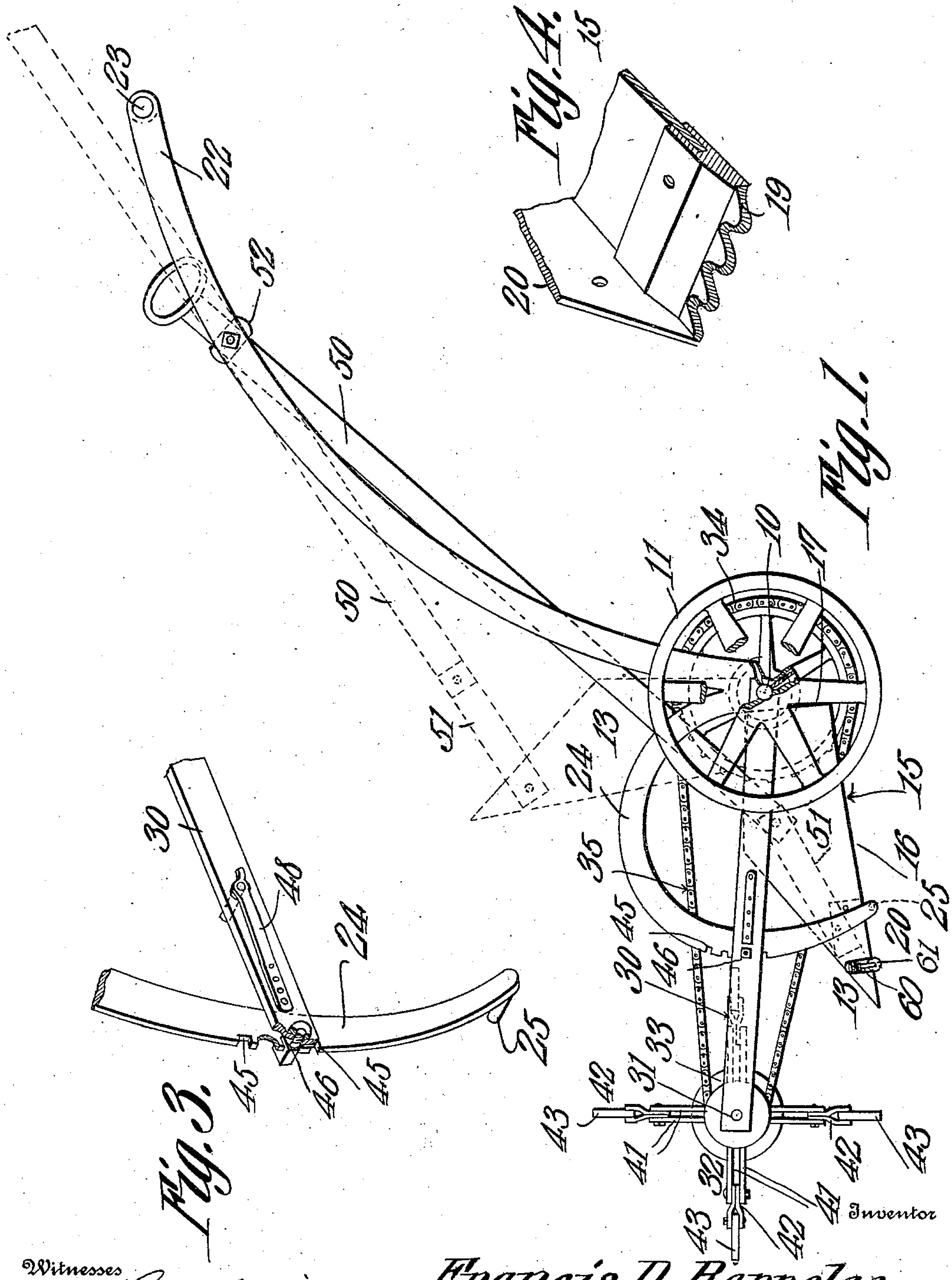
F. D. RAPPELEE.

STREET SWEEPER.

APPLICATION FILED JUNE 26, 1907.

