

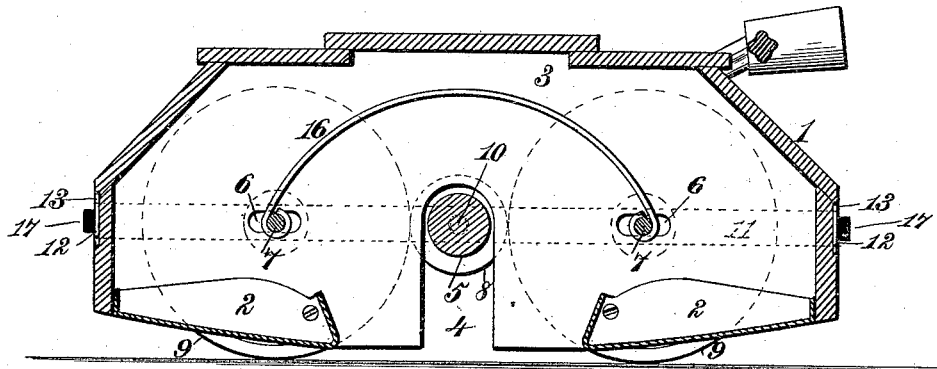
(No Model.)

W. J. DREW.  
CARPET SWEEPER.

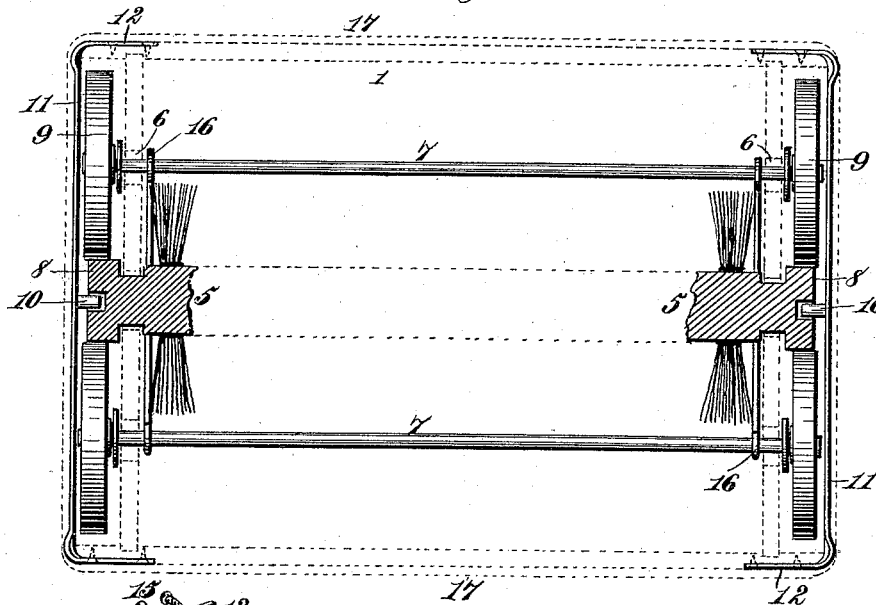
No. 344,089.

Patented June 22, 1886.

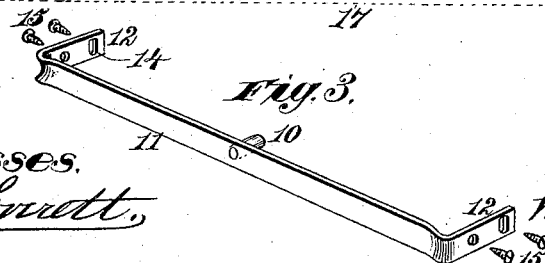
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses,

*Robert Emmett,*

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Inventor,

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*By James L. Norrie,*

*Atty.*

# UNITED STATES PATENT OFFICE.

WALTER J. DREW, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE  
BISSELL CARPET SWEEPER COMPANY, OF SAME PLACE.

## CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 344,089, dated June 22, 1886.

Application filed July 7, 1885. Serial No. 170,895. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER J. DREW, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Carpet-Sweepers, of which the following is a specification.

This invention relates to carpet-sweepers; and it consists in the combination, with a sweeper-casing, of drive-wheels, a brush-shaft extending through the end walls of the casing and in gear with the drive-wheels, and an elastic bar or strap extending across the end of the casing with its ends connected with the front and rear walls thereof, said bar or strap having a bearing on which the brush-shaft is mounted outside the casing.

The invention also consists of other features, which are hereinafter described and claimed.

