

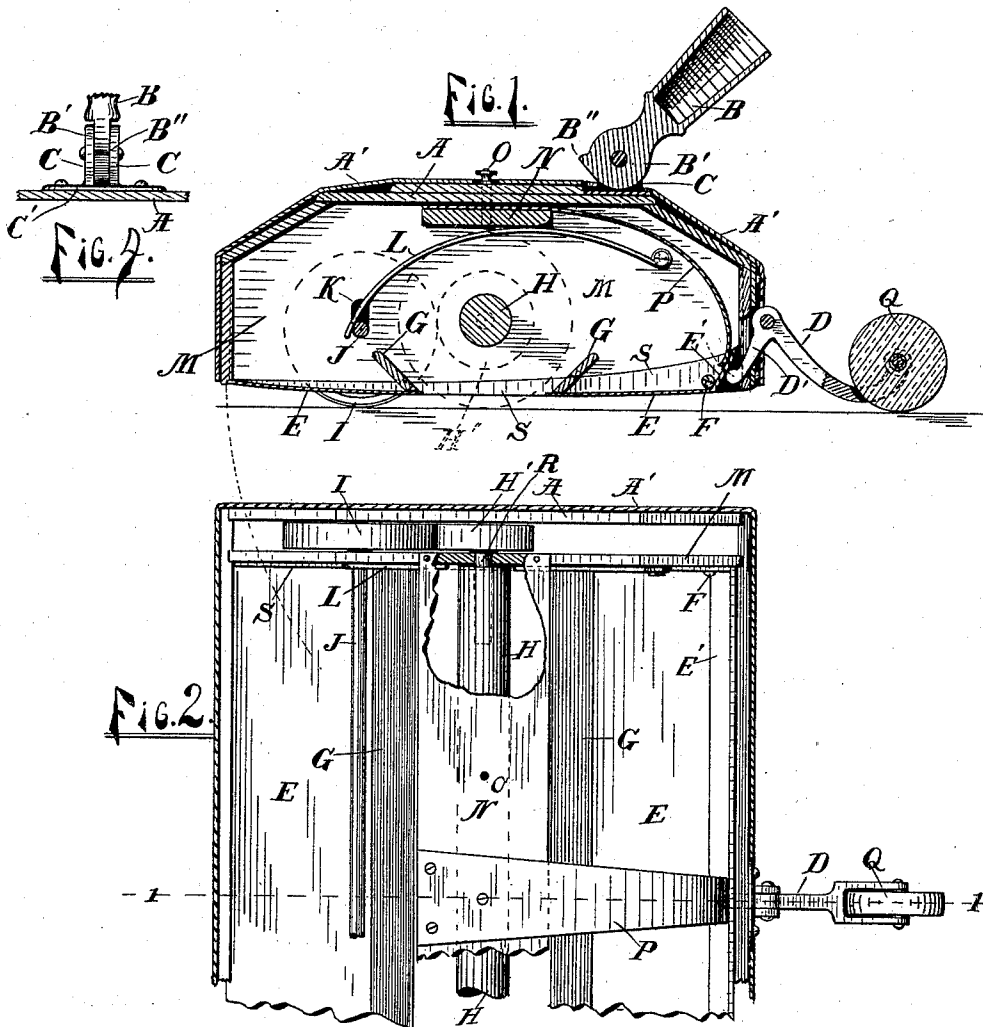
(No Model.)

2 Sheets—Sheet 1.

S. H. RAYMOND.
CARPET SWEEPER.

No. 476,214.

Patented May 31, 1892.



WITNESSES:

Louis Moulton.
Ada M. Hawley.

INVENTOR

Silas H. Raymond

BY

Luther V. Moulton
ATTORNEY.

