

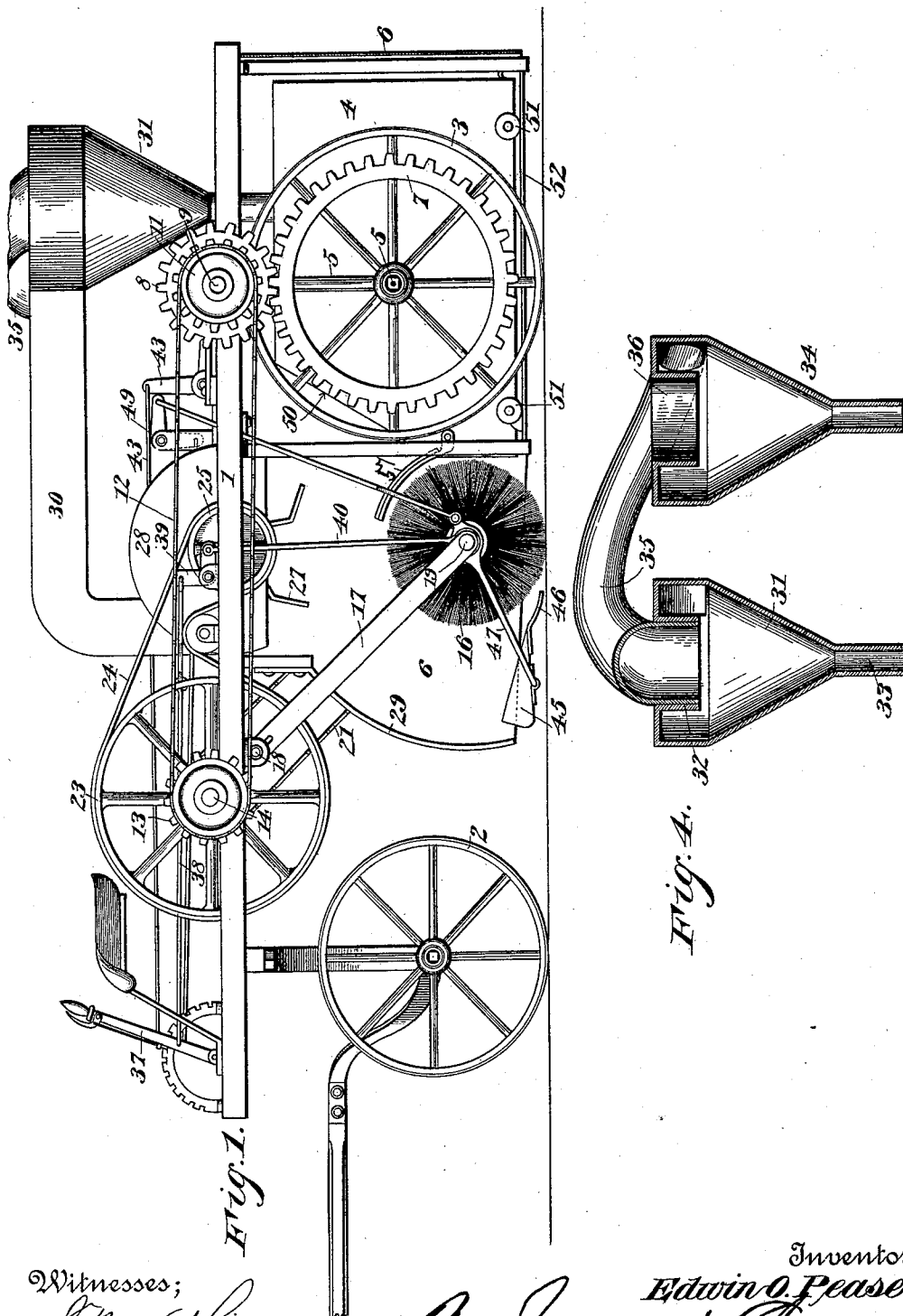
(No Model.)

3 Sheets—Sheet 1.

E. O. PEASE.
STREET SWEEPER.

No. 568,368.

Patented Sept. 29, 1896.



Witnesses;

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E. T. Myers

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(No Model.)

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Fig. 2.

