J. J. HATLINGER.

Carpet-Sweeper.

No. 165,730. Patented July 20, 1875.

Fig. 1.

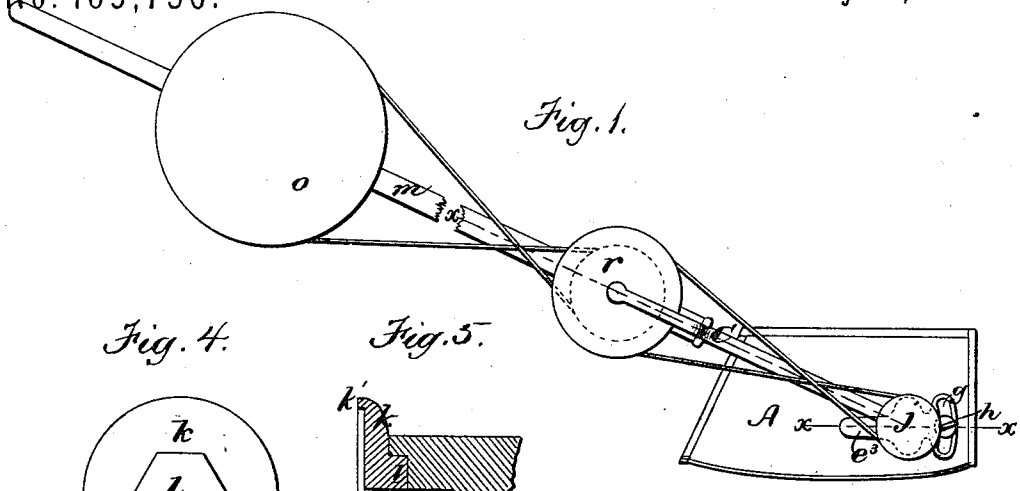


Fig. 4.

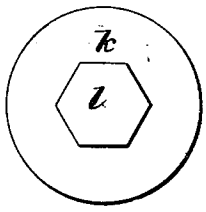


Fig. 5.

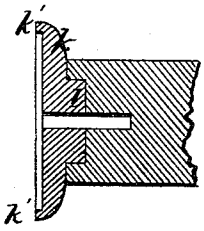


Fig. 2.

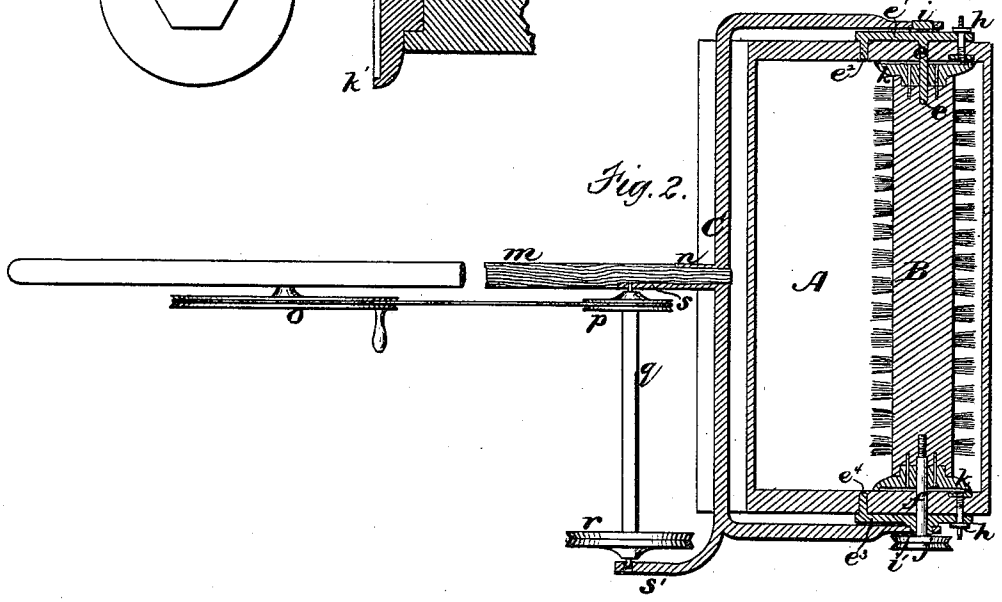


Fig. 6.

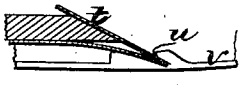
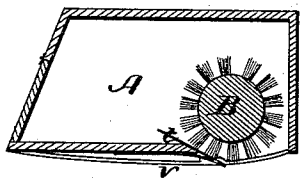


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH J. HATLINGER, OF HYDE PARK, MASSACHUSETTS.

IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **165,730**, dated July 20, 1875; application filed April 20, 1875.

To all whom it may concern:

Be it known that I, JOSEPH J. HATLINGER, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented certain Improvements in Carpet-Sweepers, of which the following is a specification:

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved carpet-sweeper. Fig. 2 is a section through lines *x x*, Fig. 1. Fig. 3 is a transverse section of the box, and Figs. 4, 5, and 6 are views of parts in detail.

