

No. 640,129.

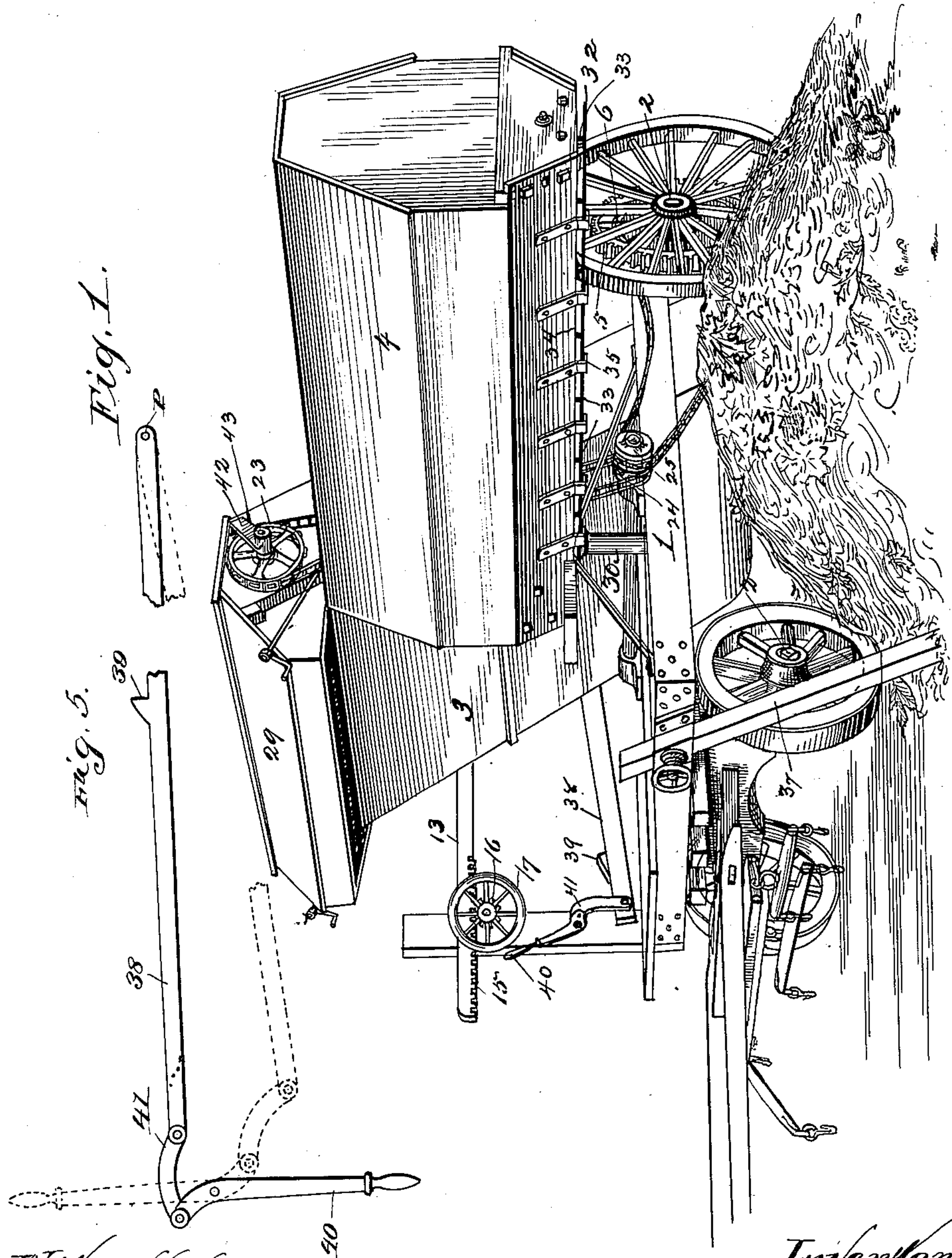
Patented Dec. 26, 1899.

A. H. GREELEY & C. O. BARTLETT.
DUMPING WAGON.

(Application filed Jan. 28, 1898.)

3 Sheets—Sheet 1.

(No Model.)



