(No Model.)

W. NEWBIGGING.

CARPET SWEEPER.

No. 525,610. Patented Sept. 4, 1894.

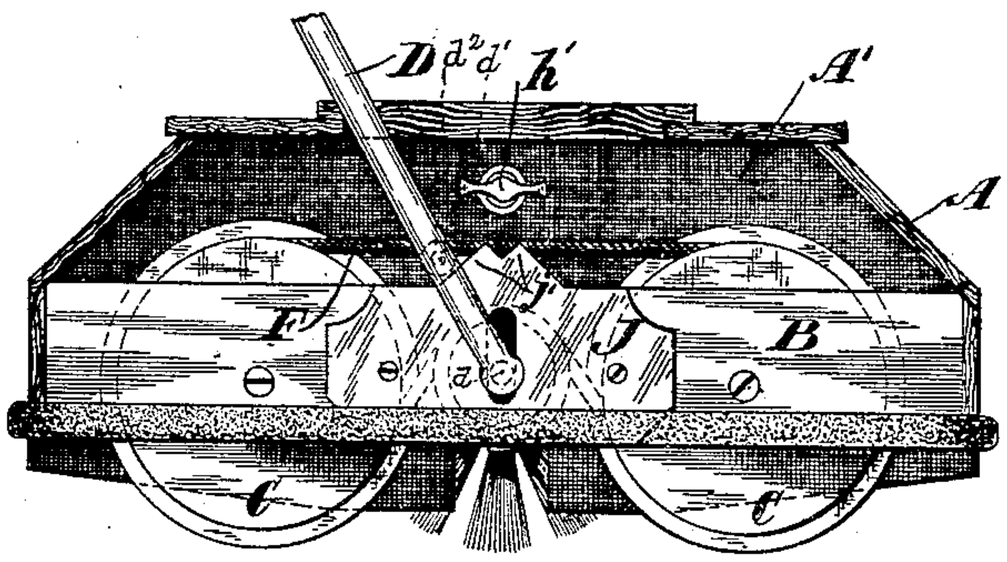

FIG. 1.

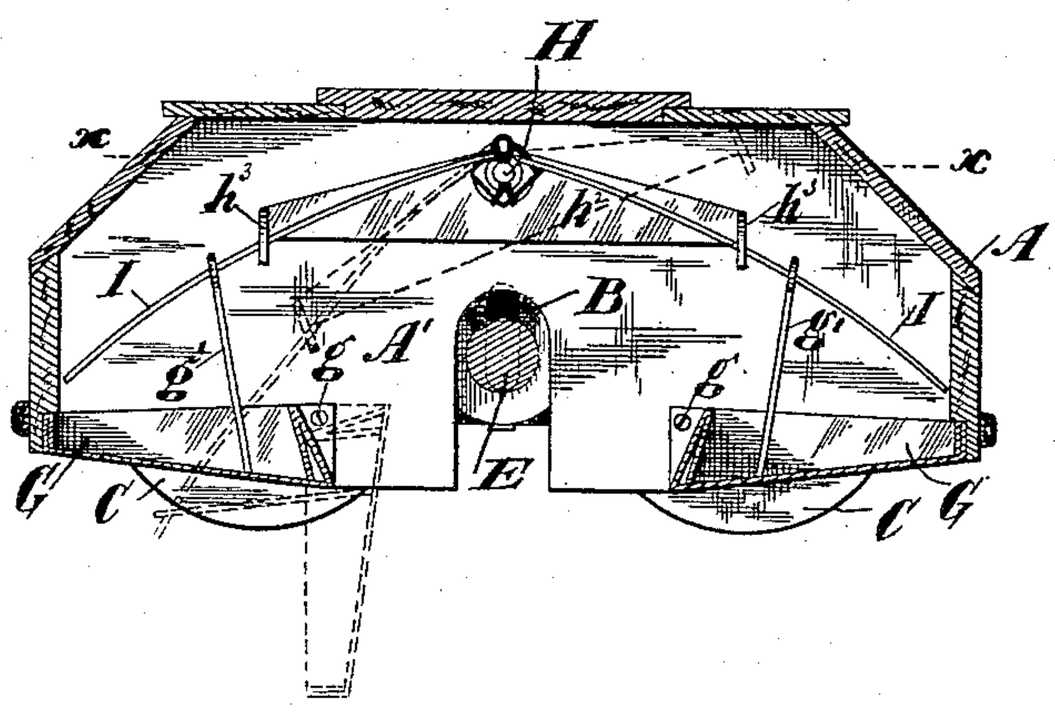

FIG. 2.

