

No. 877,852.

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F. C. MASON & J. W. SHANAHAN.
CARPET SWEEPER.

APPLICATION FILED FEB. 19, 1907.

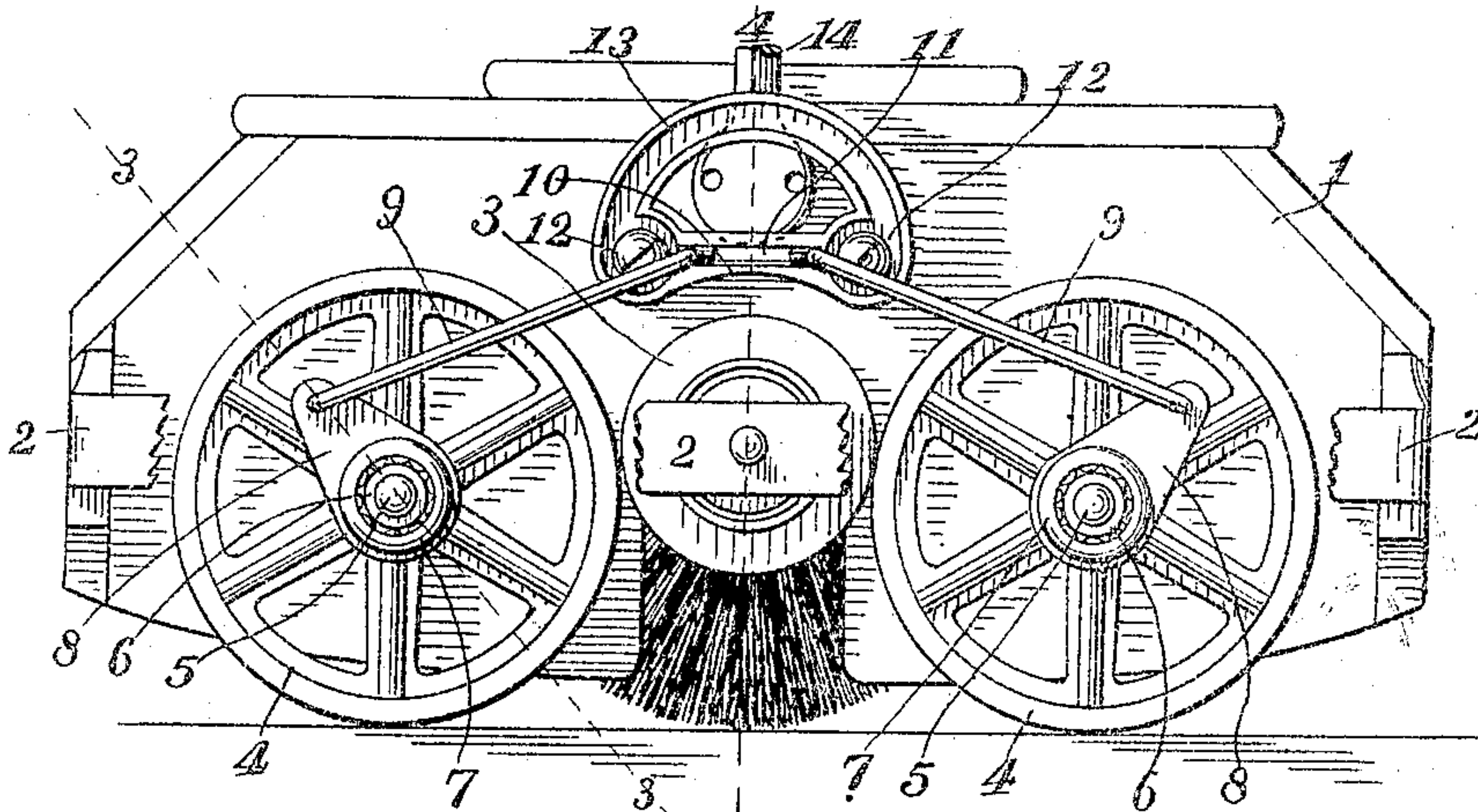


Fig. 1.

