(Model.)

H. S. WING.

Carpet Sweeper.

No. 243,095. Patented June 21, 1881.

Fig. 7.

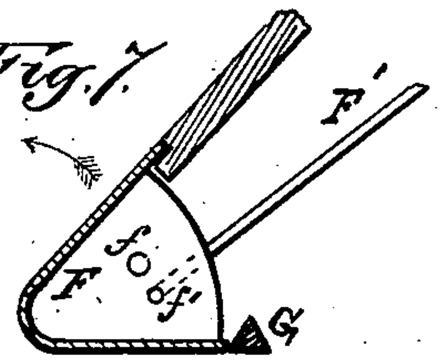


Fig. 1.

Fig. 2.

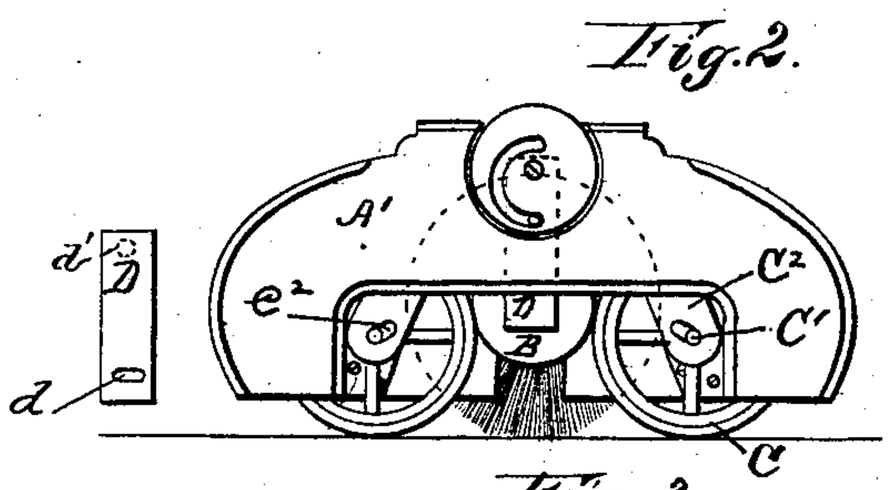


Fig. 3.

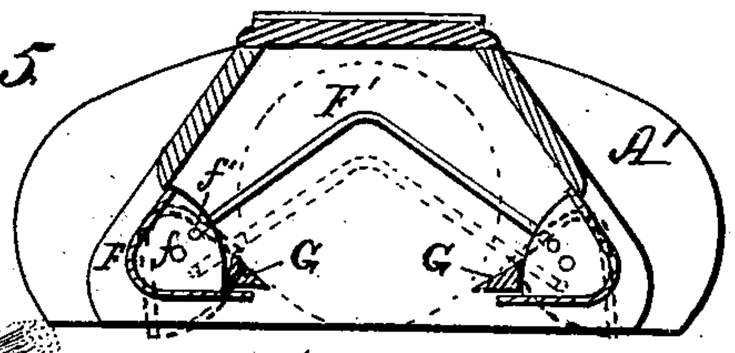


Fig. 5.

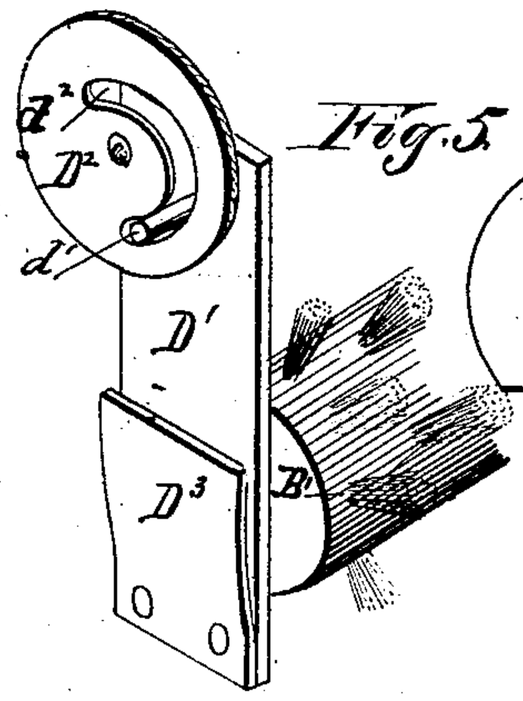


Fig. 4.