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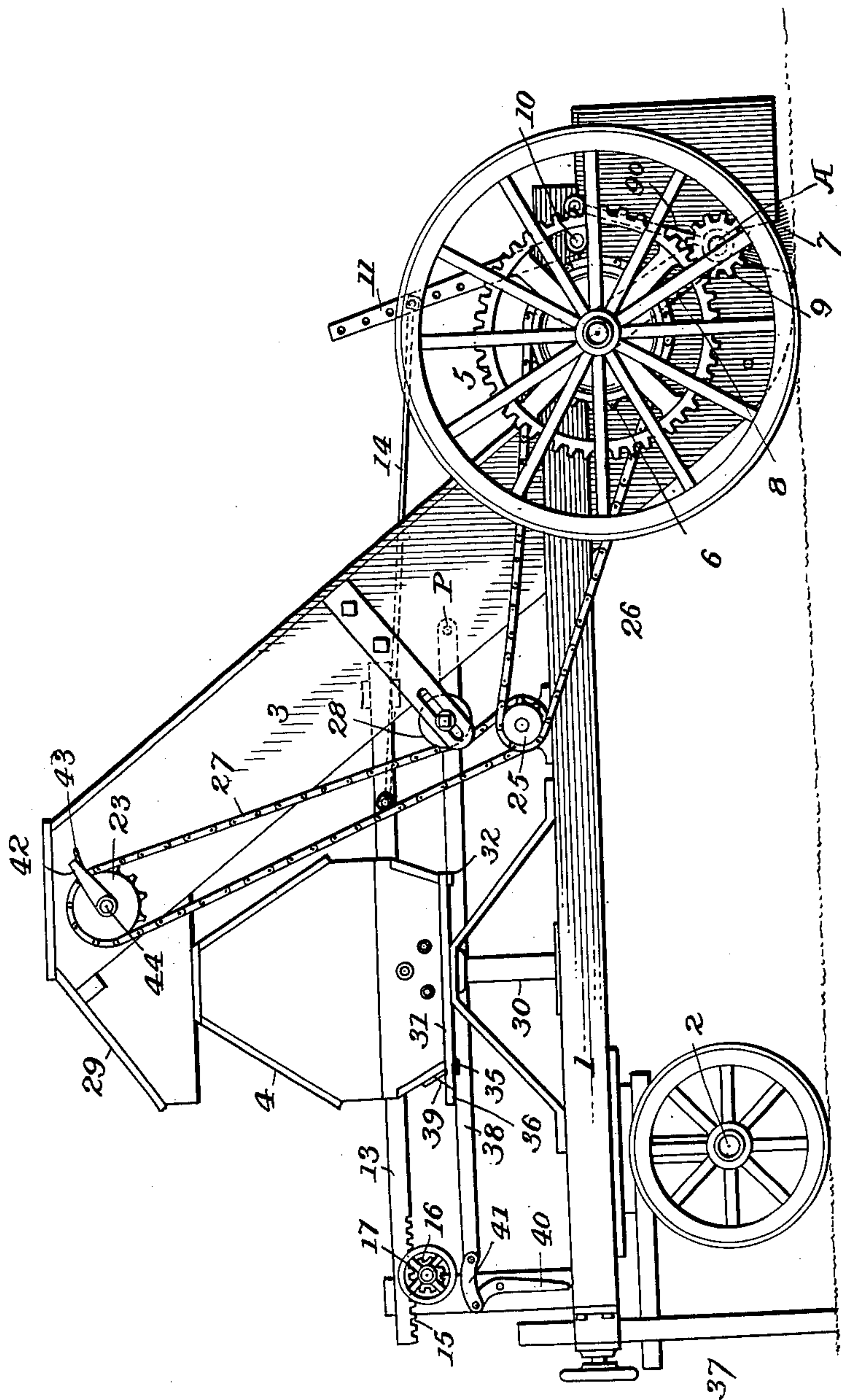
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Fig. 2.



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Fig. 3.

