

J. CABLE.
SWEEPING MACHINE.
APPLICATION FILED DEC. 24, 1908.

947,963.

Patented Feb. 1, 1910.

3 SHEETS—SHEET 1.

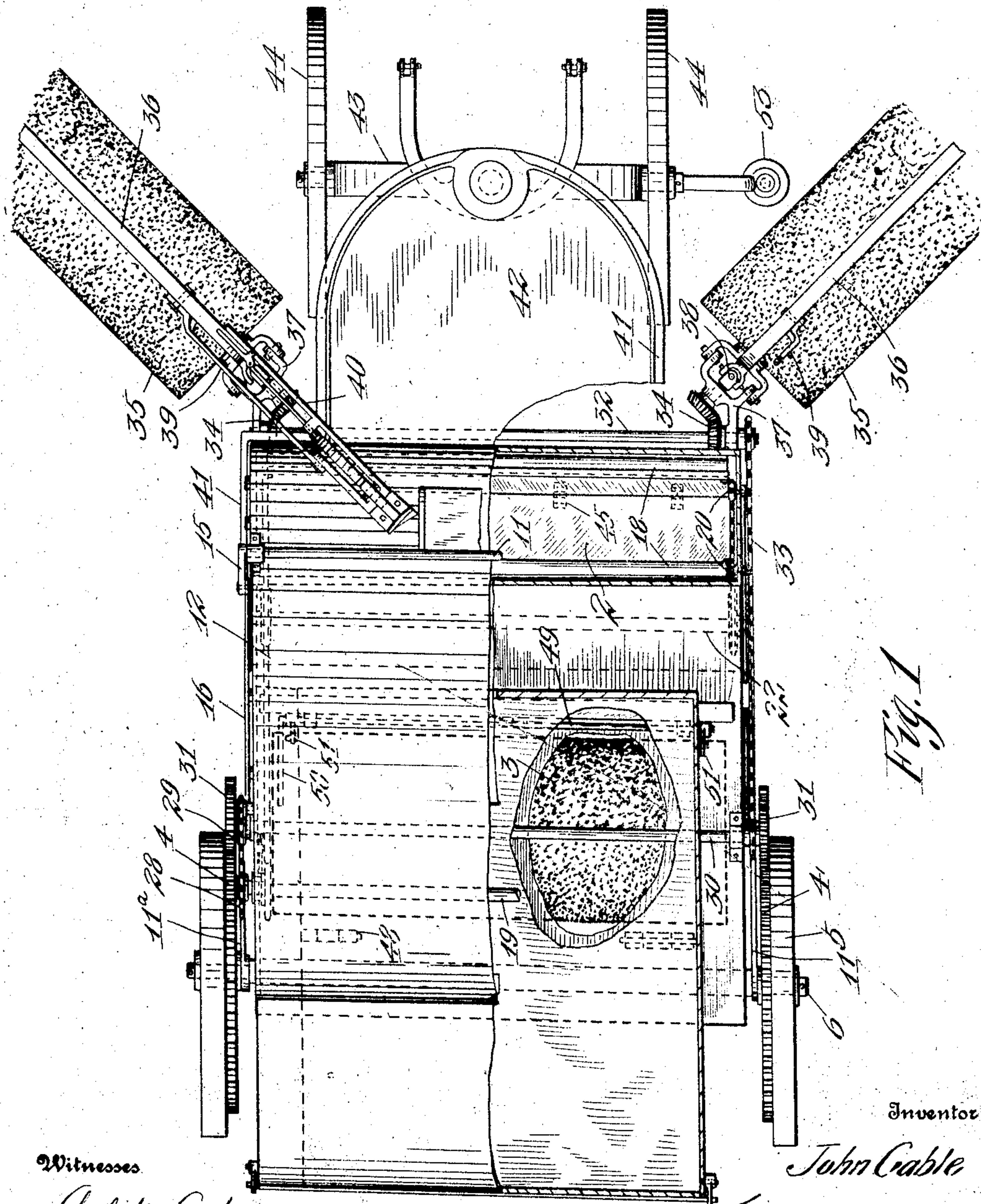


