

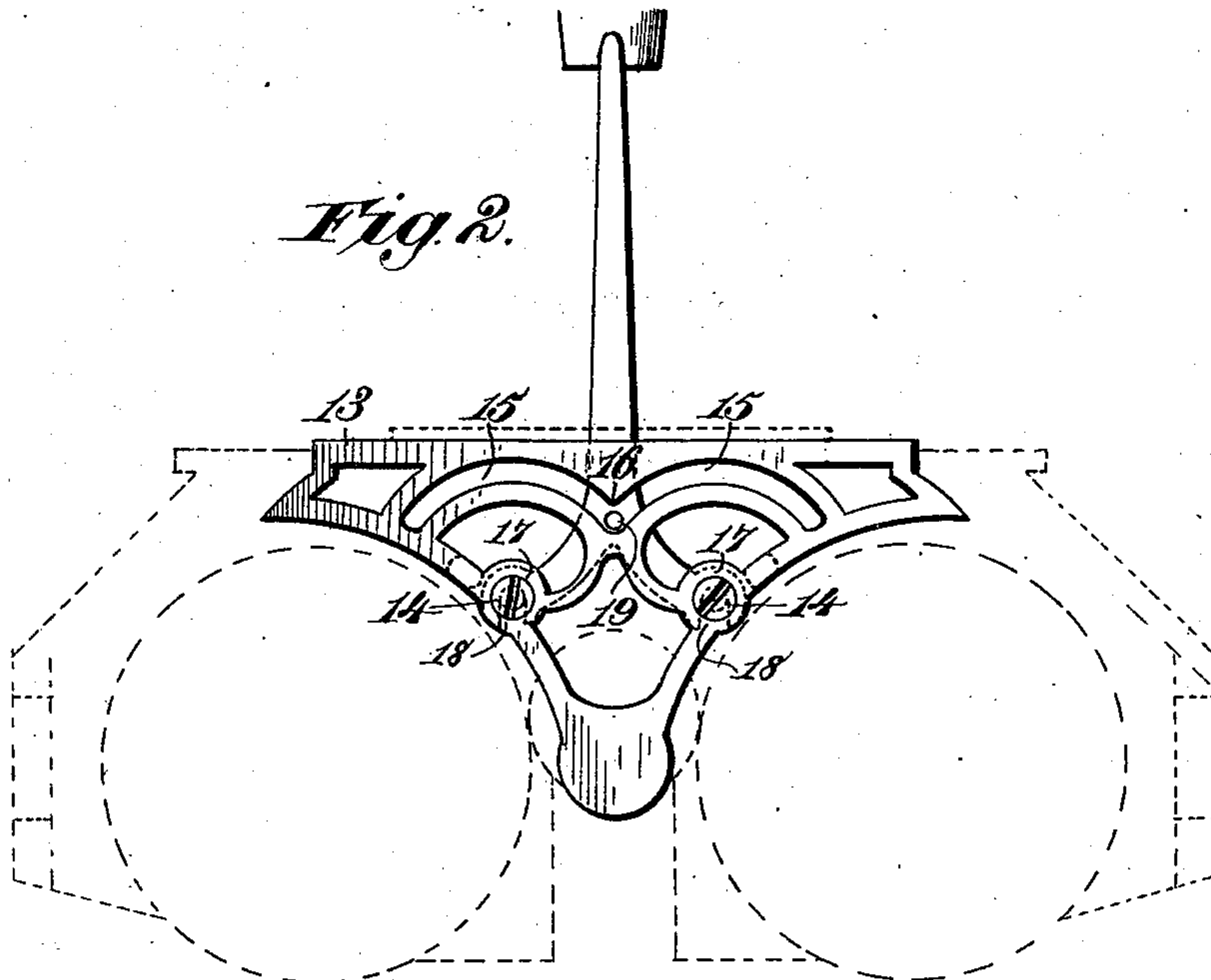
