(No Model.) 2 Sheets—Sheet 1.

S. H. RATHBURN.

STREET SWEEPING MACHINE.

No. 482,196. Patented Sept. 6, 1892.

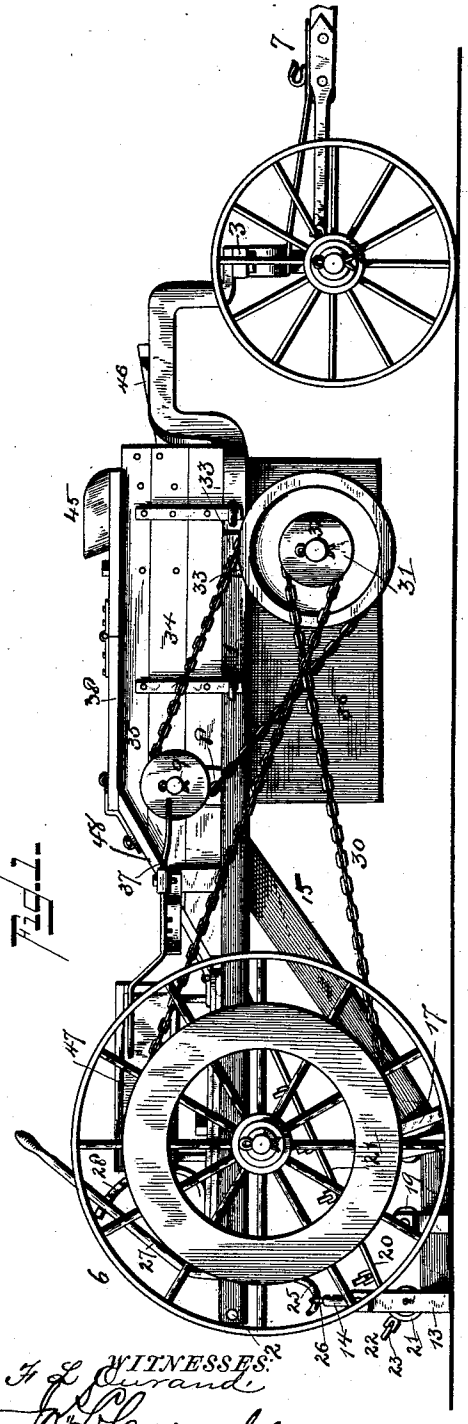

Fig. 1.

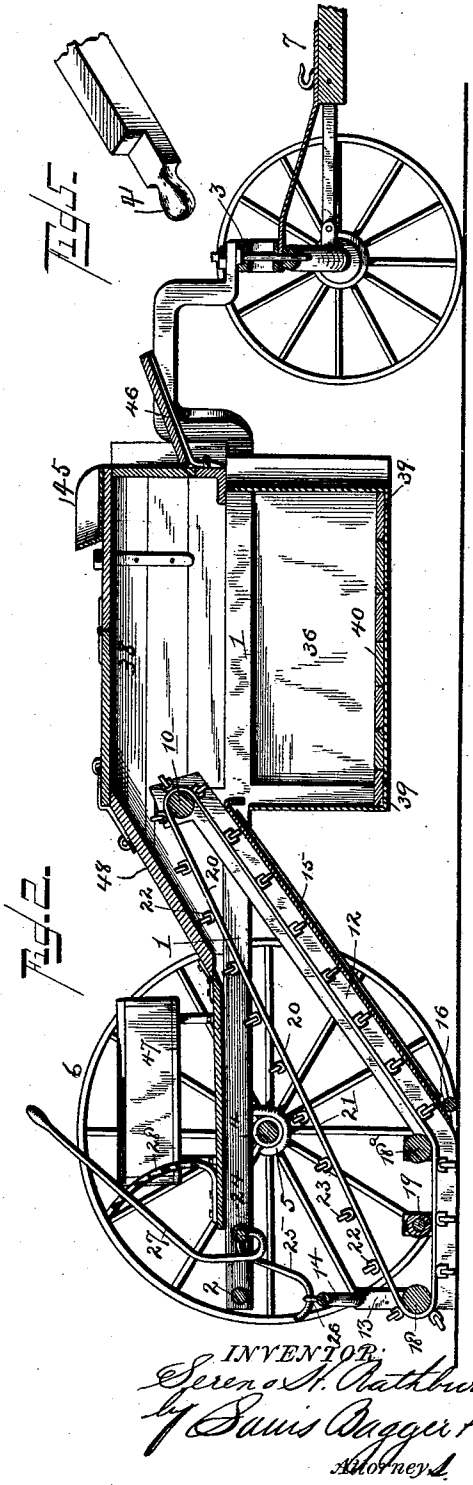

Fig. 2.

