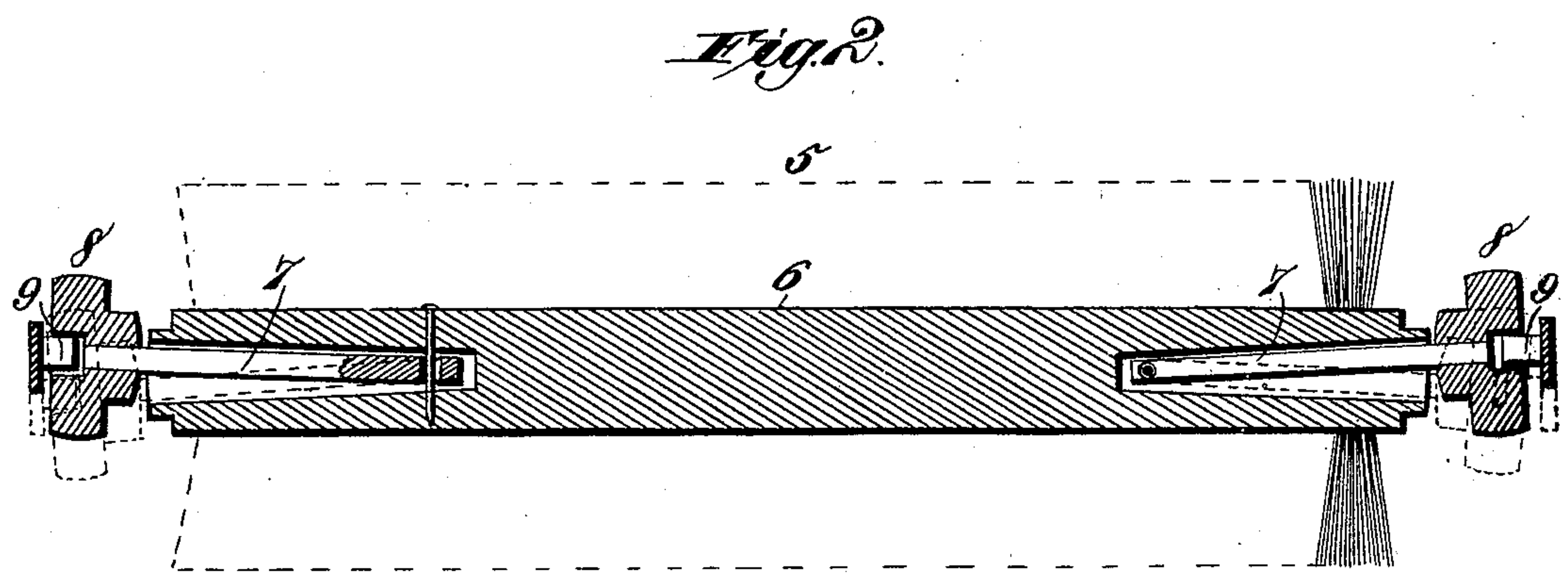
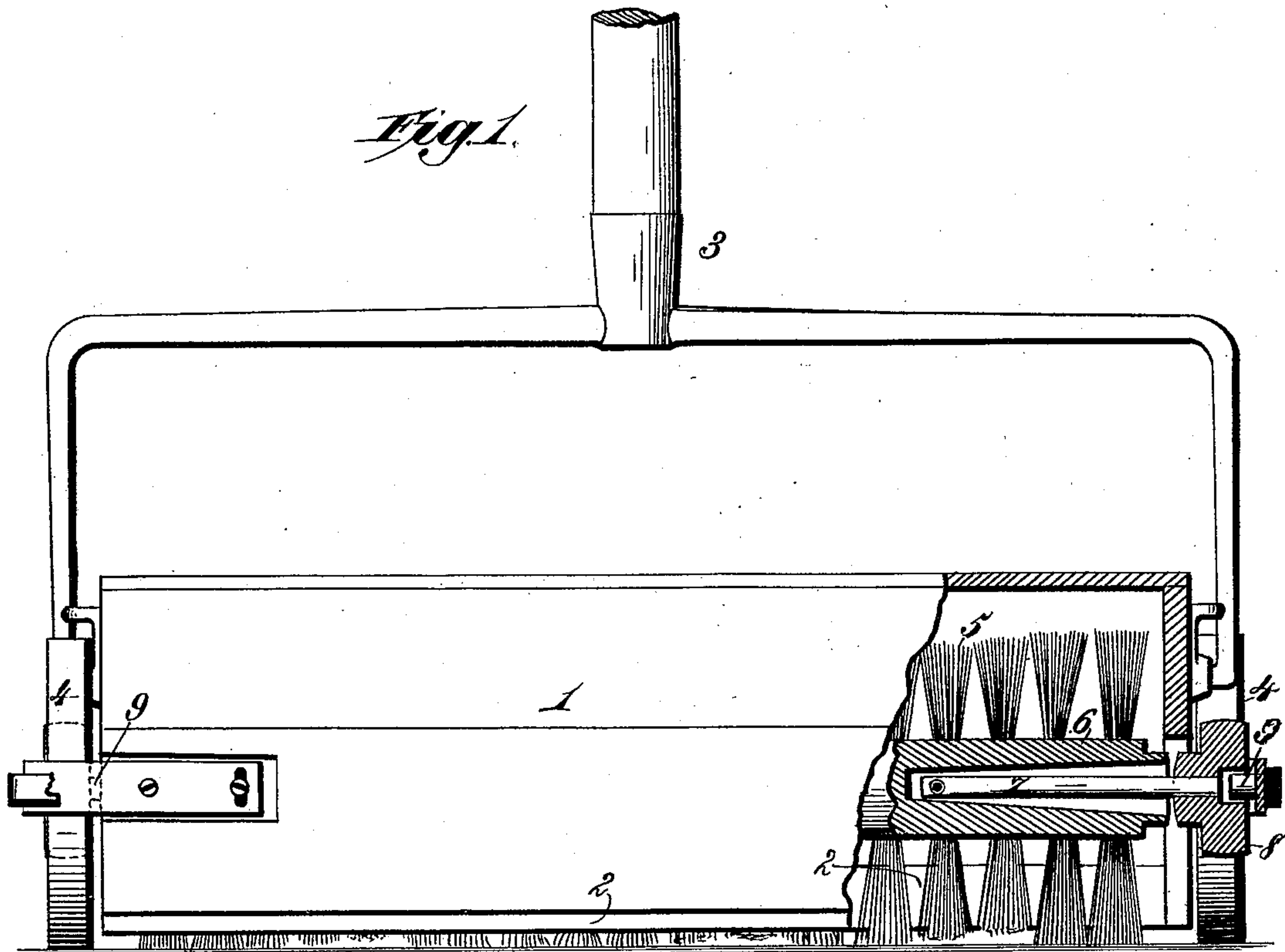