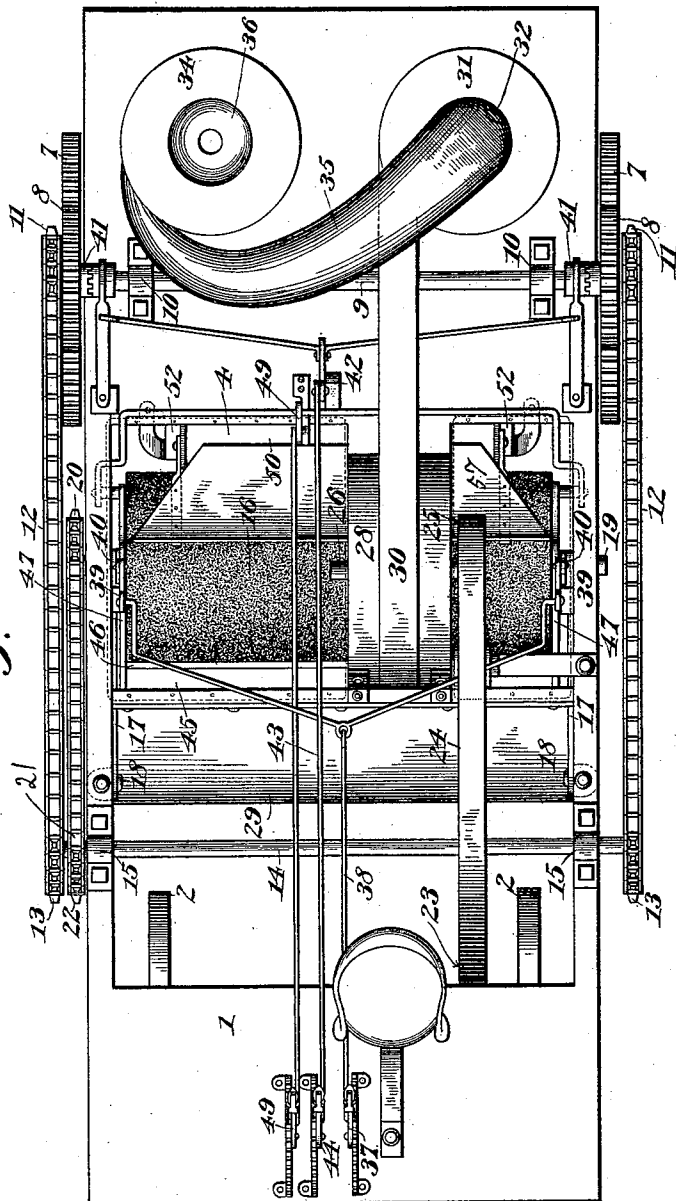
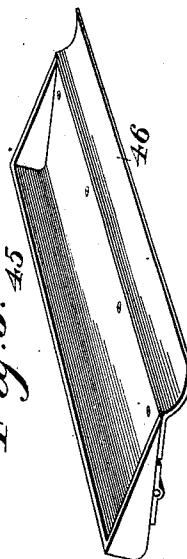


Fig. 3.



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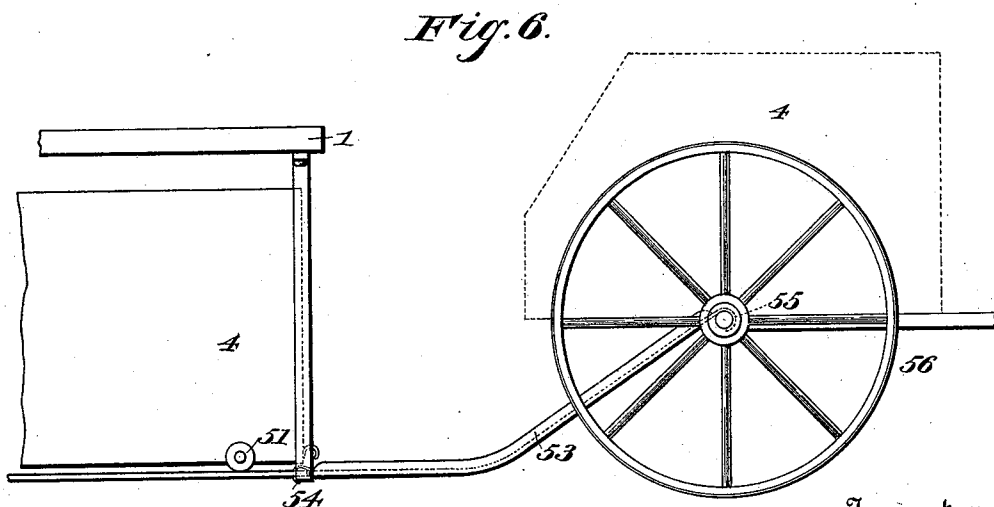
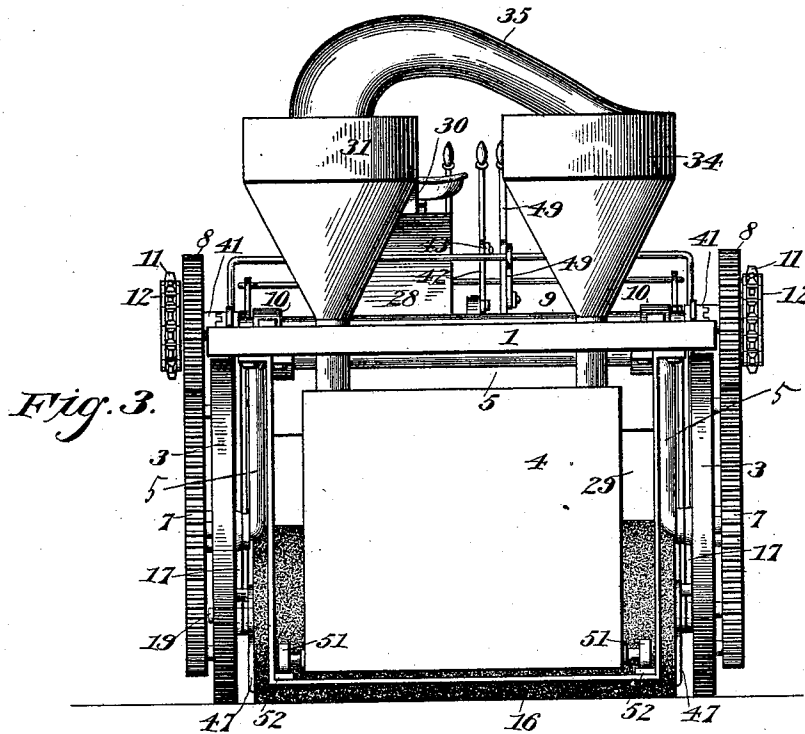
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UNITED STATES PATENT OFFICE.

