

(No Model.)

J. KNOCHE.
CARPET CLEANER.

No. 435,935.

Patented Sept. 9, 1890.

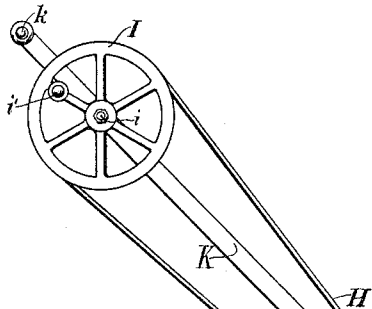


FIG. 1.

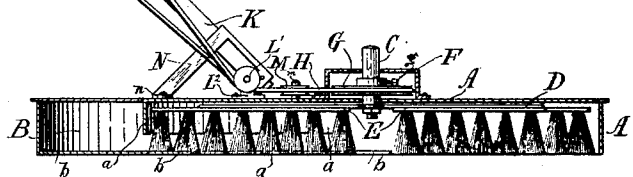
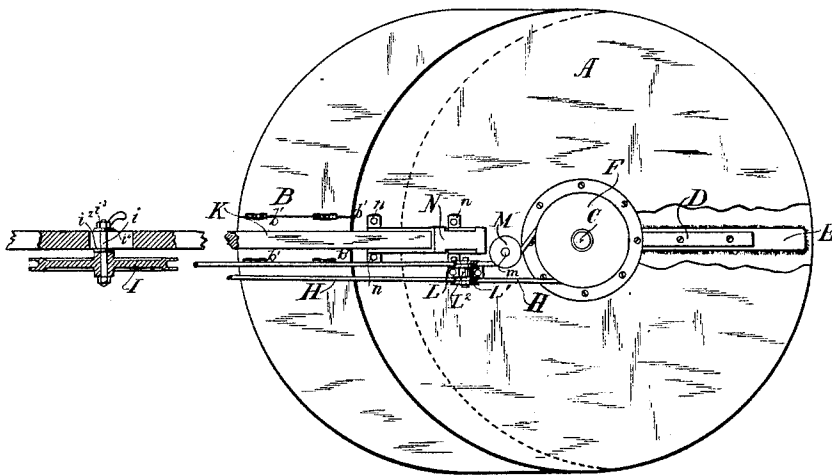


FIG. 2.



Witnesses

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JOHN KNOCHE, OF HELENA, MONTANA.

CARPET-CLEANER.

SPECIFICATION forming part of Letters Patent No. 435,935, dated September 9, 1890.

Application filed May 5, 1890. Serial No. 350,595. (No model.)

To all whom it may concern:

Be it known that I, JOHN KNOCHE, a citizen of the United States, and a resident of Helena, in the county of Lewis and Clarke and State of Montana, have invented certain new and useful Improvements in Carpet-Cleaners, of which the following is a specification.

The object of my invention is to produce a compact convenient device for cleaning or sweeping carpets without liability of injuring the furniture in the room, and which, should one part of the carpet require more brushing than another, may be held over this part and the brushes revolved with more or less speed until the cleansing is effected.

The invention will be first fully described in connection with the accompanying drawings, and will then be particularly referred to and pointed out in the claims.

Referring to the drawings, wherein like parts are indicated by similar reference letters wherever they occur in either view, Figure 1 is a diametrical section through the case of the device. The brushes and their actuating mechanism are shown in side elevation. Fig. 2 is a top or plan view of the same having part of the case-top broken away to expose part of the cross-head and one of the brushes secured to it.

The brush-case is composed of the disk A, of heavy sheet metal, and the annular rim A'. The lower edge of the rim is cut away at one side, as seen at *a*, Fig. 1, to open communication between the brush-case and the lune-shaped dust-receptacle B, which is secured to the rear edge of the brush-case and has its bottom *b* extended under the cut-away portion of rim A'. The top of the receptacle is divided and hinged at two points *b'* *b'*, the half-cases opening toward each other to afford access for the removal of dust. The center of the case A is perforated to receive a vertical shaft C, upon the lower end of which is secured the cross-head D, and to the under side of this cross-head upon each side of its center are detachably secured the brush-sections E E. The cover A furnishes the lower bearing for the shaft C. Its upper bearing is in the top of the box or housing F.

