

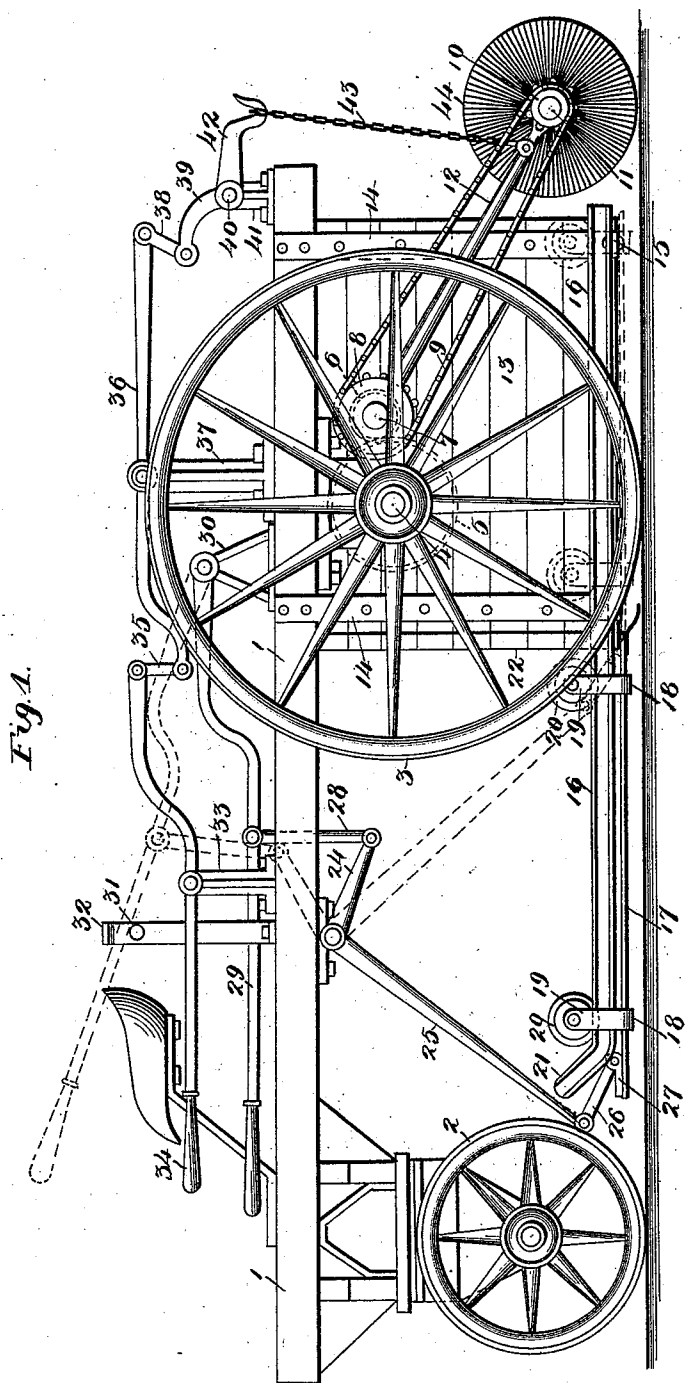
(No Model.)

4 Sheets—Sheet 1.

H. MUELLER, Jr.
STREET SWEEPER.

No. 528,548.

Patented Nov. 6, 1894.