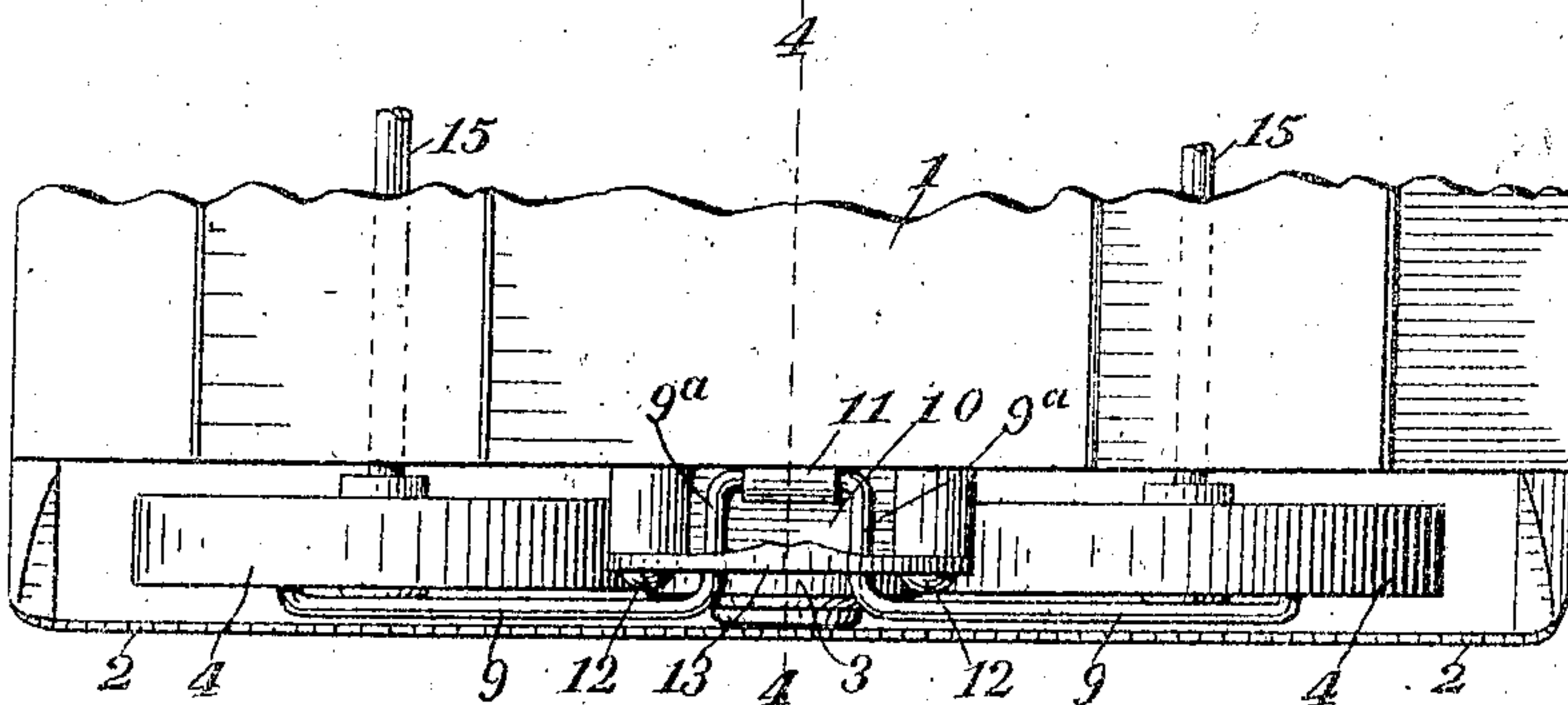


Fig. 2.