Fig. 1

Witnesses

Arlita Adams
Louise Gaudette

Inventor

John Cable

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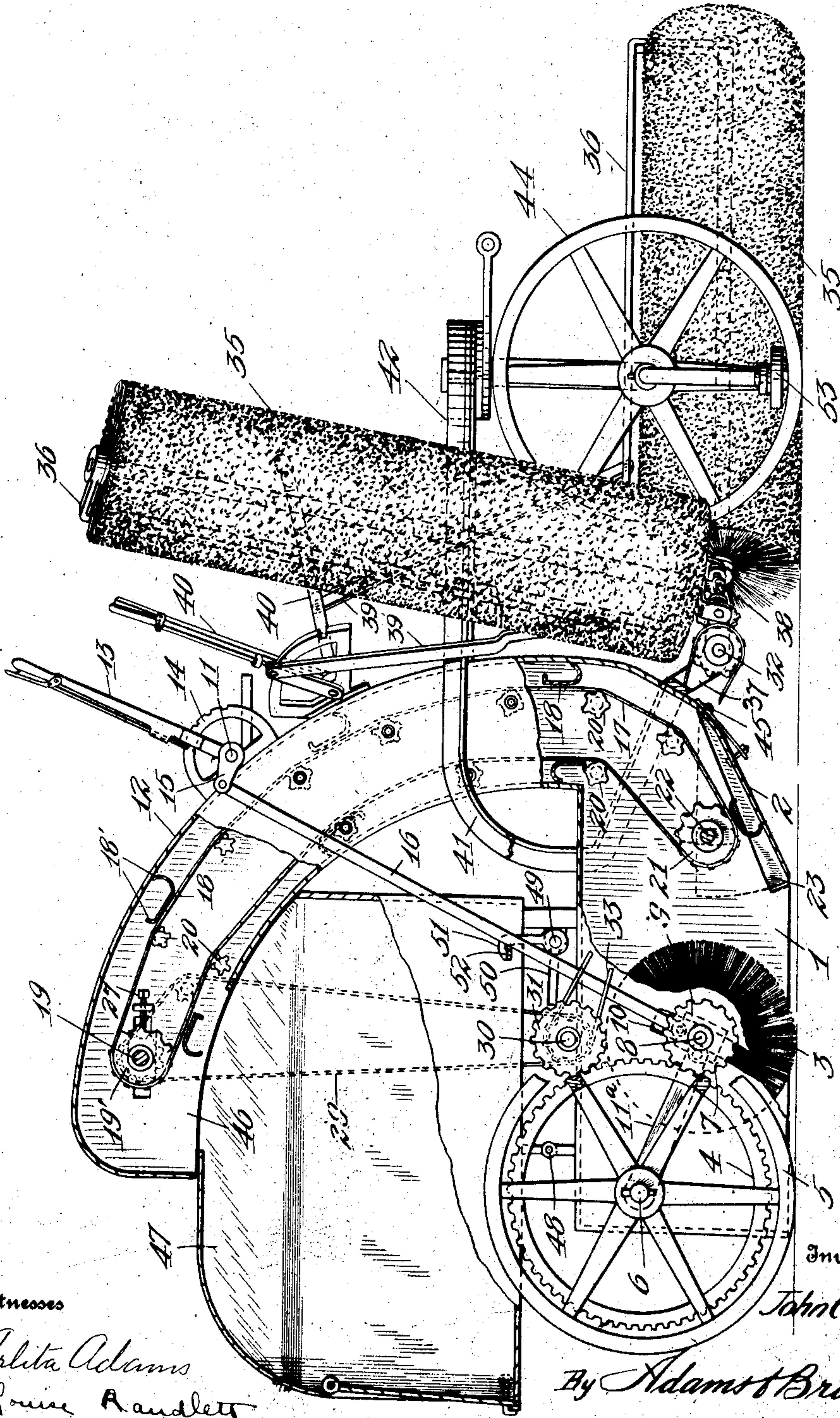