Witnesses
J. J. O'Driscoll
J. J. Smith

Inventor
Henry Mueller Jr.
By his Attorneys
Keller & Starex

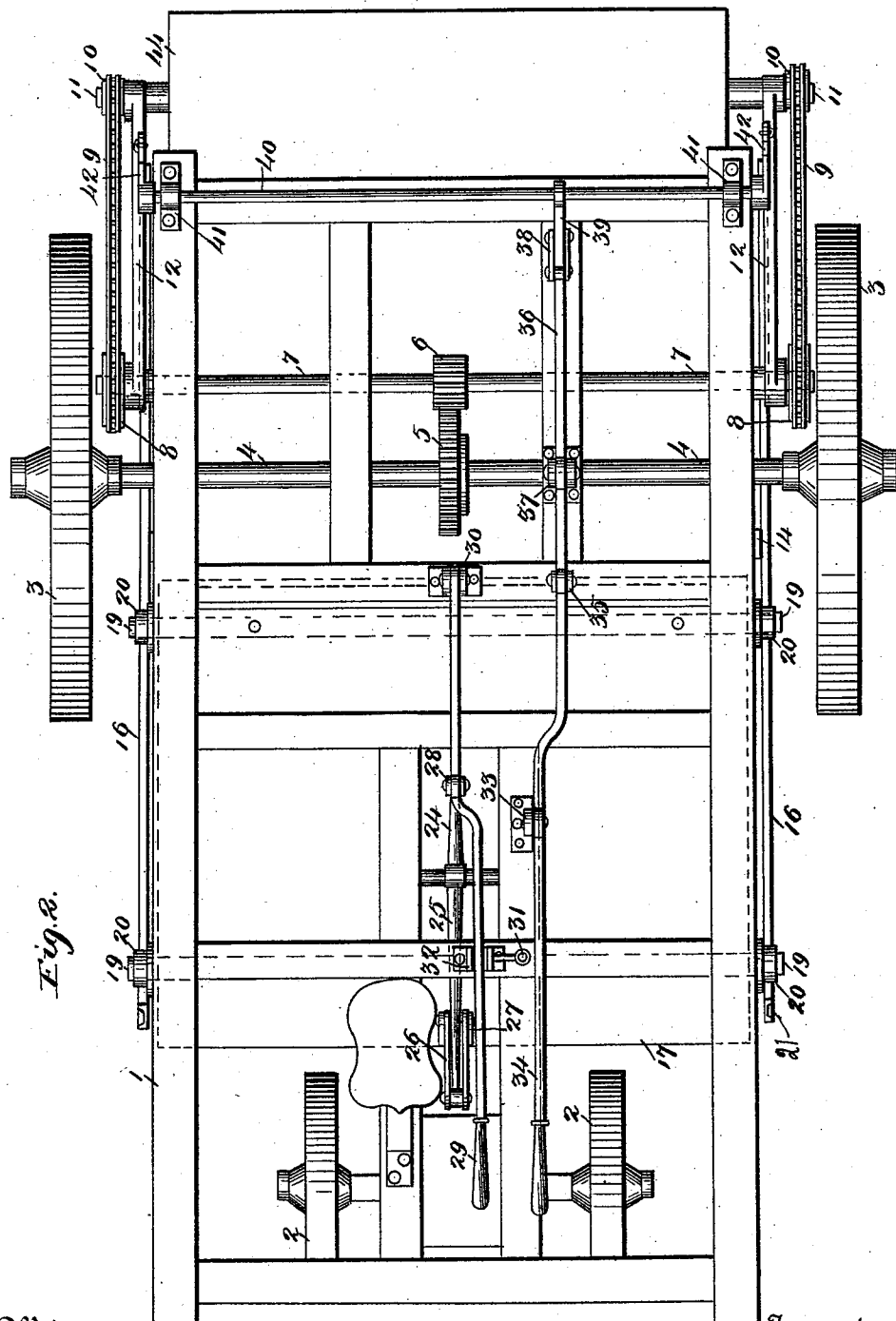
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(No Model.)

4 Sheets—Sheet 3.

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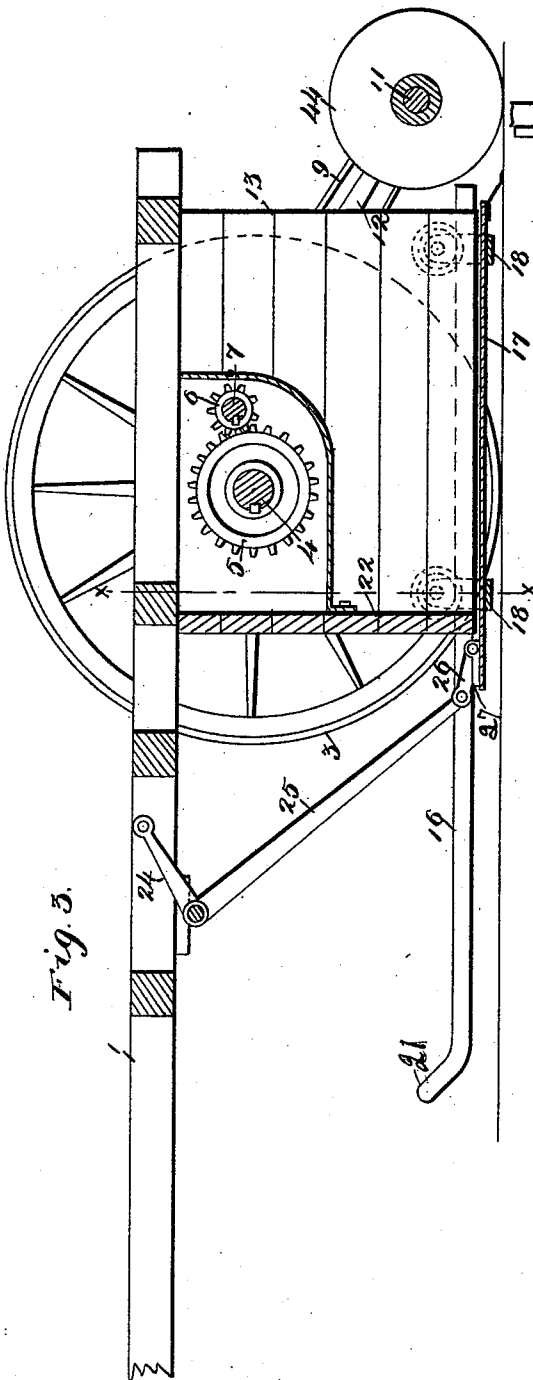


