

E. W. SMITH.
CARPET-SWEEPER.

No. 182,334.

Patented Sept. 19, 1876.

Fig. 1.

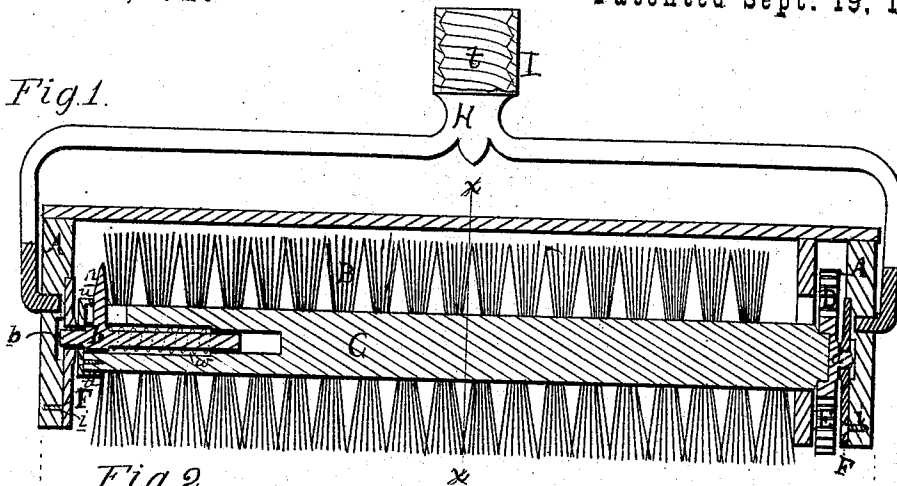


Fig. 2.

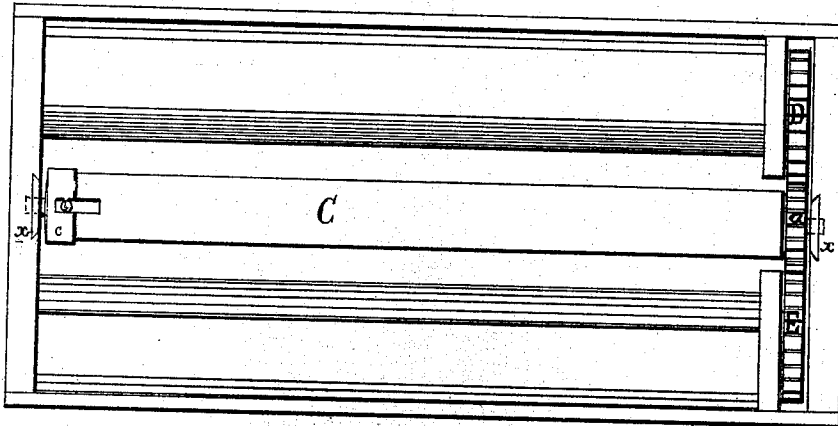


Fig. 4.

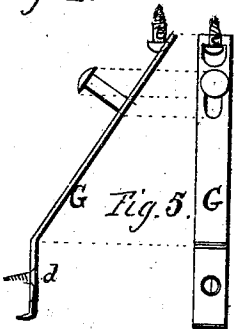


Fig. 5.

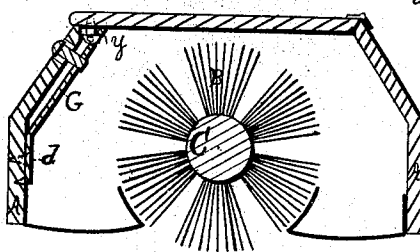


Fig. 6.

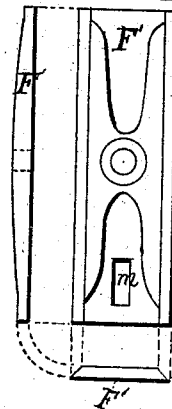


Fig. 7.

Fig. 9.