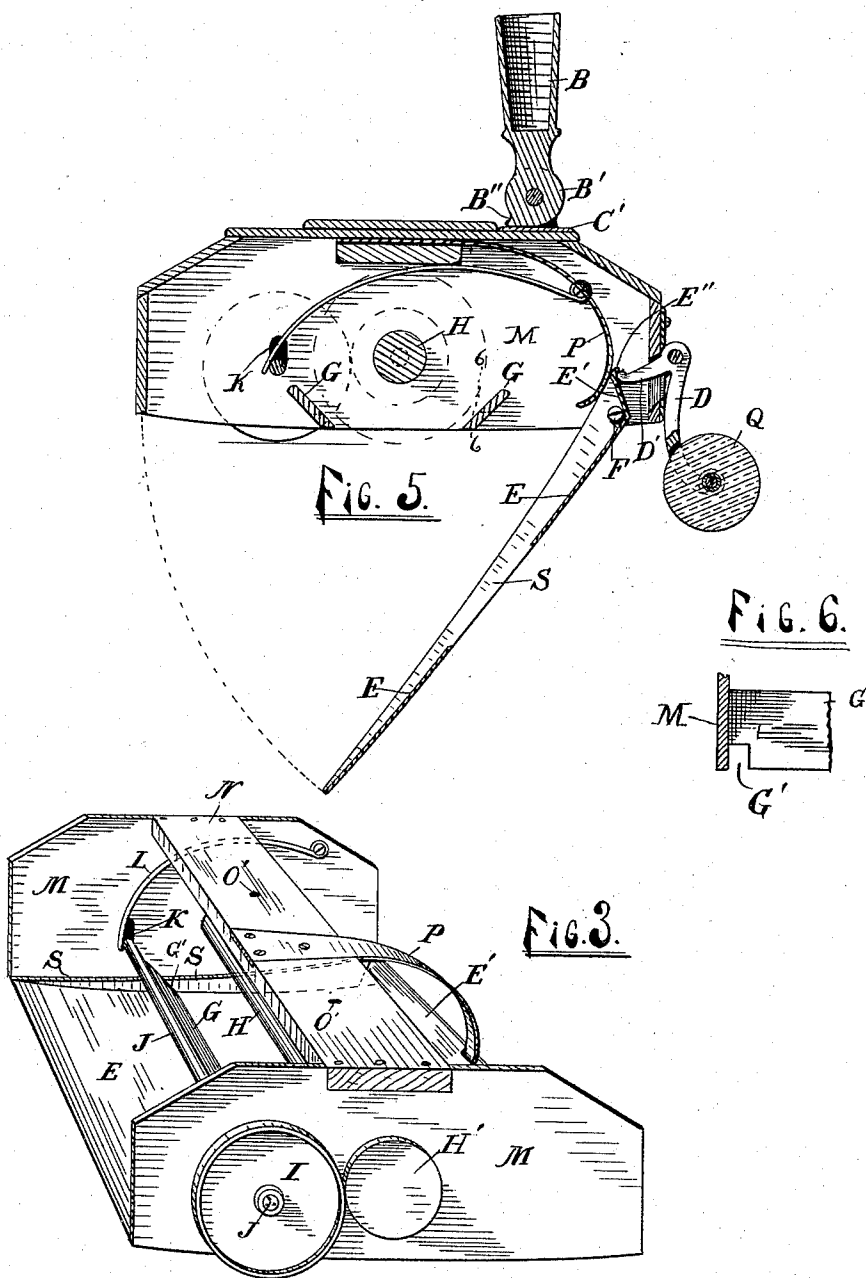
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UNITED STATES PATENT OFFICE.

SILAS H. RAYMOND, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO T. STEWART WHITE AND THOMAS FRIANT, OF SAME PLACE.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 476,214, dated May 31, 1892.

Application filed September 7, 1891. Serial No. 405,041. (No model.)

To all whom it may concern:

Be it known that I, SILAS H. RAYMOND, a citizen of the United States, residing at 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.

My invention relates to improvements in carpet-sweepers; and its object is to provide the same with certain new and useful features hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section on the line 1 1 of Fig. 2. Fig. 2 is a plan view of a portion of a device embodying my invention, the same having the top removed to show the internal parts; Fig. 3, a perspective of the removable internal parts of the device; Fig. 4, a detail of the bail-socket joint, being an elevation of the same at right angles to Fig. 1; Fig. 5, the same as Fig. 1, showing position of the parts when the pans are opened; and Fig. 6 a detail showing a portion of the strip G and the partition M in vertical section on the line 6 6 of Fig. 5.

Like letters refer to like parts in all of the figures.

A represents the case, within which are arranged two removable partitions M near to and parallel with the end walls of the same. These partitions are connected at the top by the bar N and at the bottom by two oppositely-inclined strips G G, the latter arranged at each side of the brush and forming the inner inclined sides of the dust-pans. These strips and bar are firmly secured to the partitions, and the whole constitutes a removable frame-work to which the internal mechanism of the device is attached, and said frame-work is secured within the case by screws O, passing through the top of the case and engaging threaded openings O' in the bar N. Between the partitions M and the end walls of the case are the driving-wheels I and the brush-pulleys H'. The driving-wheels are

journaled on the respective ends of a rod J, which passes through vertically-elongated openings K in the partitions M, which openings are of greater width than the diameter of said rod and extend above and below the plane of the axis of said brush-shaft, so that said rod is free to move therein above and below the plane of the axis of the brush-shaft without touching the sides of said openings as it is pressed downward and inward and toward the brush-shaft by one end of the curved springs L, the middle portion of which springs engage the under side of the bar N, the other ends of said springs being secured to the partitions M. The brush-pulleys H' are secured to pins R, which pins are journaled in the partitions M, and, extending through the same, are inserted in the axis of the brush-shaft H to rotate the same.

E E represent the bottoms of the dust-pans. The outer side of one of these is turned up at an incline E' and thence outward at its extreme outer edge, as at E'', which when the pans are closed abuts against the inner surface of the case, toward which it is pressed by the curved spring P, said spring having its free end engaging the inner side of said upturned portion of the pan and its opposite end secured to the bar N. These pan-bottoms E are attached at each end to bars S, which extend entirely across the bottom of the lower side of the partitions M and are pivoted to the same near the end adjacent to the upturned side E' of the pans. The bars G are provided with notches or recesses G' at each end to receive the bars S and permit the pan-bottoms to close.

