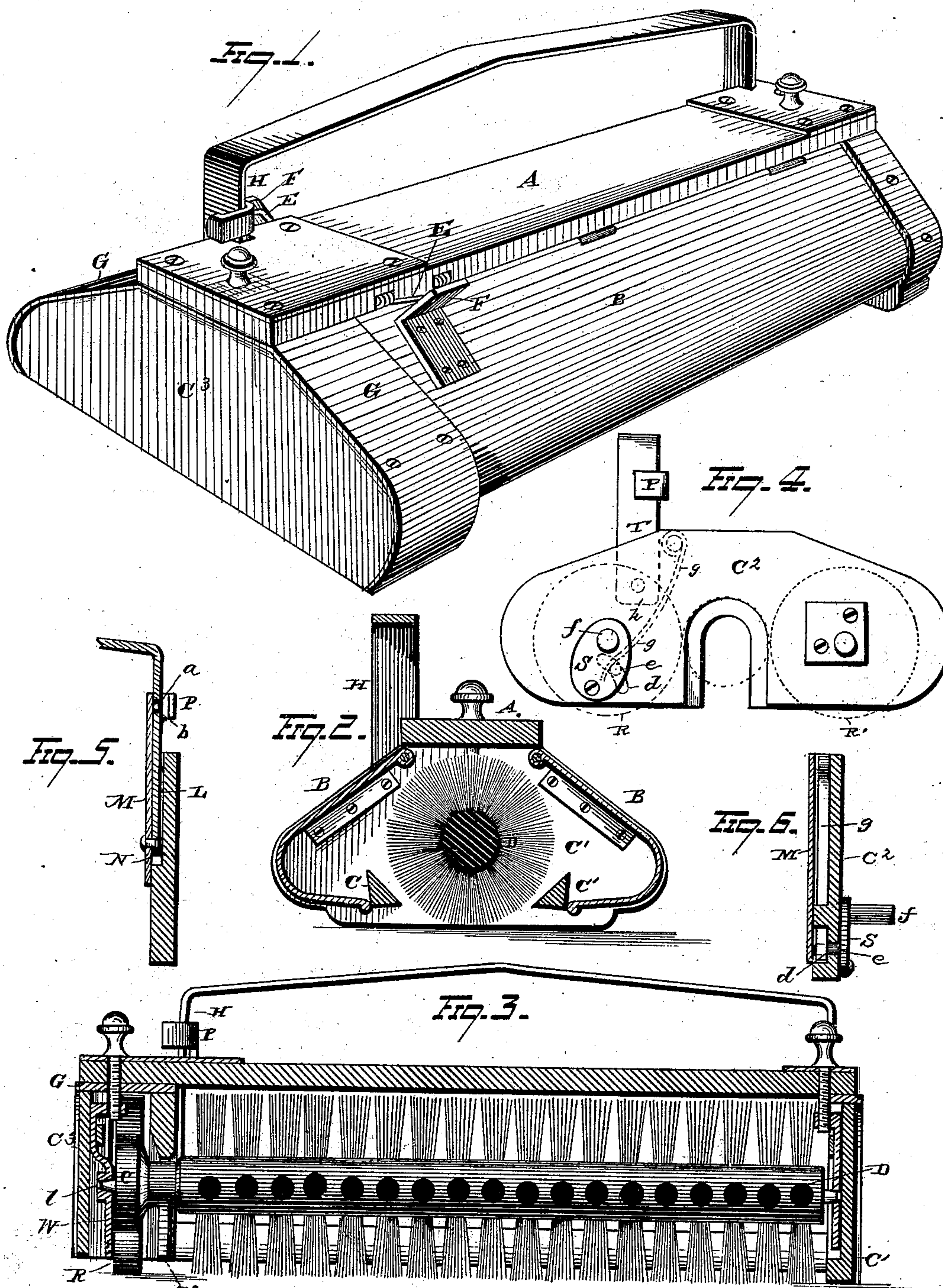


H. S. WING.
Carpet-Sweeper.

No. 227,941.

Patented May 25, 1880.



WITNESSES

E. J. Nottingham
A. M. Bright.

INVENTOR

INVENTOR
A. S. Wing.

By Sargent & Sargent, ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY S. WING, OF GRAND RAPIDS, MICHIGAN.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 227,941, dated May 25, 1880.

Application filed February 24, 1880.

To all whom it may concern:

Be it known that I, HENRY S. WING, of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Carpet-Sweepers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The main object of my invention is to provide improved means for the removal of dust from carpet-sweepers, and also to cause a durable and simple form of construction to be made at small cost.

Heretofore one class of carpet-sweepers have had their cases provided with hinged tops or with hinged lids fitting in openings formed in the tops. Another class have had their bottoms provided with tilting dust-pans. These different constructions are all found to be more or less objectionable in manufacture or use; and to obviate such objections is the purpose of the first part of my improvement.

The second part of the invention relates to the means employed for securing the arms of the handle to the end walls of the sweeper-case and maintaining the handle in raised position when desired.

The third part of my improvement relates to the sweeper-case, the same being adapted in a novel manner to permit ready access to the drive-wheels and allow the main parts of the sweeper-case to be disconnected.

The fourth part of the invention relates to improved means for maintaining the drive-wheels in spring-pressed contact with the friction-roller of the brush.

Referring to the drawings, which represent so much of a carpet-sweeper as is sufficient to illustrate the invention, Figure 1 is a perspective view of the sweeper-case. Fig. 2 is a cross-section thereof. Fig. 3 is a longitudinal vertical section of the same. Fig. 4 is a detail view of one of the journal-bearings of the drive-wheels, showing said bearing in position on the transverse wall. Fig. 5 is a detail perspective view of the transverse wall provided

with the handle-catch. Fig. 6 is a view, in vertical transverse section, of the detail parts shown in Fig. 4.

