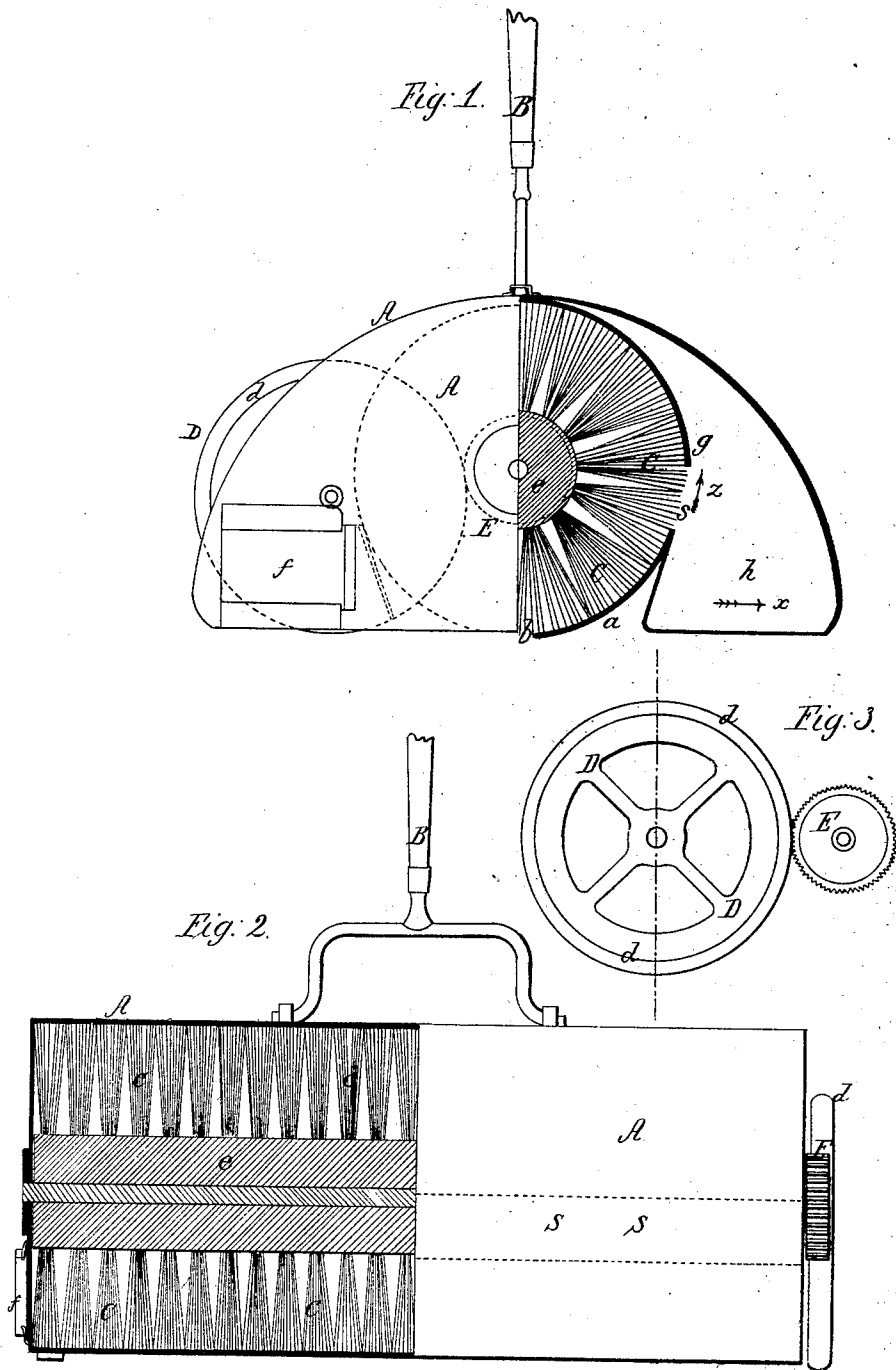


D. HARRIS.
CARPET SWEEPER.

No. 21,673.

Patented Oct. 5, 1858.



UNITED STATES PATENT OFFICE.

DANIEL HARRIS, OF BOSTON, MASSACHUSETTS.

CARPET-SWEEPER.

Specification of Letters Patent No. 21,673, dated October 5, 1858.

To all whom it may concern:

Be it known that I, DANIEL HARRIS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain
5 new and useful Improvement in Carpet or Floor Sweepers, of which the following is a full, clear, exact description, reference being had to the accompanying drawing, which forms part of this specification, and
19 in which—

Figure 1, represents a half sectional-end elevation of the sweeper constructed according to my improvement; Fig. 2, a half sectional-side elevation thereof; and Fig. 3,
15 views of details, as hereinafter referred to detached.

My improvement has reference to that description of carpet or floor sweepers, in which a revolving brush, set in motion by
20 the travel of the apparatus across the floor, is made to take up and deposit the sweepings in a case covering the brush. And my invention has for its object important improvements connected with the working or
25 transmission of motion to the brush, and connected with the construction of the case for preventing the return of the sweepings by the brush and facilitating the removal of them.

