

No. 816,606.

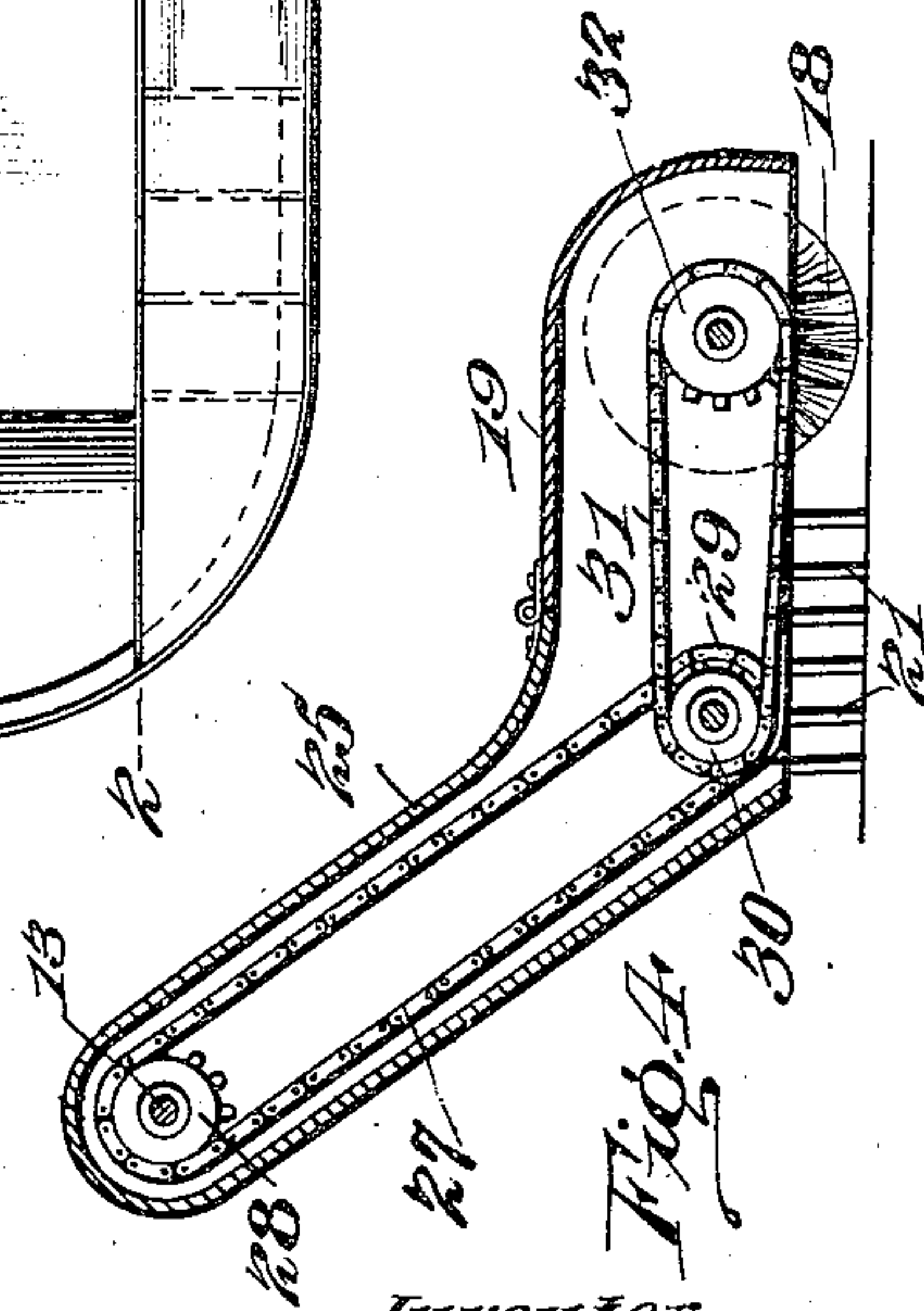
