

(No Model.)

W. J. DREW.
CARPET SWEEPER.

No. 575,219.

Patented Jan. 12, 1897.

Fig. 1.

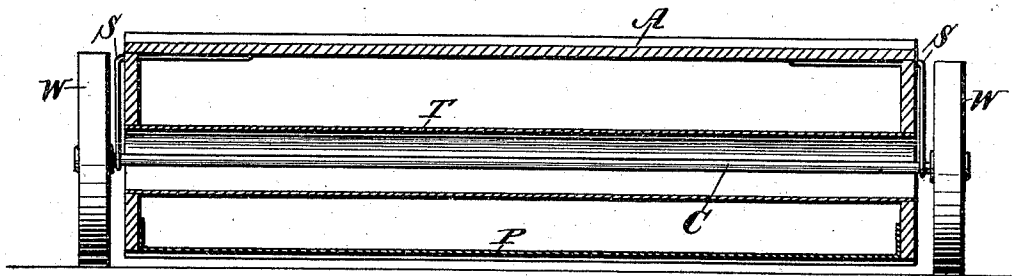
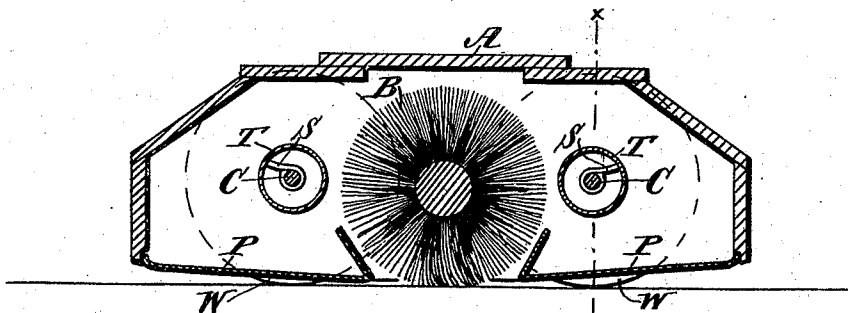


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

WALTER J. DREW, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE
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CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 575,219, dated January 12, 1897.

Application filed August 5, 1896. Serial No. 601,729. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. DREW, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a specification.

This invention relates to certain new and useful improvements in carpet-sweepers; and the objects of the invention are, first, to furnish an efficient means for protecting the wheel-axle from dirt, dust, and other materials which have a tendency to attach to or wind around the axles of carpet-sweepers; second, to use the dust-protecting device in such a manner that the same may serve to retain the larger material in the dust-pans after the same has once been carried into the pans by the revolving brush, and, third, to simplify the construction and increase the efficiency of a carpet-sweeper. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows a longitudinal sectional view through the central line of the wheel-axles, showing a section of case, a section of the protecting-tube, and the position of the wheel-axle within the tube, said sectional line being substantially on line X X of Fig. 2. Fig. 2 shows a cross-section of a carpet-sweeper case containing my invention, illustrating the position of the tubes within the case and their relative position to the dust-pans.

Similar letters refer to similar parts in both views.

A represents the sweeper-case, constructed in any suitable form.

B represents the brush-roller, supported in the case in any suitable manner.

C represents the axle, which extends through from end to end of the case, supporting the driving-wheels W W on the outside of the case. The axle is held in position in the example of my invention shown in the drawings by means of the springs S S.

T represents the tube or dust-protecting device, which entirely surrounds the wheel-axle C, and which extends from end to end

of the case and preferably into or through the end pieces of the sweeper.

P P represent the pans, constructed and supported within the sweeper-case in any ordinary manner. In the ordinary carpet-sweeper the inclined portions of the pans which convey the dust into the pans are set at an angle, the line of which angle points substantially toward the axles. In my invention as constructed the tubes, which are preferably round, serve as additional means for retaining especially large articles within the pans after the same have been swept into the pans by the brush. It sometimes and not unfrequently happens that a piece of paper will be carried out of the pan by means of the revolving brush, but in a carpet-sweeper as above described whatever is carried into the pans by the revolving of the brush will remain there until the pans are emptied in the ordinary manner.

In using a carpet-sweeper the brush operates upon the carpet entirely between the ends of the case, so that the dust which it raises is really confined or caught in the case or box of the carpet-sweeper. In moving the carpet-sweeper rapidly over the carpet a considerable quantity of dust is raised, and naturally this dust works into the journals or journal-bearings of the driving-wheels, causing said journals soon to become worn, and also causing the wheels to revolve with considerable friction. By the construction above described no dust which is raised inside of the case can work into the journals of the driving-wheels.

In all carpet-sweepers having an axle-rod extending through the case and supporting the drive-wheels on the outside thereof these axle-rods, if they have a rotary motion, invariably wind up threads and other material and thereby clog and impede the free revolution of the axle-rod. Hence in many cases it has been found necessary where long axle-rods are used to allow the driving-wheels to revolve upon the axle-rods instead of revolving the axle-rods and driving-wheels together. My invention obviates the above difficulty and enables the manufacturer to construct his carpet-sweepers provided with long axle-

rods, which rods may or may not revolve with the driving-wheels.

In sweepers as now constructed the wheels are hung upon springs or supported in some other manner, so that the wheels may be raised or lowered with reference to the shell or case of a carpet-sweeper, the object being to place in the hands of the user means for lowering the brush at will, in order to sweep heavy or light, as may be desired. I therefore have provided a tube T of sufficient size to allow the wheels to have this vertical motion and yet to prevent the axle C from coming in contact with any portion of the tube T. This tube T may be constructed of metal or any other suitable material, and may be constructed round or in any other suitable shape, but I prefer a metal tube cylindrical in form. The springs are shown by SS, which are attached, in the example of my invention shown in the drawings, to the upper portion of the case and extend downward and at an angle so as to allow the wheels to have a vertical motion with reference to the case; but it will be evident that any form of supporting mechanism for the driving-wheels may be used, and this invention is adapted more particularly to sweepers which have the journals of the driving-wheels supported by springs or by cam-levers, so as to allow for the vertical

automatic adjustment of the driving-wheels when the sweeper is in use.

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

1. In a carpet-sweeper, the combination of a case, an axle-rod extending through the ends of the case and supporting driving-wheels on the outside thereof, and a tube surrounding said axle-rod and fixed at its opposite ends in the ends of the case, whereby the axle-rod is protected from dust and other material, substantially as described.

2. In a carpet-sweeper, the combination of a case, a vertically-movable axle-rod extending through the ends of the case, driving-wheels supported on said axle-rod outside the ends of the case, and a tube surrounding said axle-rod and fixed at its opposite ends in the ends of the case, said tube being considerably larger in diameter than the diameter of the axle-rod to permit of the vertical adjustment of the axle-rod within said tube, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

WALTER J. DREW. [L. s.]

Witnesses:

ARTHUR C. DENISON,
CHRISTOPHER HONDELINK.