Referring to the accompanying drawing, the case (A) of the apparatus is provided with the usual or any suitable handle (B)
30 for traversing the sweeper across the floor.

The brush (C), which may be a single
35 long one with any number of rows of bristles, is shown to rotate, as heretofore, within the case transversely to the general motion of the apparatus and with its bristles slightly below the bottom surface of the
40 case. Said case is also provided with a spring deflector (a) situated below the front portion of the brush, to prevent return of the sweepings, and that acts as a guard or
45 scraper to the brush to clear it of adhering dirt. This deflector (a) projects a short distance up within the case and extends backward only so far as to leave a longitudinal opening (b) in the bottom of the
50 case for the brush to work through, and for the sweepings, by the action of the brush, to enter the case. The bottom edge of this deflector (a) projects a little below the bottom surface of the case, so as, by the more or less flexible character of the deflector, to
55 sustain in a soft and easy manner the case from heavy rub on the floor and so lessen the

effort of working the sweeper, also preventing injury to the carpet, as well as effectually clearing the brush by the slight action upward into or against the brush of the
60 lower edge of the deflector as produced by pressure of the case on the ground in bearing down and pushing forward the sweeper.

In sweeping carpets or floors of rooms and passages, there has been experienced a
65 want of facility in the management of all revolving sweepers employing a single brush heretofore invented, owing to their adaptability to sweep with rapidity when
70 pushed forward in a straight line, in preference to and as compared with working them on a "turn" or "sweep" or abruptly acting crosswise or returning the apparatus, all of which movements it is specially desirable in
75 sweeping carpets should be performed with ease and rapidity. The single revolving brush having heretofore been driven from both sides of the apparatus, it is obvious that such difficulty must exist in turning the
80 sweeper, also that as, in turning, the driving gear on both sides must operate unequally, a severe and unequal strain is necessarily thrown on the brush shaft inclining it to
85 twist or rupture which of course produces great friction. As well to avoid this difficulty, as to secure a soft and noiseless, yet
ever tight and positive driving arrangement not liable to derangement, easy of repair,
and gentle in its action on the carpet, all of
90 which are important considerations and but little if any inferior to the collection of the dust by the ease of the sweeper as compared with the scattering of it by an ordinary
95 broom, I prefer to construct and arrange the driving mechanism to the brush as follows: I drive the brush from one side only
of the apparatus by means of a pressure traveling wheel (D), the side elevation and
100 transverse section of which, detached, is seen in Fig. 3. This wheel is suitably arranged and of appropriate diameter, as seen in Fig. 1, so as, on pressure of the sweeper down
and forward, said wheel is rotated by its
105 friction with the floor and caused to operate a small pinion or wheel (E) on the one end of the brush shaft (e), to give the necessary
rapid revolving motion to the brush. To
secure the advantages above named of a soft
or easy and noiseless positive driving arrangement, as well as to secure a requisite
110 amount of "bite" for operating the brush from one side of the apparatus only, the

driving wheel (D) is grooved on its periphery and an india rubber or elastic cord (*d*) inserted in said groove, which cord is made the bearing surface of the wheel on the floor, also the driving surface to the toothed or roughened pinion (E) of the brush shaft. Said driving arrangement being on one side only of the sweeper, every facility is afforded for turning or performing all the requisite evolutions without twisting or undue strain of the brush shaft. The other side of the case may be provided, if required, with a separate supporting wheel or mere runner.

15 The brush rotating as indicated by the arrow (*x*) when the sweeper is pushed forward as indicated by the arrow (*z*) in Fig. 1, the sweepings are carried up by the brush over a short rear deflector or guide and some of them deposited in a rear stationary pocket provided with a simple door (*f*) at the end of the case, while the remainder of the brush in its rapid movement and would be dispersed in a cloud by the centrifugal action of the brush in the front portion of the case and the dust so floating settle in the brush and be carried out by it again, were it not that I provide a deflector (*g*) in the front portion of the case descending from the roof to within a suitable distance of the front lower reflector (*a*), so as to leave an escape opening (*s*) between said deflectors for the dust and sweepings, kept from scattering and forming a cloud by the upper deflector (*g*), to enter and be projected into a

front stationary pocket (*h*) which is also provided with an end door for removal of the deposited matter. By these means, the brush is kept clean and made to sweep cleaner, and there is no removal of drawers or their equivalents for emptying the case of sweepings, but simply the opening of the small doors and turning up on end of the case which is easier cleaned from the ends than at any other point, and the division of the stationary pockets on either side of the brush facilitates alike, lodgment of the sweepings when depositing, and clearance of them when emptying the case, in doing which latter the brush is protected from gathering any of the finer floating particles of dust set in motion by the agitation consequent on handling and tapping the case to remove the sweepings from time to time.

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

The arrangement of a revolving brush driven by means of a padded driving wheel from one side only, within a semicylindrical casing provided with stationary pockets and deflectors in front and rear of the said brush, substantially in the manner and for the purpose of acting together as described herein.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

DANL. HARRIS.

Witnesses:

JOSEPH GAVETT,
ALBERT W. BROWN.