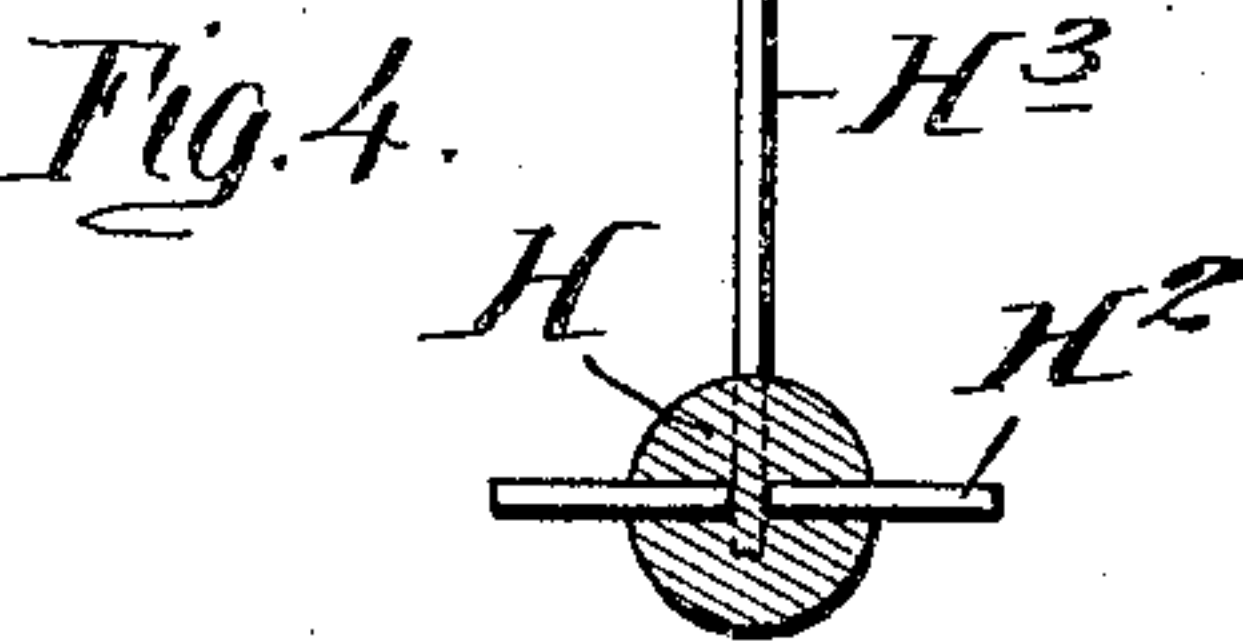
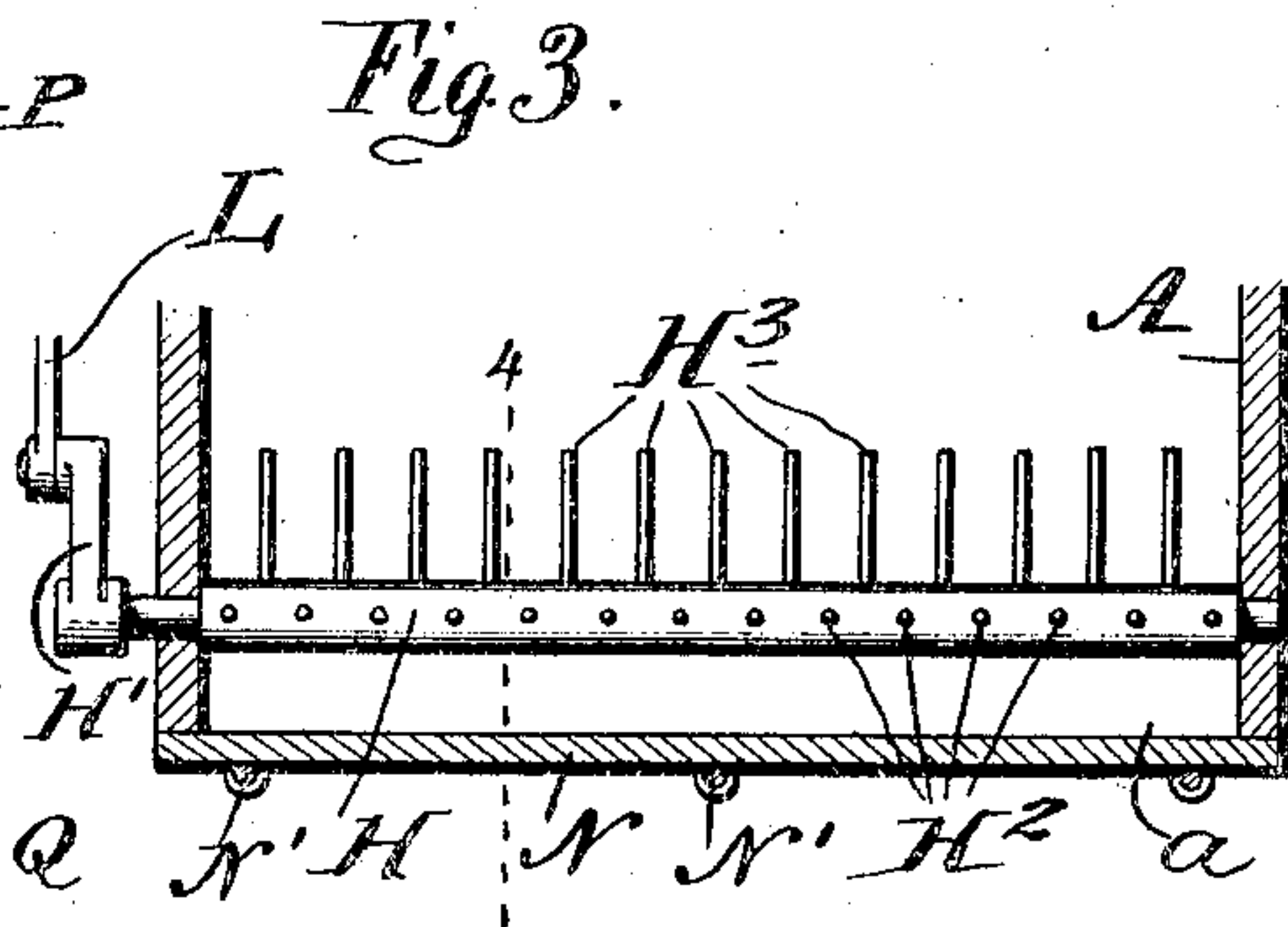