Fig. 2

Witnesses

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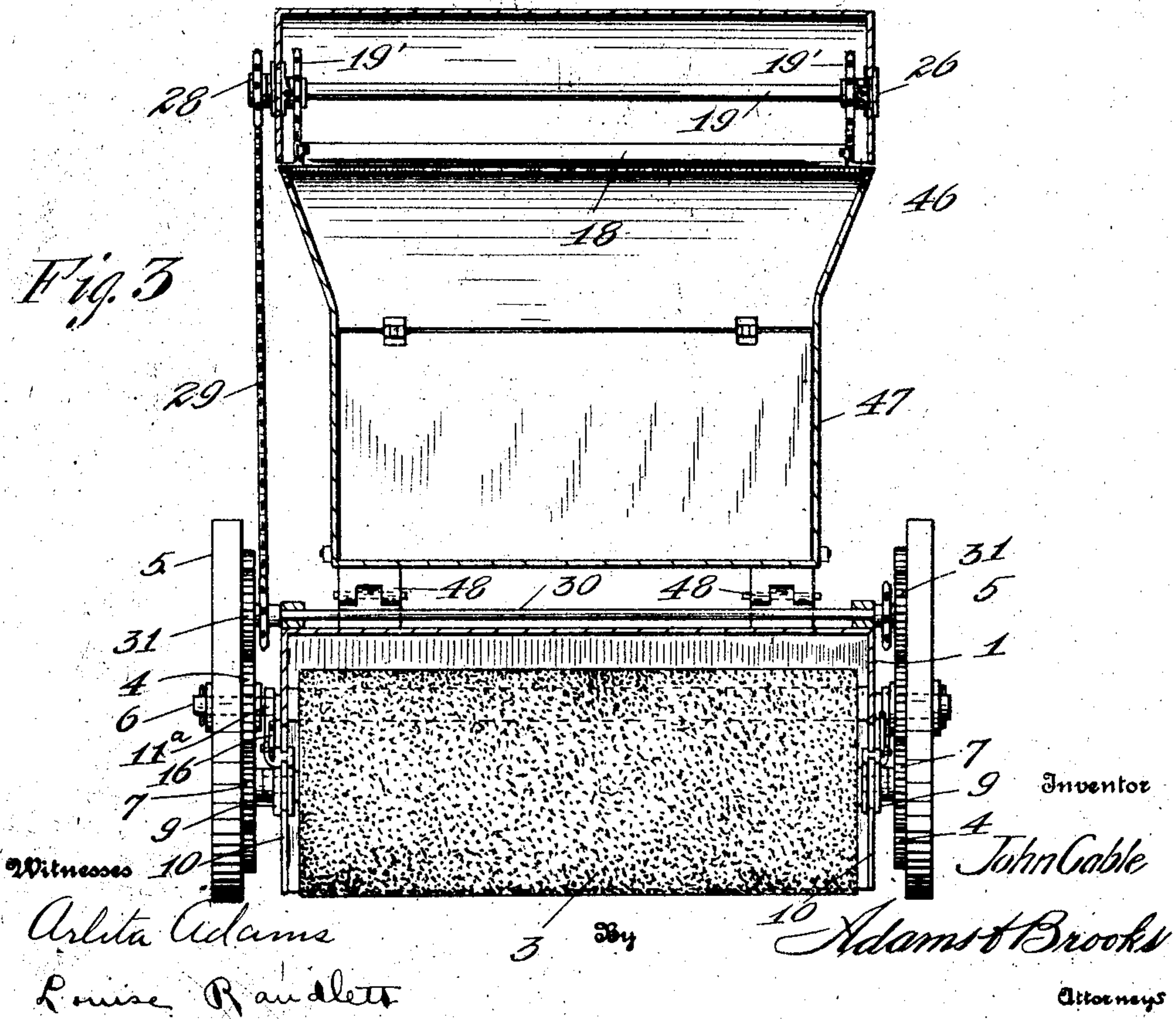
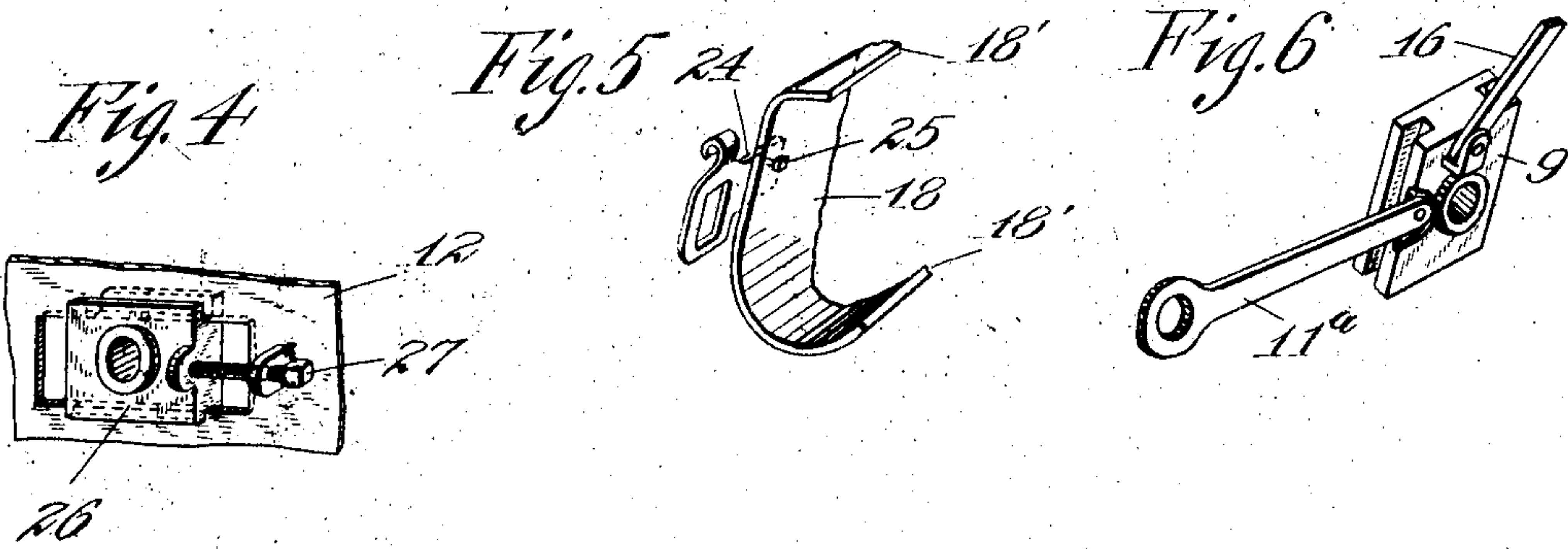
Attorneys