EDWIN O. PEASE, OF NEWARK, NEW JERSEY.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 568,368, dated September 29, 1896.

Application filed December 19, 1893. Serial No. 494,048. (No model.)

To all whom it may concern:

Be it known that I, EDWIN O. PEASE, of Newark, county of Essex, State of New Jersey, have invented certain new and useful
5 Improvements in Street-Sweeping Machines, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce
10 an improved device which shall be comparatively cheap and economical to operate and adapted to dry-sweep a street; that is to say, without previously sprinkling it, and to take up and deposit the sweepings without the use
15 of moisture and practically without dust.

In the accompanying drawings, Figure 1 is a side elevation of my machine. Fig. 2 is a top plan view thereof, showing part of the platform removed for the purpose of illustrating the mechanism therebelow. Fig. 3 is an
20 end elevation of the same. Fig. 4 is a central vertical section of the dust-collectors detached. Fig. 5 is a view of the tray detached. Fig. 6 is a diagrammatical view illustrating
25 the means of transferring the receptacle to a cart.

Referring to the figures on the drawings, 1 indicates a body or platform carried on fore wheels 2 and rear wheels 3. The platform
30 should be of such a height as to accommodate beneath it a receptacle 4 of suitable size, the rear axle 5 being of inverted-U shape, as shown in Fig. 3, for the accommodation of the receptacle. The sides and rear end of
35 the receptacle are in practice covered by an apron 6 or other suitable cover. The rear wheels are provided with strong gears 7, that, meshing with gears 8, impart motion to a main shaft 9, preferably carried in suitable
40 bearings 10 on the platform. On the shaft 9, preferably outside of the gears 8, fixed sprocket-wheels 11 are carried. These, by sprocket-chains 12, communicate motion through sprocket-wheels 13 to a shaft 14, carried in suitable bearings 15 on the body.
45

16 indicates a brush or agitator carried on vertically-adjustable bearings, arms 17, pivoted, for example, underneath the bed, as indicated at 18. On one end the brush-shaft
50 19 carries a fixed sprocket-wheel 20, which, through a sprocket-chain 21, derives motion from a sprocket-wheel 22, secured to the

shaft 14. Upon the shaft 14 is secured a belt-pulley 23, which, by a belt 24, drives a pulley 25 on a fan-shaft 26, carried in suitable bearings. A fan 27 is secured to the fan-shaft
55 within a housing 28. This housing opens at its lower end into a sort of chamber defined by the apron 6 and a front guard 29. The fan in its revolutions creates an upwardly-
60 directed blast that takes up the sweepings raised by the revolutions of the brush 16.