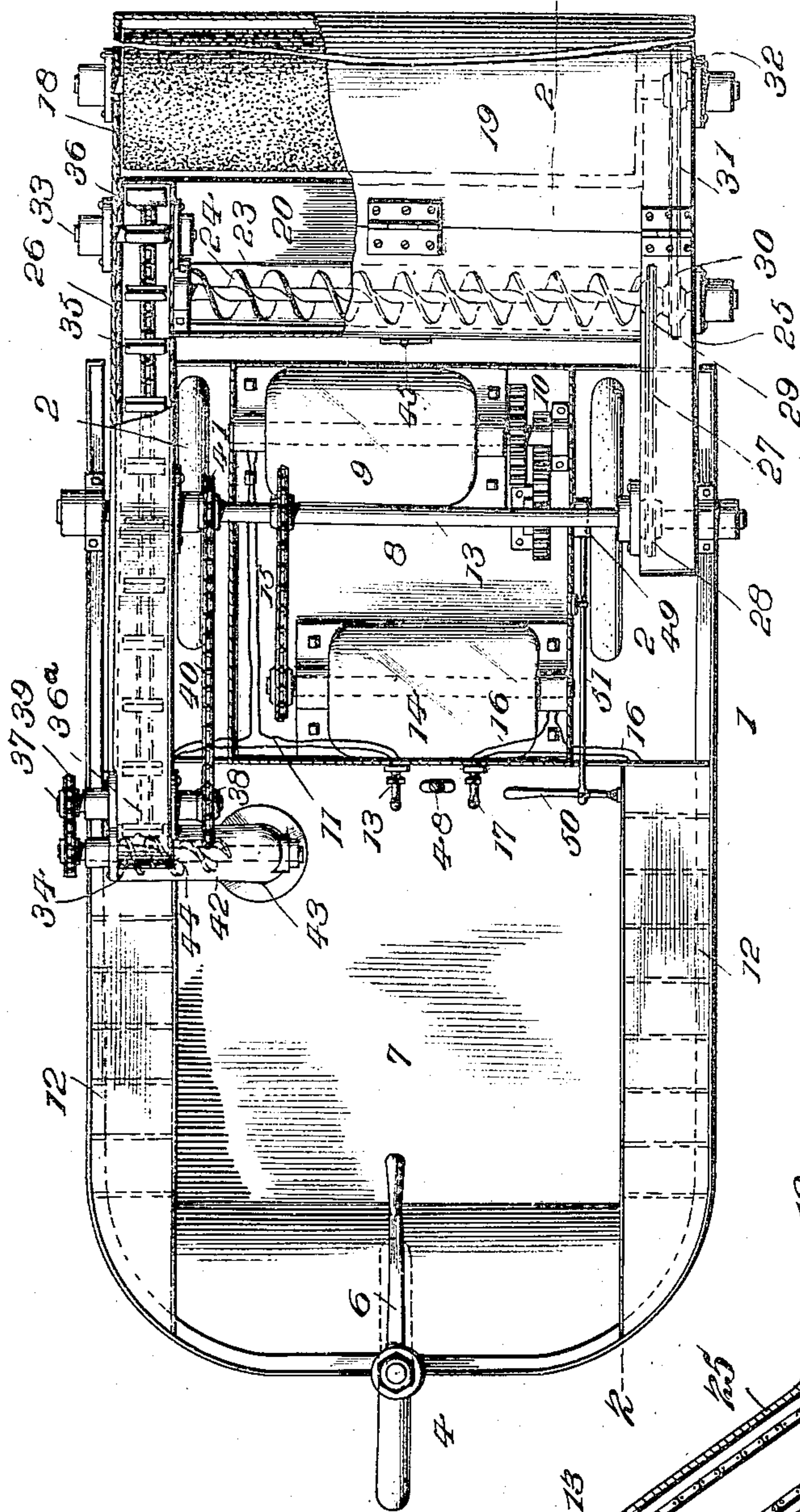
J. G. SANDERSON.
STREET CLEANER.

