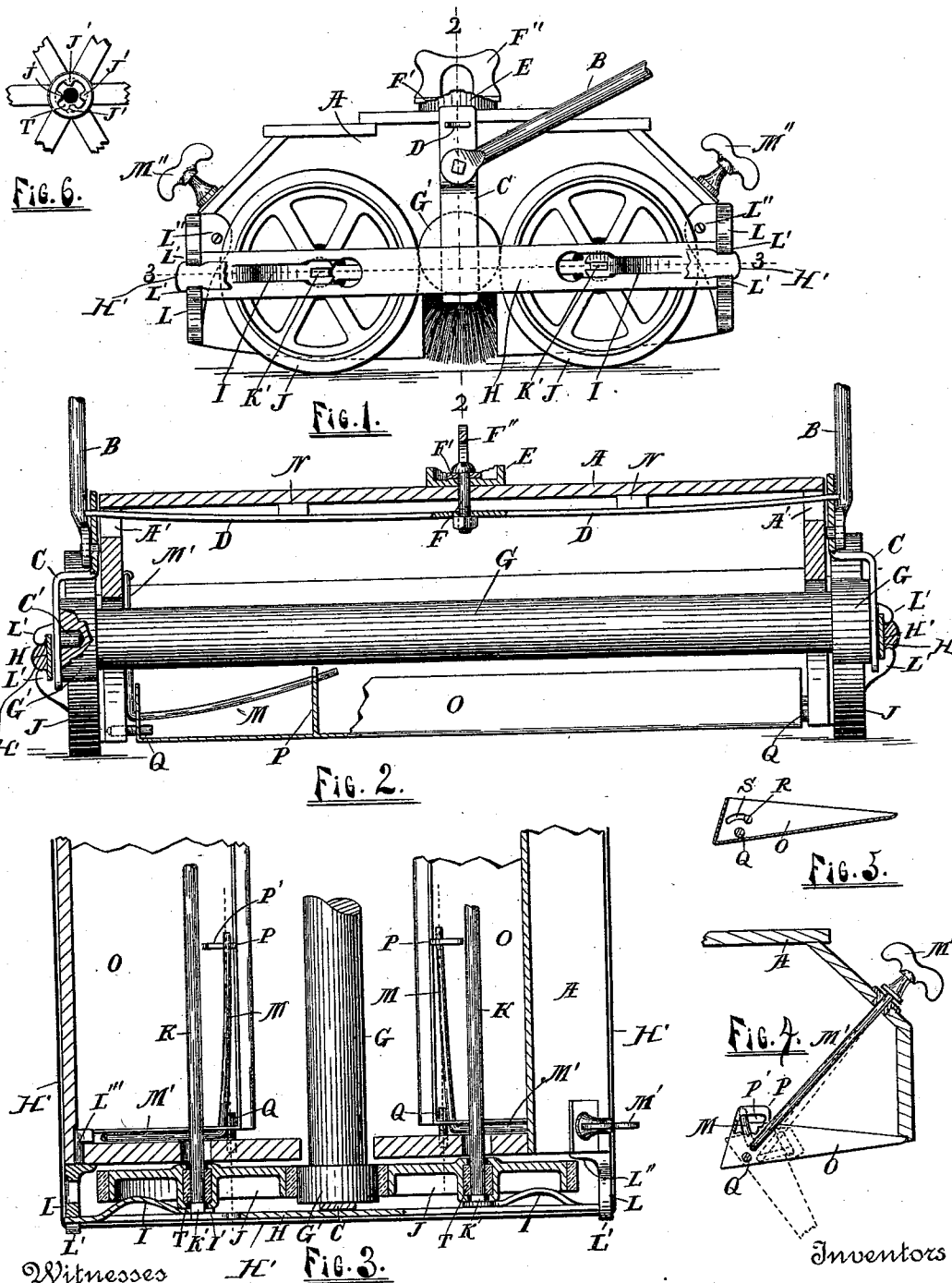


(Model.)

T. FRIANT & A. B. LINN.
CARPET SWEEPER.

No. 554,817.

Patented Feb. 18, 1896.



Witnesses

Lewis E. Moulton
Low Moulton

Inventors

Thomas Friant
Allen B. Linn

By Attorney

Sam'l V. Moulton

UNITED STATES PATENT OFFICE.

THOMAS FRIANT AND ALLEN B. LINN, OF GRAND RAPIDS, MICHIGAN, ASSIGNORS TO SAID FRIANT, T. STEWART WHITE, GAUIS W. PERKINS, AND CHARLES J. REED, OF SAME PLACE.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 554,817, dated February 18, 1896.

Application filed April 4, 1895. Serial No. 544,503. (Model.)

To all whom it may concern:

Be it known that we, THOMAS FRIANT and ALLEN B. LINN, citizens of the United States, 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 its object is to provide the same with certain 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 device embodying our invention; Fig. 2, a longitudinal vertical section of the same on the line 2 2 of Fig. 1; Fig. 3, a horizontal section of one end of the same on the line 3 3 of Fig. 1; Figs. 4 and 5, details showing the pan-operating mechanism, and Fig. 6 a detail of the hub of the drive-wheel.

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

A represents the case, provided with a bail, the end portions of which bail are shown at B B, pivoted to vertically-movable hangers C, said hangers having inwardly-projecting studs C', on which the brush-shaft G is journaled. Said brush-shaft is provided at each end with pulleys G', which are engaged by the drive-wheels J to rotate said shaft.