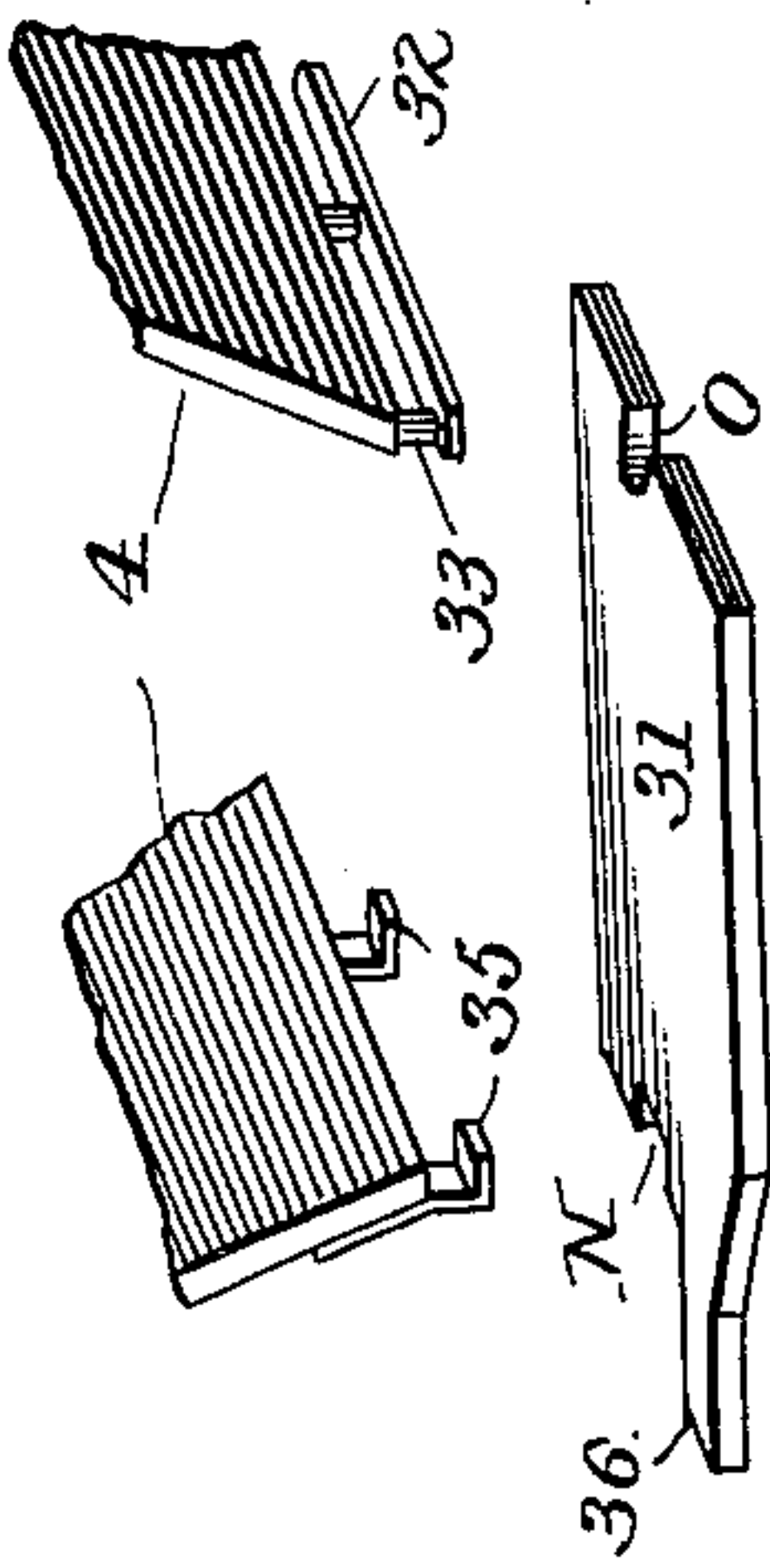