Fig. 3.

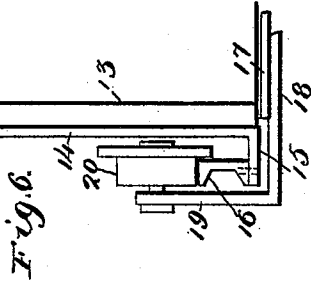


Fig. 6.

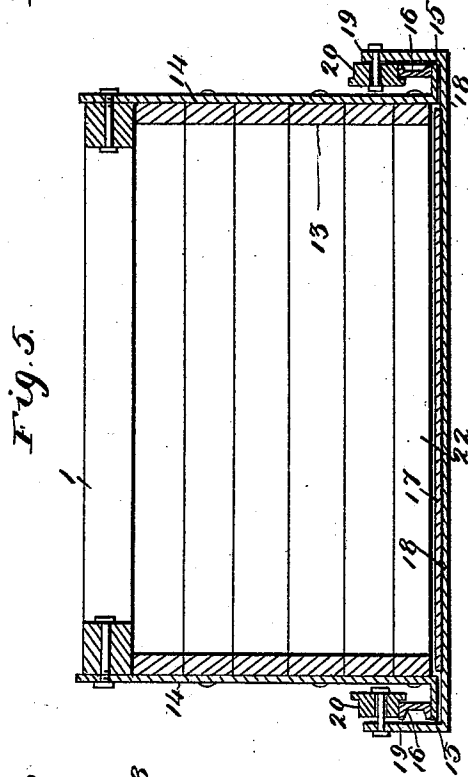


Fig. 5.

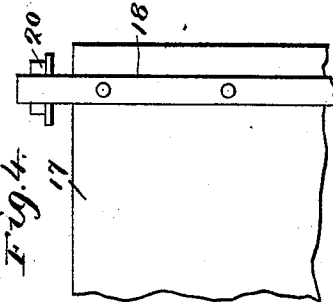


Fig. 4.

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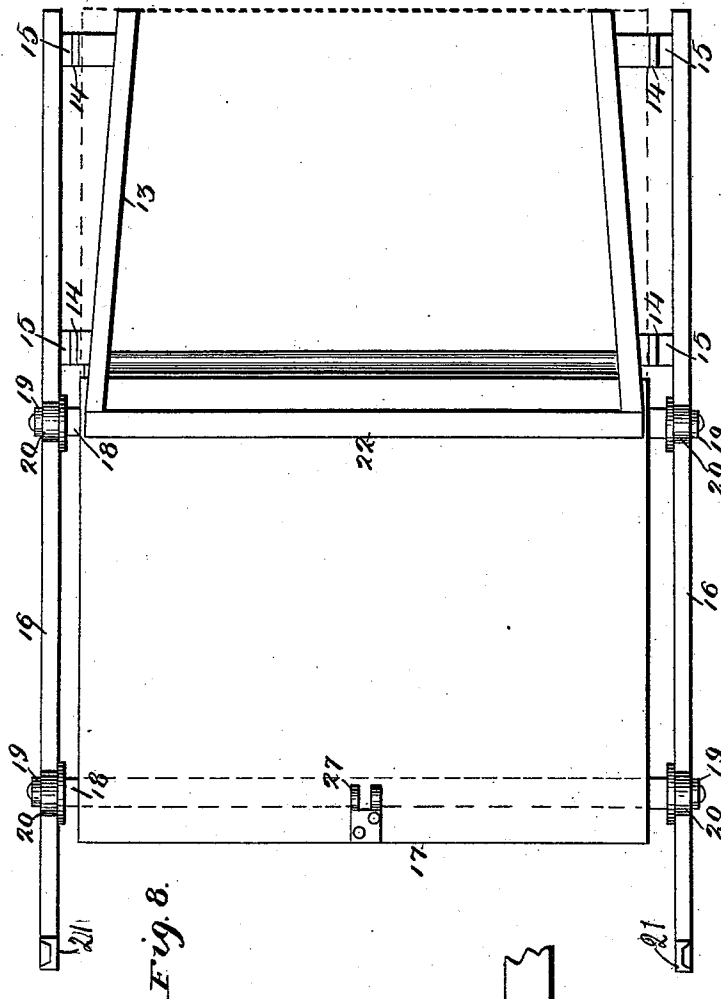
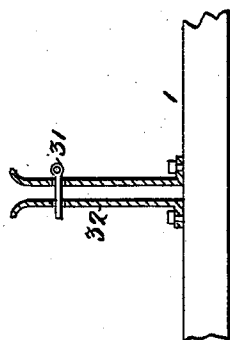