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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

JOHN CABLE, OF SEATTLE, WASHINGTON.

SWEEPING-MACHINE.

947,963.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed December 24, 1908. Serial No. 469,167.

To all whom it may concern:

Be it known that I, JOHN CABLE, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Sweeping-Machines, of which the following is a specification.

My invention relates to improvements in machines of the above type, having more particular reference to street sweeping machines, and aims primarily to provide a simplified and improved construction which will be practically dustless in operation.

A further object resides in the provision of an apparatus of this character which can be operated with a minimum amount of power and easily controlled by the operator.

With the above and other objects in view, to be referred to as my description progresses, my invention resides in the structural features, arrangements and combinations of parts, hereinafter described and succinctly defined in my annexed claims.

Referring to the accompanying drawings in which like numerals of reference indicate like parts throughout: Figure 1 is a top plan view of a sweeping machine constructed in accordance with my invention, parts being broken away. Fig. 2 is a side view thereof with parts broken away. Fig. 3 is a cross sectional view. Fig. 4 is fragmentary detail view, illustrating more particularly one of the slidably supported bearings for the drive shaft. Fig. 5 is a fragmentary view showing more particularly the means for securing the flights to the endless chains of the conveyer, and Fig. 6 is a view in perspective of one of the blocks in which the axle of the rear brush is journaled.

Referring to the drawings, 1 indicates a bottomless housing provided at its forward end portion with an inclined apron 2, arranged to receive the sweepings from a suitable brush 3, supported for rotation and driven by drive gears 4, fixed to the rear traction wheels 5, which latter are journaled on an axle 6, supported in any desired manner at the rear end portion of the housing as clearly shown in Figs. 1 and 2.

A snow considered, I provide gears 7 on the end portions of the axle 8 of brush 3, the same being in mesh with drive gears 4 and being of a comparatively small diameter.

To compensate for wearing of the brush, I support the same for vertical adjustment,

axle 8 being journaled in blocks 9, slidably arranged in curved slots 10, provided in the side walls of housing 1.

Blocks 9 are pivotally connected with arms 11^a, swingingly supported on axle 6, whereby during vertical adjustment of the brush, gears 7 will not be thrown out of mesh with gears 4.

The adjustment of brush 3 is effected by the operator who rocks a cross shaft 11, journaled on an upwardly extending casing 12, through the medium of a lever 13, having a latch mechanism of ordinary form for engagement with the toothed segment 14. Shaft 11 is provided on its end portions with cranks 15, connected by links 16 with blocks 9, (see Figs. 2 and 6).

Reference numeral 17 indicates an endless conveyer extending from apron 2 in a forward direction, then upwardly in a rearwardly curving path to the point of discharge. By this arrangement of the conveyer the flights 18 thereof are caused to first drag over the face of apron 2 to gather the sweeping. Flights 18 have outwardly curved side edge portions 18', and these prevent displacement of the material during the rearward travel of the flights. The lower side edge portion 18' of each flight projects outwardly farther than the upper one so as to engage and travel over the inner face of the forward wall of casing 12.

As now constructed, conveyer 17 comprises two chains passing from sprocket wheels 19' on a drive shaft 19, over suitable idlers 20 and 21, the latter of which are carried on a shaft 22, supported in side wings 23 of apron 2.

To secure flights 18 on said endless chain, I provide certain of the links with lugs, as 24 (see Fig. 5) to which said flights are secured by screws 25.

