

(No Model.)

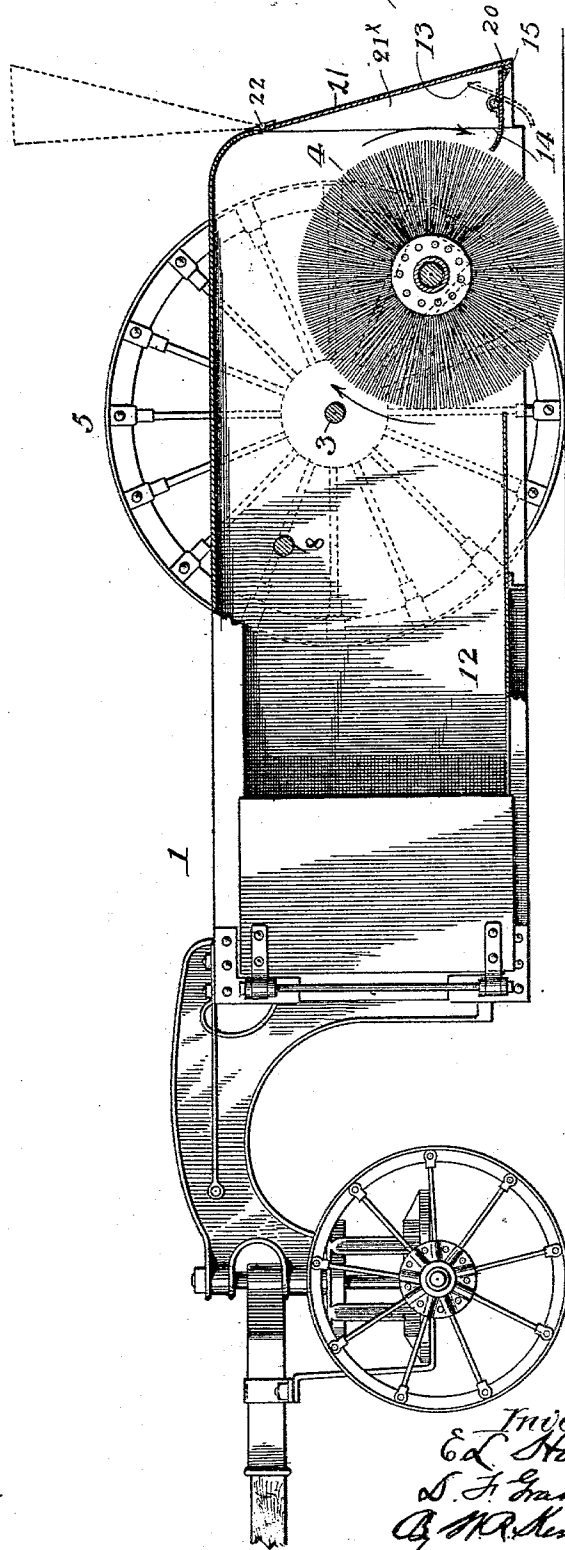
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E. L. HAWKS & D. F. GRAHAM.
STREET SWEEPER.

No. 553,066.

Patented Jan. 14, 1896.

Fig. 1.



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(No Model.)