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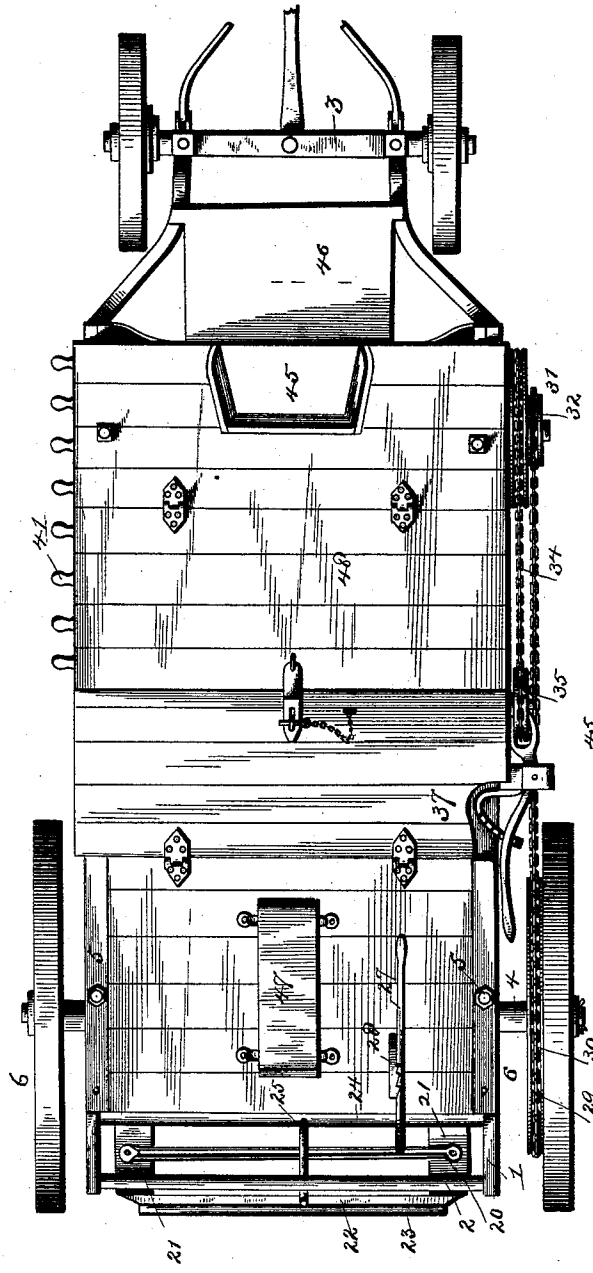

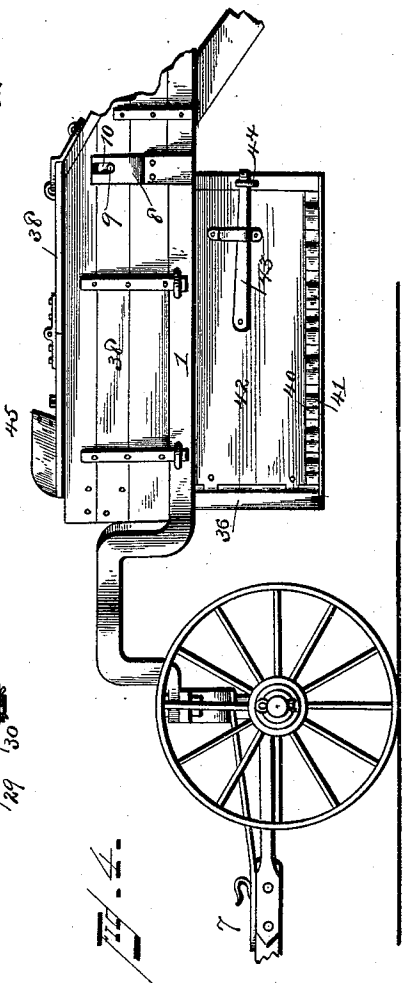

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UNITED STATES PATENT OFFICE.

SERENO H. RATHBURN, OF STANBERRY, MISSOURI.

STREET-SWEEPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,196, dated September 6, 1892.

Application filed July 20, 1891. Serial No. 400,117. (No model.)

To all whom it may concern:

Be it known that I, SERENO H. RATHBURN, a citizen of the United States, and a resident of Stanberry, in the county of Gentry and State of Missouri, have invented certain new and useful Improvements in Street-Sweeping Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in street-sweeping machines, whereby the dust, dirt, or other matter is taken directly from the street and deposited in a box or other receptacle, from which it may be readily discharged when desired or when the machine has reached the dump.

The object of the invention is to simplify the construction and improve the mode of operation of such machines, thereby obtaining superior advantages with respect to economy and efficiency.

