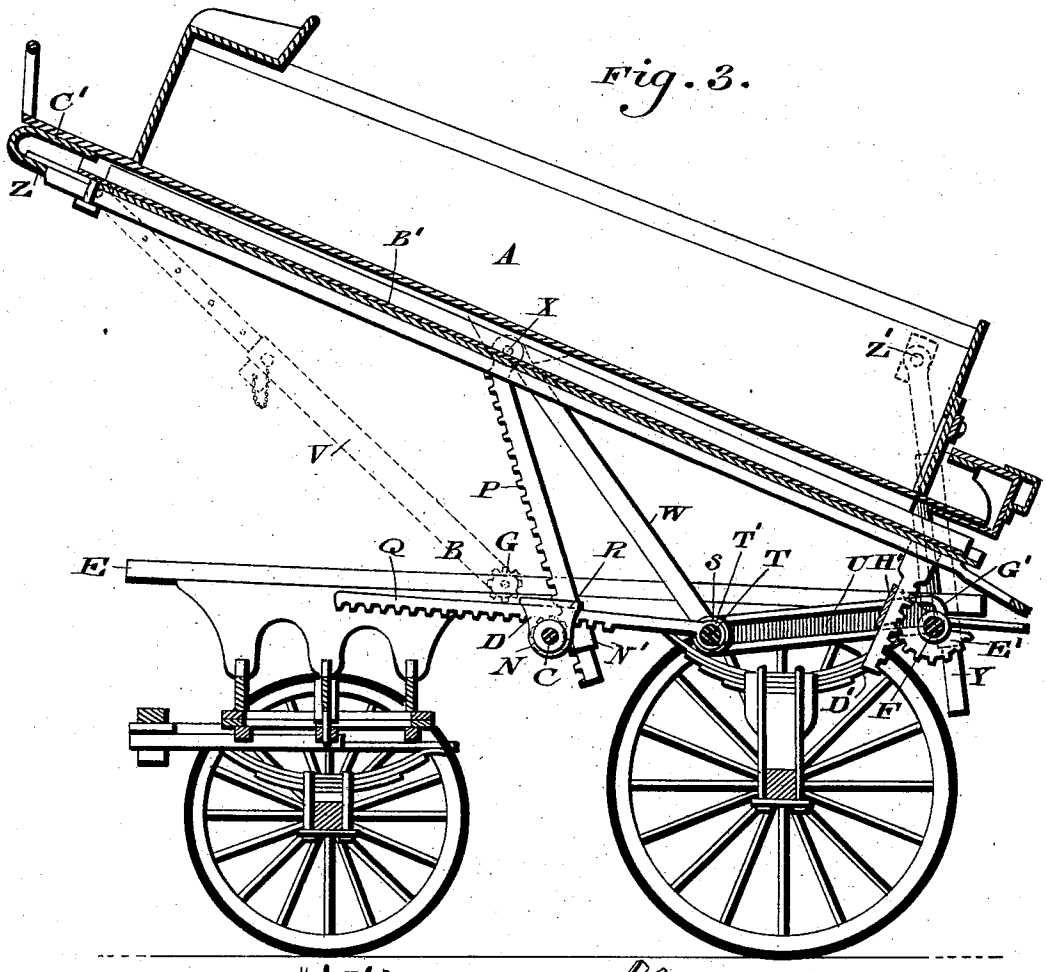
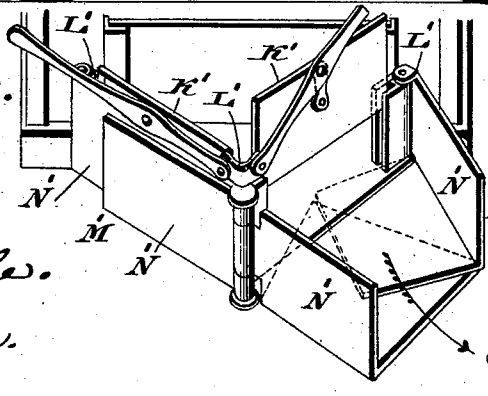


Fig. 8.



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Fig. 6.