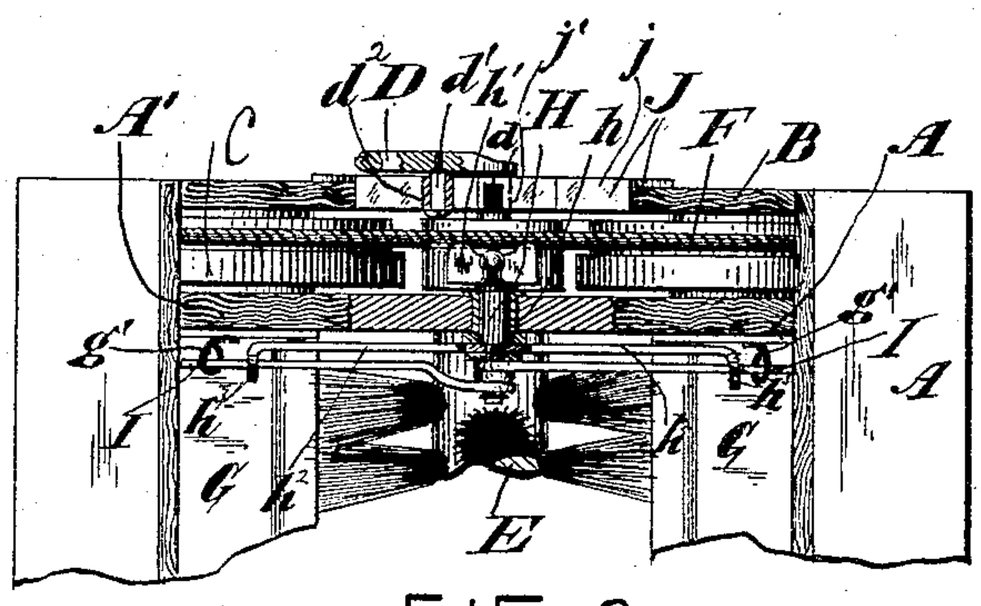

FIG. 3.

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WILLIAM NEWBIGGING, OF MILFORD, OHIO.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 525,610, dated September 4, 1894.

Application filed April 20, 1894. Serial No. 508,310. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NEWBIGGING, a citizen of the United States, and a resident of Milford, in the county of Clermont and State of Ohio, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a specification.

My invention relates to carpet sweepers. Its principal objects are to adjust the brush automatically, to adapt the device for sweeping all grades of carpets, or to the duty imposed upon the sweeper while it is in use, and also to provide an improved means to free the receiving pans from dust.

The invention consists in the peculiar combination and arrangement of parts illustrated in the accompanying drawings, hereinafter described, and particularly referred to in the claims.

Referring to the drawings, in which like parts are represented by similar reference letters wherever they occur throughout the various views: Figure 1 is an end elevation of a carpet sweeper provided with my improvements. Fig. 2 is a vertical transverse sectional view of the same. Fig. 3 is a detailed view in horizontal section of one end of a sweeper, taken through line *x x* of Fig. 2. Some of the parts are shown in section and others in plan view or edge elevation.

The inclosing case, A, has ends, A′, a short distance within each end of the case, and bridge trees, B, extending across the end of the case, the bridge trees and ends furnishing journal bearings for the drive wheels, C, and the inturned ends of the bail, D, upon which the brush shaft, E, is journaled. The drive wheels and end of the brush shaft are grooved in the usual manner to receive the elastic band, F, which passes around the grooves in the drive wheel and over the grooved end of the brush shaft, so as to exert downward pressure on the brush. G are the dust receptacles which are journaled upon screws, *g*, passing through flanges upon the ends of the pans and into the ends, A′, of the case. The parts above described are the same as similar parts now in common use in carpet sweepers, and need not therefore be specifically described.

The means for retaining the dust pans in the closed position and throwing them down to empty them of their contents will now be described. One end, A′, of the case is perforated to receive a thimble, *h*, which serves as a journal bearing for the short shaft, H. This shaft is provided, outside of the case, with a wing nut, *h′*, which is secured firmly upon the shaft to turn it in either direction. Upon the inner end of the shaft is secured a cross head, h^2, which has inwardly projecting lugs, h^3, to bear upon the arms of the spring I. The spring is coiled around the inner end of the shaft, H, and held in position upon it in any well known manner, the tension of the springs, I, bearing against the inward projections, h^3, of the cross heads.

To one end of the pans, G, are secured standards, *g′*, consisting of a wire, having its upper end turned into eyes, through which eyes the arms of the spring, I, pass. The springs normally hold the pans in the closed position while the sweeper is in use.

To empty the pans, the wing nut or cross head, *h′*, is turned a quarter revolution in either direction. This throws the pan down to the position shown in dotted line Fig. 2, and the pan being supported on the free end of the spring, the motion of turning it down would cause a rapid vibration of the pan, causing all the dust that has a tendency to adhere to it to drop out so soon as the wing nut is released from the fingers, and would fly back to the closed position. When one pan is thrown open, the other is held to its position by the spring and when released, both pans are held closed by the same means.