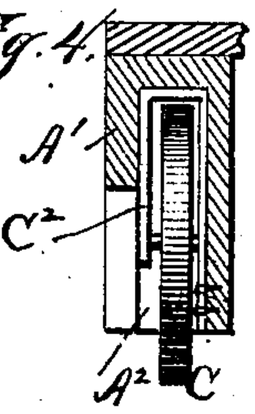
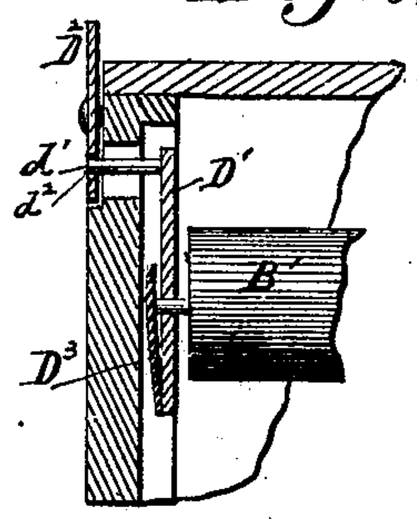


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY S. WING, OF DETROIT, MICHIGAN.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 243,095, dated June 21, 1881.

Application filed March 8, 1881. (Model.)

To all whom it may concern:

Be it known that I, HENRY S. WING, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Carpet-Sweepers; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists, first, in an improved case, the depending side boards of which are close to the brush-wheel and serve as hanger-boards for fastening the handle attachments and enabling the latter to be brought nearer the floor or base of the sweeper; secondly, in making the outer part of said end partially open, so as to expose the friction-wheels, the brush-hanger, and the journals, to facilitate coupling the parts together, oiling the journals, &c.; thirdly, in a novel spring-clamp for facilitating the ready engagement and disengagement of the brush with its hanger; fourthly, in the means for adjustment, either up or down, of the brush-hanger, consisting of a vertical wheel turning about a central support and provided with a cam-slot into which projects a stud from the adjacent hanger; fifthly, in means for dumping the pans, consisting of a spring which is connected with both pans, spans the space between them, and operates to lock the pans in dumped or closed position, and permitting either pan to be operated independently of the other, and preventing all rattling or liability of spilling the dirt; and, sixthly, in a novel hanger for the handle and means for locking the handle in vertical position.

In the drawings, Figure 1 is a perspective view of my improved sweeper. Fig. 2 is an end view on the end adjacent to the friction-wheels. Fig. 3 is a sectional view, illustrating the pans, the dumping mechanism, and the relative positions of the depending sides with respect to the friction-wheel case; Fig. 4, a section illustrating the construction of the friction-wheel case and friction-wheel support; Fig. 5, a perspective view of the spring-hanger and the brush-shaft-adjusting mechanism; Fig. 6, a sectional view of the same; Fig. 7, a variation showing the pan and spring arranged to dump outwardly from the brush.

It is the object of my invention to cheapen the construction of a sweeper, and at the same time improve its operation in all its essential features, and to this end—

A is the case, consisting of a top board, *a*, and two depending side boards, *a'*, which side boards are brought down close to the brush-wheel.

A' is the end of the case containing the friction-wheels. The end A' is made, preferably, of a single thickness of wood or other suitable material, having a broad kerf or cavity, A^2, formed between its bounding sides for the reception of the friction-wheels and brush-roller.

B is the brush-roller head, and B' the brush-roller.

C represents the friction-wheels. They are made, preferably, of metal, with a rubber tire of the usual form, though I do not drill their centers, but form them with a projecting hub, C', which is turned down to form suitable journals. These wheels are each hung in bearings C^2, which have inclined slotted seats c^2 for the journals C'. These slots incline upward and inward toward the brush-roller B, so that when the sweeper is resting upon the floor the weight of the sweeper and the pressure down upon the handle cause the friction-wheels, by rising in their slots c^2, to bear firmly against the brush-roller.