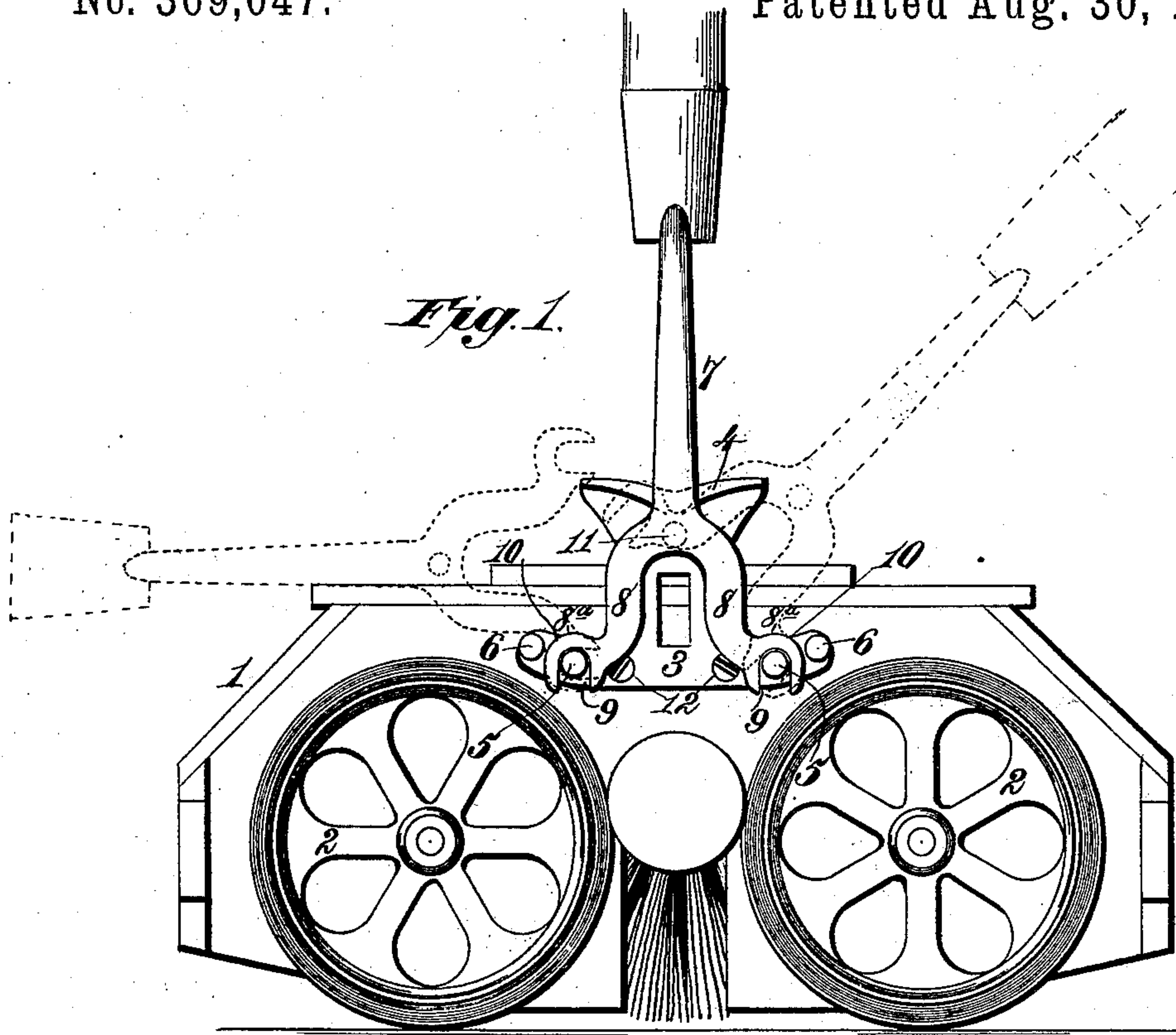
(No Model.)

