

(Model.)

2 Sheets—Sheet 1.

M. R. BISSELL.  
Carpet Sweeper.

No. 241,472.

Patented May 17, 1881.

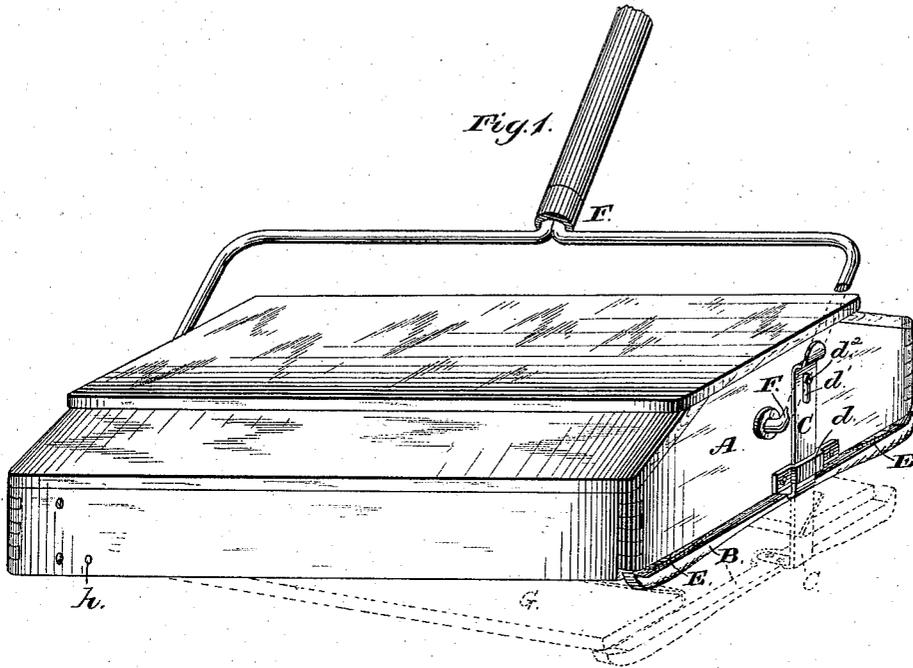
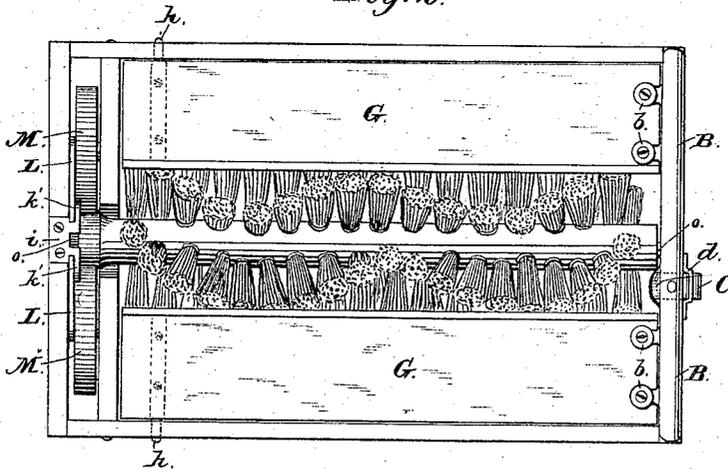


Fig. 2.



Witnesses.  
Jas. E. Hutchinson.  
J. A. Rutherford.

Inventor.  
Melville R. Bissell.  
By James L. Norris.  
Atty.

(Model.)

2 Sheets—Sheet 2.

# M. R. BISSELL. Carpet Sweeper.

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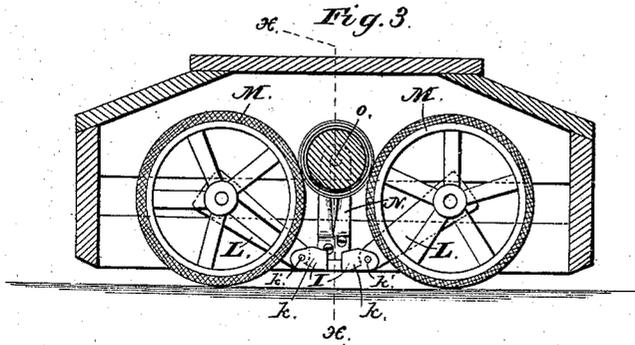


Fig. 3.