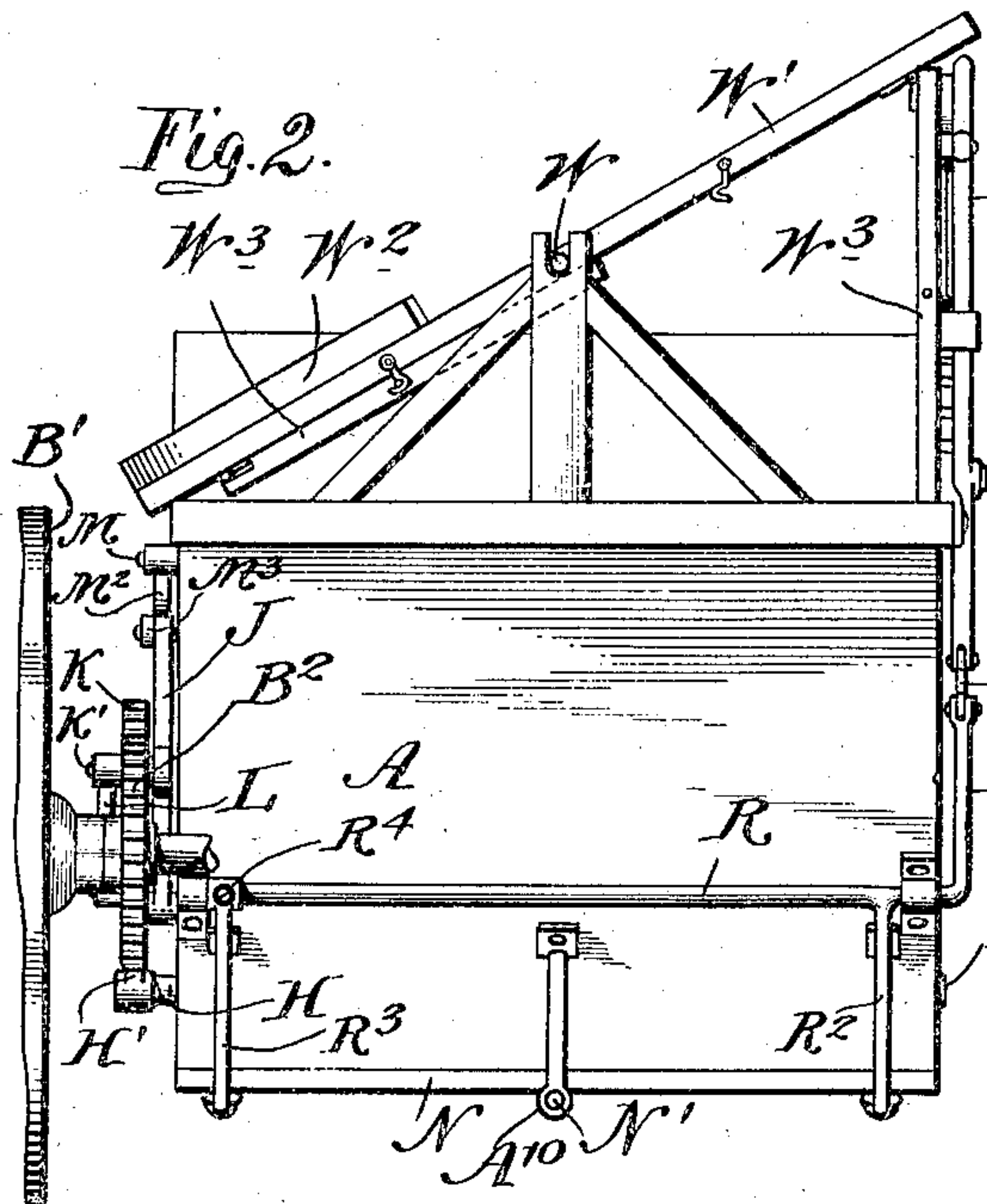