This invention has for its object to improve the construction and operation of carpet-sweepers; and to this end it consists, first, in certain improvements whereby the rotary brush is made readily removable from the box or casing; secondly, in the provision of flanged caps or bushings on the ends of the rotary brush, whereby dust and obstructions are excluded from its bearings, and its durability and efficiency increased; thirdly, in the construction of the bent rod to which the box or casing is pivoted, whereby secure and unyielding bearings are afforded for the intermediate shaft which gives motion to the rotary brush; and, lastly, in certain devices for holding the ends of the incline that guides the dust into its receptacle—all of which I will now proceed to describe.

In the drawings, A represents the box or casing of my improved carpet-sweeper, B the rotary brush, and C the bent rod, to the ends of which the box A is pivoted. *e f* are the journals of the rotary brush B, the journal *e* being, preferably, rigid, and projecting inwardly from a plate, e^1, which is pivoted at e^2 to one end of the box or casing A, while the journal *f* rotates with the brush, and passes through a socket in a plate, e^3, pivoted at e^4 to the opposite end of the casing A. The pivotal points of the plates e^1 e^3 are in the same longitudinal and vertical plane, and by swinging said plates on their pivotal points the rotary brush is elevated or depressed within the casing A, its position being thus vertically adjusted. The swinging ends of the plates e^1 e^3 are provided with segmental slots *g*, through which pass set-screws *h*, which clamp and secure the plates with the rotary brush at any desired height. The outer sides of the plates e^1 e^3 are provided with trunnions *i i'*, which enter sockets in the ends of the bent rod C, and constitute the pivots of the box or casing A, the trunnion *i'* being tubular, and allowing the rotary journal *f* to pass through it, as shown in Fig. 2. *j* is a pulley on the outer end of the rotary journal *f*, said pulley being belted to the driving mechanism, as will appear hereinafter. The journal *f* is threaded at its inner end, and is screwed into the end of the rotary brush, as shown in Fig. 2, the thread being so cut as to require the rotation of the journal in the opposite direction from that of the brush in sweeping, to effect the removal of the journal *f* from the brush; consequently, as the journal is rotated by its pulley in the proper direction for rotating the brush in sweeping, it keeps itself engaged with the brush. The brush may be removed at any time by removing the plate e^1, and unscrewing the rotary journal *f*. *k k* are metallic caps or bushings attached to the ends of the rotary brush. These caps are provided on their inner sides with hexagonal or equivalently-shaped projections *l*, which enter corresponding sockets in the ends of the brush-shaft, and are thereby prevented from rotating independently of the brush. The caps may be additionally secured, if desired, by pins or screws, as shown in Fig. 2. The outer surfaces of the caps *k* are provided with flanges *k'*, as shown more clearly in Fig. 5, these flanges rotating in close proximity to the ends of the box or casing A, and preventing threads or other obstructions from reaching the journals of the brush. Suitable sockets or orifices are made in the caps *k*, for the reception of the journals *e f*. *m* represents the staff or handle by which the sweeper is propelled. This handle is inserted in a socket, *n*, on the center of the bent rod C, and is provided with the usual driving-wheel *o*, the latter being belted to a pulley, *p*, on the intermediate shaft *q*, the latter having at its outer end the pulley *r*, which is belted to the brush-pulley *j*. The shaft *q* has its bearings in arms *s s'*, which are cast with, or otherwise rigidly formed on, the bent rod C, the arm *s* being a prolongation of the handle-socket *n*. By this means a secure bearing is obtained for both ends of the intermediate shaft, and the latter is pre-

vented from sagging at either end. *t* is an inclined strip arranged on the bottom of the box or casing, in such relation to the rotary brush as to guide the dust, &c., into its receptacle in the box. This strip is preferably made of sheet metal, secured at its back edge to the bottom of the box, and bent downward at its front edge, the ends of this front edge entering notches *u* made in metallic shoes *v*, attached to the ends of the box. The shoes *v* are made of cast malleable iron, and are slightly curved, as shown in Figs. 1 and 3. The front edge of the strip *t* is thus securely held. If desired, the journal *e* may be rotary, like the journal *f*, instead of being rigid, as shown.

I claim as my invention—

1. The caps or bushings *k*, having the projections *l*, flanges *k'*, and orifices for the reception of the journals *e f*, in combination with the brush B, substantially as described, for the purpose specified.

2. In combination with the rotary brush B, the journal *f*, threaded at its end, and having the pulley *j*, substantially as described.

3. The bent rod or bail C, having the socket *n*, and arms *s s'*, in combination with the handle *m*, shaft *q*, and box or casing A, substantially as described.

4. The combination of the inclined strip *t* with the notched shoes *v*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH J. HATLINGER.

Witnesses:

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C. F. BROWN.