W. V. Daboll.

Street Sweeper.

No. 35,365. Patented May 27, 1862.

Fig. 1.

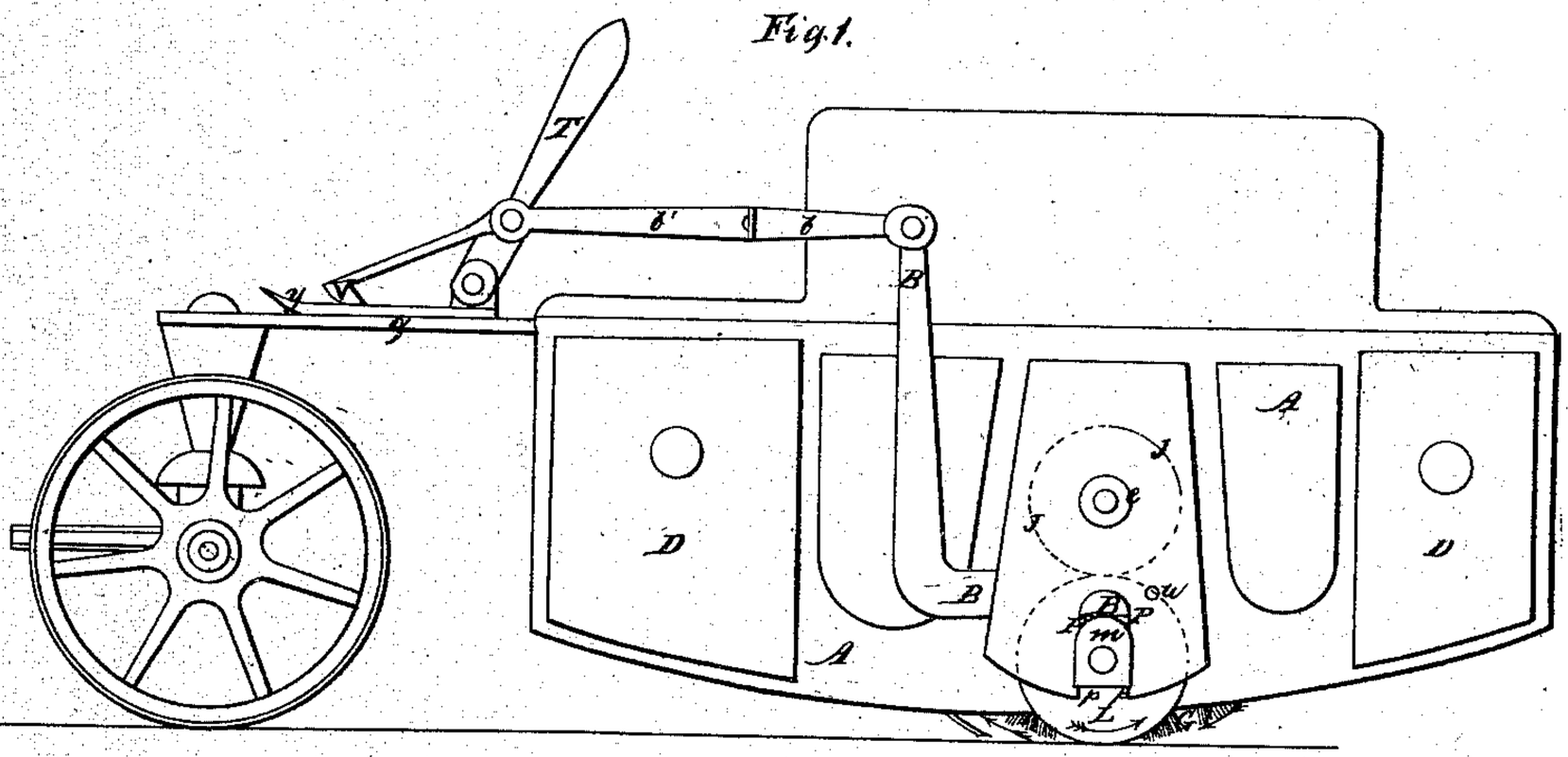


Fig. 2.