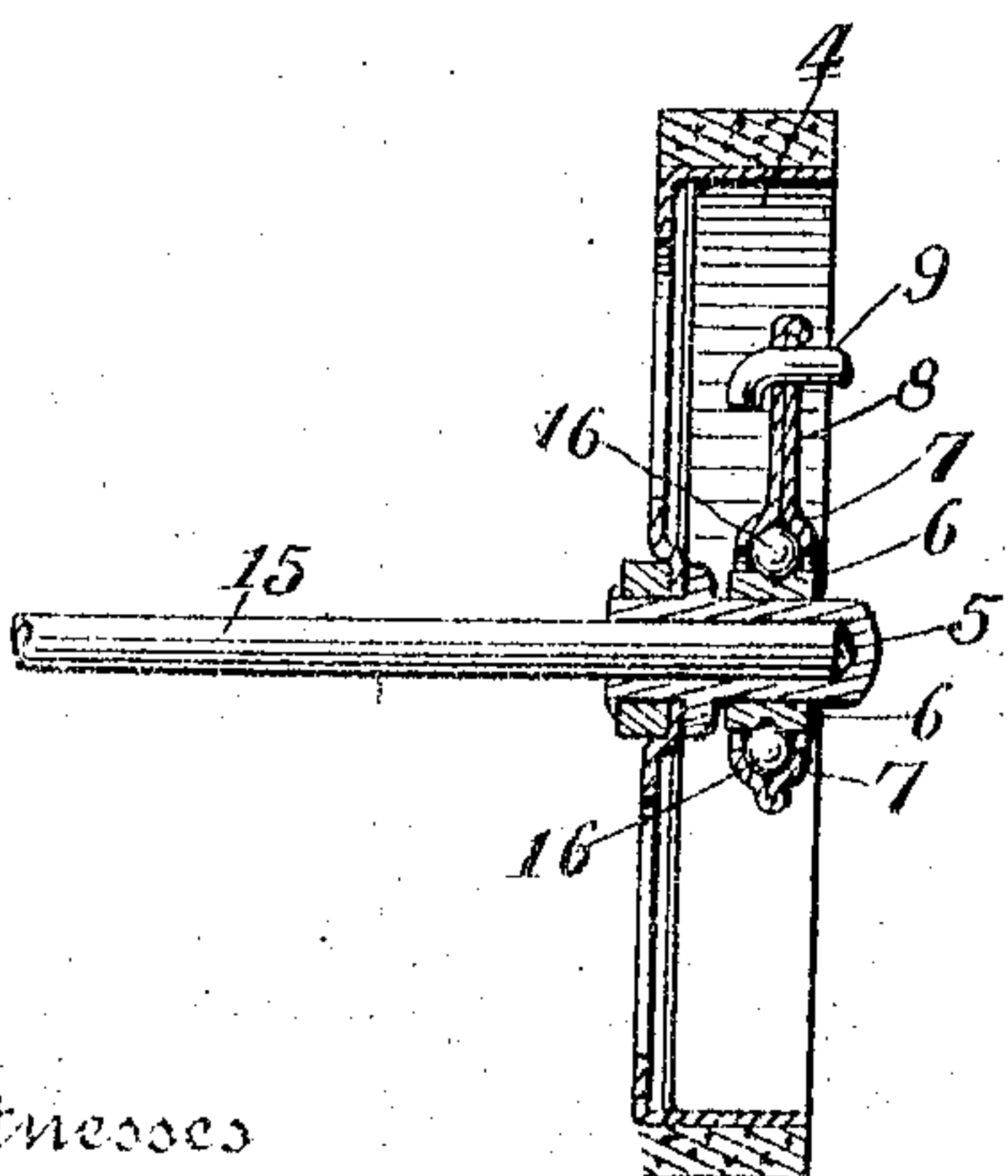


Fig. 3.