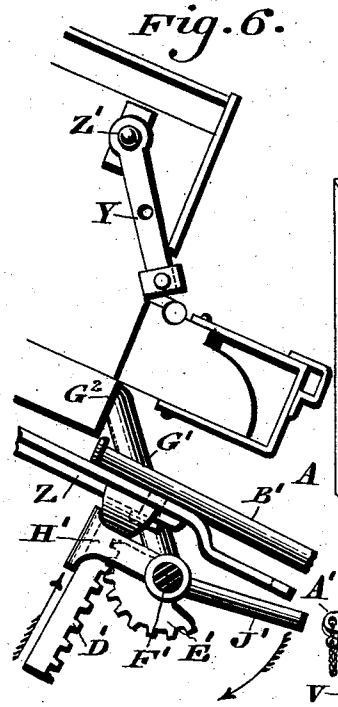


Fig. 4.

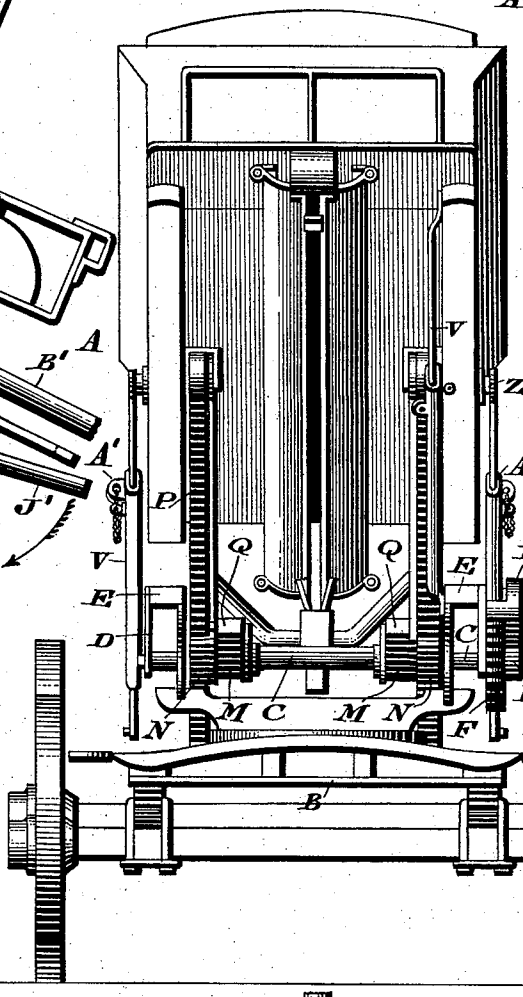


Fig. 5.

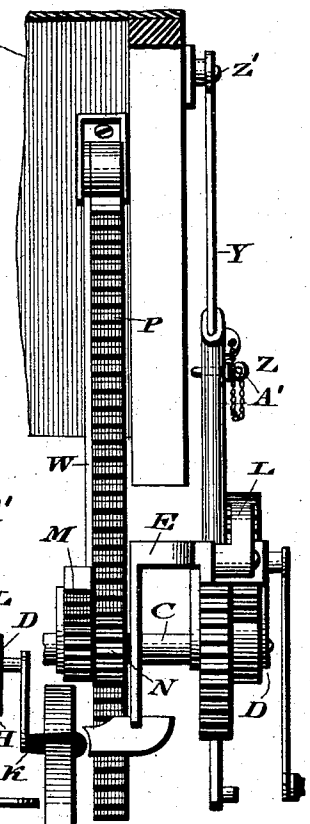
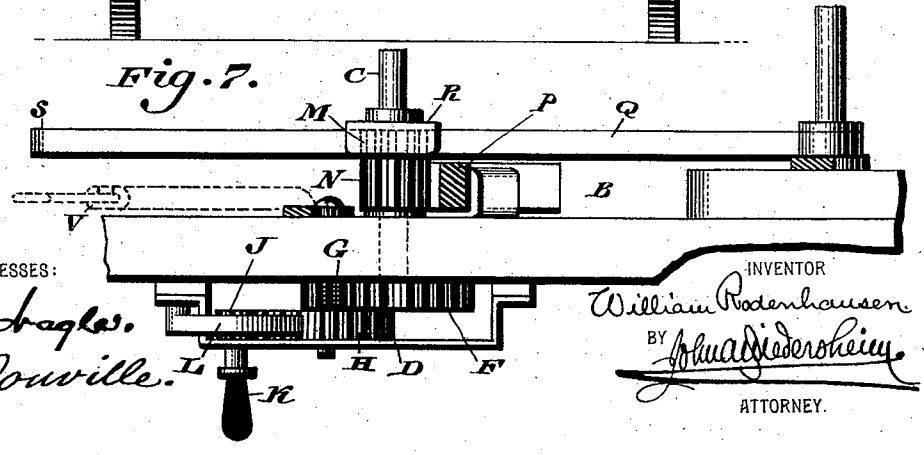


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM RODENHAUSEN, OF PHILADELPHIA, PENNSYLVANIA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 588,882, dated August 24, 1897.