The invention is clearly illustrated in the annexed drawings, in which Figure 1 is a cross-sectional view at one end of a carpet-sweeper case embodying my invention; Fig. 2, a plan view, partly in section, showing the sweeper case in dotted lines, and Fig. 3 a perspective view of one of the elastic bars or straps.

In the drawings, the reference-numeral 1 designates a carpet-sweeper case, and 2 the dust-pans hinged or pivoted thereto and provided with any suitable fastenings. The ends 3 of the case 1 are provided centrally with vertical slots or openings 4 for the passage of the brush-shaft 5, and they also have horizontal or slightly-diagonal slots 6, to admit the passage of the wheel-axes 7, that are preferably extended through the case from end to end.

The brush-shaft 5 is provided at each end with friction-gears 8, that fit between and contact with the drive-wheels 9. These drive-wheels 9 are mounted either fast or loose on the axles 7, which, as before stated, are preferably extended entirely through the sweeper-case.

The brush-shaft 5 is mounted by means of recesses formed therein at either or both ends on a fixed journal, 10, formed on or secured to the inner side of a metallic bar or strap, 11, that is attached to the sweeper-case. This bar 11 is preferably made, as shown in Fig. 2, with inwardly-bent ends 12, that enter

grooves or depressions formed in the sides of the sweeper-case at the ends where they are detachably secured by screws or otherwise. The recesses or depressions 13 may be sufficiently wide to admit of a slight vertical adjustment of the bar 11 to raise or lower the brush-shaft, the inwardly-bent arms or brackets 12 being provided with one or more slotted openings, 14, for the passage of the attaching-screws 15, as shown in Fig. 3, so as to admit of this adjustment.

In order to hold the drive-wheels and brush-shaft always in frictional contact, and so secure an effective operation of the rotary brush, the opposite axles, 7, of said drive-wheels are connected either within or without the case by springs 16, the looped or hooked ends of which are made large enough to embrace the axles in such a way, as shown, that the axles can rotate with the wheels, if fixed thereto. Preferably, however, the wheels are mounted loosely on their axles and rotate independently.

It will be seen that while the springs 16, acting on the wheel-axes, hold the wheels in frictional contact with the gears on the brush-shaft, the slots 6, through which the axles pass, permit sufficient play of the axles and wheels to correspond with variations in pressure exerted by or through the sweeper. It is obvious that the springs 16 can be located either within the sweeper-casing near the inner sides of the end pieces, as shown, or on the outside of the case between the wheels and end pieces.

By mounting the rotary brush-shaft on stationary journals 10, as described, the rotation of the brush will not be obstructed by lint or thread winding on said journals, as is liable to occur with journals that revolve with the brush. These journals 10 being fixed to a yielding metallic bar, as 11, enables the brush to be readily removed and replaced by simply springing or pressing the bar slightly outward, while by raising or lowering the bar the brush can be elevated or depressed as required.

While I have illustrated the sweeper-case as provided with horizontal slots for the passage of the drive-wheel axles, I do not confine myself to any particular construction of openings for the passage of the axles.

The ordinary elastic band, 17, that preferably encircles the sweeper-case as a guard, to pre-

vent damage to furniture, may be arranged so as to firmly clasp the metallic bars or straps 11, the corners of which are so formed with shoulders or otherwise as to afford a firm support 5 for said endless elastic band.

What I claim is—

1. The combination, with a sweeper-casing, of drive-wheels, a brush-shaft extending through the end walls of the casing and in 10 gear with the drive-wheels, and the elastic bar or strap extending across the end of the casing with its ends attached to the front and rear walls thereof, said bar or strap having a stationary journal on which the brush-shaft is 15 mounted outside the casing, substantially as described.

2. The combination, with a carpet-sweeper casing having end walls provided with slots, of a brush-shaft extending through the end 20 walls of the casing, the drive-wheel axles extended through the said slots, the drive-wheels mounted on the axles outside the sweeper-cas-

ing, and the springs having their ends looped around the axles, substantially as described.

3. The combination, with a carpet-sweeper 25 casing having end walls provided with slots, of a brush-shaft extended through the said end walls, the drive-wheel axles extended through the said slots, the drive-wheels mounted on the axles outside the casing, the springs hav- 30 ing their ends connected with the axles, and the elastic bar or strap extending across the end of the casing with its ends attached to the front and rear walls thereof, said bar or strap having a stationary journal on which the 35 brush-shaft is mounted outside the casing, substantially as described.

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

WALTER J. DREW.

Witnesses:

ARTHUR C. DENISON,  
FRED W. STEVENS.