PATENTED SEPT. 13, 1904.

SAND WAGON.

NO MODEL.



By *Siles W. Albertson* Inventor  
his Attorney  
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## UNITED STATES PATENT OFFICE.

SILAS W. ALBERTSON, OF ROSLYN, NEW YORK.

## SAND-WAGON.

SPECIFICATION forming part of Letters Patent No. 769,977, dated September 13, 1904.

Application filed January 27, 1904. Serial No. 190,852. (No model.)

*To all whom it may concern:*

Be it known that I, SILAS W. ALBERTSON, a citizen of the United States, residing at Roslyn, in the county of Nassau and State of New York, have invented a certain new and useful Improvement in Sand-Wagons, of which the following is a specification.

I have in a patent issued to me, dated January 14, 1902, No. 690,913, set forth a combination of parts which serve well in distributing sand upon roads and in screening it in the act of loading it. I have also in that patent set forth further means for screening whereby stones and other masses too large to serve well may be separated from the material after it is loaded and in the act of transporting and delivering it.

My present invention applies to the same general construction, and any portions not herein specifically described may be understood to be as in my aforesaid previous description.

I have devised improvements which prevent a too strong descent of the sand and avoid the liability of the sand to become arched without holding back the sand too much under any conditions.

I provide a peculiar agitator and oscillate or rock it. I have a row of teeth or agitating-spikes extending along on the upper side with shorter teeth or none at all on the lower side and on the front and rear sides of the agitator.

I provide simple means for adjusting the quantity of sand with great nicety, for shielding the gearing from the sand, and for holding and releasing a single screen.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a side elevation showing all the principal parts with the positions of the bearing-wheels shown in dotted outline. Fig. 2 is a corresponding rear elevation. Fig. 3 is a vertical section through a portion in the plane of the axis of the agitating-shaft. Fig. 4 is on a larger scale. It is a cross-section on the line 4 4 in Fig. 3.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is the hopper.

W' is a broad screen carried on a shaft W, extending longitudinally, supported on the elevated front and rear and capable of being inclined to the right or left, according as it shall be required to shovel the sand upon it from one side or the other.

W<sup>2</sup> is a diagonal partition set in the framing of this screen arranged to defend the mechanism carried on and near the rear hubs from receiving any of the material rejected by the screen.

W<sup>3</sup> are braces hinged to the screen, always ready to be adjusted to hold the screen properly inclined in one direction or the other, as required.

H is a shaft extending across the hopper near the base, and H<sup>3</sup> H<sup>3</sup>, &c., are long spikes or other projections of iron or steel set in the upper side adapted to agitate the sand in the hopper when the shaft H is rocked. H<sup>2</sup> H<sup>2</sup> are shorter teeth set in the same shaft.

H' is an arm fixed on the projecting end of the shaft H, engaged by a crank-pin in its end with a link L.