PATENTED APR. 3, 1906.

APPLICATION FILED SEPT. 6, 1902.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses.

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2 SHEETS—SHEET 2.

FIG. 2.

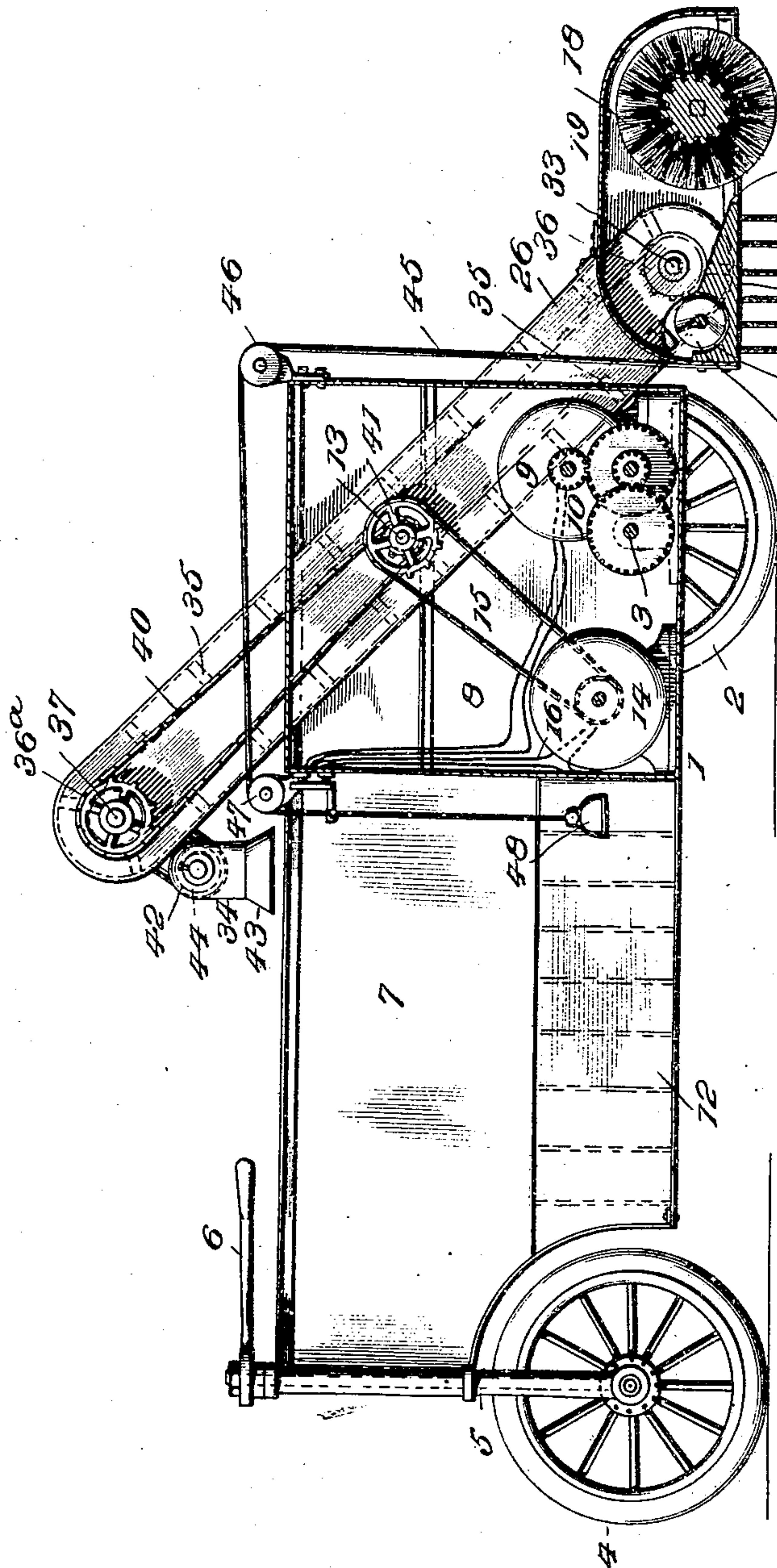
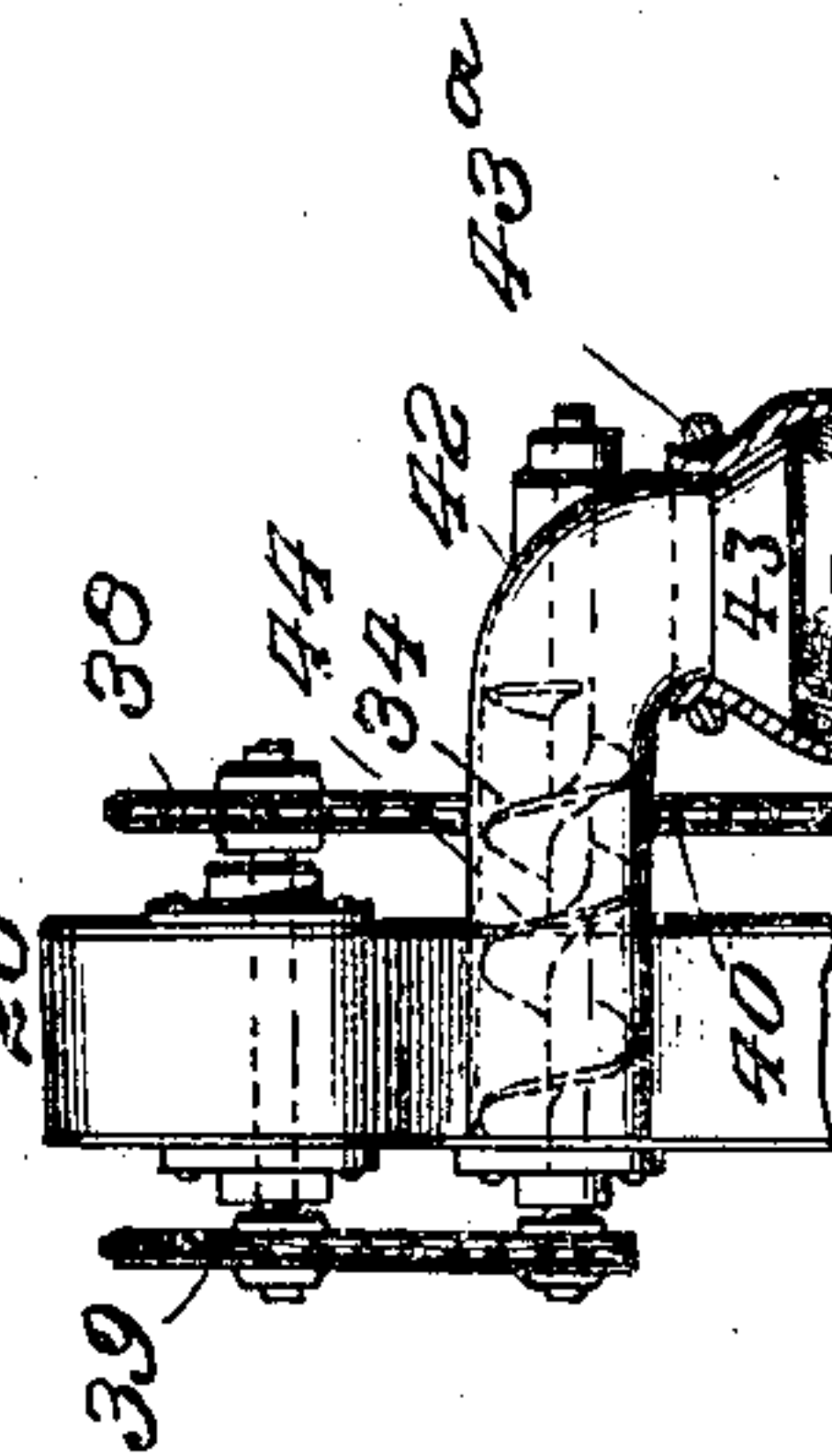


FIG. 3.



