M. EDWARDS.

STREET SWEEPER.

APPLICATION FILED SEPT. 8, 1916.

1,216,969.

Patented Feb. 20, 1917.

2 SHEETS—SHEET 1.

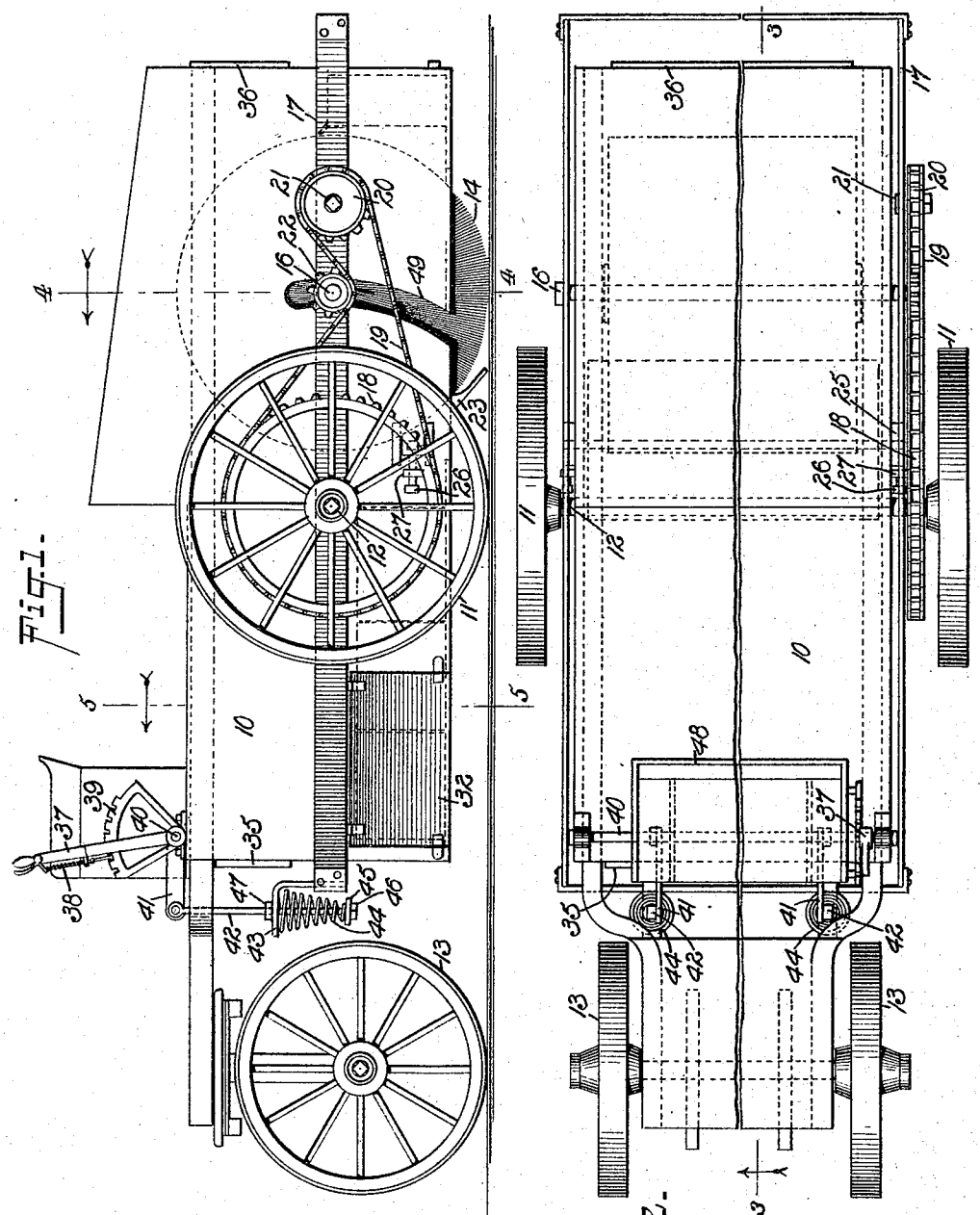


Fig. 1.

Fig. 2.