2 Sheets—Sheet 1.

W. J. DREW.
CARPET SWEEPER.

No. 369,047.

Patented Aug. 30, 1887.



Witnesses,

Robert Everett

J. A. Rutherford

Inventor,

Walter J. Drew

By *James L. Norris*
Att'y.

(No Model.)

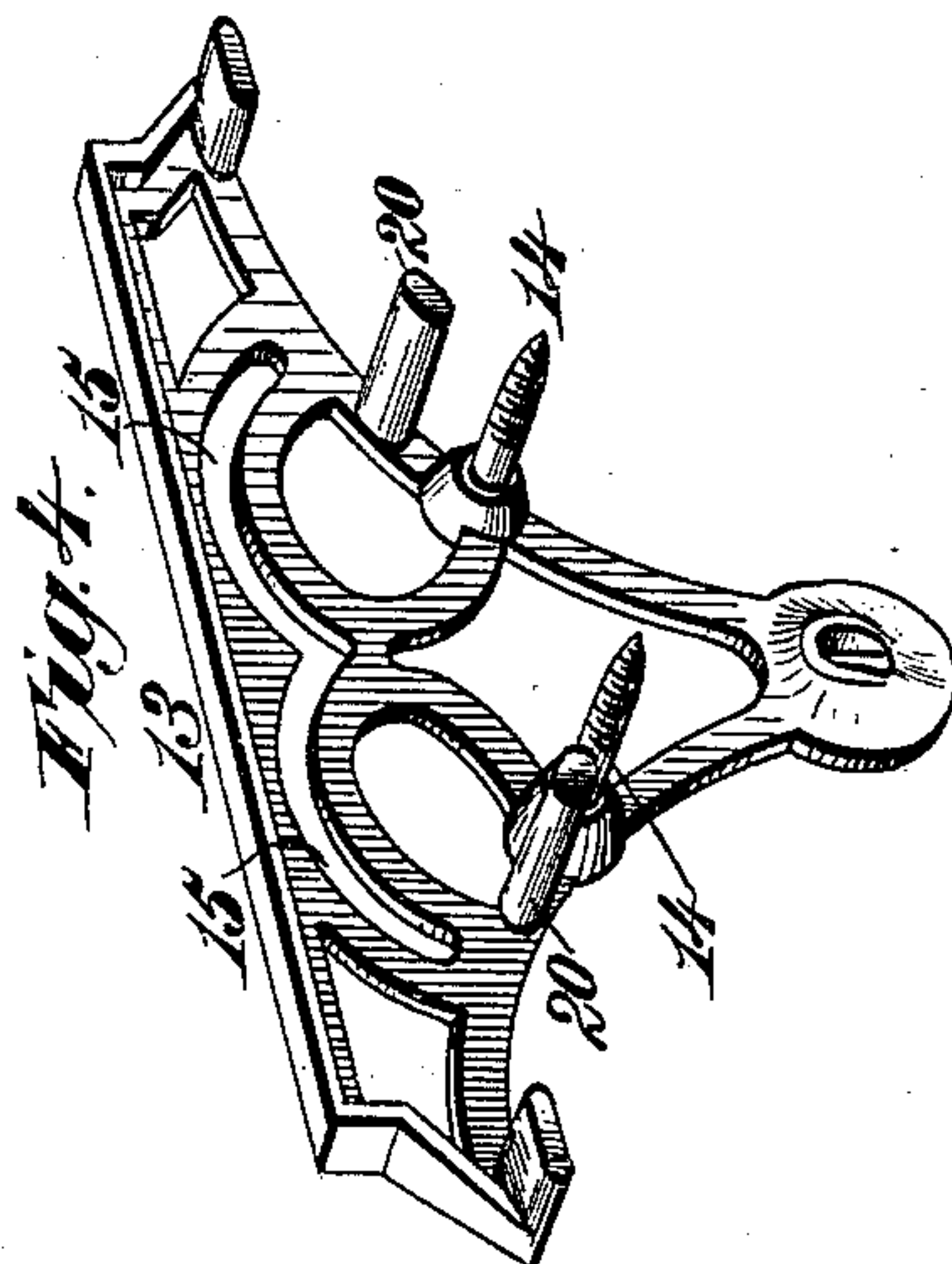
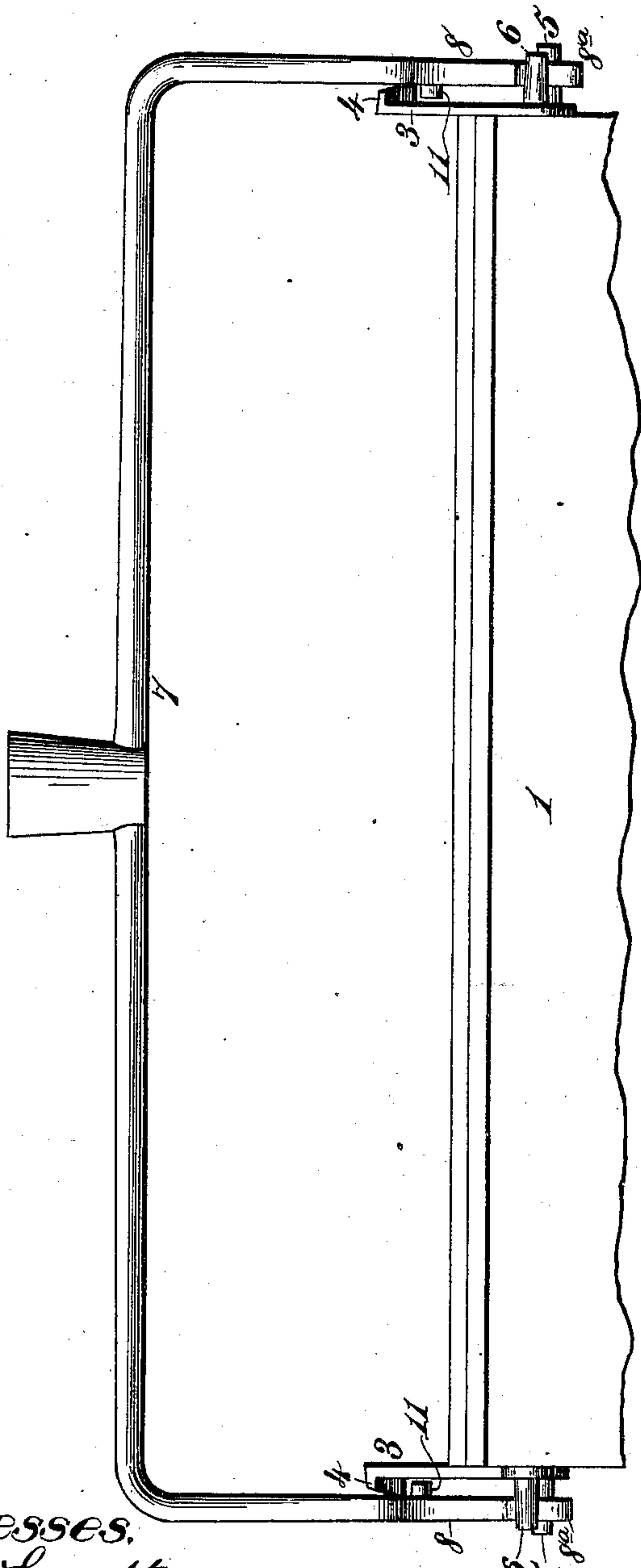
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Fig. 3.



