(No Model.)

C. C. ANDERSON.

STREET SWEEPING MACHINE.

No. 457,693. Patented Aug. 11, 1891.

Fig. 1

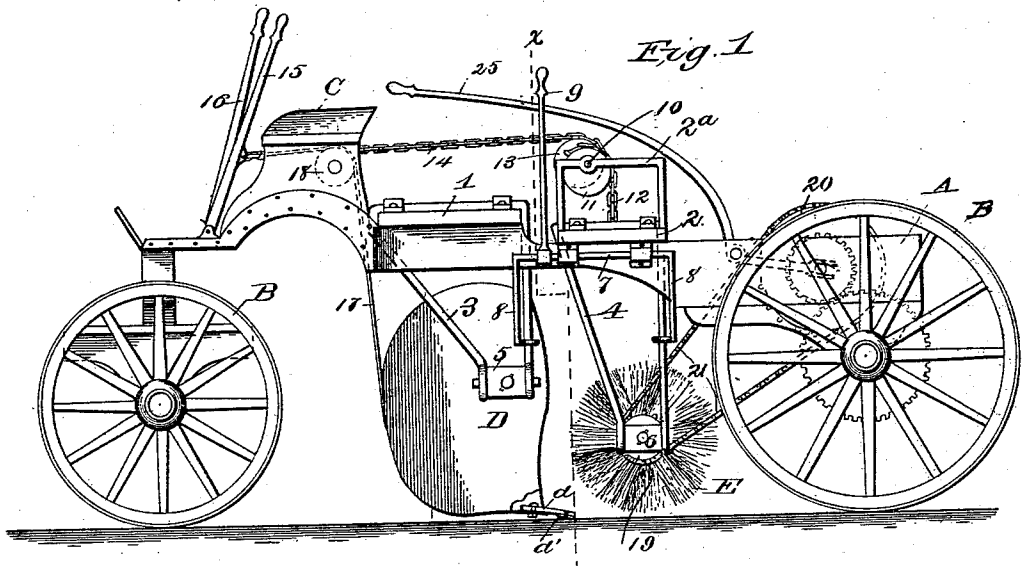


Fig. 2

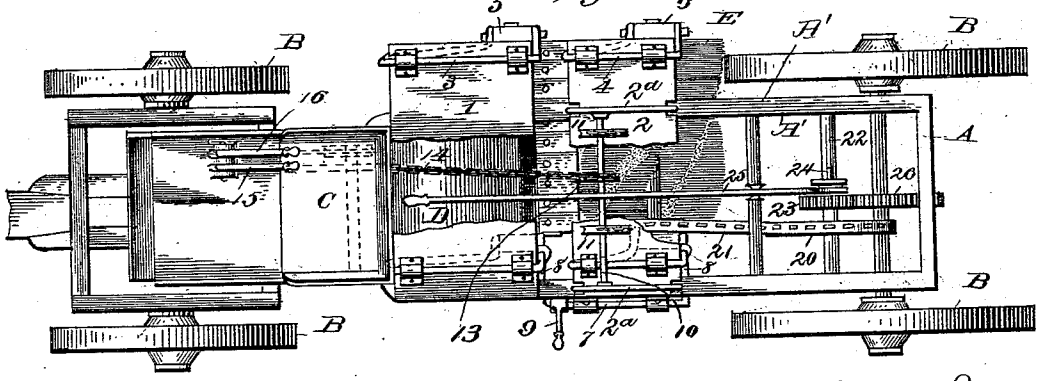


Fig. 4

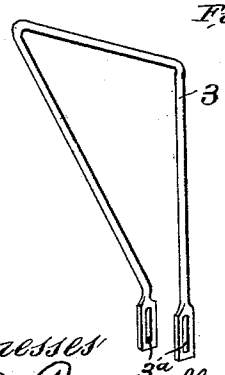


Fig. 3

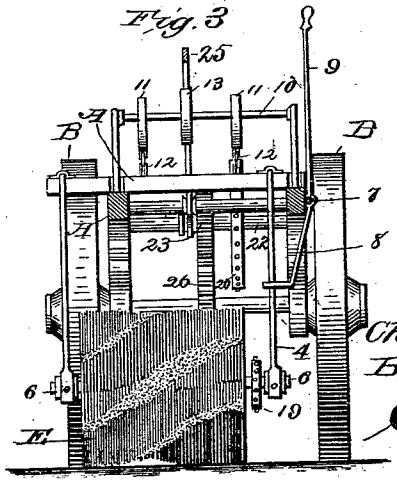
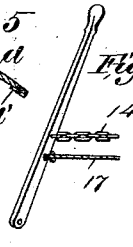


Fig. 5



Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES C. ANDERSON, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-THIRD TO E. G. WHEELER.