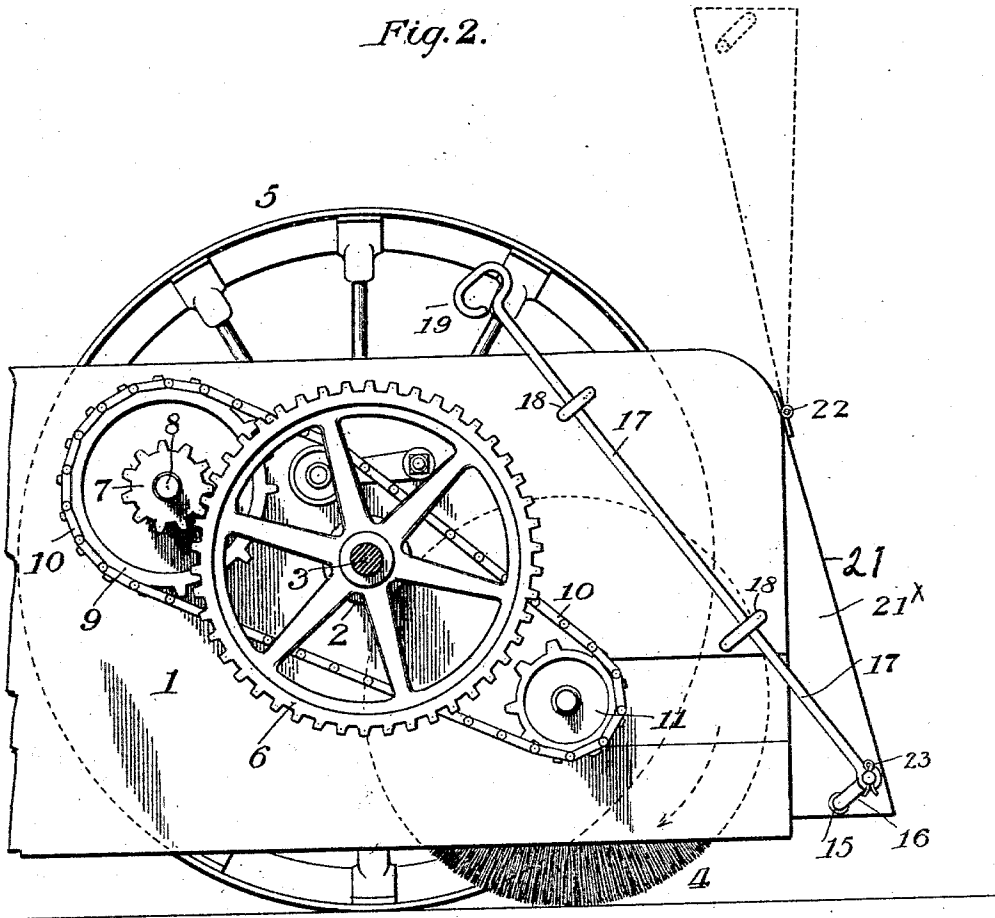
2 Sheets—Sheet 2.

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No. 553,066.

Patented Jan. 14, 1896.

Fig. 2.



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UNITED STATES PATENT OFFICE.

ERASTUS L. HAWKS AND DAVID F. GRAHAM, OF DAYTON, OHIO, ASSIGNORS
TO THE INTERNATIONAL SWEEPING MACHINE COMPANY, OF WEST VIR-
GINIA.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 553,066, dated January 14, 1896.

Application filed March 22, 1895. Serial No. 542,843. (No model.)

To all whom it may concern:

Be it known that we, ERASTUS L. HAWKS and DAVID F. GRAHAM, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Sweeping-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

Our invention relates to sweeping-machines, and has reference more particularly to street-sweeping machines which are adapted
15 to be drawn over the surface to be cleansed. In certain machines of this character a wheeled frame is provided at its rear with a horizontal rotary brush, and in front of the brush with a receptacle, so arranged that on the rotation
20 of the brush in a direction opposite to that of the ground-wheels the sweepings will be received by the receptacle. In the use of these machines it has been found that the brush will act to carry dirt upward and rearward
25 and will throw the same and any adhering mud or other matters to the ground in rear of the machine, thereby leaving a track of dirt as the machine advances. It is the aim of our invention to obviate this difficulty and
30 the depositing of any dirt on the cleansed surface, and this we accomplish by providing a secondary receptacle in rear of the brush in such position as to receive any dirt carried
35 upward by the same and any adhering matters thrown from the brush by centrifugal force.

In the accompanying drawings, Figure 1 is a longitudinal section through the rear of a street-sweeping machine having our invention embodied therein. Fig. 2 is a side elevation of the rear portion of the same on an enlarged scale.

Referring to the drawings, 1 represents a wheeled frame consisting of a casing provided at its opposite sides near its rear end with bearings 2, in which an axle 3 is mounted carrying ground-wheels 5. A rotary brush 4 is carried by a shaft 4^x mounted in suitable bearings on the casing in rear of the axle.
50 This brush is driven from ground-wheels 5 in the direction indicated by the arrow through

any suitable form of gearing, in the present case consisting of a gear-wheel 6, fixed to one of the ground-wheels and engaging a small pinion 7 mounted on the end of a stud 8 projecting from the side of the casing and having fixed thereto a sprocket-wheel 9 connected by a chain 10 to a sprocket-wheel 11 on the brush-shaft before alluded to. In the front part of the casing adjacent to the brush is located a receptacle 12, adapted to receive the dirt and other matters thrown up by the brush, and from the receptacle the accumulated load may be discharged as desired.