Fig. 8.

Fig. 7.



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UNITED STATES PATENT OFFICE.

HENRY MUELLER, JR., OF ST. LOUIS, MISSOURI.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 528,548, dated November 6, 1894.

Application filed June 11, 1894. Serial No. 514,137. (No model.)

To all whom it may concern:

Be it known that I, HENRY MUELLER, Jr., of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Street-Sweeping Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in street sweepers and pilers and consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of my complete invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal middle section through the receptacle. Fig. 4 is a detail of one end of the bottom showing supporting bar and wheel carried thereby. Fig. 5 is a section on the line *x-x* of Fig. 3. Fig. 6 is a detail of one end of the receptacle showing the sliding plate or bottom, supporting bars, track rails and the wheels on the same. Fig. 7 is a middle sectional elevation of the fork for temporarily retaining the operating lever for the sliding bottom; and Fig. 8 is a plan view of the receptacle detached showing the preferred form thereof.

The object of my present invention is to construct a street sweeper and piler wherein the dirt will be swept into a receptacle forming a part of the same, and from which the dirt can be dumped at suitable intervals along the route of the sweeper, and thus be piled in readiness to be transferred to a cart.

In general the invention consists of an open fixed receptacle suspended from the frame of the machine the said receptacle being open at the side and bottom; of a sliding plate or bottom for the said receptacle adapted to be withdrawn from under the same and in this act the dirt being dumped from the receptacle and scraped from off the bottom; of a broom adjacent to the open side end of the same for sweeping dirt onto the sliding bottom.

The invention consists further in special devices for dumping the receptacle, that is, withdrawing the sliding bottom from under the same; devices for keeping the sliding bottom in either its normal or closed position and in other details to be now described.

Referring to the drawings, 1 represents the frame which is supported on the wheels 2 and driving wheels 3. The wheels 3 are firmly secured to their shaft 4 the latter carrying at its medial portion a driving gear wheel 5 which meshes with a pinion 6 on a second shaft 7 to the outer ends of which are secured the sprocket wheels 8. Over each sprocket wheel 8 passes a sprocket chain 9 co operating with sprocket wheels 10 secured at each end of the broom shaft 11. The broom shaft 11 is mounted between the ends of the arms 12, one end of each of which loosely embraces the shaft 7 adjacent and interior to the sprocket wheels 8, the said arms being of sufficient weight to keep the broom against the ground when in its sweeping position.

The open receptacle 13 is supported from the frame in the rear of the machine by depending hangers or plates 14, one hanger at either end of the receptacle, each hanger or plate having a right-angular projecting portion 15 serving to support the rails 16 which are secured to said right-angular projections or arms. The sliding plate or bottom 17 of the open receptacle is supported and secured by the angle bars 18 at either end, the up-turned ends 19 of the said bars forming bearings for the wheels 20 which are adapted to roll over the rails 16, the forward ends of the rails having upwardly inclined portions 21 to prevent the bottom from rolling off at said end.

It is obvious from the construction described that the false or movable bottom is free to slide back and forth along the rails carried at the bottom of the receptacle, and that when said bottom is withdrawn from under the receptacle the dirt will be scraped off from said bottom and the contents of the receptacle at the same time dumped into the street, the bottom in its sliding movement co-operating with the lower edge of the rear wall 22 of the receptacle. To better hold the dirt as it is swept into the receptacle the side walls of the same are made inclined toward each other as best shown in Fig. 8.