929,109. Patented July 27, 1909.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

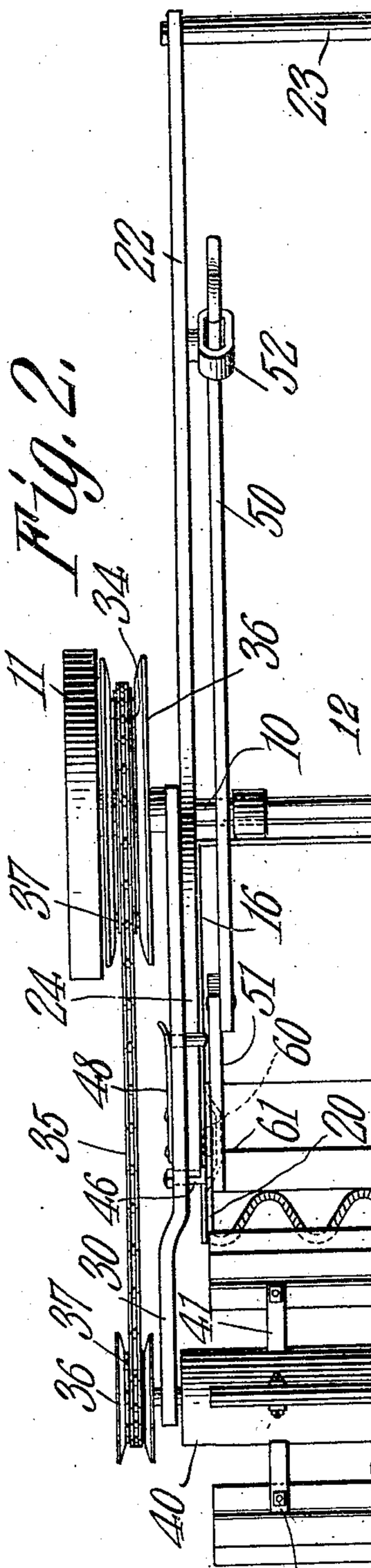
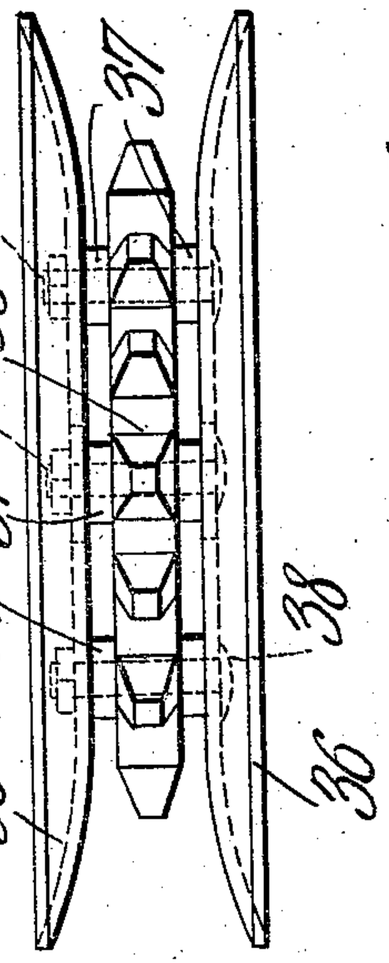


Fig. 6.