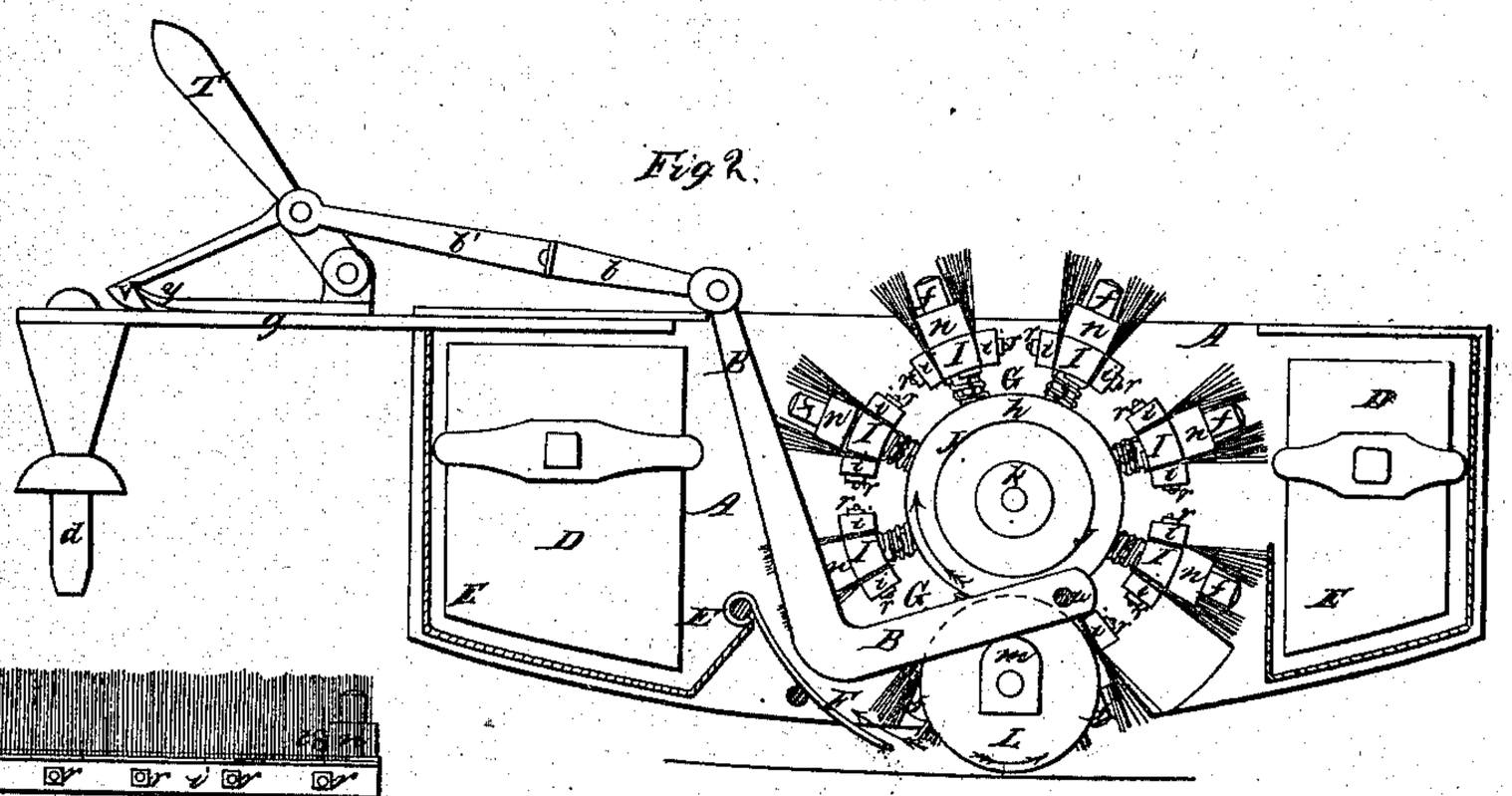
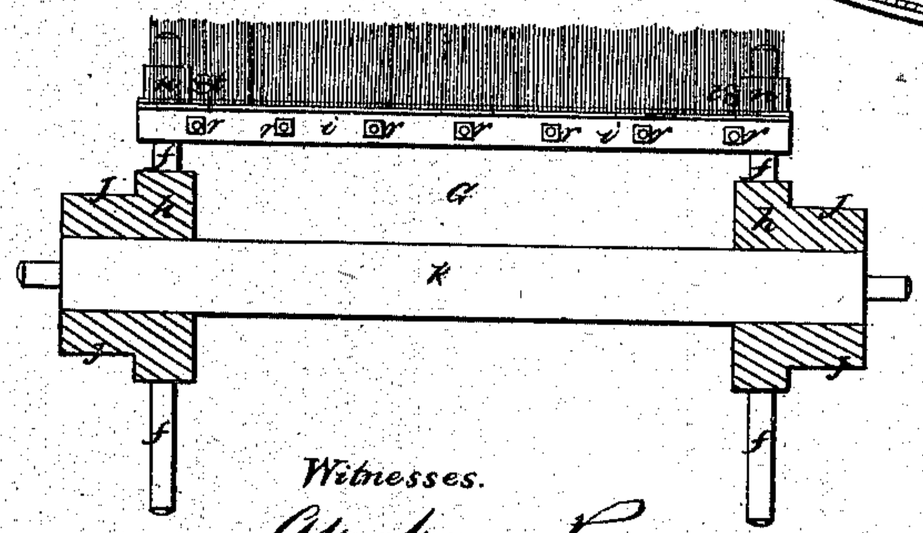