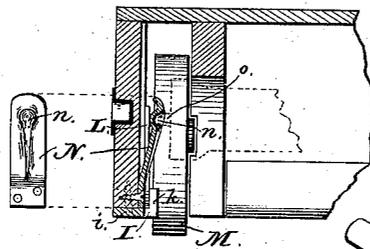


Fig. 4.

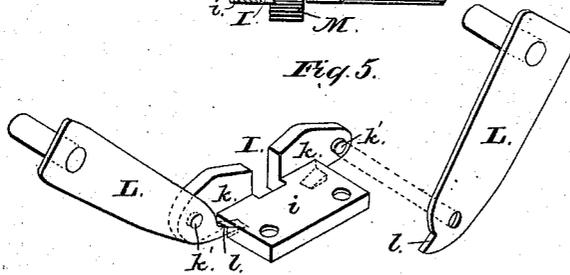


Fig. 5.

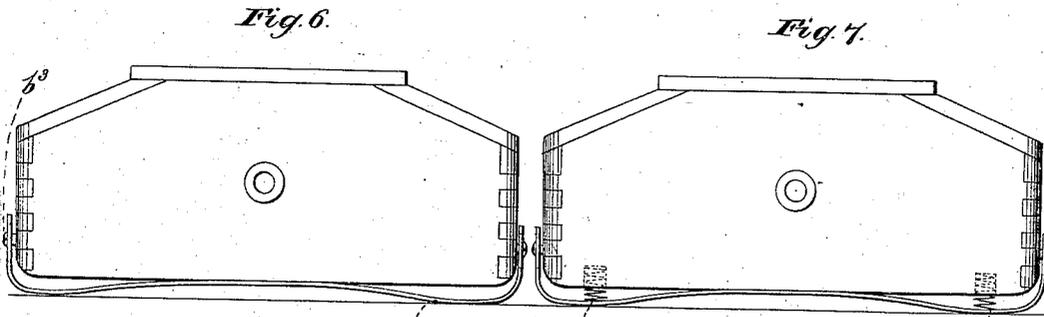


Fig. 6.

Fig. 7.

Witnesses.

*Geo. E. Hutchinson.*  
*J. A. Rutherford.*

Inventor.

*McLville R. Bissell,*  
 By *James L. Norris.*

# UNITED STATES PATENT OFFICE.

MELVILLE R. BISSELL, OF GRAND RAPIDS, MICHIGAN.

## CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 241,472, dated May 17, 1881.

Application filed April 4, 1881. (Model.)

To all whom it may concern:

Be it known that I, MELVILLE R. BISSELL, 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.

My invention relates to the runners and devices for carrying the traveling wheels which communicate motion to the brush of a rotary brush carpet-sweeper. Its objects are to permit the brush to be brought closer to the floor when it is desired to increase its force of action without separate adjustment of its bearings or manipulation of any of the parts of the sweeper.

It consists in the combination, with a carpet-sweeper casing, of a yielding runner arranged under and secured to one end of said casing, whereby, when downward pressure is exerted upon the casing, the bottom of the casing and the brush mounted in said casing are caused to approach the floor, and the brush will sweep with increased force; and it also consists in a novel combination and arrangement of devices for supporting the rotary brush and traveling wheels, whereby the brush is rendered readily removable and replaceable through the open bottom of the casing, all as hereinafter particularly described with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a carpet-sweeper having a runner applied thereto according to my invention, the sweepings-receptacles being shown lowered in dotted lines. Figure 2 is a bottom view of the same. Figure 3 is an inside view of the end wall of a sweeper-casing to which the traveling wheels are connected, showing my improved wheel and brush-supporting devices. Fig. 4 is a vertical section on line *x x* of Fig. 3. Fig. 5 is a perspective view of the wheel-carrying arms and their coupling. Figs. 6 and 7 are end views of sweeper-casings, with modified forms of runners.

Referring to Fig. 1, the letter A denotes the end wall of the casing, to which the runner is attached, and B indicates the runner, which is located under the end wall. An arm, C, is secured at its lower end to the runner and extends upward along the outer surface of the wall, passing through a guide, *d*, and having

in its upper portion a vertical slot, *d'*, which embraces a pin, *d<sup>2</sup>*, also serving as a guide. Directly to the under edge of the end wall is firmly secured the middle of a bow-spring, E, the ends of which curve downwardly against the top of the runner and form an elastic seat for the same. When the runner rests upon the floor, as in Fig. 1, a downward pressure of the handle F will cause the casing to flatten the spring and sink toward the runner, carrying the brush closer to the floor, so that its bristles will make longer and closer sweep thereupon, this being of great advantage when there is found upon the floor any such material as lint, raw cotton, or other substance which has a tendency to adhere to a carpet or floor.