The foregoing parts may be of the ordinary and usual construction, and except in so far as hereinafter indicated they form no part of the present invention.

In applying our invention to a machine of this character we locate in rear of the brush within the casing a horizontal receptacle 13 in such position that it will receive any dirt carried upward and rearward by the brush and any mud or other adhering matters thrown off from the brush by its rotation. This receptacle we prefer to construct in a form adapted when desired to be operated to discharge its contents, and for this purpose we employ a rectangular plate having its edges fitted closely to the two sides and rear wall of the casing, and on the front edge of this plate we form an upwardly-extending flange 14, which will serve to retain the dirt received by the receptacle. The plate is pivoted between the sides of the casing by journals 15 projecting from opposite sides of the same and mounted in suitable bearings or openings in the casing. One of the journals is extended beyond the casing to the outside, where it is provided with a crank-arm 16, to which is jointed the lower end of an operating-rod 17, extending upwardly and forwardly along the side of the casing through suitable guides 18 to the upper side of the same, where it is provided with a handle 19, the construction being such that the operating-rod may be pushed backward and forward within its guides. When the rod is drawn upward, it will, through its connection with the crank-arm, turn the receptacle on its horizontal axis to a vertical position, as indicated by dotted lines, which action will cause the discharge
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of the contents to the ground. By quickly moving the rod back and forth the receptacle may be shaken or vibrated and in this manner any adhering matters will be effectually removed. When the rod is pushed back, it will turn the receptacle to its former position, its rear edge resting on a lug 20 extending from the rear wall of the casing and serving to hold the receptacle in its proper receiving position.

In the accompanying drawings we have represented that portion of the casing in which the receptacle is mounted, the rear wall, as being movable for the purpose of permitting the brush to be lifted rearward from the machine. In such cases the rear wall of the casing is in the form of a door 21 having side walls 21^x, which door is pivoted at its upper end to the rear edge of the top of the casing, as at 22. As a result of this arrangement, when the brush is to be removed the door is turned upward to the position shown in dotted lines in Fig. 1, which will open the rear end of the casing and allow access to its interior or the removal of the brush therefrom. In order to admit of the lifting of the door and at the same time preserve the feature of operating the receptacle from the outside to dump its contents, we apply the lower end of the operating-rod to the crank-arm in such manner that it can be conveniently removed when the door is to be lifted. This is accomplished by providing the rod with an opening to receive the end of the crank-arm, which latter is perforated to receive a removable confining key or cotter 23.

It is to be understood that our device may be modified within reasonable limits and embodied in various forms without departing

from the limits of our invention, the essence of which resides in combining with the rotary brush a receptacle in rear thereof to receive matters carried upward and rearward by the brush and prevent their being thrown onto the cleansed surface, said receptacle adapted to be operated in the manner shown and described to dump its contents.

Having thus described our invention, we claim—

1. In a sweeping machine the combination of the frame or casing, a rotary brush in rear portion of the same, a dirt receptacle in rear of the brush mounted in the casing on a horizontal transverse axis, a crank arm connected to said receptacle, and an operating rod extending in guides on the side of the casing with its lower end pivoted to the crank arm and its upper end terminating adjacent to the top of the machine.

2. In a sweeping machine the combination of a frame or casing having its rear wall in the form of a door hinged at its upper edge to turn upward, a rotary brush in the rear portion of the casing, a movable receptacle mounted in said hinged door, connections extending from said receptacle to the outside, and an operating rod for dumping the receptacle removably attached at its lower end to said connection and extending to the top of the casing;—whereby the operating rod may be detached to permit the door to be lifted.

In testimony whereof we affix our signatures in presence of two witnesses.

ERASTUS L. HAWKS.
DAVID F. GRAHAM.

Witnesses:

HENRY B. WALKER,
JNO. J. HOOVER.