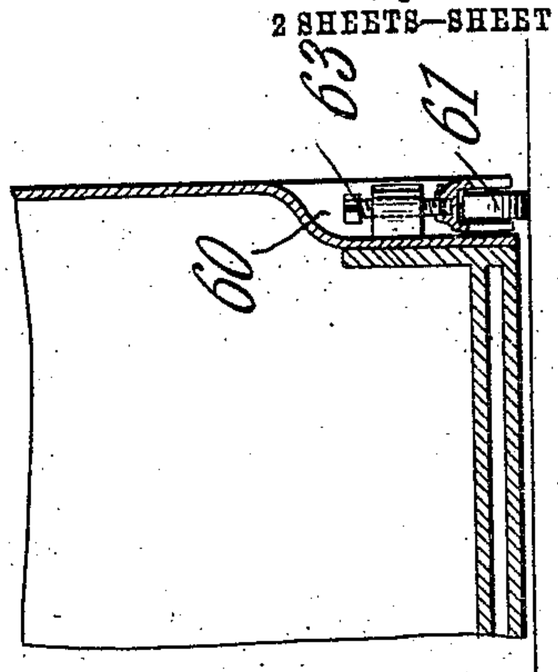
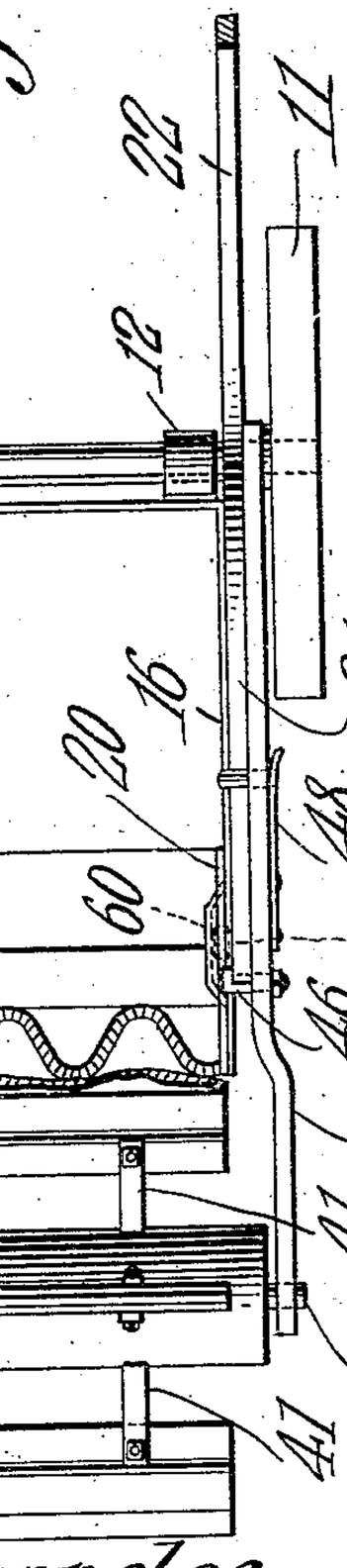


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANCIS DELOS RAPPELEE, OF GREEN BAY, WISCONSIN.

STREET-SWEEPER.

No. 929,109. Specification of Letters Patent. Patented July 27, 1909.

Application filed June 26, 1907. Serial No. 380,964.

To all whom it may concern:

Be it known that I, FRANCIS D. RAPPELEE, a citizen of the United States, residing at Green Bay, in the county of Brown and State of Wisconsin, have invented a new and useful Street-Sweeper, of which the following is a specification.

This invention has relation to street sweepers, and it consists in the novel construction and arrangement of its parts, hereinafter shown and described.

The object of the invention is to provide a manually operable sweeper of the character indicated which is wheel-mounted, and which carries a pivoted dirt-receptacle and a rotating brush. The parts are so arranged that the brush will deposit the dirt in the receptacle as the sweeper progresses, and the pivotal or vertical movement of the dirt receptacle is limited, so that the said receptacle cannot assume a dumping position while the sweeper is in operation; but may have sufficient play or movement to ride over knobs or uneven places in the surface of the street.

A further object of the invention is to provide means whereby the revolving brush may be adjusted vertically, in order to compensate for wear which might occur at the extremities of the surface-engaging members of the said brush.

In the accompanying drawings:—Figure 1 is a side elevation of the street-sweeper. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view of a dirt-receptacle guide-arm and a brush-supporting arm used in the sweeper. Fig. 4 is a detail perspective view of a portion of a blade used in the sweeper. Fig. 5 is a transverse sectional view through one of the sides of the dirt-receptacle. Fig. 6 is an edge view of a sprocket wheel used in the sweeper.

The sweeper consists of the axle 10, which is supported at its ends upon the wheels 11. The sleeves 12 are attached to the dirt receptacle 13, and receive the axle 10. The dirt-receptacle 13 is in the form of an open-top pan, having a bottom wall 15, side walls 16, and a rear wall 17. The forward edge of the bottom 15 fits within a groove at the rear edge of knife-blade, 19 said blade having a serrated cutting edge, and being beveled, in order that it may more readily disengage material that may cling to the surface being cleaned. Said blades may have flanges 20, as shown in Fig. 4, for attachment with the sides of the receptacle 13.