Upon the shaft C is secured a grooved pulley G by a set-screw tapped through its hub *g*. The purpose of this arrangement is to pro-

vide for the vertical adjustment of the shaft C in order to compensate for the wear of the brushes. As the outer ends of the brushes travel over more surface than the inner ends, it is obvious that the end bunches of bristles will wear faster than those nearer the axis. For this reason the brush-sections are detachably connected to the cross-head, so that they may be reversed end for end to insure even wear upon all the bristles. The shaft C is driven by a band H, which passes over the pulley G, and a grooved driving-wheel I, which is journaled on a stud-bolt *i*, which is secured in the upper end of the handle K, by which the sweeper is moved round the room. The handle is provided with a cross-head *k*, to be grasped by the left hand, while the right hand is employed in turning the wheel I by its handle *i'*. The band H is directed and guided between the driving-pulley I and the driven pulley G by pulleys L, L', and M. The pulleys L and L' are journaled upon the opposite ends of a short shaft which is rigidly secured in a block L², which is secured upon the disk A, and the pulley M is journaled upon a pin *m*, which projects up vertically from the said disk A. The front of the housing F is open to permit the band H to freely pass around the pulley G. The lower end of the handle K is firmly secured in an angular bracket N, which is bolted or riveted through its outwardly-projected flanged feet *n* upon the top of disk A. The handle K is longitudinally slotted to receive the square shank of the stud-bolt *i*. This stud-bolt has a collar *i*², which bears against one side of the square handle K, and the end opposite the journal is screw-threaded to receive a thumb-nut *i*³, which, being tightened against an intervening washer *i*⁴, holds the journal-bearing *i* securely in any position it may be placed within the slot in handle K. By this arrangement the tension of the band is readily regulated.

It will be seen that the device may be readily pushed over the carpet by the handle K and the brushes revolved with the speed necessary to perfectly clean the carpet. The dust collects in the receptacle B, and is readily removed by lifting either one or both of the covers. Should the brush-sections require changing or replacing, it is only necessary to turn the case over, loosen the nut on the end

of shaft C, and remove the cross-head. To lower the brushes, should they become worn, the housing F is removed and set-screw g loosened to allow the shaft to drop down until the brushes press firmly upon the carpet, when the set-screw is tightened and the housing replaced.

What I claim is—

1. In a carpet-sweeper, the circular brush-case, the vertical shaft mounted centrally therein and projecting above said case to receive power for revolving it, the cross-head secured upon said shaft, the brush-sections E, secured to said cross-head, means, such as shown, to revolve the said shaft, cross-head, and brushes, and the dust-receptacle B, secured to one side of said case and communicating with it, substantially as shown and described.

2. The combination, substantially as specified, of the circular brush-case A, the dust-receptacle B, secured to one side thereof and having the bottom b extending under the case A, the rim A', cut away above said extended bottom, the shaft C, cross-head D, and brush-sections E, fitted to revolve within case A A', the handle K, secured upon the top A of the brush-case and carrying the driving-pulley I,

the pulley G, secured upon the shaft C, the band H, and band-guide pulleys L L' M, whereby the brush-case is moved around and the brushes revolved, for the purpose set forth.

3. In a carpet-sweeper, the combination of the brush-case A A', dust-collector B b, secured to one side thereof, the horizontally-revolving brushes E, detachably secured to the revolving cross-head, and the vertically-adjustable cross-head shaft C, whereby the brush-sections are changeable end for end and vertically adjustable to compensate for wear, substantially as shown and described.

4. The combination, in a carpet-sweeper, of the circular case A A', the dust-receptacle B b, secured to one side thereof, the angular bracket N, secured to the top of the brush-case, the handle K, secured to said bracket, the driving-pulley I, adjustably secured to said handle, the vertical shaft C, cross-head D, and pulley G, secured to said shaft, the brush-sections secured to said cross-head, the pulleys L L' M, and band H, arranged substantially as and for the purpose set forth.

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Witnesses:

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