(No Model.)

W. J. DREW.
CARPET SWEEPER.

No. 405,084.

Patented June 11, 1889.



Witnesses.
Robert Everett,
J. A. Rutherford.

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. 405,084, dated June 11, 1889.

Application filed April 11, 1888. Serial No. 270,337. (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, State of Michigan, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a full, clear, and exact specification.

This invention has for its object to provide a carpet-sweeper with a brush-carrying shaft that can freely rise and fall independently of its driving mechanism, whereby the brush will uniformly bear upon the carpet or other surface traversed.

The object of my invention I accomplish in the manner and by the means hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a carpet-sweeper embodying my invention; and Fig. 2, a longitudinal sectional view of the brush-carrying shaft, showing one means of loosely or flexibly attaching the driving wheel or pulley thereto.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, where the numeral 1 indicates a carpet-sweeper casing, 2 the dust-pans, 3 the propelling-handle, and 4 the supporting drive-wheels, all of which may be of any construction suitable for the conditions required. The cylindrical brush 5, of any desired material, is carried by a shaft 6, having at one or both ends a driving wheel or pulley 8, which is loosely or flexibly connected with the shaft by means that will permit the shaft to freely rise and fall independent of a corresponding rising-and-falling movement of the wheel or pulley. I show a driving wheel or pulley at each end of the brush-shaft driven by frictional contact with the supporting drive-wheels 4; but I do not confine myself to friction driving mechanism, nor to a driving-wheel at each end of the brush-carrying shaft. I prefer, however, a driving-pulley 8 at each end, and as one means of connection I provide each pulley with a bar or rod 7, having its inner end pivoted in a recess in the end of the shaft, which recess is of such size that

the shaft can freely rise and fall at one or both ends without imparting corresponding rising and falling movements to the shaft-driving pulleys 8. In certain carpet-sweepers the pulleys 8 may be supported by pivots 9 entering orifices in the pulleys; but this constitutes no part of the present invention.

The pulleys 8 may be permanently or detachably secured to the bars or rods; but whatever connection is employed, it is requisite that the brush-shaft be loosely or flexibly connected with its driving wheel or pulley, so that the brush-shaft gravitates to the floor and is capable of freely rising and falling independent of the entire driving mechanism. By this invention the brush accommodates itself to the surface traversed and bears uniformly thereupon, and when the sweeper rests upon the floor the brush is raised, and thereby places the loose or flexible connections 7 in a position such as shown in Fig. 1, so that the tendency of the brush-shaft to center the said flexible connections by centrifugal action tends to throw the brush down against the floor, thus producing a contact which is close in proportion to the speed of revolution of the brush-carrying shaft.

Carpet-sweepers have heretofore been provided with brush-carrying shafts journaled in vertical slots, for the purpose of utilizing the weight of the shaft to press the brush on the carpet; but in all such sweepers prior to my invention the brush-driving wheel is rigidly attached to the brush-shaft, while in my invention the brush-shaft is so connected with its driving-wheel that the brush-shaft can rise and fall independent of the said driving-wheel.

Having thus described my invention, what I claim is—

1. A brush-carrying shaft for a carpet-sweeper having its driving wheel or pulley loosely or flexibly connected therewith to permit the shaft to rise and fall independent of the said driving wheel or pulley, substantially as described.

2. The combination, with a carpet-sweeper casing having driving mechanism, of a brush-carrying shaft having a loosely or flexibly attached driving wheel or pulley and capable

of rising and falling independent of said driving wheel or pulley, substantially as described.

3. The combination, with a sweeper-casing and driving mechanism, of a brush-driving
5 wheel having a bar or rod, and a brush-carrying shaft loosely or flexibly connected with the bar or rod and capable of rising and falling independent of the said driving wheel or pulley, substantially as described.

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

WALTER J. DREW.

Witnesses:

ARTHUR C. DENISON,
CHAS. B. JUDD.