May 28, 1929. H. P. JOHNSTON 1,715,199

VACUUM CLEANER FOR RUGS

Filed July 13, 1926

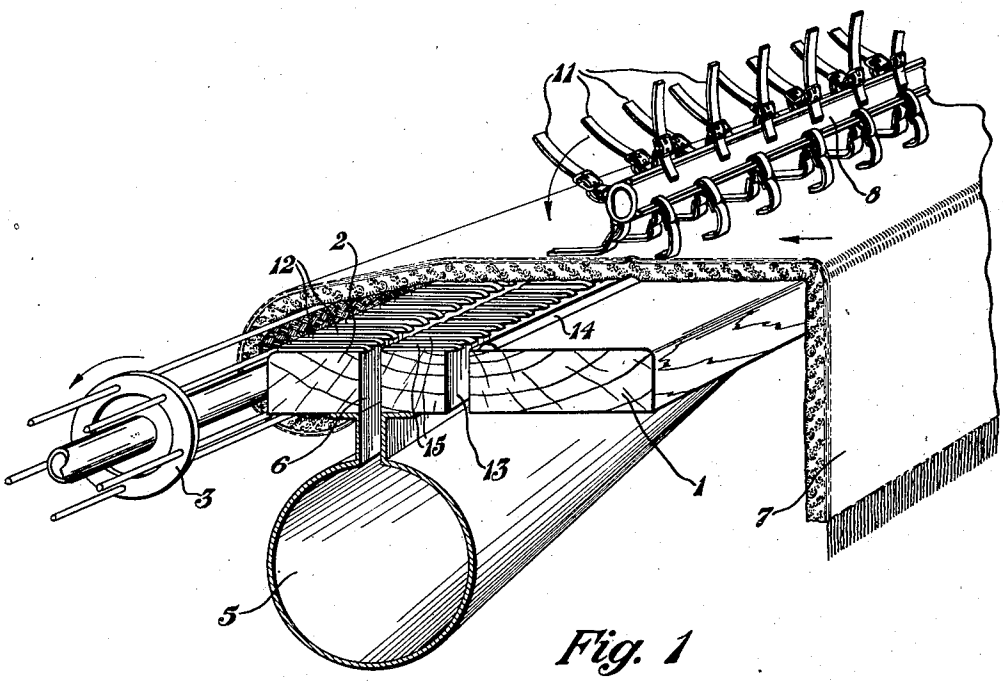


Fig. 1

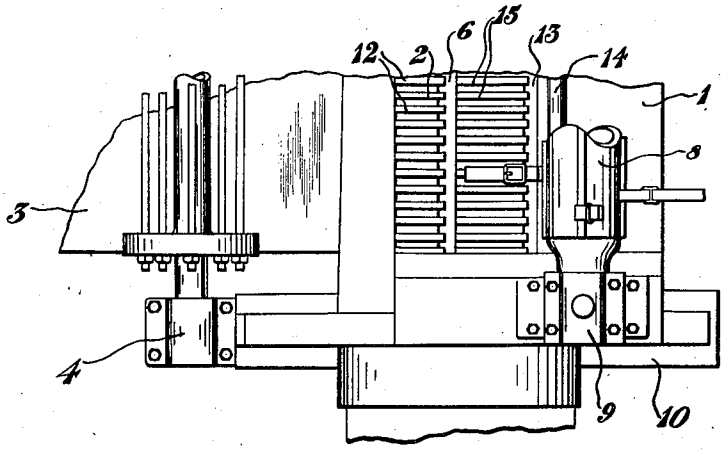


Fig. 2

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UNITED STATES PATENT OFFICE.

HENRY P. JOHNSTON, OF CANTON, OHIO, ASSIGNOR TO THE NUSLY BROTHERS COMPANY, INC., OF CANTON, OHIO, A CORPORATION OF OHIO.

VACUUM CLEANER FOR RUGS.

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The invention relates to fabric cleaning machines and more particularly to that type of machines in which the fabric or rug to be cleaned is drawn across a table provided with a slot, connected to the vacuum creating device, for withdrawing from the rug, dust and dirt which is previously loosened by a suitable beating appliance.

For the purpose of preventing the rug from being drawn too tightly against the vacuum cleaning slot, and sealing the same, spaced cleats are provided upon the tables of such machines adjacent to the slot and at right angles thereto.