Pivoted on the axle 10 are the handle-bars 22, which are curved upwardly and rearwardly, and united by a suitable cross-bar 23. The bars 22 are provided with forwardly extending curved arms 24, that pass down on opposite sides of the dirt receptacle 13, and are provided, at their forward extremities, with inwardly bent lugs 25, that pass under the said dirt receptacle 13, so that when necessary the said receptacle may be tilted up by downward pressure on the cross-bar 23 when the sweeper is to be moved from place to place.

Pivoted to the axle 10 are the rear ends of a pair of bars 30, the forward ends of these bars serving as a support for the shaft 31, that carries a brush 32. At one end of the shaft 31 is secured a sprocket whee l33 that is connected to a sprocket wheel 34, on the hub of one of the wheels 11 by means of a link belt 35. To the opposite sides of each of the sprocket wheels are secured dished guard-plates 36, that are slightly spaced from the sides of the sprocket wheel by rings or washers 37, that pass around the disk-attaching bolts 38. These guards serve to prevent accidental jumping of the sprocket chain from the sprocket wheels.

The brush comprises a central drum 40, from which project a plurality of pairs of arms 41. Between each pair of arms is arranged a metallic clamp 42 and each clamp carries a cleaning strip 43, that is formed of leather, rubber, or other yieldable material. These strips are held in position in the clamps by means of suitable bolts that may be readily detached when it becomes necessary to renew the strips.

In order to hold the revolving brush at proper height with relation to the street surface, the arms 24 of the handle members, are provided with a series of notches 45 arranged for the reception of a locking-pin 46, that projects from the link or bar 30, and when the pin is locked in the rack, the brush will be held in a fixed position with relation to the handle-bars 22.

In order to prevent the dirt receptacle 13 from assuming a dumping position while the sweeper is accumulating material, the bars or links 30 are provided with spring-actuated pins 48 which pass through suitable openings

in the said bars or links and are arranged to lie transversely across the path of movement of the upper edges of the end walls of the dirt-receptacle 13, but the said pins 48 are normally spaced from the upper edges of the said receptacle, so that the said receptacle may have limited vertical movement or swing between the said pins, and the lugs 25 of the arms 24, whereby the dirt-receptacle 13 may ride over knobs or repair patches in the street surface, and at the same time cannot assume a dumping position by reason of the interference of the pins 48.

By manually swinging the free ends of the springs 48, so that the pins carried thereby will pass beyond the paths of movement of the edges of the dirt-receptacle 13, the said receptacle may be tilted to dumping position by means of a pull-rod 50. The lower end of the pull-rod 50 is connected, by means of a link 51, to the forward portion of the receptacle 13. The said rod 50 extends up along one of the handle-bars 22, and passes through the swiveled eye 52, attached to the said handle-bar. The top of the rod 50 is provided with a handle-grip of usual configuration.

At each side of the dirt receptacle 13 is arranged a recess 60, within which is a small roller 61, designed for engagement with the surface to be cleaned, and which may serve to slightly elevate the edge of the knife above the level of the surface. The roller is carried by a bracket to which is swiveled an adjustable screw 63 that may be turned for the purpose of adjusting the level of the knife.

Having described my invention, what I claim as new, and desire to secure, by Letters Patent, is:—

A sweeper comprising a wheel-mounted axle, a dirt-receptacle pivotally mounted upon the axle, handle-bars mounted upon the axle, arms extending forwardly and downwardly from the said handle-bars and terminating, at their forward ends, in lugs which lie under the dirt-receptacle, said arms having, at their forward edges, notches, brush supporting arms pivotally connected with the axle, lugs carried by the brush-supporting arms for engagement with the notches of the first said arms, a brush mounted for rotation between the brush-supporting arms, means operatively connecting the said brush with one of the supporting wheels, and springs attached to the brush-supporting arms and carrying pins which normally lie transversely across the paths of movement of the edges of the dirt-receptacle and spaced from the same.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANCIS DELOS RAPPELEE.

Witnesses:

JEAN BROWN,

E. THOMAS.