The case of the carpet-sweeper is formed with a top piece, A, to opposite sides of which, respectively, are hinged the upper portions of two dust-pans, B. These dust-pans constitute the sides of the case, and have their inner sides formed longitudinally concave. The outer sides of the pans are longitudinally convex. The lower portions of the pans are adapted to have free bearing against the outer sides, respectively, of two bottom bars, C, the latter extending between the walls C' C² of the case, and located on opposite sides of the brush-roller D. A spring, E, is secured to each side of the top piece of the case and projects laterally outward therefrom, the outer end of the spring bearing against a projection, F, formed on the upper portion of the corresponding dust-pan, and thereby maintaining the latter firmly closed in position.

The dust-pans may be made of any suitable material. Cheap sheet-iron, japanned, or wood, might be used. Their weight tends to maintain them in normal position, while the springs prevent rattling when the sweeper is in use.

The end walls, C' C³, are provided with a yielding binding, G, of any suitable material adapted to prevent injury to the furniture or base-board of the room, said binding covering the face edges of the walls, and also extending in lateral projection beyond their exposed sides.

The arms H of the swinging handle are pivoted within vertical openings L, formed in the walls C' C² of the case, said openings being formed by metallic plates M, which inclose the sides of recesses N, made in the upper portions of the walls. One of these plates is formed with an upright spring-catch, P, having a stud, a, on the outer side of its upper extremity. This stud is adapted to engage with an eye, b, formed in the corresponding arm of the handle. By this means the handle may be maintained in a perpendicular position when not in use, and the sweeper-case may be held in a horizontal position while the dust-pans are being emptied. It also permits the sweeper to be carried without permitting escape of dust.

The top piece, A, is secured to the transverse wall C³, while the bottom bars, C, are secured to the transverse wall C' C², the construction being adapted to permit the top piece, with the dust-pans and wall C³, to be readily connected to or disconnected from the walls C' C² and the bottom bars. This permits easy access to the drive-wheels R R' and actuating mechanism of the brush-roll. Drive-wheel R has spring-pressed contact with the friction-roller c, as follows: A vertically-curved slot, d, is formed transversely in wall C², and in this slot fits a lug, e, projecting from the inner face of the plate S. Said plate has its lower portion pivoted to the wall C², and its upper portion provided with a bearing, f, on which is journaled the drive-wheel. A spring, g, has one extremity secured to the upper portion of wall C², and its opposite extremity bears downwardly against the lug e, so that when in operation it tends to maintain the driving-wheel in close contact with the friction-roller. The corresponding arm T of the sweeper-handle is provided with a cam, h, adapted to engage with said spring when the handle is in operative position, the cam bearing inwardly against the spring and forcing the drive-wheel toward the friction-roller. When the handle is thrown in upright position its cam releases the spring, and the drive-wheel is not maintained in close contact with the friction-roller.

The vertical spring W, provided with an eye, l, in which is journaled that end of the brush-roll which is provided with the friction-roller, is adapted to have swinging movement in a plane across the sweeper-case. This swinging movement permits the brush-roll, with its friction-roller, to be oscillated in a transverse line corresponding to the movement of drive-wheel R as the latter is moved against the friction-roller by the above-described parts, or is released from such contact.

By suitable means, if so desired, I can cause both drive-wheels to be pressed against the friction-roller as the handle is thrown down, and both said wheels to be released from such spring-pressed contact when the handle is thrown up.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a carpet-sweeper, a dust-pan made in concavo-convex form throughout its length, and forming one side of the sweeper-case, said dust-pan being hinged at its upper portion, substantially as set forth.

2. In a carpet-sweeper, the combination, with a top piece, of dust-pans which form the sides of the case, and are hinged at their upper portions to opposite sides of said top piece, substantially as set forth.

3. In a carpet-sweeper, the combination, with a top piece and a spring secured thereto, of a dust-pan forming one side of the case, and hinged at its upper portion to said top piece, the pan being provided with a projection, against which the outer end of the spring bears, and thereby maintains said pan firmly in closed position, substantially as set forth.

4. In a carpet-sweeper, the combination, with a top piece and two bottom bars extending between the end walls on opposite sides of the brush-roller, of two dust-pans forming the sides of the case, said pans having their upper portions hinged to opposite sides of said top piece and their lower portions bearing against the outer sides, respectively, of said bottom bars, substantially as set forth.

5. In a carpet-sweeper, the combination, with an end wall having a recessed upper portion, and a spring-plate fitted over said recess, of a handle-arm pivoted in the vertical opening formed by the recess and plate, and adapted to have stud-and-eye engagement with the upper extremity of said spring-plate, substantially as set forth.

6. In a carpet-sweeper, the combination, with two transverse walls connected together, and drive-wheels secured to one of them, of a top piece provided with tilting pans and a transverse wall, which latter incloses the drive-wheels, said parts being adapted to permit the top piece, with its pans and wall, to be readily attached to or detached from the connected transverse walls and drive-wheels, substantially as set forth.

7. In a carpet-sweeper, the combination, with a pivotal plate, on which a drive-wheel is journaled, and a spring which engages with a lug formed on said plate, of a handle-arm adapted, when in inclined position, to bear against said spring, so as to maintain the wheel in close contact with the friction-roller, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of February, 1880.

HENRY S. WING.

Witnesses:

CLARK H. GLEASON,
GEORGE M. UDALL.