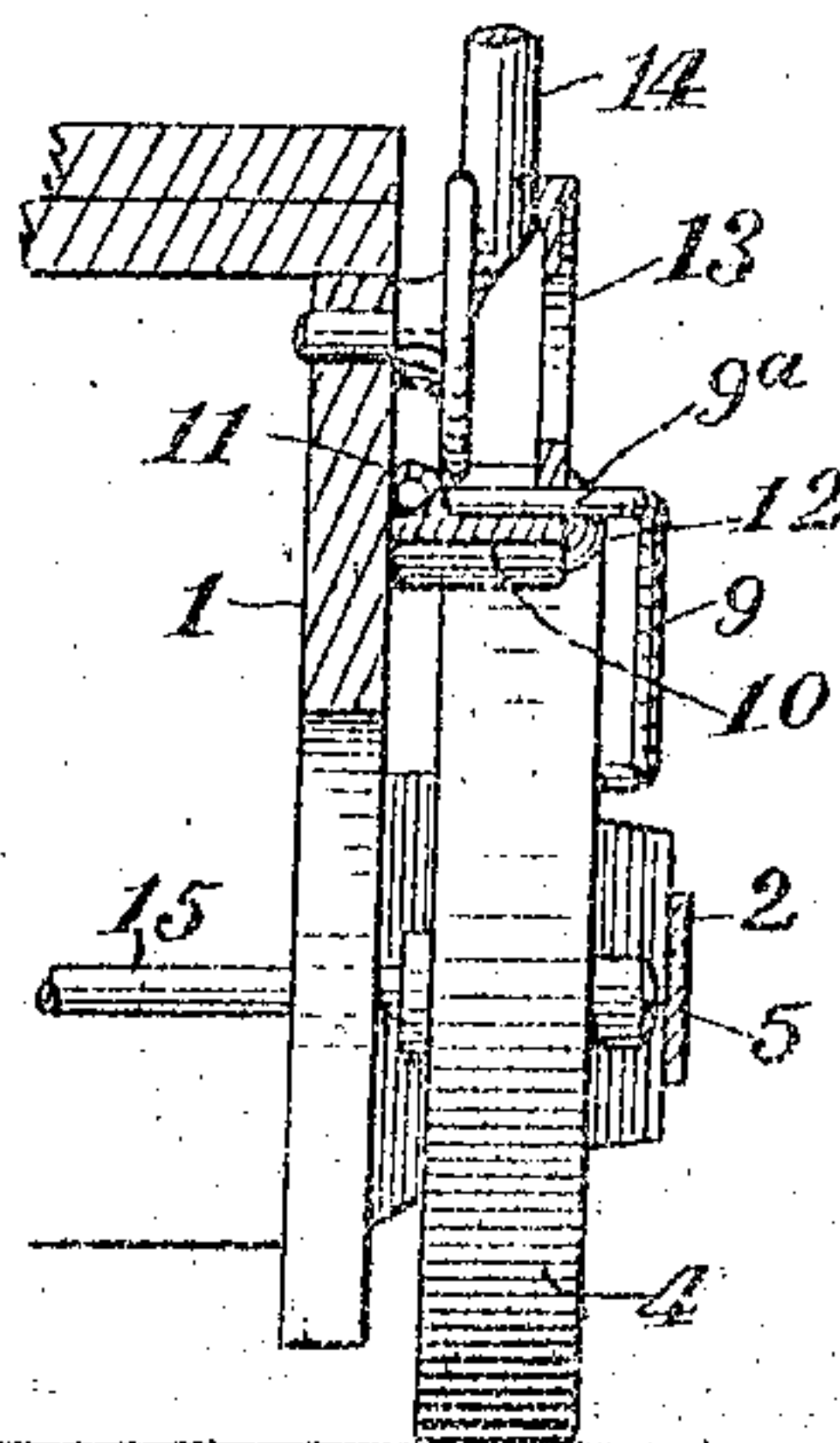


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANCIS C. MASON AND JOHN W. SHANAHAN, OF GRAND RAPIDS, MICHIGAN, ASSIGNORS TO
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CARPET-SWEEPER.

No. 877,852.

Specification of Letters Patent.

Patented Jan. 28, 1908.

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To all whom it may concern:

Be it known that we, FRANCIS C. MASON and JOHN W. SHANAHAN, citizens of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Carpet-Sweepers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in carpet sweepers, and more particularly to the mounting of the supporting and driving wheels thereon.