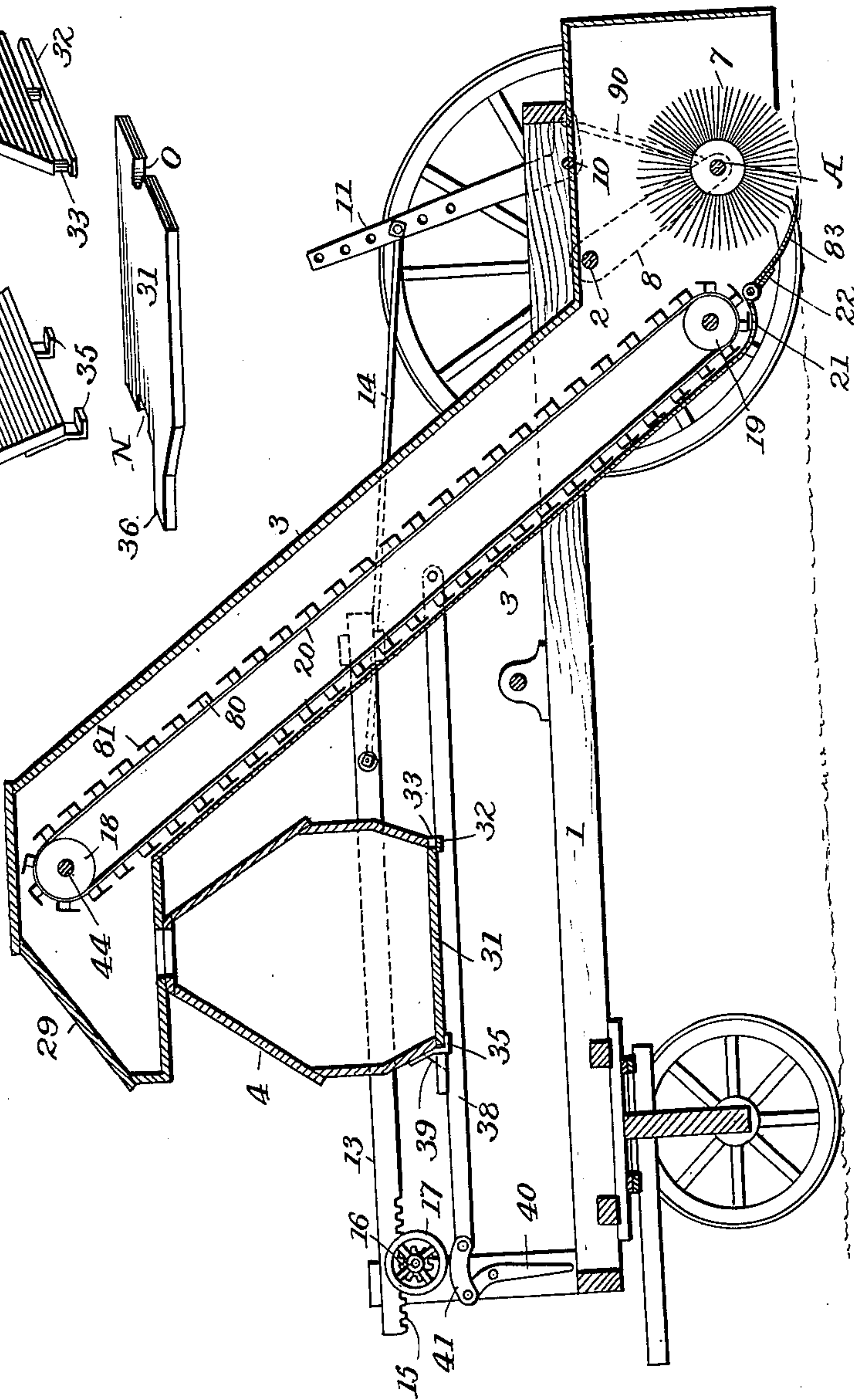