It has been found however, that, even with such a construction, there is frequently a tendency to draw the rug, by suction, so tightly against the table as to prevent the full advantage of the suction cleaning from being attained; and the object of the present improvement is to provide for additional air being drawn from between the table and the rug to overcome this objection.

The above, and other objects, may be attained by providing a second slot in the table, parallel to the vacuum cleaning slot, and by locating spaced cleats upon the table, between two slots, whereby, when the rug is drawn over the table, cleaning air is drawn by the vacuum creating means, upward through said second slot, between said cleats, and over the surface of the rug, and through the vacuum cleaning slot, thus obtaining the desired results, and preventing any tendency for the rug to be sealed against the vacuum cleaning slot.

An embodiment of the invention is illustrated in the accompanying drawing, in which

Figure 1 is a perspective view of a portion of the improved vacuum cleaning machine, and

Fig. 2, a fragmentary plan view of the same.

Similar numerals of reference indicate corresponding parts through the drawing.

The machine includes a table 1, supported in any well known manner and provided with the suction bed 2, a draw roll 3 being mounted at one side, being preferably journaled in the bearing brackets 4.

A suction chamber 5 is provided beneath the suction bed and communicates therewith through the elongated slot 6, extending throughout the length of the table, transverse to the path of the rug or fabric 7, to be cleaned, as the same is drawn beneath the beater 8, which may be journaled in bearings 9, carried upon the end frames 10, of the machine, to which the bearings 4 may also be connected.

This beater may be provided with a plurality of lashes or thongs 11, formed of leather or other suitable material, and arranged to deliver a succession of sharp blows to the rug upon rotation of the beater roll.

A plurality of spaced cleats 12 are mounted upon the suction bed, between the vacuum slot 6 and the edge of the bed adjacent to the draw roll 3, thus providing a series of channels, or grooves, in the suction bed, transverse to the suction slot, the cleats preferably extending over the edge of the slot as shown in the drawing.

A slot 13, parallel to the vacuum slot, is provided entirely through the table, at the opposite edge of the suction bed, and a bead, or rib 14, is mounted upon the upper surface of the table, adjacent to, and parallel with, said slot. Spaced cleats 15, similar to the cleats 12, extend transversely across the suction bed, from the vacuum slot 6 to the slot 13, preferably extending slightly over the edge of the latter slot, as illustrated, thus forming channels or grooves through the suction bed between the suction slot and the air intake slot 13.

Any suitable means may be provided for rotating the draw roll 3 and beater roll 8, in the direction of the arrows shown in Figure 1, and any suitable vacuum creating means may be connected to the vacuum chamber 5.

In operating the cleaner, one end of the rug or fabric 7, to be cleaned, is attached to the draw roll 3, whereby upon starting the mechanism the draw roll will slowly draw the rug over the table and suction bed and beneath the beater.

The dirt and dust will be loosened by the operation of the beater and the suction created in the vacuum chamber 5 will draw this dirt and dust down through the slot 6 and through the vacuum chamber, the channels or grooves formed by the spaced cleats 12 and 15 permitting the suction action to take place over an extended area of the rug.

By providing the air intake slot 13, addi-

tional cleaning air is furnished to be drawn over the surface of the rug to the vacuum slot, air being thus drawn from both directions through the channels, formed by the cleats 12 and 15, to the vacuum slot.

By extending the ends of the cleats over the slots the rug is prevented from being drawn into the same, and by locating the bead or rib 14 upon the table, adjacent to the edge of the slot 13, the suction cleaning is confined to the area of the suction bed.

I claim:

A fabric cleaning machine including a stationary suction bed over which the fabric is passed, and having a suction slot parallel with and spaced from one edge of the bed, a second slot parallel with and spaced from the suction slot, a plurality of channels in the bed extending from the suction slot to the one edge of the bed, a second plurality of channels in the bed extending from the suction slot to the second slot, a flat table extending from the second slot to the other edge of the bed, a rib on the flat table adjacent the second slot, the channels providing means for permitting cleaning air to be drawn across the bed beneath the fabric from the second slot to the suction slot and from the one edge of the bed to the suction slot when a suction is created at the suction slot, and the rib providing means for sealing the rug to the bed on the table side of the second slot, means for passing the fabric over the bed, and beaters above the bed and adjacent the second slot for striking the fabric to loosen dirt therefrom.

In testimony that I claim the above I have hereunto subscribed my name.

HENRY P. JOHNSTON.