Witnesses.

Robert Emmett

J. A. Withersford

Inventor.

Walter J. Drew.

By James L. Norris

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. 369,047, dated August 30, 1887.

Application filed March 12, 1887. Serial No. 230,684. (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.

Heretofore and prior to my invention the handles of carpet-sweepers have been attached by a bail pivoted upon the ends of the casing, so that the handle may be swung from side to side or vibrated as the sweeper is moved to and fro. It has been found, however, that in all cases where the bail is attached centrally and above the journal-bearings of the brush-shaft the sweeper is extremely liable to tilt upward when drawn toward the operator, the side of the casing most remote from the user rising as the sweeper is reversed, owing to the resistance of the brush acting upon the carpet in one direction while the bail is drawing it to the other. To overcome this objection it has been usual in some cases to pivot the bail below the bearings of the brush-shaft, while in other instances it has been attached above and upon one side of the vertical line passing through the axis of the brush. The latter form of construction obviates the difficulty, but renders it necessary to operate the sweeper from the side upon which the pivotal bearings of the bail are arranged, since, if the bail is swung to the other side and the sweeper operated in both directions, the difficulty mentioned will be greatly exaggerated, owing to the non-central position of the pivoted bearings of the bail.

It is the purpose of my invention to overcome this objection and to render the sweeper capable of being operated in both directions by a person standing upon either side of the casing.

The invention consists in the features and combinations of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is an end elevation of a sweeper-casing, showing one form in which my invention may be embodied. Fig. 2 is a similar view showing a slight modification in construction. Fig. 3 is a view in side elevation of the parts shown in Fig. 1. Fig. 4 is a de-

tail view showing the construction of the parts seen in Fig. 2.

In the said drawings, the reference-numeral 1 designates the sweeper-casing, which is of the usual construction and supported upon wheels 2, by which, also, the brush-shaft is driven. Upon the ends of the casing, above the journals of the brush-shaft, I mount a bracket-plate, 3, arranged centrally with relation to the case. Upon this plate, at or near its upper portion, is formed or mounted a flange, 4, inclining downward from both ends toward the central point. Projecting from the face of the plate are studs 5, arranged upon opposite sides of the central line of the sweeper, and a little behind each of said studs is placed a second stud or pin, 6, all arranged at a right angle to the plate on which they are placed.