Fig. 4.

Fig. 3.



Witnesses.
Abraham Payne
Isaac A Bonnell

Inventor.
Wm V. Daboll

UNITED STATES PATENT OFFICE.

WILLIAM V. D'ABOLL, OF CRANSTON, RHODE ISLAND.

IMPROVEMENT IN STREET-SWEEPING MACHINES.

Specification forming part of Letters Patent No. **35,365,** dated May 27, 1862.

To all whom it may concern:

Be it known that I, WILLIAM V. DABOLL, of Cranston, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Street-Sweeping Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a longitudinal view of a sweeping-machine arranged with my improvement. Fig. 2 is a transverse section of the same, showing the construction and arrangement of the interior and the working parts. Figs. 3 and 4 are details of the construction, which are referred to in the course of the description.

Similar letters of reference denote corresponding parts in the several figures.

My improvement has special reference to a peculiar arrangement of "friction driving-rollers" relatively with "the ends of a revolving broom or brush," patented by N. B. Pratt, February 8, 1859, for a carpet-sweeper.

My improvement consists in a peculiar construction of the brush-cylinder to provide for the wear and replacement of the brush material, and, in combination therewith, a convenient apparatus for regulating and controlling the operations of the brush-cylinder conformable with its arrangement with the friction driving-rollers, as specified in the patent referred to, for the purpose of adapting the so-arranged sweeping apparatus to street-sweeping purposes.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same.

In the accompanying drawings, A A is the body of the machine, which may consist of a frame, of wood or cast-iron covered or lined with sheet-iron, having a dirt-box, E E, at each end, and in connection therewith suitable opening or doors, D D, upon each side for removing the accumulations of dirt therefrom, and having a stout frame, *g*, of wood or iron, projecting from the forward end, provided with a suitable linchpin, *d*, for connecting the machine with the forward axletree of a wagon, so that it may be drawn and operated by one or more horses in the usual way.