One of the rear wheels B' carries a gear-wheel B<sup>2</sup> on its hub. K is a gear-wheel adapted to be turned thereby when properly engaged and carrying a crank-pin K', which engages the link L. This wheel turns loosely on a center pin J', carried in a lever J, which latter is controlled by the driver through a treadle M', set on a transverse shaft M, extending across the wagon at the front, and an arm M<sup>2</sup> thereon, and a link M<sup>3</sup> leading therefrom to the lever J. When the driver acts with his foot on the treadle M' and partially revolves the shaft M, he thereby thrusts on the link L, inclines the lever J rearward, and engages the gears K and B<sup>2</sup>, and as the wagon moves forward the rotation of the wheels rocks the shaft H and by the teeth H<sup>2</sup> and H<sup>3</sup> efficiently stirs the sand and insures its uniform discharge through the aperture *a* below.

P is a hand-lever pivoted to the framing of



the wagon. The driver by turning this lever, and thereby pulling on the connected link Q, acts through an arm R' to rock a shaft R, supported in bearings on the rear inclined face of the hopper.

R<sup>2</sup> and R<sup>3</sup> are arms set on the shaft connecting with a sliding valve T, mounted below and controlling the aperture *a*. The friction holds this valve in any position in which it may be set, and the driver soon finds in what position to set the hand-lever to get the right quantity of sand on the road, so that both sides of the road shall receive equal quantities of sand. One of the arms R<sup>3</sup> is held on the shaft R by a pinching-screw R<sup>4</sup>, which when slackened allows the arm to be shifted around. This makes it practicable to skew the position of the valve so as to make one side of the aperture *a* open more than the other to any extent required.

N is a valve of sufficient area applied below the aperture *a* and provided with bars N', (shown as three, extending longitudinally relatively to the motion,) which are supported in eyes A<sup>10</sup>, carried on the wagon. The valve is well supported and cannot become clogged with sand even if it is of a bad quality and damp.

I attach importance to the alternate partial rotation of the agitating-teeth H H in opposite directions, for the reason, among others, that it allows the shaft to extend across in a lower position and for the teeth H H, which extend upward, to be longer than when the shaft is completely revolved. The arrangement avoids any excessive compacting of the sand at any point and insures a free and uniformly-graduated delivery.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. The bevel of the hopper may be varied within wide limits. Instead of making the shaft H of wood and supplying the teeth H<sup>2</sup> H<sup>3</sup> by simply driving stout nails or spikes therein the shaft may be made of metal and the teeth cast or otherwise made integral therewith.

Parts can be used without the whole. I can dispense with the provisions for skewing the valve T, taking care to adjust the parts so correctly that the opening for the escape of the sand shall be uniform in width from one side quite across the whole base of the hopper. I can add parts. Instead of connecting the arms R<sup>2</sup> and R<sup>3</sup> each by engaging an eye in their ends, with a corresponding end formed in one of the bars N, I can leave the bars with plain ends and, locating the arms R<sup>2</sup> and R<sup>3</sup> differently, connect them by separate links to the rear edge of the valve N. Such may in many cases be preferable.

I claim as my invention—

1. In a vehicle of the character described, the combination with a hopper having a discharge-aperture and controlling-valve, of a shaft with agitating projections or teeth mounted within it and means for rocking it alternately in opposite directions, substantially as herein specified.

2. In a vehicle of the character described, the combination with a hopper having a discharge-aperture and controlling-valve, of a shaft with agitating projections or teeth on its upper side, and means for turning it to a limited extent alternately in opposite directions, and provisions by the treadle M' and connections for engaging and disengaging the rocking means at will, all substantially as herein specified.

3. In a vehicle of the character described, the combination with a hopper having a discharge-aperture and controlling-valve, of a shaft with agitating projections or teeth mounted within it, and means for rocking it, and provisions by the treadle M' and connections for engaging and disengaging the rocking means at will, and also independently-operable provisions for varying the opening of the discharging-aperture on one side or both sides, all substantially as herein specified.

4. In a vehicle of the character described, the combination with a hopper having a discharge-aperture and controlling-valve, of a shaft with agitating projections or teeth mounted within it, and means for rocking it, and provisions by the treadle M' and connections for engaging and disengaging the rocking means at will, a screen W' arranged to be inclined toward either side at will and having a diagonal partition W<sup>2</sup> arranged to shield the operating mechanism, all substantially as herein specified.

5. In a vehicle of the character described, the combination with a hopper having a discharge-aperture and controlling-valve, of a shaft with agitating projections or teeth mounted within it, and means for rocking it, and provisions by the treadle M' and connections for engaging and disengaging the rocking means at will, a screen W' arranged to be inclined toward either side at will and having a diagonal partition W<sup>2</sup> and a hinged brace W<sup>3</sup> adapted to serve substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

SILAS W. ALBERTSON.

Witnesses:

S. H. STODDER,  
M. F. BOYLE.