Witnesses

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JAMES GARDNER SANDERSON, OF SCRANTON, PENNSYLVANIA, ASSIGNOR
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STREET-CLEANER.

No. 816,606.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed September 6, 1902. Serial No. 122,434.

To all whom it may concern:

Be it known that I, JAMES GARDNER SANDERSON, a citizen of the United States, residing at Scranton, in the county of Lackawanna, State of Pennsylvania, have invented certain new and useful Improvements in Street-Cleaners, of which the following is a specification.

The object of this invention is to produce an improved street-sweeping machine of the motor-vehicle type in which the parts will be compactly arranged and so constructed that the vehicle may be propelled while the sweeping and collecting mechanism is inactive, or the sweeping and collecting mechanism may be employed while the vehicle is stationary, or both mechanisms may be operated simultaneously.

A further object is to provide an improved construction for conveying the sweepings from the brush to a bag or other receptacle.

With these and minor objects in view the invention consists of the parts and combinations of parts hereinafter described, and pointed out in the appended claims.

In the drawings forming a part of this specification, Figure 1 is a top plan view of the machine with parts broken away to disclose the interior construction. Fig. 2 is a vertical section on the line 2-2, Fig. 1; and Fig. 3 is an end view of the bag-filler. Fig. 4 is a vertical section of the chain-casing, showing the position of the parts therein.

Like numerals indicate like parts through all the figures of the drawings and in the specification.

Referring more particularly to the drawings, 1 indicates the frame of the vehicle, which is mounted upon two front wheels 2, secured to the axle 3, and the steering-wheel 4, secured to the steering-fork 5, journaled in the rear of the frame and controlled by a steering-lever 6. The frame 1 is divided into two compartments, one in the rear, as shown at 7, which the operator occupies to control the machine and which receives the sweepings, and one in front, as shown at 8, in which is mounted the operating mechanism.

The vehicle is propelled by any kind of motive power; but it is preferable to mount an electric motor 9 in the compartment 8 and connect the same with the axle 3 by means of reducing-gearing 10. The current for the motor is obtained through wires 11 from cells 12, located in the lower part of the rear com-

partment 7, a switch 13 in the compartment 7 controlling the current.

The sweeping and collecting mechanism receive their motion from a shaft 13, journaled in the front compartment 8. This shaft is rotated by any motive power, but preferably by a motor 14, connected therewith by gearing and chain 15, and this motor receives its current from the cells 12, before mentioned, through wires 16 and is controlled by switch 17, mounted in the rear compartment 7.

A rotary brush 18 is mounted in advance of the vehicle and is journaled in the forward part of a collecting-casing 19. In the rear of the brush and in the casing is mounted for receiving the sweepings from the brush a receiving-shelf 20, the under side of which is provided with perpendicular sheet-scrapers 21, which remove any dirt not removed by the brush. The receiving-shelf 20 is inclined at its forward portion, as shown at 22, and has a channel 23 at its rear. In this channel is mounted a conveyer 24, preferably a screw.

To operate the brush 18 and conveyer 24 and at the same time to permit the brush 18 and scrapers 21 to rise and fall so that any unevenness in the surface to be cleaned will not interfere with the operation of the machine, the receiving-casing 19 is swung from the shaft 13 by means of a chain-casing 25 and a conveyer-casing 26. The chain-casing 25 is journaled on the shaft 13 and the shaft of the screw conveyer 24 and has mounted within it a chain 27, which communicates motion from the gear 28 on the shaft 13 to the gear 29 on the shaft of the screw conveyer 24, which shaft in turn communicates rotation through the gear 30, chain 31, and gear 32 to the brush 18.