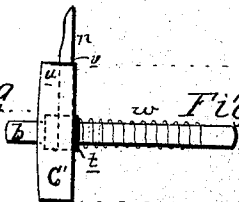
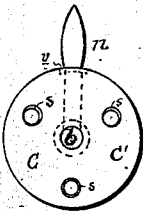


Fig. 10.



Witnesses.
Courtney A. Cooper
Frank M. Green.

E. W. Smith
By his atty
Charles J. Fisher

UNITED STATES PATENT OFFICE.

EMERY W. SMITH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **182,334**, dated September 19, 1876; application filed June 15, 1876.

To all whom it may concern:

Be it known that I, EMERY W. SMITH, of Boston, Suffolk county, Massachusetts, have invented an Improved Carpet-Sweeper, of which the following is the specification:

The object of my invention is a carpet-sweeper, from which the brush may be readily detached, in which it may be adjusted with facility, and to which the handle may be securely connected.

In the accompanying drawing, Figure 1 is a longitudinal section of a sweeper with my improvements; Fig. 2, an inverted plan view; Fig. 3, a cross-section on the line *x x*, Fig. 1; Figs. 4 to 10, detached views.

A is the casing, within which revolves the brush B. On a shaft, C, at one end of the brush-shaft, is a pinion, *a*, which is driven by the cog-wheels D E, resting on the carpet in the usual manner. The journal *b*, at the opposite end of the shaft, slides in the latter, and is provided with a spring, *w*, which tends to throw the journal forward through the ferule *c* into a socket or bearing of an adjustable plate, F, corresponding to a similar plate, F, for the journal at the opposite end of the brush.

In order to form a neat, cheap, and readily applied attachment, the journal *b* consists of a rod of wire provided with a lug, *t*, Fig. 9, which forms a shoulder for the spring to bear against, and an enlargement into which to screw the end of the arm *n*. The journal extends through, and is guided by a metallic cap-plate, C', which is flanged to fit the end of the shaft, and has openings *s* through which pass the screws that secure it in place. In the flange *u* of this cap is a slot, *v*, which receives the arm *n* and further guides the journal.

It will be seen that this constitutes a complete operative device, capable of being readily applied to any brush-shaft.

The plates F F are beveled at the edges—slide in dovetailed slots *x* in the ends of the case A, and are secured, after adjustment, by means of set-screws *i* extending through slots *m*. The lid is secured by means of a thumb-spring catch, G, fastened to the case A by

means of the screw *d*, and having a shoulder, *y*, for catching a stud, *e*, on the lid. H is the bail, secured as usual, and provided with an enlargement, I, having an internal screw-threaded socket, *t*, the whole being cast in one piece. A thumb-piece, *n*, projects laterally from the sliding journal, and serves as a means of retracting the latter when the brush is to be withdrawn or inserted.

By the use of this sliding journal the brush-shaft may be easily and quickly taken, either from the top or bottom of the case, for the purpose of freeing it from any threads or strings which may have become wound around it.

The usual method of fastening the handle to the bail has been by the use of a screw on the bail running into the handle. This weakens the handle, and is liable to split it.

By having the bail cast in one piece of malleable iron, or other metal, with an enlargement provided with an internal threaded socket, as described, the handle may be securely attached without danger of splitting.

I do not claim to be the inventor of the combination in a carpet-sweeper of a sliding journal with the shaft C, as this combination was used before my invention thereof.

I claim—

1. The journal *b*, provided with an enlargement, *t*, in combination with the spring *w*, arm *n*, and cap C', having a slotted flange, *u*, the whole constituting an attachment for application to the shaft C of a carpet-sweeper, as set forth.

2. The combination, in a sweeper, of the bail H, having a socket and threaded enlargement, I, and handle fitted to the socket in said enlargement, substantially as specified.

3. The plates F, having beveled edges, and adjustable in dovetailed recesses, substantially as set forth.

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

EMERY W. SMITH.

Witnesses:

B. LEWIS BLACKFORD,
FRANKLIN COBBETT.