

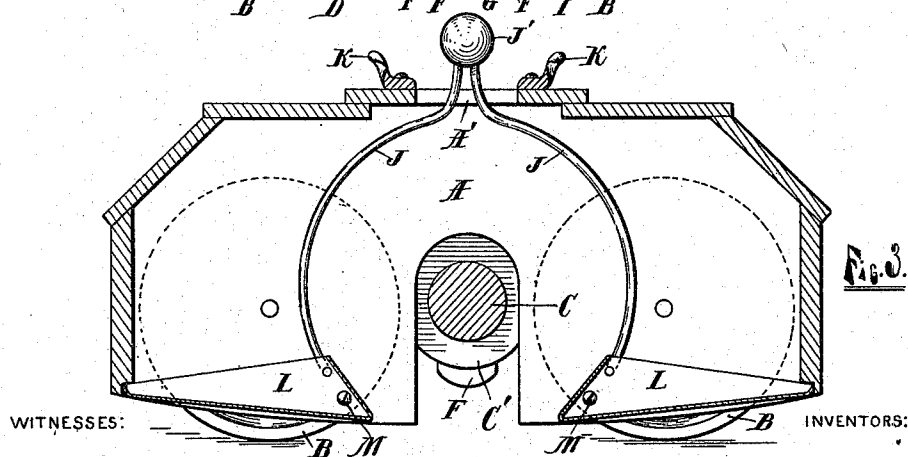
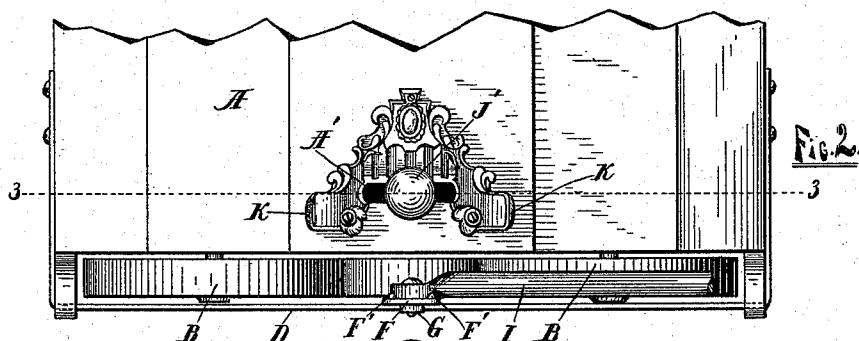
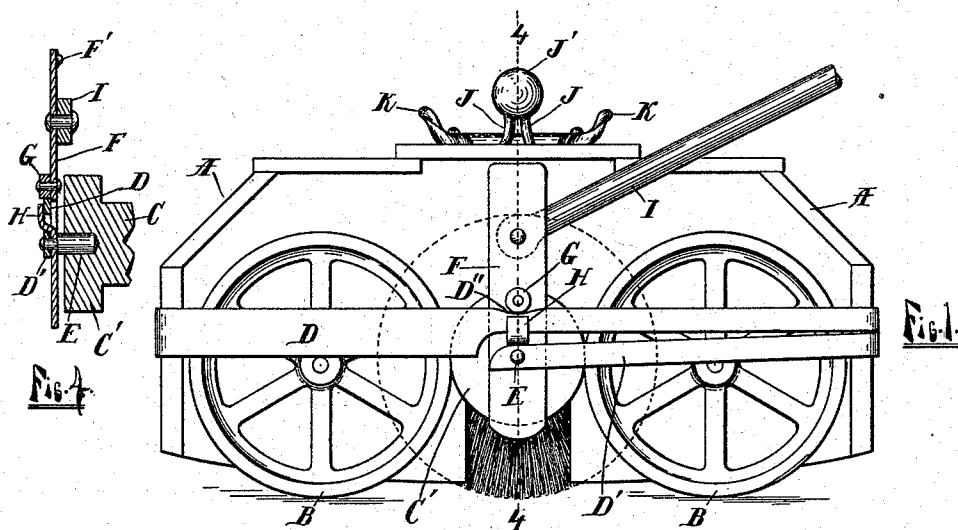
(No Model.)

A. D. & A. B. LINN.

CARPET SWEEPER.

No. 571,451.

Patented Nov. 17, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 571,451, dated November 17, 1896.

Application filed February 24, 1896. Serial No. 580,312. (No model.)

To all whom it may concern:

Be it known that we, ALLEN D. LINN 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 is a plan view of one end of the same; Fig. 3, a vertical section on the line 3 3 of Fig. 2, and Fig. 4 a detail in vertical section on the line 4 4 of Fig. 1.