STREET-SWEEPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 457,693, dated August 11, 1891.

Application filed May 6, 1891. Serial No. 391,779. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. ANDERSON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Street-Sweeping Machines; and I 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of devices commonly termed "street-sweepers," and has for its object to facilitate the removal of dust, dirt, and sweepings from the gutters adjacent to the curb and from such other places as the ordinary sweepers cannot reach by reason of the projection of the carriage or truck.

Street-sweepers as commonly constructed carry the sweeping and collecting mechanism in a substantially fixed position with relation to the carriage, and as the movement of the carriage laterally is restricted by the curb and like vertical projections a residue of the sweepings is left in the gutter and along the line of curb. To meet these indications, laterally-vibrating sweeping devices adapted to be projected beyond the line of the truck or tread of the carriage-wheels have heretofore been devised; but said devices have been loosely suspended, so as to sink by gravity only, and incapable of exerting a pressure or sweeping force on the pavement other than that due to their own weight, and were illy adapted to meet irregular or uneven surfaces.

The object of my invention consists in journaling the rotary brush and dirt-receptacle in laterally-swinging frames, which are operated by hand-levers, whereby the same may be simultaneously moved to or from the curb, as desired.

Another object lies in the means of dumping the dirt-receptacle and providing said dirt-receptacle with yielding flaps on its lower edge, said flaps adapted to rest upon and slide along the ground, whereby they act in the capacity of conveyers for the dirt and prevent the same from passing under the receptacle when the machine is operating upon uneven surfaces.

Other minor details of invention will be hereinafter described, and definitely pointed out in the appended claims.

These objects I attain by the construction illustrated in the accompanying drawings, forming a part of this specification, wherein like letters of reference indicate like parts wherever they occur, and in which—

Figure 1 represents a view in side elevation of my device; Fig. 2, a top plan showing the dirt-receptacle and brush in their projected position; Fig. 3, a section on line $x\,x$ of Fig. 1, and Fig. 4 a perspective view of one of the hangers. Fig. 5 is an enlarged detail of the flexible strip and wear-iron. Fig. 6 is a modified form of connection of the actuating cords or chains for operating the dirt-receptacle and brush simultaneously.

Referring to the drawings by letters and figures of reference, A indicates the frame mounted upon wheels B, which are preferably in line with each other.

Secured to the frame in the rear of the driver's seat C are two platforms 1 and 2, which project beyond the side rail A′ on the right hand or gutter side of the machine, the platform 2 being provided with reduced portions at its sides, which are adapted to receive guide-rods 2^a, which are secured to the side rails of the machine, thus permitting the platform to ride upon the guide-rods vertically when the cams mounted in the cross-piece of the guide-rods are actuated.

Pivotally secured to and passing over the platforms are hangers 3 and 4, the former of which is secured to the platform 1 and the latter to platform 2. Pivoted in these hangers are the dirt-receptacle and rotary brush, which have their bearings in cross-heads 5 and 6, the cross-head 5 having lugs at its front and rear sides, which project into slots 3^a in the lower end of the hangers 3, thereby permitting a vertical movement of the dirt-receptacle and allowing the same to ride over obstructions without injury.

Journaled in bearing at the side of the machine, preferably the left, is a horizontal shaft 7, having depending hangers 8, said hangers or arms being provided with eyes

which encircle one arm of the hangers 3 and 4. Extending upwardly from the horizontal shaft 7 is a handle or lever 9 for actuating the same, thereby affording means for the lateral movement of the brush and dirt-receptacle simultaneously.