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALTON H. GREELEY AND CHARLES O. BARTLETT, OF CLEVELAND, OHIO.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 640,129, dated December 26, 1899.

Application filed January 28, 1898. Serial No. 668,270. (No model.)

To all whom it may concern:

Be it known that we, ALTON H. GREELEY and CHARLES O. BARTLETT, citizens of the United States, and residents of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Dumping-Wagons, of which we hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in dumping-wagons; and the object of the invention is to provide a construction in which the dumping-receptacle may be bodily moved beyond one side of its supporting-frame to discharge its contents. By this arrangement we avoid the necessity of providing special means for lifting the weight of the dirt-receptacle and the material contained therein, as would be necessary if the contents were discharged through an opening in the end or side of the receptacle.

The invention, which consists in the peculiar construction and arrangement of parts that will be hereinafter described, may be used in connection with various mechanisms, and in the drawings we have illustrated the same as combined with a street-sweeping machine of that type in which the material raised by a rotary brush is delivered to an elevator or conveyer, by which it is deposited in the dumping-receptacle.

Figure 1 is a perspective view of a machine embodying our improvements, the rotatable dirt-receptacle being shown in position to discharge its contents and the bottom plates thereof being removed. Fig. 2 is a side elevation of the machine. Fig. 3 is a view illustrating the manner of securing the removable bottom plates in the rotatable dirt-receptacle. Fig. 4 is a longitudinal sectional view of the machine. Fig. 5 is a detail view of the bar for locking the dirt-receptacle in position to be loaded.

Like letters and numerals of reference indicate corresponding parts in all the figures of the drawings, referring to which—

1 designates the main supporting-frame of the machine, it being provided with suitable carrying-wheels, which are mounted on axles 2. Upon this frame are mounted the rotary

cleaning-brush, the conveyer for elevating the material lifted by said brush, and the receiver or receptacle for holding the dirt until a sufficient quantity has been accumulated. The axle A of the brush 7 is carried by hangers or links 8, which are loosely connected at their upper ends to the rear axle 2, and suitable means under the control of the driver, at the forward end of the machine, are provided for causing said brush-supporting hangers to vibrate about the axis of said rear axle, and thereby vary the position of the brush relative to the frame of the machine and the surface to be cleaned. In the embodiment of the invention herein illustrated this adjusting means comprises two rods or links 9, connected at their lower ends to the axle A of the brush 7 and having their upper ends attached to ears or lugs on a rock-shaft 10, that is mounted in suitable bearings on the main frame 1. The shaft 10 is provided at one end with an arm 11, which is connected, by means of a rod 14, with an adjusting-bar 13, extending longitudinally of the machine. Near its forward end this bar 13 is provided with a series of rack-teeth 15, and a pinion 16 is mounted on a suitable support on the frame 1 and arranged to mesh with said rack 15. By means of a hand-wheel 17 the driver can rotate the pinion 16, and thus move the adjusting-bar 13 longitudinally, thereby rocking the shaft 10 and adjusting the brush 7 as desired. The arm 11 is preferably provided with a series of perforations, so that the rod 14 may be connected therewith at any desired distance from the axis of the shaft 10 to vary the amount of leverage applied to said shaft.

Rotary motion is imparted to the cleaning-brush by means of a gear 5, suitably secured to the rear axle and meshing with a pinion 9, mounted on the brush-axle. This arrangement of parts enables the brush to be elevated or vibrated about the axis of the rear axle in the manner above described without destroying the connection between its pinion 9 and the master-gear 5.

3 designates the casing or inclosing box for the endless conveyer, by means of which the dirt raised from the ground by the brush 7 is carried to the receptacle provided therefor. This casing is preferably made in the form shown in the drawings, it having at its up-

per end a forwardly-extending hood open at its lower side and provided at its lower end with a flexible shoe or apron 22, that extends on curved lines toward and projects partially under the cleaning-brush 7. Preferably this shoe or apron consists of an upper portion of metal and a lower rearwardly-projecting portion 83 of leather, upon which the dirt thrown forward by the brush 7 is initially received.

Within the box or casing 3 are mounted the drums 18 19, about which extends the endless bucket conveyer 20. This consists, preferably, of a band of cloth having a series of transversely-extending wooden strips 80, provided with projecting metal plates 81, secured thereto. The plates 81 protect the wooden strips from wear and form sides to retain the dirt along that run of the conveyer which moves upward. The lower end of the box or casing 3 is curved and so shaped as to partially surround the lower drum 19 of the conveyer, as indicated at 21, and to the rear edge of this portion 21 is hinged the above-described apron 22. The conveyer is driven from the sprocket-wheel 6, mounted on the rear axle of the machine. A chain 26 connects said sprocket with a sprocket 25, mounted on one end of a shaft journaled in suitable bearings on the main frame 1. On the same shaft with the sprocket 25 is secured a similar sprocket 24, which is connected, by means of a sprocket-chain 27, with a driving-sprocket 23, mounted on the shaft 44 of the upper drum or roller 18 of the conveyer. An idler-sprocket 28 is suitably secured to the conveyer-casing and arranged to engage with the chain 27 to take up any sag that would otherwise occur therein.