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

A represents the case; B B, the driving-wheels, and C the brush-shaft, said shaft having a pulley C' engaged by the wheels B. The brush-shaft is also journaled at each end on a stud E, projecting inward from the movable end of a spring-arm D', formed of a portion of the lower side of the guard-bar D by dividing the same longitudinally from near one end to a point beyond the said stud, and thence downward, and springing the free end of the arm thus formed downward. Said spring-arms are adjusted to press the brush downward toward the carpet. To automatically raise the brush-shaft and reduce its contact with the carpet more or less according to the resistance of the surface acted upon, a vibrating lever F is pivoted upon the stud E, to the upper part of which lever is pivoted the bale I. Said lever is provided with a projection G, consisting of a suitable roll, which engages the upper edge of the guard-bar, which thus forms a track for said roll. A hook H is also provided on said lever, engaging the outer side of said guard-

bar to hold the lever close to the same and in a vertical plane. Projections F' near the upper ends of said levers engage the bale to hold the same in a vertical position. To increase the action of the levers F, a slight depression D'' may be formed in the upper side of the guard-bars, the inclined sides of which cause the levers to raise and more rapidly increase their elevation as the resistance increases.

When the machine is propelled over any smooth hard surface, the resistance to its forward movement is slight, and the downward pressure of the arms D' will hold the levers F in a nearly or quite vertical position and the brush at or near its lowest position, which position is most suitable for such surfaces. Should the device pass over any softer carpet, the increasing resistance to the progress of the device at once requires more propelling force to be applied to the handle I and in a horizontal direction. This tends to thrust the hangers forward to an inclined position. The projection G thus traverses the upper edge of the guard-bar more or less, and thus the brush is raised and its contact with the carpet reduced more or less and to the proper position for the particular carpet. It will be especially observed that the brush is raised more or less solely by increased and decreased resistance to horizontal pushing or pulling of the handle, and only in accord with increased and decreased resistance to the desired movement of the machine, due to the nature of the surface traversed, and the brush is automatically adjusted according to such resistance solely, without attention or voluntary action of any kind on the part of the operator. As the softer carpets require the brush to be raised and the resistance to forward or backward movement of the machine increases with increased softness of the carpet traversed an automatic adjustment is made that will instantly adapt the machine to any surface traversed thereby.

L L are the dust-pans pivoted near their inner angles at M and operated by a single flexible wire folded at the middle and having diverging curved arms J J, and pivoted at its ends to the respective pans diagonally upward

and outward from the pivots M and near the same. Said arms J J spring toward each other and hold said pans closed. The folded middle part J' of said spring projects through a transverse slot A' in the case, and the scutcheon-plate is provided with projections K K opposite each end of said slot. By seizing one of said projections K and the part J' and pressing them toward each other a longitudinally-downward pressure is exerted on the arm J at that side, and the pan toward which it is moved will be opened. Thus each pan will be opened alternately by moving the upper part of the spring in the direction of each pan, respectively.

Having thus fully described our invention, what we claim is—

1. In a carpet-sweeper in combination with a case, a brush, and vertically-movable supports for said brush, levers attached to said supports, a bale attached to said levers, and a support for said levers attached to the case, whereby the brush is raised proportionately as the propelling power applied to the bale is increased substantially as described.

2. In a carpet-sweeper, in combination with a case and brush, flexible arms to press the brush in contact with the surface acted upon, vibrating levers for raising said brush, and a bale connected to said levers and automatically operating the same by the power applied to propel the machine, substantially as described.

3. In a carpet-sweeper, a case, flexible arms attached at one end to said case, a brush journaled on the movable ends of said arms and pressed downward thereby, levers pivoted to said arms, supports for said levers and a bale pivoted to said levers, substantially as described.

4. In a carpet-sweeper, a case, flexible arms attached to said case at one end, a brush journaled on the free ends of said arms and pressed downward thereby, vibrating levers pivoted

to said arms, projections on said levers, a track engaged by said projections, and a bale pivoted to said levers and operating the same, substantially as described.

5. In a carpet-sweeper, a case, guard-bars divided to form flexible arms, a brush journaled on said arms, levers pivoted to said arms, rolls on said levers engaging and traversing the upper edge of said guard-bars, and a bale pivoted to said levers, substantially as described.

6. In a carpet-sweeper, a case, guard-bars attached to the same, and divided longitudinally and laterally forming spring-arms, studs in the free ends of said arms, a brush and levers journaled on said studs, rolls and hooks on said levers engaging and traversing said guard-bars, and a bale pivoted to said levers, substantially as described.

7. In a carpet-sweeper, a case having a transverse slot, pans pivoted in said case, a spring folded at the middle and projecting through said slot, and having diverging arms pivoted to said pans, whereby said pans are alternately opened by moving said folded end laterally in said slot, substantially as described.

8. In a carpet-sweeper, a case having a transverse slot, a scutcheon-plate having projections opposite the ends of said slot, dust-pans pivoted in said case near their inner angles a spring folded at the middle and projecting upward through said slot and laterally movable therein, and having diverging spring-arms pivoted to said pans above the pivots thereof, whereby said pans are held closed and alternately opened substantially as described.

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

ALLEN D. LINN.
ALLEN B. LINN.

Witnesses:

LOUIS GOHLKE,
LUTHER V. MOULTON.