The mechanism for operating the sliding bottom is as follows: Pivoted at a suitable point along the front portion of the frame is a bent lever having a short arm 24 and a long arm 25. The lower end of the latter is pivot-

ally secured to a link 26 whose opposite end is pivotally secured to a casting 27 secured to the forward end of the sliding bottom. The free end of the short arm 24 is pivotally secured to a rod 28 whose opposite end is pivotally connected to the medial portion of an operating lever 29 suitably curved and which is pivoted in a suitable standard 30 mounted on top of the frame. The said lever 29 when depressed will, by reason of the connections described, withdraw the sliding bottom from under the receptacle, scrape the dirt located thereon and allow the contents to dump from the said receptacle, the full lines in Fig. 1 showing the parts in this position. The said lever when raised (as seen in dotted lines in said figure) will close the bottom, and the parts are retained in this position by resting the operating end of the lever 29 against a pin 31 passed through suitable openings of the fork 32 mounted at the front end of the frame.

During the dumping of the receptacle it becomes necessary of course to elevate the broom from off the ground to allow the sweeper to freely pass over the pile made by the dumping of the dirt in advance of the said broom. This is accomplished by the following mechanism: Mounted on a standard 33 is a pivoted lever 34 whose rear end is secured to a link 35 pivotally secured to a bent second lever 36 mounted on a standard 37. The free rear end of the lever 36 is secured to a link 38 which is pivotally connected to a curved arm 36 rigidly secured to a rocking shaft 40 mounted in bearings 41 on top of the frame, said shaft being parallel to the broom shaft 11. At the outer ends of the rock shaft 40 are secured the hooks 42 from each of which hangs a chain 43 secured one to each arm 12 carrying the broom shaft 11. It will be apparent from the connections described that when the lever 34 has its operating end depressed the rock shaft 40 will be turned so as to raise the free ends of the hooks 42, and thus raise the broom shaft and the broom 44 carried thereby, in this way allowing the sweeper to freely pass over the pile dumped from the receptacle.

It is obvious that the machine can be altered in details without departing from the spirit of my invention and that all equivalents are within the scope of my invention.

The gear wheels 5 and 6 have generally a protective casing secured about them as shown only in Fig. 3, the object of the casing being to keep off any dirt and accumulations from said gear wheels.

Having described my invention, what I claim is—

1. In a street sweeping machine, a suitable frame, an open receptacle depending from said frame, and a sliding bottom adapted to co-operate with the lower edge of the rear wall of said receptacle for scraping the dirt

located on said bottom, substantially as set forth.

2. In a street sweeping machine, a suitable frame, an open receptacle depending from the same, a broom located adjacent to the open end adapted to sweep dirt into said receptacle, and a sliding bottom or plate adapted to co-operate with the lower edge of the rear wall of the receptacle for scraping the dirt located on said bottom, substantially as set forth.

3. In a street sweeping machine, a suitable frame, a receptacle on said frame, depending hangers for supporting said receptacle, track rails carried by the lower end of said hangers, a sliding bottom, rollers connected to said bottom and moving on said rails, and means for operating said bottom substantially as set forth.

4. In a street sweeping machine, a suitable receptacle, a sliding bottom or plate co-operating therewith, supporting angle bars embracing said bottom plate, wheels mounted on said bars adjacent to the side walls of the receptacle, depending plates or hangers supporting the receptacle at either end thereof, right-angular projecting arms on said hangers, track rails carried by said right-angular projecting arms, inclined terminals or ends forming part of said rails, the said wheels adapted to pass over said rails, and suitable operating mechanism for sliding said bottom, substantially as set forth.

5. In a street sweeping machine, a suitable frame, a receptacle depending therefrom having inclined lateral walls, a vertical rear wall, and a sliding bottom co-operating with the lower edges of said walls, substantially as set forth.

6. In a street sweeping machine a receptacle having a suitable sliding bottom, a link secured to the forward end thereof, a pivoted bent lever having a long and short arm, the said long arm being pivotally secured to the end of said link, a rod secured to the free end of the short arm, a pivoted operating lever having its medial portion loosely connected to the opposite end of the said rod, and a suitable fork for securing the operating end of the operating lever, substantially as set forth.

7. In a street sweeping machine, a suitable frame, an open receptacle depending from the same, a brush located adjacent to the open end of the receptacle for sweeping dirt thereinto, suitable running gear for said brush, a sliding bottom for said receptacle, and means for supporting and guiding said bottom, substantially as set forth.

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

HENRY MUELLER, JR.

Witnesses:

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C. F. KELLER.