A. H. KNAPP.

Carpet-Sweeper.

No. 213,336. Patented Mar. 18, 1879.

Fig. 1.

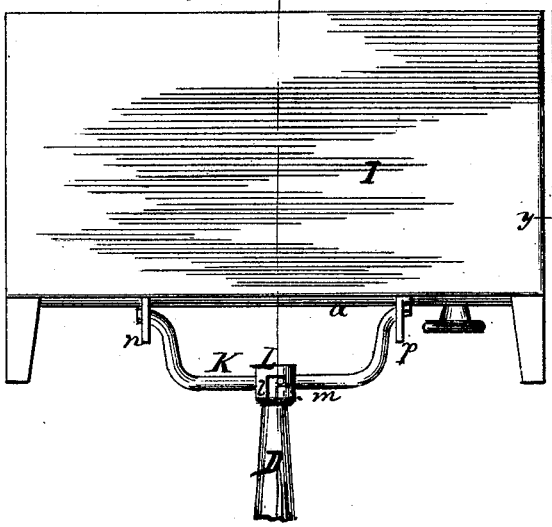



Fig. 2.

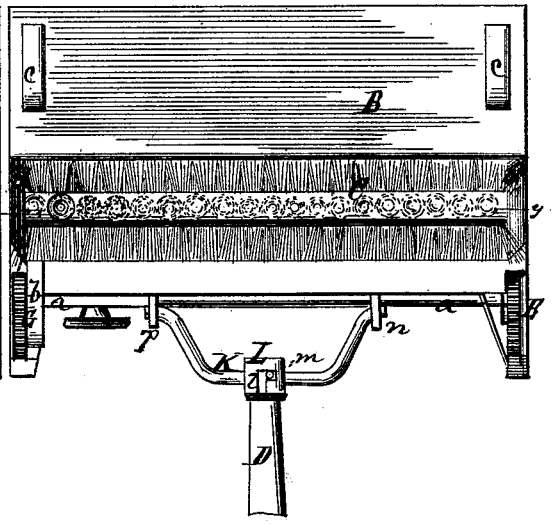



Fig. 3.

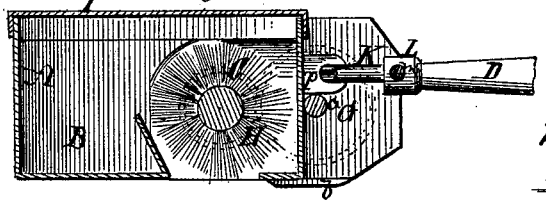



Fig. 4.

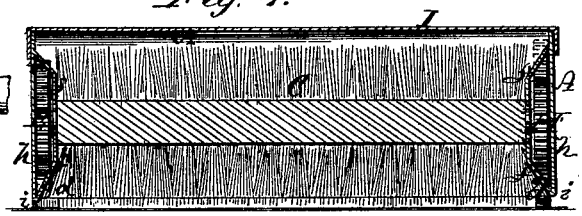
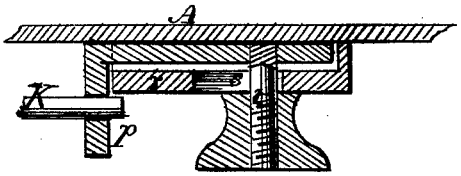



Fig. 5




Witnesses:
Jed. G. Deterich
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by J. S. Brown
his atty.

# UNITED STATES PATENT OFFICE.

A. HAYDN KNAPP, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **213,336**, dated March 18, 1879; application filed July 30, 1878.

*To all whom it may concern:*

Be it known that I, A. HAYDN KNAPP, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Carpet-Sweeper; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a top view of the carpet-sweeper; Fig. 2, a bottom view of the same; Fig. 3, a transverse vertical section thereof in a plane indicated by the line *x x*, Fig. 1; Fig. 4, a vertical section thereof in a plane indicated by the line *y y*, Fig. 2; Fig. 5, view of a part detached.

Like letters designate corresponding parts in all of the figures.

In the drawings, A represents the inclosing case or body; B, the dust-receptacle thereof; C, the revolving brush, and D the handle for moving the sweeper along.

The revolving motion is communicated to the brush C by means of a friction-wheel, E, (which may or may not be a cog-wheel,) at one end of the brush, the shaft *a* of which wheel extends across to the other side of the machine, and bears at that end a cog-wheel, G, that gears into a pinion, H, on the adjacent end of the brush-shaft. The cog-wheel G is kept from contact with the carpet by a shield, *b*, which also serves as a shoe, which slides on the carpet, and, with other shoes or projections *c c*, keeps the case of the machine from bearing and rubbing on the carpet.

Since the driving-wheels and pinion E G H necessarily occupy a space at the ends of the brush C equal to their thickness at each side of the machine, the bristles of the brush, as heretofore constructed, do not reach fully to the sides of the case of the machine, and cannot, therefore, sweep cleanly at the sides of the room.

The first feature of my invention consists in an improved construction of the case and brush, by which this defect is remedied, substantially in the following manner: The plates *f f*, which inclose the said driving-wheels E G H, particularly the pinion E, I make sloping or outwardly-flaring at the under side of the brush-bearings, as at *g g*, so that they meet the outer side plates, *h h*, of the case, whereby, as seen at *i i*, the two plates inclosing the wheels at each side form a mere edge, and occupy no appreciable part of the width of the machine. The pinion H around the brush-shaft at one end, not reaching down to the carpet, allows room for this sloping, and at the other end of the shaft there is no pinion in the way, according to my construction; but if, according to the usual construction, there is a pinion at each end of the brush-shaft, the construction described provides for it just the same.

In connection with this outward sloping of the inner plates of the case to inclose the brush-gearing, I construct the brush C with its bristles *d d* at the ends of the shaft arranged to radiate or diverge toward the sides of the machine sufficiently to reach the extreme edges *i i* of the case, and thus practically make the brush reach and sweep the entire width of the machine. The machine therefore sweeps close to the sides of the room, doing the work thoroughly and completely.

The cover I of the case fits and holds closely over the body thereof, but is not otherwise attached thereto, so that it can be entirely removed for discharging the dust from the sweeper. I thus obviate the inconvenience of a hinged cover.

The handle D is secured to the machine by means of a bail, K, hinged to the rear side of the case. This handle is secured removably to the bail by means of a socket, L, on the middle of the bail, and provided with bent or bayonet notches *l l*, which receive pins *m m*, projecting from the sides of the handle.

The bail itself is hinged at one end in a fixed bearing, *n*, and at the other end, in a laterally-movable bearing, *p*, whereby it may be secured in place or detached from the machine at will. To allow the lateral movement of the bearing *p*, it is arranged to slide in a socket, *r*, having a slot, *s*, in one side, through which a tightening-screw, *t*, passes into the bearing, to hold the latter in the position required.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a carpet-sweeper, a case made to inclose the gearing which drives the brush-shaft and separates it from the dust-chamber, beveled or sloped on the inside outward to a line with the outer case, at the bottom, so as to allow the brush to reach the full width of the case, substantially as and for the purpose herein specified.

2. In combination with the beveled case inclosing the gearing, a revolving brush having its bristles arranged to reach the extreme side edges of the case at the bottom thereof, substantially as and for the purpose herein specified.

Specification signed by me.

A. H. KNAPP. [L. S.]

Witnesses:
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