The conveyer-casing 26 is journaled at its center to the shaft 13 and at its lower end to a shaft 33 on the collecting-casing 19 and adjacent to the screw conveyer 24. The conveyer-casing being journaled to the frame 1 and to the collecting-casing 19, the casing is permitted to rise and fall relatively to the frame 1, and the conveyer is always in a position to convey the sweepings from the casing 19 to the frame 1, it partaking of the movement of the casing 19.

The upper end of the conveyer-casing 26 carries a bag-filling device 34. Within the conveyer-casing is mounted an endless conveyer 35 of any known variety, which passes

around a pinion 36 on the shaft 33 of the collecting-casing 19 and a pinion 36^a on a shaft 37 in the upper part of the conveyer-casing. The ends of the shaft 37 extend beyond the sides of the casing 26 and are provided, respectively, with pinions 38 and 39. Pinion 38 is connected, through the medium of chain 40, with a pinion 41 on the shaft 13 to communicate motion from said shaft 13 to the conveyer 35.

The bag-filling device 34 consists of a horizontal tube 42 at right angles to the conveyer-casing 26, having a flared downwardly-turned end 43, around which is secured a bag by an elastic band 43^a. This band permits, should the operator be inattentive, the bag when full to be forced off of the flared end 43, and thereby prevents the mechanism which conveys the sweepings to said bag being broken, which would be the result if the bag were not removed. Within the tube 43 is a screw conveyer 44, which receives motion from the pinion 39 on the shaft 37 of the conveyer-casing.

When it is desired that no sweeping shall be done by the machine, the operator lifts the collecting-casing by means of a cable 45, secured to said collecting-casing, passing over pulleys 46 and 47, depending into the rear compartment and having a stirrup 48, in which the operator places his foot.

A band-brake 49 on the axle 3 is provided and is operated by a lever 50, which connects with the band by a rod 51.

The operation of the machine is as follows: The motors being started, motion is communicated to the axle 3, whereby the machine is propelled, and to the shaft 13, which rotates the brush, through the medium of chains 27 and 31, in the direction of the travel of the machine, and thereby assists in its propulsion. The dirt is swept by the brush 18 into the channel 23, from which it is conveyed by the screw 24 to the conveyer-casing 26, where it is caught by the endless conveyer 35 and carried to the bag-filling device 34, from which it is conveyed by the screw 44 to the bag secured upon said filling device and within the rear compartment 7.

I desire it to be understood that I do not wish to be limited to the construction shown and described herein and that various changes in form, proportion, and minor details of con-

struction may be made without departing from the spirit of my invention.

Having thus described the invention, the following is what I claim as new therein:

1. The combination with the frame, a shaft carried thereby, and means for rotating the shaft, of a collector-casing carrying a brush, two casings journaled on the shaft and to the collector-casing, mechanism for operating the brush from the shaft mounted in one of the casings, and a conveyer also operated by the shaft mounted in the other casing.

2. The combination with the frame, carrying a motor, and a collector-casing carrying a brush, of two casings connecting the collector-casing with the frame, brush-operating mechanism mounted in one of the casings, and a conveyer mounted in the other casing.

3. In a street-sweeper, the combination with the collector mounted in the front of the machine-frame and comprising a casing, a rotary brush journaled in the casing, a shelf mounted in the rear of the brush and a single screw conveyer carrying the material received on the shelf, to one side of the collector; of a conveyer extending from the side of the collector, a motor carried by the machine, connections between the motor, the conveyer and the brush whereby the two latter are operated by the former, and independent means for propelling the machine.

4. The combination with the vehicle-frame having a front and a rear compartment, of a brush mounted in advance of the frame and movable up and down relatively thereto, a conveyer carrying the sweepings from the brush to the rear compartment, a motor mounted in the front compartment, and propelling the vehicle, a second motor also mounted in the front compartment and operating the conveyer and the brush in the direction of travel of the vehicle, and a cable, extending from the brush to the rear compartment by which the brush may be raised and lowered.

The foregoing specification signed this 4th day of September, 1902.

JAMES GARDNER SANDERSON.

In presence of—

F. L. HITCHCOCK,
H. P. HITCHCOCK.