A chute 30 communicates with the fan-housing 28 and receives from the fan the blast loaded with sweepings from the brush. The
65 chute communicates with a dust-arrester 31, of what may be called the "pneumatic" type, or what is better known as a "cyclone dust-arrester;" that is to say, the chute enters the
70 side of an inverted conical chamber having central walls or air-discharge aperture 32 in its upturned base and dust-discharge aperture 33 in its inverted apex. The dust-laden blast discharging into the chamber on one
75 side takes up a gyratory or whirling motion within the chamber, thereby, by the aid of centrifugal force, depositing the heavier dust particles against the side walls of the chamber and allowing the purified air to issue
80 through the aperture 32. The dust drops from the chamber into the receptacle 4. By this means the sweepings may be collected and deposited into the receptacle without the necessity of sprinkling and practically without dust.
85

It happens, particularly with reference to a machine of this sort in which occasionally windrows of accumulations will be encountered, that a sudden overlaid blast may be discharged into the chamber 31. In that case
90 the chamber would "puff," as it is called; that is to say, it would be unable to collect the excessive quantity of dust, which excessive quantity would be discharged with the air through the aperture 32. To prevent the
95 occurrence of puffing in dust-collectors of this class, I have devised means of connecting them in "series," it may be called; that is to say, I employ a plurality of collectors, (two being shown in the drawings and the second
100 one indicated at 34,) so that the discharge-aperture of the first one is operatively connected with the side of the next one, and so on.

In the drawings a conduit or pipe 35 connects the discharge-aperture 32 of the collector 31 with the side of the collector 34. If the collector 31 should be overlaid, the pipe 35 will conduct the blast and excess of dust to the collector 34, which could discharge the purified air from the discharge-aperture 36 in like manner as was described with reference to the collector 31.

The numbers of collectors employed and connected in series may be regulated by the amount of work to be performed by the machine. For raising the brush I prefer to employ a segment-lever 37, connected by a rod 38 to bell-levers 39, carried on the platform, and by rods 40, fastened to the axle 19 of the brush. Any suitable means, however, may be substituted for this purpose. I also contemplate the use of clutches 41, connected to pivoted supports and, through connecting-rods, a bell-crank lever 42, and rod 43, to a segment-lever 44, by which the operating mechanism of the machine may be thrown out of operation.

Another feature of my invention consists in the employment of a tray 45, having an extension-piece 46, trailed in front of the brush 16. This tray is pivotally carried on arms 47, pivoted, respectively, to the ends of the axle 19 and extending beyond it. The heavier collections of the brush that it would be impracticable to cause the blast to take up will be caught by the tray. When the tray becomes full, the arms 47 are depressed by suitable means, as, for example, the system of levers 49 illustrated. By this means the tray is swung above the brush and discharged upon it while in rotation. Its contents are immediately swept into the mouth 50 of the receptacle through a guide-chute 57, carried in front thereof. The tray is released and drops, as before, in front of the brush.

The receptacle 4 is preferably made removable and is provided for that purpose, for example, with wheels or rollers 51, that move on a track 52, supported under the body, and which are adapted to ride upon a temporary track 53, which may be formed, substantially as shown, with a hook 54 at one end adapted to fasten over the frame of the

receptacle-track, and a hook 55, adapted to fasten upon the end of a cart 56, for example.

I do not confine myself to the details of construction herein shown and described, but reserve the right to modify and vary them at will within the scope of my invention.

What I claim is—

1. In a street-sweeping machine, the combination with the body and wheels, of a brush operatively connected with the wheels, a tray carried in front of the brush, a dust-receptacle having a mouth in proximity to the brush, and means for operating the tray to deposit its contents upon the brush, substantially as specified.

2. In a street-sweeping machine, the combination of a body and wheels, of a brush operatively connected with the wheels, a tray, mechanism for actuating the tray to deposit its contents upon the brush, and a removable receptacle carried underneath the body and having a mouth in proximity to the brush, substantially as specified.

3. The combination with a body and wheels, of a brush operatively connected with the wheels, a tray carried upon levers pivoted upon the axle of the brush, a segment-lever in close proximity to the seat of the body, and mechanism connecting said lever with the levers supporting the tray, substantially as specified.

4. The combination with the body and wheels, of an adjustable brush and a fan operatively connected with the wheels, a tray in operative proximity to the brush, mechanism for throwing the wheels into or out of operative relation with the fan and brush, independent segment-levers in close proximity to the seat of the body, and mechanism operatively connecting the levers, respectively, with the tray, and brush and with the mechanism for disconnecting the wheels from the fan and brush, substantially as specified.

In testimony of all which I have hereunto subscribed my name.

EDWIN O. PEASE.

Witnesses:

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C. F. MANNING.