Application filed December 11, 1896. Serial No. 615,326. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RODENHAUSEN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dumping-Wagons, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a dumping-wagon which may be raised in a powerful and convenient manner and firmly sustained in elevated position at different places on the running-gear.

It also consists of novel means for adjusting the handle of the discharge-chute.

It further consists in providing the body with means for discharging the load to the right or left or both right and left, as desired.

Figure 1 represents a side elevation of a dumping-wagon embodying my invention. Fig. 2 represents a vertical section of a portion thereof on an enlarged scale. Fig. 3 represents a vertical section of the wagon in partly elevated position. Fig. 4 represents a front view of the wagon in elevated position. Fig. 5 represents a front view of a portion of the wagon in elevated position on an enlarged scale. Fig. 6 represents a side elevation of the rear end portion of the wagon. Fig. 7 represents a top or plan view of a detached portion, part of the same being in horizontal section. Fig. 8 represents a perspective view of the tail-gates and discharge-spouts embodying my invention.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the body of a coal-wagon, and B the running-gear thereof.

C designates a transversely-extending shaft which is mounted on the ears D, which are secured to the sills E of the running-gear, said shaft having secured to it the spur-wheel F, which meshes with the pinion G, the shaft of the latter carrying the spur-wheel H, which latter meshes with the pinion J, whose shaft has the crank-handle K thereon.

L designates a pawl which is mounted on one of the sills E and adapted to engage with the spur-wheel H for locking the train or multiple gearing formed by the several spur-wheels and pinions, it being noticed that when the crank-handle is properly rotated motion is imparted to the gearing, and the shaft D receives rotation in a powerful manner.

Connected (keyed or otherwise secured) to the shaft C are the pinions M and N, the pinions N meshing with the rack-bars P, which depend from and are pivotally connected with the body of the wagon and are guided in the stirrups $N^{\times}$, which are mounted on the axis of said pinions N.

The pinions M mesh with the longitudinally-extending rack-bars Q, which are guided in and held in engagement by the stirrups R, the latter being freely mounted on the shaft C and permitting said rack-bars to pass through the same in the opposite motions thereof.

The rear ends of the rack-bars Q have ears S thereon, the same freely receiving the shaft or cross-bar T, whose ends carry the rollers T′, as gudgeons, which are freely located in the guides or slotted ways U, which latter are secured to the inner sides of the sills E, said rollers being adapted to play in said ways in the opposite motions of said shaft C.

V designates an arm whose lower end is mounted on one of the sills E and whose upper end is pivotally connected with the forward end of the body A.

W designates radial arms whose lower ends are freely mounted on the shaft T and whose upper ends are mounted on the pivots X, which in the present case also connect the rack-bars P with the body of the wagon.

Y designates arms whose lower ends are mounted on the sills E and whose upper ends are pivotally connected to the sides of the body A, as at Z′.

It will be noticed that the arms V and Y are made of parts fitted to each other telescopically, so that they may be lengthened or shortened, as required, the parts of each arm being held in their adjusted position by means of the pins A′.

It will be seen that when the shaft C is rotated the rack-bars P are raised and the rack-bars Q are drawn forward, these two motions

being occasioned by the action of the pinions N and M.

The shaft T advances or slides in the guides U, owing to its connection with the rack-bars Q, and the arms W are raised simultaneously with the elevation of the rack-bar P. By this provision the body may be raised in front to full extent, after which the angle of inclination of the body is adjusted by the operation of the radial arms or bars V Y, the pins A′ then being applied, and the coal may then be rapidly discharged from the body by the chute while the wagon remains parallel with the curb or sidewalk, it being noticed that the body as elevated is sustained at different places on the sills by the rack-bars P and arms W, so that it is firmly held, a feature of importance, owing to the great weight of the body and its contents, said bars and arms directly receiving said weight.