The bail 7 is of the ordinary form; but at each end it is provided with a bifurcation, 8, having its extremities 8^a extended outward, and provided with slots 9, open at one end and of a width capable of receiving the studs 5. The back or edge of the slotted portion is rounded off, as shown at 10, for a purpose to be explained presently. Upon the back of the bifurcation 8, at or near the point where it joins the end of the bail, is formed or mounted a stud or lug, 11, projecting inwardly and adapted to pass under the flange 4 as the bail swings back and forth.

The bracket-plates 3, being engaged with the bail by placing one of the studs 5 in the slot 9 in one arm of the bifurcation 8, said plates are attached to the casing by screws 12, or in any other suitable manner, being centrally arranged above the journals of the brush-shaft, as described. By rocking the bail back and forth across the top of the sweeper the slotted extremities 8^a will engage alternately with the studs 5, which form the pivotal bearings for the bail. As the latter approximates an angle of forty-five degrees, the stud or lug 11 engages with one end of the flange 4, passing beneath the same and holding the extremities 8^a in operative engagement with the studs 5 as the pivotal point is shifted from one side of the central line to the other. After the said stud has passed out from under the flange the pivoted engagement is secured

by the angular position of the slot 9 and by the stud 6, which lies behind the rounded edge 10 and prevents the arm 8 from being drawn off the stud 6 in the direction of the length of the slot.

The construction described may be very considerably varied without departing from my invention. For example, as shown in Figs. 2 and 4, I may use a frame, 13, which affords a bearing for the journal of the brush-shaft and is attached to the casing by screws 14. In this frame are cut two curved slots, 15, communicating at the central point, 16, and each concentric with that one of the screws 14 over which it lies. The bifurcation on the end of the bail is not essentially different from that already described, the extremities 17 thereof being slotted, as at 18, to receive the screws 14 by which the frame is attached. Projecting from the bail is a pin or stud, 19, which extends into the slot 15 and runs therein as the bail swings from side to side.

Projecting inwardly from the frame 13 are studs 20, which lie outside of and a little above the screws 14. The outer branch of the slotted extremity 17 passes between the stud and the screw, whereby the former serves the same function as the studs 6, Fig. 1. In the modified form of construction, however, I do not regard these studs as essential, since the slots 15 may serve to retain and guide the slotted extremities 17.

These several constructions are shown to illustrate the variety of forms in which the invention may be embodied, the gist thereof being a swinging bail, which, as it is shifted from side to side, engages alternately with pivotal bearings upon opposite sides of the central line of the casing.

By carrying the central portion of the flange 4 outward somewhat I may obtain a frictional bearing against the inner face of the bifurcation 8, whereby not only will the handle be retained in an upright position, but the tendency of the casing to tilt, in case much pressure is exerted to force the brush into intimate contact with the carpet, is counteracted.

It will be observed that in my invention the bail is shifted in the direction the bail is turned, so that the draft or propelling pressure is at all times on that bearing which is

nearest the operator. This feature of shifting the bail in the direction the bail is turned is of the utmost importance, in that it permits the sweeper to be operated from either side of the casing, while it entirely avoids tilting of the sweeper-case.

Having thus described my invention, what I claim is—

1. In a carpet-sweeper, the combination, with the casing, of a bail having at each end two pivotal seats separated from each other, pivotal bearings on the ends of the casing arranged on opposite sides of the central vertical line, and pins or studs whereby the pivotal engagement is retained when the point of engagement is shifted from side to side, substantially as described.

2. In a carpet-sweeper, the combination, with the casing having independent pivotal bearings arranged on opposite sides of the vertical line passing through the brush-journals, of a bail having independent seats for the said pivotal bearings, and means for preserving the pivotal engagement when shifted from one bearing to the other, substantially as described.

3. In a carpet-sweeper, the combination, with the casing having pivotal bearings projecting from its ends, arranged on both sides of the central vertical line, of a bail having its ends bifurcated and provided with seats for the pivotal bearings in each extremity of the bifurcation, retaining studs arranged outside the pivotal bearings, and a retaining-flange engaging with a pin or stud on the bail, substantially as described.

4. In a carpet-sweeper, the combination, with a casing having at each end bearings arranged on opposite sides of a central line drawn through the brush-shaft, of a bail adapted to said bearings and shifting from one bearing to another in the direction the bail is turned to preserve the draft or propelling pressure at all times in that bearing which is nearest the operator, substantially as described.

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

WALTER J. DREW.

Witnesses:

ARTHUR C. DENISON,
EMILY O. PELTON.