Drive shaft 19 is journaled in slidable bearings 26, connected with adjusting devices 27, and is provided on one end with a sprocket wheel 28 to which power is transmitted by a chain 29 from a driven shaft 30. Shaft 30 is journaled on the top wall of housing 1 and provided with gears 31 meshing with drive gears 4.

Reference numeral 32 indicates a forwardly disposed shaft driven by a chain 33 from shaft 30 and transmitting power to suitable gearing 34, 34 to side brushes 35. Brushes 35 are set in forwardly diverging planes so as to sweep on opposite sides of

the path of brush 3 and throw the sweepings caught thereby into the path of said brush 3, as will be readily understood. Brushes 35 are journaled in frames 36 swingingly supported on brackets 37 of the main frame of the machine and the axles of said brushes are connected by universal joints 38 with the gearing 34, by which construction either or both of the brushes 35 can be swung upwardly as illustrated in Fig. 2, to an operative position. As a means for elevating brushes 35 I have shown links 39 which are connected to frames 36 and to suitable levers 40

15 Brackets 37 are formed on the lower end portions of frame members 41 which are secured in any desired manner to housing 1 and casing 12 and extend forwardly therefrom to provide a platform 42 to which the forward axle 43, for the supporting wheels 20 44, is pivoted.

To prevent injury to apron 2, as by the same striking a rock or other obstruction, I pivotally support the same, as by hinges 45, whereby the apron can swing vertically, the same during such movement carrying with it shaft 22 and thereby insuring of a proper action of the flights in their movement over the face of said apron, at all times.

30 In the operation of my machine, the flights in passing around sprocket wheels 19' discharge their contents through the discharge opening 46 of casing 12 into a suitable receiver, that shown being in the form of a closed receptacle 47, swingingly supported as by hinges 48 on the housing 1. A rock shaft 49, provided with a suitable operating handle 50 is provided on its end portions with catches 51 which normally engage lugs 40 52 on the sides of receptacle 47 to prevent accidental swinging thereof.

If desired one or more fenders 53 may be provided to prevent the housing or projecting parts of the machine coming in contact 45 with the curbing.

While I have herein shown and described a machine which will carry out the functions assigned to it, I reserve the right to make such changes in the details of construction as fall within the scope of my annexed 50 claims.

Having thus described my invention what I claim as new, and desire to secure by Letters Patent of the United States of America, is:

60 1. In a street sweeper, the combination of a housing, sweeping means arranged in said housing, a casing communicating at its front end with the housing and curving upwardly and rearwardly therefrom, a conveyer arranged in said casing and adapted to carry

material to the upper rear end thereof, the casing having a discharge opening at said upper rear end, supporting frame work for the aforesaid parts, a receptacle partially 6 mounted in the space between the casing and the housing and provided in its upper portion with an opening into which material is discharged from the casing, and means for tilting the receptacle rearwardly from the 70 casing to discharge the contents thereof.

2. In a street sweeper, the combination of a housing, a brush mounted therein, a casing extending upwardly and rearwardly from the housing and communicating at its 75 lower end with the front portion of said housing, a conveyer mounted in the casing to carry material upwardly therein to its rear upper end and at which point the curved casing has a discharge opening, a 80 supporting frame work for the above parts, and a dirt receptacle mounted pivotally on said frame work between its ends so as to tilt rearwardly away from the curved casing, said receptacle having its upper front 85 portion curved so as to fit partly into the space between the housing and the casing and the curved portion having an opening in its top to receive material from the discharge of the casing. 90

3. In a street sweeper, the combination of a supporting frame work mounted on wheels, a bottomless housing at the rear portion of said support, a brush mounted in the housing, an apron at the front portion of 95 the housing and in advance of the brush, an upwardly and rearwardly curving casing mounted on the housing and communicating at its lower end with the front portion of the housing and above the apron aforesaid, a 10 conveyer mounted in the casing, said casing having a discharge at its upper rear end, a receptacle having the front body portion thereof received between the curved casing and the housing and being pivoted between 105 its ends and the frame work so as to tilt rearwardly away from the casing, the upper portion of the receptacle being curved to conform with the curvature of the casing and having an opening therein just below the discharge of the casing, locking devices for preventing rearward tilting movement of the receptacle, and mechanism 110 mounted on the casing and connected with the brush to raise and lower the same at will. 115

Signed at Seattle, Washington this 17th day of December 1908.

JOHN CABLE.

Witnesses:

A. A. BOOTH,
STEPHEN A. BROOKS.