The invention consists in the novel construction and combination of parts hereinafter fully described, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of a street-sweeping machine constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a plan view. Fig. 4 is a side elevation of the front portion of the apparatus seen from the opposite side of that of Fig. 1. Fig. 5 is a detail perspective view of a portion of one of the cut-away or recessed transverse bars.

In the drawings, the reference-numeral 1 designates a metal frame consisting of horizontal side bars connected together by rear cross-bar 2 and front bar 3, to the latter of which is swiveled the front axle. 4 designates the rear axle secured to said side bars by clips 5, and 6 denotes the driving-wheels. The front axle is provided with an ordinary draft-tongue 7.

About midway of the length of the machine the side bars are provided with upwardly-extending lugs 8, which form the bearings for the journals 9 of a transverse roller 10. To these journals on their inner sides are pivoted two inclined bars 12, which extend downwardly and backwardly to a point about in line with the rear axle. They are then slightly inclined upwardly and extended to the rear of the apparatus, where they are formed or provided with vertical arms 13, connected at their upper ends by means of a transverse bar 14.

To the under sides of the bars 12 is secured a sheet-metal plate 15, which extends from roller 10 to the lowest point of the bars and forming with said bars a way or chute. The lower side of this way or chute is provided with a transverse roller 16, journaled in short depending arms 17, said roller being adapted to rest upon the ground and support the machine while it is operating. These bars are also provided with upwardly-extending lugs, in which are journaled the rollers 18, 18^a, and 19, the rollers 18 18^a being similar to roller 10, and over which the dust-conveyer 20 passes, while the roller 19, which is intermediate of the other rollers, is intended to keep the scrapers or sweepers secured to the conveyer-belt down in contact with the street or roadway. This conveyer consists of two endless belts 21, of leather or other suitable material, provided with transverse scrapers or sweepers 22, secured at proper intervals thereto. These scrapers consist of trough-shaped metal plates riveted at each end to said belts and provided with strips of leather 23, inserted and secured therein. These strips project a short distance beyond the edges of the troughs, so as to form the sweeping or scraping surfaces. The belts 21 pass around the rollers 10 and 18 and under rollers 18^a and 19. Near the rear end of the machine and journaled in the side bars thereof is a transverse shaft or bar 24, provided with a rearwardly-extending arm 25, which engages with and passes through a loop 26 on the rear cross-bar 14. This bar 24 is also provided with a bent lever 27 by which said bar can be oscillated to raise and lower the conveyer and chute.

The machine is decked over or provided with a housing above the conveyer-belt and chute, so as to prevent escape of dirt and dust,

and on this housing is attached a segmental rack-bar 28, with which the lever 27 may be engaged to hold the same in position.

Secured to the inner side of one of the rear wheels of the machine is a chain-wheel 29, which revolves with said wheel and over which passes an endless chain 30, which also passes over a hub 31 on a chain-wheel 32, pivoted to the arm 33, depending from one of the side bars of the machine. This wheel 32 is connected by means of chain 34 with wheel 35, secured to the journal or axle of roller 10. From this construction it will be seen that as the machine is moved forward the wheels are revolved and the dust-conveyer is actuated, so that the scraper or sweepers gather up the dust or dirt and convey it by means of the chute or way into the receptacle or box 36 in the front of the machine.

The roller 10 and wheel 35 are provided with an ordinary clutch mechanism operated by the bifurcated lever 37 for throwing them into and out of gear.

The receptacle 36 consists of a rectangular box situated in the forward part of the machine in front of and below the roller 10. It is provided with a removable top 38, and at its bottom is provided with horizontal inwardly-projecting flanges 39, upon which rest a number of removable bars 40, provided with outwardly-projecting handles 41, said bars forming the bottom of the box. At one side of the receptacle is a hinged door 42, provided with a pivoted latch 43, engaging with a keeper 44, whereby it may be closed and locked. It will be noted that the bars 40 at the handles are cut away or recessed, so that the body portions project somewhat above the surface of the handles thereof, so that when the door is closed and locked it will be impossible to withdraw said bars. When, however, it is desired to withdraw the bars to dump the contents of the box, the door is opened, when said bars can be readily removed.

At the rear of the apparatus is a housing consisting of a transverse platform 49, having hinged to its front edge an inclined door 48. The platform is provided with a tool-box 47.

Having thus described my invention, what I claim is—

In a street-sweeping machine, the combination, with the frame and supporting-wheels, the conveyer, and means for operating the same, of the dust-receptacle having an opening at its rear end to receive the upper end of the conveyer, a hinged side door, and the bottom consisting of a series of removable transverse bars having their outer ends cut away or recessed, forming shoulders against which the door abuts when closed and locked, whereby removal of said bars is prevented, substantially as described.

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

SERENO H. RATHBURN.

Witnesses:

V. T. WILLIAMS,

DALE HOWES.