Journaled in the cross-bars which connect the upper ends of the guides 2^a is a shaft 10, having mounted thereon cams 11, over which are passed chains or cords 12, said chains or cords being attached at their lower ends to the platform 2. 13 indicates a cam similarly mounted on the shaft intermediate the cams 11, and which has also passing over and around its periphery a chain or cord 14, which chain or cord is extended to the forward part of the machine and secured to a suitable actuating-lever 15, placed within easy reach of the operator. When the lever 15 is actuated, the cam 13 is rotated partially, and, being rigidly mounted on the shaft 10, it carries around with it cams 11, which, having the chains 12 attached thereon, (which have their other ends attached to the platform 2,) raises platform 2, the same riding on the vertical guide-rods, as before described. This movement of the lever 15, actuating the platform 2, raises the brush E, which is mounted in the lower end of the hangers on said platform, and immediately upon the release of the lever 15 the brush E returns to its normal position by gravity. It will be noticed that the cams 11 and 13 are mounted at an angle to each other to facilitate the actuating capacity of the cam 13 and the lifting-power of the cams 11.

D indicates the dirt-receptacle, which is preferably formed substantially semicircular in cross-section and eccentrically mounted in the cross-heads or bearings 5, heretofore described, so as to permit the return of the same by its own gravity after being dumped. Secured to the lower lip of this receptacle are a series of flaps, yielding in their nature, to permit themselves to accommodate any uneven or unequal surface and prevent the passage of the dirt under the receptacle. I prefer in the construction of these flaps to provide on their lower surface a wear-iron or shoe d', which will tend to retain the same in the lowered position, and also prevent wear to a certain extent.

In order to rotate the receptacle to dump its contents, I provide a hand-lever 16, pivoted to the front platform of the machine, and connect the dumping-receptacle and hand-lever by means of a chain or cord 17, which passes over a guide-pulley 18 under the driver's seat.

E indicates the brush transversely disposed to the line of the draft of the machine and journaled in bearings 6, which are secured in the hangers 4. Motion is imparted to the brush E by means of a sprocket-wheel 19 on the inner end of its shaft, which sprocket-wheel receives motion from a sprocket-wheel 20 through the medium of a chain belt 21.

Slidingly mounted on the shaft 22, which is journaled in the main frame, and upon which is also rigidly mounted the sprocket-wheel 20, is a pinion 23, sliding upon a spline or feather 24, and which pinion engages with a gear-wheel 26, mounted upon the rear axle. To throw the pinion 23 out of engagement with the gear, I provide said pinion with a sleeve, with which engages a lever 25, placed within reach of the driver.

The operation may be described as follows: The parts being in the position shown in Fig. 2, the machine is driven close to the curb, the lever 25 thrown into operative position, and the brush E will revolve, throwing the sweepings into the receptacle until the same is full, at which stage the levers 15 and 16 are thrown forward, the former raising and dumping the receptacle, and the latter raising the brush so as to clear the pile as it is dumped. The levers are then released and the receptacle and brush will immediately resume their normal positions.

It is obvious that should it be desired the chains 14 and 17 could be connected to one instead of two levers, and thereby be worked simultaneously, so that upon thrusting the lever forward both the dirt-receptacle and brush would be actuated.

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

1. In a street-sweeper, the combination, with a laterally-moving dirt-receptacle, of a laterally-movable brush and means for actuating said brush, substantially as and for the purposes described.

2. In a street-sweeper, the combination, with a laterally-movable dirt-receptacle, of a laterally-movable brush and means for simultaneously moving said dirt-receptacle and brush laterally, substantially as and for the purposes described.

3. In a street-sweeper, the combination, with a laterally-movable dirt-receptacle and laterally-movable brush, of means for simultaneously moving said receptacle and brush laterally, and levers and suitable connections for dumping the receptacle and raising the brush, substantially as and for the purposes described.

4. In a street-sweeper, the combination, with the laterally and vertically movable brush, of means for actuating said brush, substantially as and for the purposes described.

5. In a street-sweeper, the combination, with the laterally and vertically movable brush, of a shaft having a depending arm provided with an eye for encircling the brush-support, a lever for actuating said arms, and guides having means journaled in their connecting cross-pieces for raising said brush, substantially as and for the purposes described.

6. In a st.eet-sweeper, the combination, with the frame, of a platform thereon extend-

ing beyond the same at one side, laterally-swinging hangers secured to said platform, and a dirt-receptacle slidingly mounted in said hangers, substantially as described.

7. In a street-sweeper, the combination, with the frame, of a vertically-movable platform thereon, guides for said platform, hangers pivotally secured to the platform, a brush journaled in the ends of the hangers, a shaft journaled in the guides, cams on said shaft, connections between the cams and platform, and means for actuating said cams, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES C. ANDERSON.

Witnesses:
F. R. CORNWALL,
D. G. STUART.