D D' are the respective arms of a bell-crank lever pivoted to the case A opposite the spring P. The outer arm D of the same is forked and provided with a wheel Q to support the rear side of the device, which wheel is of rubber or other elastic material. The inner arm D' passes through an opening in the case A and is limited in its downward movement by the end of said opening and contacts the upturned side E' of the pan opposite the spring P.

B is the handle-socket, having a flattened lower end B' pivoted between the parallel jaws C C of a hanger secured to the case.

Said socket is provided with a projection B'', which contacts the bed-plate C' of the hanger and prevents the said socket from turning more than slightly beyond a perpendicular position.

The case A is provided with a jacket A', covering the top sides and ends of the same and made of any suitable material, such as felt, rubber, or heavy cloth. This jacket is provided with suitable openings, through which pass the screws O, socket B, and bell-crank D. Said jacket by covering the sides and ends of the case entirely prevents contact with and marring of furniture by the same, which is not the case with a mere band of flexible material, which may pass above or below a projecting molding or member on the furniture, and thus fail to prevent contact of the case with the same.

For repairing, cleaning, or oiling the device the screws O can be removed and the parts shown in Fig. 3 removed from the case.

When it is desirable to empty the dust-pans, the handle is raised until the projection B'' contacts the bed-plate C'. The sweeper then can be lifted above any suitable receptacle, when by depressing the outer arm D of the bell-crank lever the pans will simultaneously open in the same direction and discharge the contents of both at the side of the sweeper opposite said lever. The projection B'' in the meantime prevents the downward pressure on said lever from turning the sweeper out of horizontal position. The arm D' moves upward against the outwardly-turned edge E'' and the arm D contacts the outside of the case. The direction of the pressure exerted by the spring P being in line with the arm D', the pans are locked open thereby and will remain open until released by moving the lever D outward.

While sweeping the springs L yield to any downward pressure upon the handle and permit the rod J to rise in the openings K and at the same time press said rod in the direction of the brush-shaft to maintain contact between the driving-wheels and brush-pulleys, the rod J sliding along the under side of said spring as it moves.

What I claim is—

1. In a carpet-sweeper, in combination with a case, a removable frame-work inclosed within the same and detachably secured thereto, a brush-shaft and driving-wheels journaled on said frame-work, and dust-pans attached to the same, substantially as described.

2. In a carpet-sweeper, in combination with a case, detachable partitions near each end of the same, a bar at the top and inclined strips at the bottom attached to said partitions, said strips forming inner stationary sides to dust-pans, said pans pivoted to said partitions and contacting said strips when closed, a brush-shaft journaled in said partitions, having pulleys on its outer ends, and driving-wheels

journaled on a rod passing through said partitions, substantially as described.

3. In a carpet-sweeper, in combination with the case, a detachable frame consisting of two partitions connected at the top by a bar and at the bottom by inclined strips having notches at each end, bars extending across said partitions and pivoted to the same, bottoms attached to said bars, and a brush-shaft and driving-wheels journaled upon said frame, substantially as described.

4. In a carpet-sweeper, in combination with a brush-shaft journaled in the case and having pulleys at each end, a rod passing through elongated openings and movable therein above and below the plane of the axis of said brush-shaft and toward and from the brush-shaft and springs engaging said rod and sliding thereon and also forcing the same downward and toward the brush-shaft, substantially as described.

5. In a carpet-sweeper, dust-pans consisting of stationary bars at each side of the brush, bars extending across each end of the case and pivoted near one side of the same, and pan-bottoms attached to said pivoted bars, substantially as described.

6. In a carpet-sweeper, dust-pans at each side of the brush, bars extending across each end of the case, forming the ends of said pans, and pivoted near one side of said case, one of said pans having an upturned edge near said pivots, a spring engaging said upturned edge to close said pans, and a pivoted lever having its inner arm engaging the same to open said pans and its outer arm provided with a wheel to support one side of the sweeper, substantially as described.

7. In a carpet-sweeper, a dust-pan having an upturned outer side having an outwardly-turned upper edge, a spring engaging said upturned side to close said pan, and a pivoted lever engaging the same to open said pan, said lever engaging said outwardly-turned edge and locking said pan when open, substantially as described.

8. In a carpet-sweeper, a bail-socket having a flattened lower end pivoted between the jaws of a hanger attached to the case and provided with a projection on said flattened end engaging the bed-plate of said hanger and limiting the movement of said socket, substantially as described.

9. In combination with a carpet-sweeper, a jacket of felt, cloth, or other suitable material inclosing the top and sides of the same and provided with openings for the projecting parts on the outside of the case, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SILAS H. RAYMOND.

Witnesses:

LUTHER V. MOULTON,
DENNIS L. ROGERS.