D is a vertically-flexible strip of metal, which extends through vertically-elongated openings A' in the case, and also through openings in the hangers C, thus forming flexible supports for said hangers. The ends of said spring-strip are made concave and engage the bail B to sustain said bail in a vertical position. Said spring also engages blocks N N in the upper part of the case and located at some distance from each other and from the respective ends of said spring. A bolt F passes through the middle of said strip D midway between said blocks, and also through the top of the case.

E is an upwardly-projecting flange surrounding said bolt, and provided with steps of various elevations.

F' is a transverse bar engaging the steps of said flange and through which the bolt F passes. Said bar is provided with a thumb-piece F'' to adjust the same upon the various steps of the flange E, whereby the middle of the spring D is vertically adjusted, which thus vertically adjusts the normal position of the brush-shaft G relative to the carpet. Any downward pressure on the bail B depresses the flexible outer ends of said spring D and thus lowers the brush more or less from the normal, according to the amount of pressure so exerted.

L L are corner-irons, which serve to prolong the vertical sides of the case and support the guard-bar H, which bar can thus be made of a straight strip of metal and engage with suitable openings in the said corner-irons, which irons project beyond said bar at each side, as at L' L', to engage the respective sides of the flexible guard-band and retain the same in place. Said corner-irons are secured in place by flanges L'', screwed to the case, and by studs L''' passing through the case and provided with lateral lugs to engage the inner surface of the same. Spring-tongues I are punched out of the stock of the guard-bars and curved inward, the free ends of said tongues being provided with slots to engage the flattened ends K' of the rods K, upon which rods the drive-wheels are journaled. These spring-tongues being bent inward in the curved form shown are vertically flexible, and thus yield to pressure upon the bail to lower the device, and also horizontally flexible, whereby they serve to force the drive-wheels J in close contact with the brush-pulleys C'.

The dust-pans O are pivoted at each end at Q Q, and are opened and closed and also held in each position by a spring-wire M bent at substantially right angles, and passing through the end of the pan near said angle and close to one of the pivots Q. One arm, M', of said wire extends diagonally upward and outward through the case and is provided at its outer end with the thumb-piece M'' to turn the same

on its axis. The other arm, M, of said wire is flexible and extends inward and passes downward and engages a slotted opening in the upper end of a post P in the pan O. By rotating the arm M' the arm M turns laterally at its inner end, and thus opens or closes the pan. The downward pressure of said arm M serves to hold the pan as said arm is turned to the respective sides of the line of the axis of the pan. The slot P' in the post P permits the arm M to move to a greater distance from the said axial line and thus increases its efficiency; but said slot is not necessary. Any means of connecting the wire to the pan at this point will operate, but with less leverage.

The hubs of the drive-wheels are cast in the form of a shell around a core T of suitable antifriction material, and said hubs are provided with inwardly-projecting lugs J' to hold said material in place and permit the escape of the gas in the process of casting.

What we claim is—

1. In a carpet-sweeper, a case, a vertically-flexible bar extending through vertically-elongated openings in the ends of the case, a bail and brush-shaft supported by said bar, means for vertically adjusting the middle of the bar and elevated supports on the top of the case engaging said bar at each side of its middle and between the same and its ends substantially as described.

2. In a carpet-sweeper, a case having vertically-elongated openings in its ends, a continuous flexible bar extending through said openings, hangers attached to the respective ends of said bar, a bail pivoted to said hangers, a brush-shaft journaled on the same, a bolt passing through the case and through the middle of said bar, a transverse bar on said bolt, and an upwardly-projecting flange having steps, and engaging said bar, and blocks at each side of said bolt and at a distance therefrom and engaging said bar, substantially as described.

3. In a carpet-sweeper, a case having vertically-elongated openings in its ends, a vertically-flexible continuous bar passing through said openings, hangers attached to the respective ends of said bar, a bail pivoted to said hangers and engaged by the ends of said bar,

a brush-shaft journaled on said bar, blocks engaging said bar at each side of its middle, and at a distance therefrom, a bolt passing through said bar and case, an upwardly-projecting flange surrounding said bolt, having steps of different elevations, a transverse bar rotatively engaging said steps and the head of said bolt and provided with a thumb-piece, substantially as described.

4. In a carpet-sweeper, a case, corner-irons prolonging the vertical walls of said case and secured to the same by studs having lateral lugs engaging the inner surface of the case and flanges screwed to the case, and having sockets and projections, guard-bars supported by said sockets, and a guard-band engaged by said projections, substantially as described.

5. In a carpet-sweeper, a case, guard-bars, having spring-tongues made vertically and longitudinally flexible by bending, drive-wheel journals attached to the free ends of said tongues drive-wheels on said journals, and a brush-shaft, having pulleys engaged by said wheels, substantially as described.

6. In a carpet-sweeper, a case, a dust-pan pivoted to the same at each end, a spring-wire having a substantially right-angle bend located near the pivot of said pan, one arm of said wire being rotative on its axis and extending through the case, the other arm of said wire engaging the pan at one side of the axial line of the same and pressing upon the same, substantially as described.

7. In a carpet-sweeper, in combination with a case and a dust-pan pivoted to the same, at each end, a spring-wire bent at substantially right angles and passing through the pan near the pivot and near the angle in said wire, one arm of said wire extending through the case and provided with a thumb-piece, and a post attached to said pan, having a slotted opening engaging said wire, substantially as described.

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

THOMAS FRIANT.
ALLEN B. LINN.

Witnesses:

LEWIS E. FLANDERS,
LUTHER V. MOULTON.