The brush-cylinder G revolves between the two dirt-boxes E E in bearings formed in the frame upon each side at *e*. It is constructed as shown in Figs. 2 and 3, there being two hubs, *h h*, of cast-iron, secured upon each end of the shaft *k*, from which hubs a number of radial arms, *f f f*, project, upon which the brushes I I I are arranged and adjusted, two opposite arms in each hub holding one brush by passing through the ends of the same, as shown. The said brushes are adjusted to and held in their proper position by means of the spiral springs *s s s*, which encircle each arm beneath the ends of the brushes, and a sliding collar, *n n n*, upon each arm over the brush, which is secured to the arm by a set-screw, *t*. The springs *s s s*, it will be seen, press the brushes I I I from the center of the brush-cylinder, so that after the brushes have worn short, by simply moving the sliding collars *n n n* toward the ends of their radial arms the brushes I I I are set out from the center and made effective again from time to time, until the brushes are worn so short that they are no longer elastic, when the brush material should be removed and replaced by new. This is accomplished by loosening the screw-bolts *r r r*, which serve to confine the birch-twigs, rattans, or other like material, of which the brushes are made, between the bars *i* I *i*. After the material is properly inserted between said bars, the screw-bolts are again tightened and the ends of the brushes are trimmed off, so as to be of uniform length and equally distant from the center of the brush-cylinder. The springs *s s s* are depressed as much as possible at first to give the greatest length to the new brush, that they may wear a greater length of time. The construction of the brushes, as described, it should be understood, is not new, the same being set forth in the expired patent of Alexander Jones, of July 28, 1843, and very generally used in machines for this purpose. The springs *s s s*, besides assisting in adjusting and holding the brushes I in position, also permit the brush to yield at one or both ends in case it should encounter any obstruction in revolving or in sweeping over an uneven surface.

The machine travels upon the friction driving-rollers L, one upon each side, which revolve in bearings formed in the boxes *m*, which are arranged in oblong slots *p p* in the frame, as shown in Fig. 1. These rollers may be formed

of cast-iron, or of wood shod with iron, about sixteen inches in diameter, and upon the top of each bears one of the hubs *h* of the brush-cylinder, which are turned flat and to a diameter of about twelve inches to form a suitable rolling bearing, J, and being thus arranged the entire weight of the machine and its contents bears upon the top of the driving-rollers, which tends to impart a considerable power to the revolving brush-cylinder.

In order to control the operation of the brush-cylinder as arranged with the friction driving-rollers, so as to make the cylinder revolve or not, as is desired, it is necessary to lift the bearings J of the brush-cylinder from contact with the driving-rollers L, and with it the body of the machine. This is done by means of the lever B swinging upon the fulcrum-pin *u* in the frame and exerting its power against the top of the boxes *m m* upon each side of the machine, the two levers B being connected by a cross-bar, *b*, and frame *b'* to the hand-lever T, upon the frame *g*, conveniently arranged to be operated by the person driving the team. To the hand-lever a stout iron hook, *v*, is attached, which hooks upon the catch *y*, as shown in Fig. 2, in which position the brush-cylinder remains stationary and is lifted from contact with the surface over which it travels. In this condition the machine is drawn to the locality which is to be swept, when, by means of the hand-lever T, the hook *v* is released and the working parts placed in the position shown in Fig. 1. The brush-cylinder is thereby made to revolve, and in so doing to sweep the dirt against the dash-board F, and thence into the dirt-boxes E E. When these are filled, the cylinder is lifted from the driving-rollers by means of the levers T and B, and the load of dirt is carried off and removed from the boxes through the doors D D by means of a common hoe, after which the sweeping may be resumed.

Having described my improved machine, I wish it to be understood that I do not claim the arrangement of the friction driving-rollers relatively with the ends of the brush-cylinder, nor the construction of the brushes I I I as described, nor the use of the dash-board F, the improvement claimed being confined to the peculiar construction of the brush-cylinder and the apparatus described for controlling the operation of the same.

What I claim, and desire to secure by Letters Patent, is—

1. The combination of the shaft *k*, the hubs *h h*, the radial arms *f f f*, the springs *s s s*, the collars *n n*, with the brushes I I I, substantially as described, for the purpose specified.

2. In combination with the brush-cylinder as arranged, the levers B and T, with suitable connections, in combination with the hook *v*, or an equivalent fastening, operating substantially as described, for the purpose specified.

WM. V. DABOLL.

Witnesses:

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ISAAC A. BROWNELL.