In a sweeper provided with a runner, as above described, I prefer to attach the sweepings-receptacles G G to the runner at one end and pivot the other end to the casing, so that the bottoms of these receptacles will be always at the same distance from the floor, whatever may be the position of the brush and the rest of the casing.

In Fig. 1 the letter *h* indicates a pivot-pin, which projects from the bottom of the sweepings-receptacle G and extends into the hole in the side wall of the casing, the pin being the only means of direct attachment of the receptacle to the casing.

From the runner B lugs *b* project laterally, and are secured by screws to the bottom or floor of the receptacle at the end opposite that which is pivoted, so that the runner carries the end of the receptacle. Both sweepings-receptacles are mounted in the same manner.

When it is desired to empty these receptacles the slot of the arm C is slipped off the pin *d<sup>2</sup>* and the arm pushed downward in its lower guide, carrying the runner and the ends of the receptacles away from the end wall of the casing, as shown in dotted lines, Fig. 1, the ends of the receptacles being thus left open, so that their contents may be discharged. The end wall of the casing forms, also, the end walls of the receptacles in their closed position.

To the lower edge of the end wall of the casing, opposite that under which the runner is arranged, is secured a double bracket, I, from the attaching-plate *i* of which two arms, *k*, project inwardly, and are provided with exten-

sions  $k'$ , projecting at right angles toward the side walls, respectively. To these extensions  $k'$ , respectively on their sides next the end wall, are pivoted the inner ends of arms L, which at their outer ends carry the traveling wheels M M. The inner ends of these arms L are provided with noses  $l$ , which project under the arms  $k$  and serve as stops to limit the downward movement of the outer ends and wheels, thus preventing the wheels from falling out of the casing when the latter is raised. The arms  $k$  are separated by an intervening space, and immediately above them a spring-plate, N, has its lower end firmly secured to the end wall of the casing, its upper portion inclining inwardly. Near the top of this spring-plate is formed a conical indentation,  $n$ , which receives the conical tip of one of the journals  $o$  of the brush-shaft, as shown in Fig. 4. The other journal of said shaft may be mounted in any of the ordinary bearings attached to the opposite end wall of the casing.

When it is desired to remove the brush from its bearing the shaft is pressed downward and the plate N will yield, as shown in dotted lines, Fig. 4, to permit the journal  $o$  to escape from the indentation  $n$ , said journal being then free to pass outward between the arms  $k k$ . In replacing the brush the opposite journal is first inserted in its bearing, the journal  $o$  passed upward between the arms  $k k$  and against the plate N, when sufficient pressure will cause said plate to yield and allow the journal to slip up and enter the indentation  $n$ , where it will be sufficiently firmly held for its operative purpose by the elasticity of the plate. I have thus provided an exceedingly simple and efficient means for supporting the brush and permitting its ready removal and replacement.

Heretofore the journal of the brush has been supported either by a bearing which had to be taken out or detached from the casing or else such a bearing that necessitated the lateral movement of the brush in removing it, or a manipulation of the bearing to move it away from

the journal. I avoid all manipulation of the bearing and lateral movement of the brush, taking it out and replacing it in a straight line directly through the open bottom of the casing.

In Fig. 6 the runner is simply a spring-strip, B', secured at its middle to the under edge of the end wall, and having its arms bowed downward, their ends being bent up along the walls of the casing and provided with slots through which pins project from the walls, said pins  $b'$  serving as guides.

In Fig. 7 is shown a similar runner, between the bowed arms of which and the edge of the end wall are arranged spiral springs  $s$ , to reinforce the elasticity of said arms.

What I claim is—

1. The combination, with a carpet-sweeper casing, of a yielding runner arranged under and secured to one end of said casing, substantially as and for the purpose set forth.

2. The combination, with the casing of a carpet-sweeper, of the sweeping-receptacles pivoted at one end and provided with means for detachably securing the other ends in position, the runner to which the swinging ends of said receptacles are connected, and the spring interposed between said runner and the casing, substantially as described.

3. The combination, with the casing, wheel-carrying arms, and brush, of the bracket having the separated arms  $k$ , to which the wheel-carrying arms are connected, and the plate N, secured above said bracket and having the indentation  $n$  in line with the space between said arms, substantially as described, whereby the brush may be readily removed and replaced, its journal passing between said arms.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

MELVILLE R. BISSELL.

Witnesses:

H. JOSLIN,

J. A. RUTHERFORD.