The object of our invention is to provide improved means whereby the said wheels are properly engaged with the brush shaft pulleys and frictional contact therewith increased by downward pressure upon the device; the said wheels provided with improved journal bearings; improved means provided for supporting the wheels in vertical planes, and to provide the device with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:

Figure 1. is an end elevation of a carpet sweeper embodying our invention, with parts omitted; Fig. 2. a plan view of the same; Fig. 3. an enlarged sectional detail on the line 3—3 of Fig. 1.; Fig. 4. a vertical section on the line 4—4 of Figs. 1 and 2.

Like numbers refer to like parts in all of the figures.

1 represents the case; 2, the end guards of the same; 3 the brush pulleys; 4, the supporting and driving wheels, all arranged as usually constructed. These wheels are provided with tubular hubs closed at the outer end, in which hubs are inserted the connecting rods 15, which rods normally rotate with the wheels which they connect, except in case the device is moved in a curved path, whereby the wheels at one end are required to move more rapidly than those at the other end, in which event the rod will slip or rotate in one or the other of the hubs to accommodate this movement. This rod maintains the wheels thereon in parallel planes, and the hubs are journaled to rotate within bearings supporting the case. An externally grooved

collar 6 is fixed on each hub, and traversing this groove are a series of balls 16 inclosed in a case 7, consisting of two substantially equal stamped sheet metal cups secured to each other by folding the edge of one cup over the edge of the other. These cups 7 are provided with arms 8 extending diagonally outward and upward at substantially 45 degrees from the vertical or horizontal. These arms at their outer ends are pivoted on spring supports 9 preferably consisting of a spring wire pivoted at its respective ends to the respective arms, and attached to the case at the middle, for which purpose, the middle portion thereof is bent inward in a loop as at 9^a and extends through the front of the bail support 13 and across the base plate 10 thereof, on which plate is a clip 11 engaging the middle portion of the wire, whereby the spring support is securely held in place and furnishes vertically and outwardly yieldable pivotal supports for the arms 8. Any downward pressure exerted upon the case will tend to swing these arms inward toward the brush pulleys 3 as well as upward and thus whenever the case is pressed downward to increase the contact of the brush with the carpet, increased frictional contact between the driving wheels and the brush pulleys is simultaneously secured. As the bearings of the wheels swing inward, the ends of the spring supports 9 move outward as well as upward, whereby the arms become more nearly horizontal and are wedged between their pivots and the brush pulleys.

What we claim is:

1. In a carpet sweeper, in combination with the case and brush shaft, wheels having tubular hubs closed at the outer ends, rods inserted in the hubs and connecting the wheels in opposing pairs, said rods normally rotative with the connected wheels but rotative therein, bearings in which the hubs are journaled, arms extending outward and upward from the bearings, and spring supports on which the arms are pivoted to move inward and upward.

2. In a carpet sweeper, in combination with the case and brush shaft, supporting wheels having tubular hubs closed at the outer ends, rods inserted in said hubs and connecting the wheels in pairs, said rods being normally rotative with the connected wheels, and rotative therein when the wheels

rotate unequally, bearings in which the hubs are journaled, arms on the bearings, bail supports spaced apart from the case and having base plates, spring supports pivoted
5 at their outer ends to the arms of the bearings and secured to the base plates at the middle.

3. In a carpet sweeper the combination of a case, a bail support spaced apart from the case and having a horizontal bed plate at-
10 tached to the case, a spring support having a horizontally disposed loop extending through an opening in the bail support, a clip on the bed plate and engaging the loop, and means for connecting the supporting wheels with
15 the free ends of the spring support.

4. In a carpet sweeper, a case, a bed plate attached to the case and projecting horizontally therefrom, a spring support having a horizontally disposed loop at the middle,
20 means for securing the loop to the bed plate,

bearings attached to the free ends of the support and wheels journaled in the bearings.

5. In a carpet sweeper the combination of a case, a pair of wheels, each wheel having a tubular hub, a rod having its respective ends
25 inserted in said hubs and being wholly supported by the wheels, said rod being normally rotative with the wheels and adapted to slip or rotate in one of said hubs when the wheels rotate unequally, bearings in which
30 the hubs of the wheels are journaled, and means extending outside of the wheels for connecting the bearings to the case.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANCIS C. MASON.

JOHN W. SHANAHAN.

Witnesses:

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