D and D' are the hangers for the ends of the brush-shaft. That one adjacent to the friction-rollers is provided with a bearing, *d*, for the pintle or end of the shaft, said bearing being a little elongated from side to side, so that when the sweeper is pushed in one direction one of the friction-wheels will ride up into its slotted seat, press against the brush-roller, and force the latter over against the other friction-wheel. This construction, it will be observed, prevents the great friction which would otherwise arise at the bearing *d*, and enables the brush-wheel to be operated upon, as well by the upward movement of the adjacent periphery of the advance friction-wheel as by the downward movement of that of the rear friction-wheel. The hangers D D' are each provided with a stud, *d'*, which pro-

jects into the cam-slot d^2 of a wheel, D^2, so that by turning this wheel the corresponding hanger is adjusted up or down. The hanger D^2, preferably at the end opposite the friction-wheels, is provided with a spring, D^3, which presses against that end of the brush-shaft and holds it firmly in place in the sweeper-case; but when it is desired to remove the brush this spring will yield to a slight longitudinal pressure in the usual way.

The end A′ of the case is preferably made open along the lower outer portion of its face, so as to expose the journals of the friction-wheels, the lower end of the hanger, and other parts, to facilitate the coupling together of the parts and the lubrication of the journals. This is shown in Fig. 2.

The slotted hangers for the friction-wheels are preferably made in the form of a loop, as shown. This facilitates the construction, and the wheels can be inserted in place by first pressing open the loop, so as to admit the projecting journals into the slots c^2, then inserting the loop up into its place, and fastening by screws c^3.

E is the handle-support. It is hinged to a hanger, E′, which, in turn, is fastened to the depending side a'. This side being, as explained, very close to the brush, brings the pressure of the handle close to the brush, and down well toward the base of the sweeper. This handle-support E may be provided with any suitable means for the attachment of the handle, such as a plain or screw tang, &c.

E^2 is a latch-plate, which engages with the handle-support E when the handle is raised to a vertical position, and locks it there; but it may be readily disengaged by pressing with the hand or foot upon the projecting lip e^2.

F represents the pans, and G the brush-bars. The dust-pans may be made to dump toward or from the brush, as desired. They are pivoted at f to the case.

F′ is a spring, fastened to the pans at f' and spanning the space between them. If the device is intended to dump toward the brush, as shown in Fig. 3, the points f' are so located with respect to the pivots f that when closed, ready for use, they will be slightly above the pivots f, so that the springs shall hold them locked in this position, not only preventing the escape of dust, but preventing the objectionable rattling of the parts in use. When open, as in dumping, the points f' will be slightly below f, so in like manner to lock the pans in their dumped position.

In the variation shown in Fig. 7 the same idea obtains as to the relative arrangement of the parts; but the pans here dump from the brush.

In using this device the pans may be dumped by lifting on the edge of the pan, and they spring back again into place by pressing down on them with the hand or foot. Either pan may be dumped independently of the other, and this is convenient when the opening is small through which to empty the pans—say, for instance, into a stove. For convenience, in the claims I will refer to that end of the frame which incloses the friction-wheel as the "friction-wheel case."

What I claim is—

1. In a carpet-sweeper, a case with stationary depending sides, which extend down close to the brush considerably within the lateral extremities of the friction-wheel case, substantially as described.

2. In a carpet-sweeper, a friction-wheel case made partially open upon its face, so as to expose the working parts of the friction mechanism, substantially as described.

3. The combination, with the friction-rollers journaled in inclined slotted bearings, of a brush-roller seated at its end on a seat elongated from side to side, substantially as described.

4. In a carpet-sweeper, a brush-hanger consisting of a bar provided with an opening for the passage of the pintle on the end of the brush-shaft, and a spring-plate fastened to the back of said bar, against which the pintle impinges, substantially as described.

5. In a carpet-sweeper, an adjustable brush-hanger, consisting of a bar with a projecting pin or lug, in combination with a vertical wheel having a cam-slot engaging said pin or lug, substantially as described.

6. The combination, with the dust-pans, of a spring uniting the two and spanning the space between them, said spring having its ends secured to the pans in such relation to the pivotal points of the latter as to lock the pans shut when in use and lock them open when dumped, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY S. WING.

Witnesses:
ALBERT M. HENRY,
HENRY F. QUELCH.