WITNESSES

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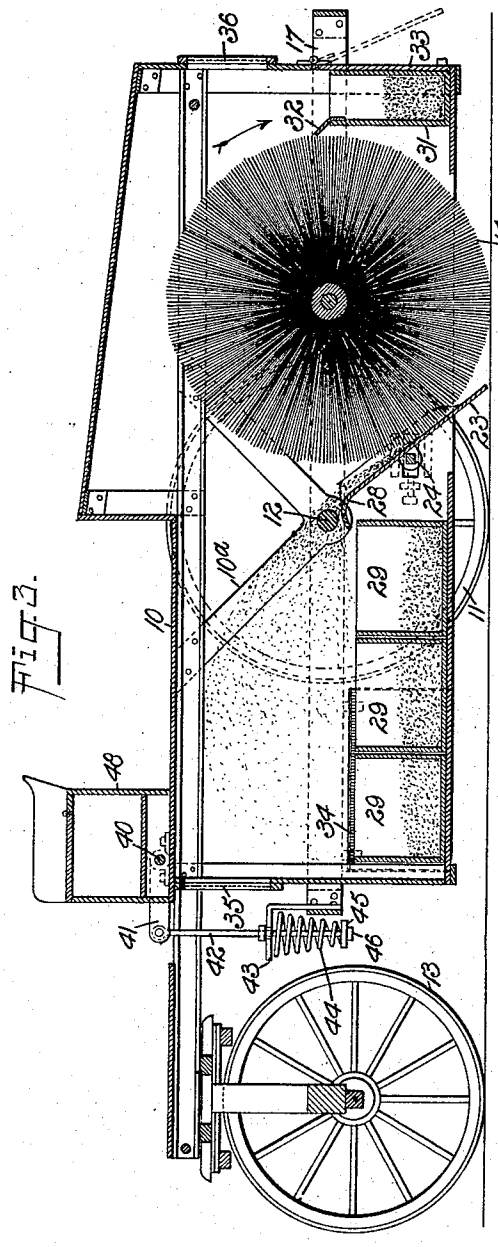


Fig. 3.

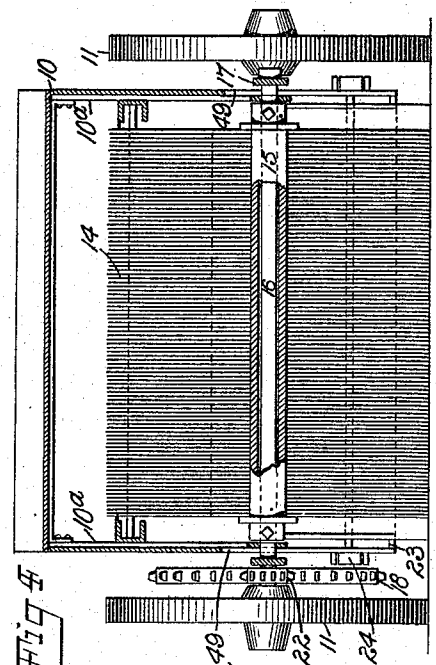


Fig. 4.

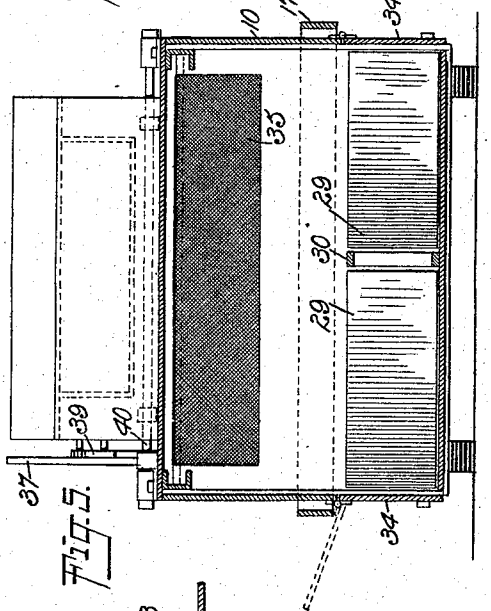


Fig. 5.

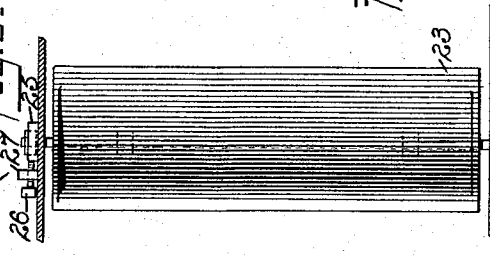


Fig. 6.

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STREET-SWEEPER.

1,216,969. Specification of Letters Patent. Patented Feb. 20, 1917.

Application filed September 8, 1916. Serial No. 119,011.

To all whom it may concern:

Be it known that I, MARMADUKE EDWARDS, a citizen of the United States, and a resident of Halesite, in the county of Suffolk and State of New York, have invented a new and Improved Street-Sweeper, of which the following is a full, clear, and exact description.

My invention relates to a wheeled street sweeper having a rotary brush driven from a running wheel.

Objects of the invention are to provide an improved drive means for the rotary brush, involving few and simple elements which will produce an even, steady rotation of the brush; to provide a convenient arrangement of boxes for the sweepings and dust and conveniently removable from the body; to provide a rotary brush and a co-acting inclined pan so arranged that an air current or suction will be produced, active to carry the dust into the interior of the body with the sweepings; to provide an effective arrangement of screened outlets for filtered air from the interior of the sweeper; and to provide improved means mounting the brush and novel means for varying the brush pressure.