4 designates the dirt receiver or receptacle, which is mounted upon the main frame in such manner as when in operative position to extend below the forwardly-projecting hood 29 of the conveyer-casing. Said receptacle is preferably open at the upper end, so that material carried upwardly by the endless conveyer and discharged over the drum 18 will be received therein. The receptacle 4 is mounted upon a vertical pivot or rotatable support 30 at one side of the machine, and when a sufficient quantity of dirt has accumulated therein said receptacle is swung about said pivot to cause its body to project beyond the side of the machine, as indicated in Fig. 1, and the contents thereof can then be discharged onto any desired surface or into a wagon. Preferably the bottom of this dirt-receptacle is composed of a series of removable plates 31, each being provided at one end with a suitable handle 36. As shown, the side walls of the receptacle 4 are inclined inwardly near the bottom thereof, and a supporting-bar 32 is secured below the lower edge of one of said sides, it being preferably connected to said side, but held at a distance therefrom equal to the thickness of the bottom plates 31, by means of a series of pins or bolts 33. To the opposite side wall of the re-

ceptacle 4 are secured a series of hook-shaped hangers, which are arranged in substantial alinement with the pins or bolts 33. Each of the removable bottom plates is provided in its edge adjacent to the handle 36 with a notch N and in its opposite end or edge with a similar notch O. To place either of the removable plates in position, the notch O thereof is placed in alinement with one of the pins 33 and the plate is pushed rearwardly until the notch N thereof aligns with and permits the forward end of said plate to be lifted vertically past the hook 35. Then by a slight forward movement the body of said hook is brought into the notch N, and the plate 31 is supported by the strip 32 and hook 35.

37 designates an inclined bar or strut which is adjustably secured to the front of the frame of the machine and adapted to engage with the ground to prevent the machine from being tipped when the loaded dirt-receptacle is moved into position to discharge its load at one side of the machine, as shown in Fig. 1.

When in position to be loaded, the receptacle 4 is engaged by a bar 38, which is pivotally connected at one end P with the side wall of the conveyer-casing and at its opposite end is connected, by means of a link 41, with an operating-lever 40. A lug or stop 39 is secured to said bar and is adapted to engage with the forward inclined side wall of the receptacle 4 when the same is in position to be loaded. When it is desired to discharge the contents of the receptacle 4, it will be understood that the locking or retaining bar 38 is first moved into the position shown in Fig. 1 and in dotted lines in Fig. 5.

It will be seen that by mounting the refuse-receptacle upon a vertical pivot or axis adjacent to one side of the machine the operator is enabled to readily swing the same into a position where it will project to any desired extent beyond the side of the main carrying-frame, and it is unnecessary to lift the weight of the refuse material when moving the receptacle therefor into position to discharge its contents. By our construction also the operator is enabled to easily regulate and control the escape of material from the refuse-receptacle—that is, by withdrawing one or more of the removable bottom boards the size of the discharge-opening is varied. The entire weight of the material is not brought against any one of the bottom pieces, but is distributed equally over the entire series, whereby any one may be easily withdrawn and the point of discharge varied according to the wishes of the operator.

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

1. The combination with a wheeled supporting-frame, of a receptacle mounted at one end upon a pivot at one side of the supporting-frame, whereby it can be swung transversely outside of its frame, and having a discharge-opening in its bottom.

2. The combination with a frame, and supporting - wheels therefor, of a receptacle mounted at one extremity upon a vertical pivot at one side of the machine, whereby it can be swung to one side thereof, and having a removable bottom.

3. The combination with a wheeled supporting - frame, of a receptacle extending transversely across said frame and mounted at one end upon a vertical pivot situated at one side of the frame, a locking device for holding said receptacle in position to be loaded, and a removable bottom adapted to close the lower end of the receptacle.

4. The combination with a supporting-frame mounted upon suitable carrying-wheels, of a receptacle supported on the frame and adapted to be moved beyond one side

thereof to discharge its contents, and a bar or strut connected with the frame and adapted to engage with ground at that side of the machine beyond which the receptacle is projected to discharge its load.

5. The combination of a wheeled supporting-frame, a horizontally-adjustable receptacle mounted on the frame and adapted to be projected beyond a side of the machine to discharge its contents, and a series of removable bottom plates for said receptacle.

In testimony whereof we hereunto set our hands this 15th day of December, A. D. 1897.

ALTON H. GREELEY.

CHARLES O. BARTLETT.

Witnesses:

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