UNITED STATES PATENT OFFICE

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VACUUM CLEANER ROLLER

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1 Claim. (CI. 15—141)

My invention refers to vacuum cleaners and it has for its primary object to provide an effective agitator roller for beating and brushing floors or floor fabrics, incidental to sucking up the dust or lint, the roller being provided with longitudinal flat sections, forming suction air channels associated with protecting substantially semi-circular beater ribs.

A further object of my invention is to provide the roller with yieldable blades, composed preferably of leather, and means for removable attaching said blades to the roller.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the novel construction, combination and arrangement of parts, substantially as hereinafter described, and more particularly defined by the appended claim, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claim.

In the accompanying drawings is illustrated one complete example of the physical embodiment of the present invention constructed according to the best mode so far devised for the practical application of the principles thereof.

In the drawings:

Fig. 1 represents a side elevation of a roller embodying the features of my invention.

Fig. 2 is an end view of the same, partly in section as indicated by line 2—2 of Fig. 1.

Fig. 3 is a top plan view of a portion of the roller, particularly illustrating a lapped sectional blade.

Fig. 4 is a detail longitudinal sectional view through a fragment of the roller illustrating a key-strip for the blade, the same being indicated by line 4—4 of Fig. 3.

Fig. 5 is an enlarged cross sectional view illustrating the flexible blade attaching mechanism, the section being indicated by line 5—5 of Fig. 1.

Fig. 6 is a fragmentary sectional elevation illustrating the lapped blade pieces, the section being indicated by line 6—6 of Fig. 3.

Fig. 7 is a perspective view of the blade keys; and

Figure 8 is a perspective view illustrating a second species of the invention, wherein the lever blades are fully lapped and the key strip is interlocked with the roller.

Referring by characters to the drawings, 1 indicates a suction roller composed of aluminum or other suitable material. The roller is provided with a standard shaft 2 suitably journaled in a suction housing, not shown. The central portion of the roller is provided with an annular groove 3 adapted to receive a driving belt (not shown).

As best indicated in Figs. 1 and 2 of the drawing, the roller is provided with longitudinal flat faces 4—4, which faces form air channels and are encased in metallic substantially semi-circular guard or beater ribs 5—5, the same, for strengthening purposes, being provided with reinforcing fins, as shown. These ribs are secured to the body of the roller by screws or other suitable means, and while two of said ribs are shown in connection with each flat face 4, it is understood that any number of the same may be employed.

The circular faces of the roller, paralleling the flat faces, are provided with longitudinal slots 6 for the reception of a series of lapped leather blade sections 7, which blade sections are positioned at opposite ends of the roller and diametrically disposed, whereby one yieldable blade will engage the floor followed by the second yieldable blade.

As shown, the blades are preferably formed from a plurality of short sections having their exposed sweeping portions lapping each other, as indicated in Fig. 3 of the drawing. These lapped blade sections have their lower ends fitted into a longitudinally positioned spring clip 8, which spring clip is provided with a bottom offset shoe 8', and said clip is also riveted to each leather blade section, as best illustrated in Fig. 5 of the drawing.

The blade sections, as a whole, are then inserted into the slots 6 and thereafter they are locked in said slot by a key-strip 9, the inner end of which key-strip is provided with an offset tongue 9', which tongue is nested in a socket formed in the slot end, as best indicated in Figs. 3 and 4 of the drawing.

The outer end of each key-strip is provided with a clamping finger 10 for the end of the composite blade and said key-strip is then secured by a single countersunk screw 11. It being understood that this key-strip also engages the offset shoe 8' of the blade clip 8, whereby the said blades are firmly held in their functioning position.

Thus it will be noted that the flexible blades may be removed for renewal purposes by simply actuating the retaining screw 11.

From the foregoing description it is apparent that the roller, when actuated at high rotative speed, will impart a beating operation upon the floor coverings and also a brushing operation upon the same, while a suction current of air will be caused to travel through the roller chan-
nels 4 and collect up dust and loose fibre in the usual manner.

Fig. 8 illustrates a second species of my invention showing uninterrupted leather blade sections, wherein the same are fully lapped from end to end to insure strength. The key-strip 3, in this instance, shows the finger 10 interlocking with a roller finger 10', to reinforce the end of the roller.

I claim:

An agitator for a vacuum cleaner comprising a roller provided with a central portion having an annular belt receiving groove therein, the roller being provided with a pair of aligned channels on each side thereof, the pairs of channels being diametrically opposite, spaced substantially semi-circular guard ribs secured to the roller about the channels, the roller also having a longitudinally extending slot therein on each side of the annular groove, said slots being diametrically opposite and lying between the pairs of channels, a pair of blades each including a series of overlapping sections, a spring clip secured to the inner end of each blade, the inner ends of the blades with the clips being fitted in the slots, each clip having a longitudinally extending offset shoe, a key strip fitted into each slot overlapping the offset shoe of the clip in the slot, and means securing the key strips in place.

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