The invention will be particularly explained in the specific description following.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a side elevation of a street sweeper constructed in accordance with my invention;

Fig. 2 is a plan view thereof;

Fig. 3 is a longitudinal vertical section on the line 3—3, Fig. 2;

Fig. 4 is a transverse vertical section on the line 4—4, Fig. 1;

Fig. 5 is a transverse vertical section on the line 5—5, Fig. 1;

Fig. 6 is a fragmentary plan view of the dust pan.

In carrying out my invention in practice, a suitable body 10 is provided adapted to receive sweepings, the body being provided with running wheels 11 on an axle 12. The axle 12 in the present example is supported in hanger brackets 10^a on the body at the interior. The numeral 13 indicates the front wheels.

A rotary brush 14 has the hub 15 thereof fitting a shaft 16 and fixedly secured thereto in any suitable manner.

The shaft 16 is mounted to turn in a frame 17 extending about the body 10 and presenting side bars ranging longitudinally of the body. The side bars of the frame 17 are rockably slung between the ends on the axle 12 so that the frame may be rocked vertically.

The drive means for the brush 14 includes a sprocket 18 driven by or with the running wheels, over which sprocket a chain 19 runs, said chain running also over an idler sprocket 20 on a short shaft 21 on a side bar of the frame 17. The working run of the chain 19 engages the under side of a sprocket pinion 22 fixed on the brush shaft 16. The chain runs directly from the drive sprocket 18 beneath the fixed brush sprocket 22, thence direct to the idler sprocket 20 and back to the said drive sprocket. The described drive means for the brush, it will be seen, is composed of simple elements giving a direct and positive drive to the brush so as to revolve the same steadily and evenly.

The brush, it will be seen, turns in a forward direction, being mounted in the frame 17 in the rear of the axle 12. Co-acting with the brush at the front thereof and tangential thereto is an inclined dust pan 23 disposed at the bottom of the box to lead to the interior thereof. The dust pan 23 is hung at about its longitudinal center on a shaft 24 turning in suitable bearing blocks 25 which are slidable by means of set screws 26 operating in lugs 27 on the body 10. The pan 23, by reason of its adjustment and its tangential position, is given such a close engagement with the brush 14 that a suction will be created by the brush between the same and the pan to draw in the dust with the sweepings. The upper end of the pan 23 is curved forwardly and downwardly as at 28 to direct the sweepings forwardly.

I provide a plurality of dirt boxes 29 within the interior of the body 10 forward of the front of the pan and the brush. Advantageously, these boxes 29 are arranged in two longitudinal series separated by a longitudinal partition frame 30. Also, in the rear of the brush 14 I provide a box or receptacle 31 to receive any dirt carried rearwardly at the top of the brush. The receptacle 31 has a suitable guard strip 32 at the

top to prevent the dirt being carried downwardly and outwardly by the brush. In order to provide for the convenient removal and insertion of the box 31, a rear door 33 is provided on the body 10. Similarly, side doors 34 are provided on the body near the front for the removal and insertion of the boxes or receptacles 29.

The operation of the brush creates more or less air pressure within the body 10, and I provide said body, near the top at the front, with a screened transverse air outlet 35, the screening material being suitable to filter the air by screening out the dust therefrom. A similar transverse screened air outlet opening 36 is provided in the rear end of the box near the top, that is to say, behind the brush 14.

In order to optionally vary the brush pressure in sweeping, the rockable frame 17 carrying said brush is adapted to be raised or lowered by a lever 37 provided with the usual latch 38 to engage the customary toothed sector 39. The shaft 40 on which the lever 37 is fixed has arms 41, extending forwardly, and hung on said arms at the forward ends are depending rods 42 which extend through brackets 43 on the frame 17. On each rod 42 beneath the adjacent bracket 43 is a compression spring 44 retained at its lower end by a washer 45 and nut 46. The rod 42 passes freely through the bracket 43 and is provided with a fixed collar 47 or the like, above said bracket. Thus, by a downward movement of the rods 42, the collars 47 will engage the brackets 43 and depress the frame 17 to lift the brush, while an upward movement of the rods 42 will place the springs 44 under tension, thereby exerting a yielding pressure on the brush.

The lever 47 is adjacent to the driver's seat 48. In the rocking movements of the frame 17, the brush shaft 16 is free to move in arcuate slots 49 formed in the sides of the body 10.

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

A sweeper including a body, a frame having side bars pivotally slung between the ends thereof on the body for vertical rocking movement and having a cross bar joining the said side bars at the front of the body, a rotary sweeper brush carried by said frame rearward of the pivotal center thereof, a rock bar on the body at the front, a lever on said rock bar, depending rods hung on the said rock bar near each side of the front of the body and adapted to be raised or lowered with the rocking of said rock bar by the lever, brackets on said cross bar of the frame through which brackets the said rods are vertically movable, means on the depending rods above said brackets adapted to engage the latter upon a downward movement of the rods to depress the cross bar and the front end of the frame and coil springs on the rods below the said brackets, said springs abutting at the upper ends against the under sides of the brackets, and exerting their pressure at the lower ends on the said rods.

MARMADUKE EDWARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."