When the pins A′ are withdrawn and the pawl L is disengaged from the gear-wheel H, the body A will be lowered and returned to its first position.

Z designates the hanger for the chute B′, the same being flexibly connected at its front end with the body of the wagon, as at C′, and having at its rear end, which is free, the rack D′, which depends from said hanger and engages with the segmental pinion E′, whose shaft F′ is mounted on the rod or bar G′, which is attached to the body A, as at G^2. (See Fig. 6.)

Mounted on the shaft F′ is a frame or yoke H′, which freely embraces the rack D′, so as to guide the latter in its motions and also keep it in engagement with the said pinion E′, it being noticed that by proper motion of the handle J′ of the pinion E′ the rack D′ may be raised and lowered and so adjust the angle of the hanger Z, and consequently of the chute when the latter is drawn out to operative position.

Referring to Fig. 8, K′ designates the tail-boards of the chute, the same being fitted in the vertical guides L′, which rise from the floor of the body A and are located angularly to each other and to the end of said floor for dumping or discharging the load to the right or left, according to requirements. Pivoted to said guides are spouts M′, formed of sections N′ N′, each of which is of L shape, one limb thereof being vertical and the other horizontal, so that the horizontal limbs of each spout may be placed one on the other as the bottom of the spout and the vertical limbs are separated at the sides of the spout, as shown at the right side of Fig. 8. The parts of the other spout may be folded, the horizontal limbs below the floor of the body and the vertical limbs against each other, thus closing the gate at the left side of said figure. The coal may now be discharged from the body on the right side, as indicated by the arrow, but it is evident that said side may be closed and the left side opened, so as to discharge the coal at the latter, or coal may be discharged at both sides by properly opening the spout and tail-gates.

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

1. A dumping-wagon having the sills on its running-gear provided with ears, the shafts C mounted in said ears having the pinions M and N thereon, a wagon-body having the rack-bars P and the bars W pivoted thereto, the cross-bar T connected to the lower ends of said bars W and the rack-bars Q pivotally connected to said bar T and engaging said pinions M, said rack-bars P being engaged by said pinions N, and means for rotating said shaft C.

2. In a dumping-wagon, a running-gear having the shaft C mounted thereon, the pinions M and N on said shaft, the ways U secured to the sills of said running-gear, a wagon-body, the rack-bars P and the bars W and Y pivotally connected thereto, the cross-bar T mounted in the lower ends of said bars W and guided in said ways U, the rack-bars Q mounted on said cross-bar T and engaging said pinions M, said rack-bars P engaging said pinions N, and means for rotating said shaft C, the lower ends of said arms Y being mounted on said sills.

3. In a dumping-wagon, a body provided with a vertically-moving rack and an operating-pinion therefor, and a horizontally-movable rack and an operating-pinion therefor, both of said operating-pinions being mounted on the same shaft and said horizontal movable rack having a pivoted-arm connection with said body and guided in ways in the wagon-bed.

4. In a dumping-wagon, a running-gear having the shaft C mounted on the sills thereof, the ways U attached to the inner side of the said sills, the wagon-body with the rack-bars P and the bars W pivoted thereto adjacent to each other, the cross-bar T mounted in the lower ends of said bars W, the rack-bars Q mounted on said cross-bar T, the pinions M and N on said shaft C engaging respectively said rack-bars Q and P, means for rotating said shaft C, and the bars V and Y adjustable in length, and connected with said body and running-gear.

5. In a dumping-wagon, a body provided with a pivoted rack vertically movable on mechanism on the wagon-bed, and arms pivotally connected at their ends with the front end of the wagon-body and with the wagon-bed, arms connected with the wagon body and bed at their rear ends, a rack movable in ways on the wagon-bed and connected by an arm with the wagon-body, and mechanism for rotating said racks in unison.

6. In a dumping-wagon, a chute connected at its front end to the body thereof and pro-

vided at its rear end with a depending rack, a segmental pinion mounted on an arm secured to said body and a handle for operating said shaft said pinion engaging said rack.

7. In a dumping-wagon, a body with the vertical guides L′ arranged angularly to each other and rising from the floor thereof, and sectional spouts hinged to said guides, each of said sections having a vertical and a horizontal limb as described.

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