To automatically adjust the brush while the sweeper is in use, a plate, J, is secured upon each end, upon the bridge trees, B. This plate is vertically slotted to pass the journal, *d*, of the bail, these journals projecting inwardly from the lower end of the bail, D. The plate, J, has inturned flanged lugs, *j*, to pass over the top of the bridge tree. Similar inwardly inclined lugs, *j′*, spring up from the parts, *j*, to near the center of a V shaped or curved notch in the apex between the inclines.

The bail, D, has an inwardly projecting stud, *d′*, fitted with a friction roll, d^2, which bears upon the overlapping lugs of the plate, J. The top of the plate, J, serves as a fulcrum upon which the friction wheel, d^2, bears,

and it will be seen that by drawing down, the journals of the roller will be elevated, drawing the brush shaft upwardly, and an upward movement of the handle would allow the brush shaft to drop down under the tension of the spring band, F. Thus the operator may, by elevating or lowering the handle of the bail, when in use, bring the brush down with greater or less force upon the carpet. In sweeping some carpets, but little force is required upon the brush, and if more is used than necessary, the carpet is liable to be injured, while in others greater pressure is required. The operator can readily determine, by the feel of the implement in use, whether more or less pressure is required, and can regulate it accordingly.

When the sweeper is laid aside, the handle is thrown to the vertical position, the wheels, d^2, taking into the notch in the top of plate, J, and holding it in that position. This is found to be very convenient, as so long as the handle is in the vertical position, the sweeper is not liable to move or the bail fall over, so that it may be placed away in any position without leaning the bail against the wall.

For durability the bridge trees are armed with the metal plate, J, but this may be dispensed with if hard wood is used for the bridge trees.

Without limiting myself to specific details of construction, what I claim is—

1. The combination of the sweeper case, having vertically slotted ends set in from the case sides and top, the bridge trees also slotted vertically and secured to the case, the grooved drive wheels journaled between the case ends and bridge trees, the cylindrical brush, having its shaft ends grooved and axially perforated, said ends projecting through the vertical slots in the case ends, the elastic bands passing around the drive wheels and over the grooved ends of the brush shaft, the bail, having inwardly projecting studs upon each arm, the lower ones to pass through the vertical slots in the bridge trees to serve as journals for the brush shaft, and the upper ones to bear upon the bridge trees and serve as fulcrums, by which the brush may be elevated against the pressure of the spring bands for the purpose of adjusting the brush shaft to the duty required while the sweeper is in use, substantially as shown and described.

2. The combination, in a carpet sweeper, of the case, the grooved drive wheels journaled in the ends thereof, the cylindrical brush having vertical play between the drive wheels, the elastic bands passing around the drive wheels and over the brush shaft to exert a downward pressure on the brush while revolving the same when the drive wheels revolve, the bridge trees carrying fulcrum bearings, the bail carrying journal pins for the brush shaft, and studs to project over the fulcrum bearings of the bridge trees, whereby the brush shaft may be elevated or lowered by the depression or elevation of the bail while the machine is in use, substantially as shown and described.

3. In a carpet sweeper, the combination of the vertically slotted recessed ends, A′, the vertically slotted bridge trees, B, the slotted metal plate, J, having flanges, j and j', turned over the top edge of the bridge trees, the grooved drive wheels, C, journaled between the ends of the case and the bridge trees, the cylindrical brush having its shaft ends axially perforated and extending through the vertical slots in the case ends, elastic bands, F, passing around the drive wheels and over the brush shaft ends, the bail, D, having journals, d, to enter the ends of the brush shaft, and the stud pins, d', secured in the bail, and an arm with friction wheels, d^2, to bear upon the flanges of the plate, J, whereby the pressure is automatically adjusted to the duty required, by elevating or depressing the bail, while the sweeper is in use, substantially as shown and described.

4. The combination, in a carpet sweeper, of the case, the drive wheels journaled outside the case ends on opposite sides of the center, the cylindrical brush journaled centrally between the drive wheels, the elastic bands passing around the drive wheels and over the brush shaft, the dust receptacles pivoted between the case ends upon each side of the brush and having upward projections, a rock shaft passing through one of the case ends, the cross arm secured upon said shaft and having inwardly projecting lugs, the spring centrally coiled around the rock shaft and having arms upon each side, pressed by the lugs upon the cross head, and their free ends engaging the projections of the dust receptacles, whereby the receptacle upon either side is thrown down and emptied by turning said cross shaft in either direction, substantially as shown and described.

5. The combination, in a carpet sweeper, of the case, the cylindrical brush mounted to revolve centrally therein, the dust pans pivoted at their upper inner ends to the case ends upon opposite sides of the brush, and having upwardly projecting standards, the shaft, H, passing through the case ends, the wing nut, h', secured upon said shaft outside the case, the cross arm, h^2, having lugs, h^3, secured upon said shaft inside of the case end, and the spring, I, centrally coiled around the shaft, having its free ends passing underneath the lugs, h^3, of the cross head, and through the standards secured to the dust pans, whereby the movement of the shaft throws either pan down independent of the other to empty it of its contents, substantially as shown and described.

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