

Nov. 27, 1962

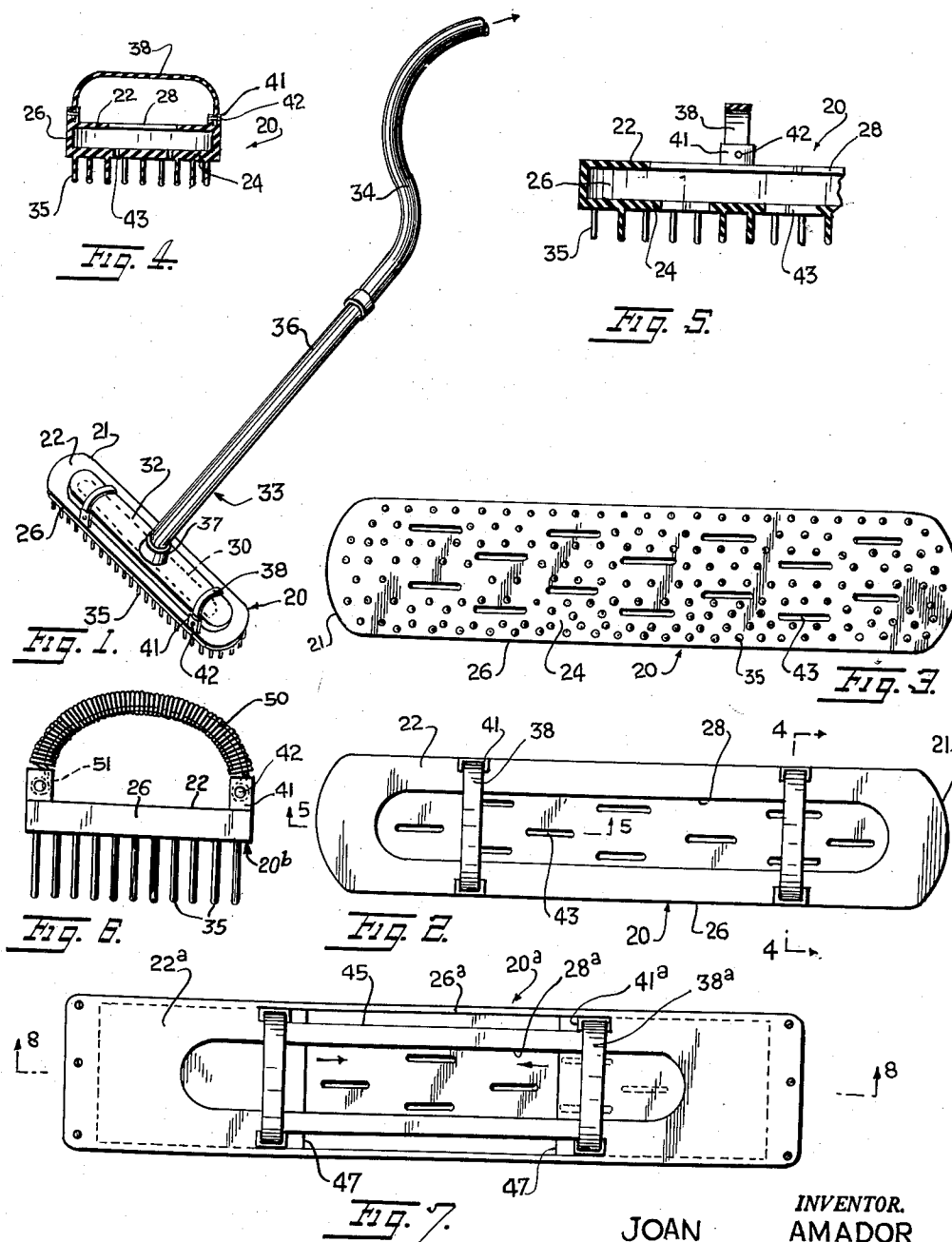
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3,065,491

NAP RAISING ATTACHMENT FOR CLEANING DEVICES

Filed Oct. 27, 1960

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

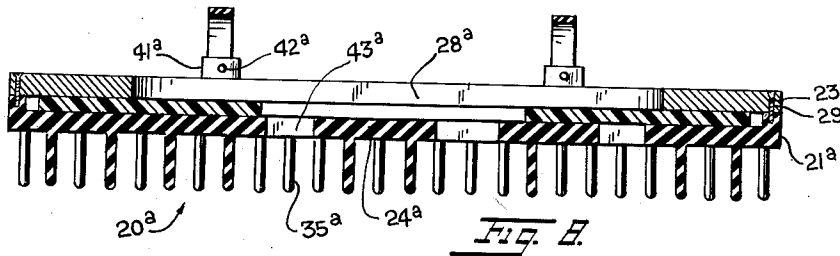


Fig. 8.

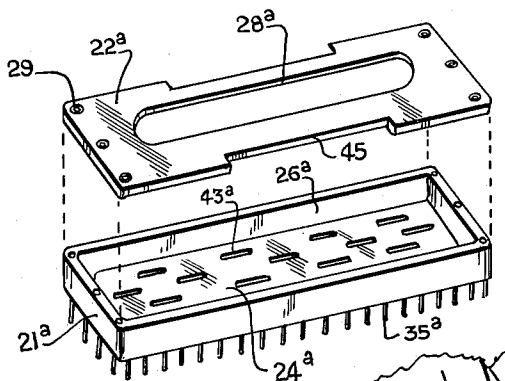


Fig. 9.

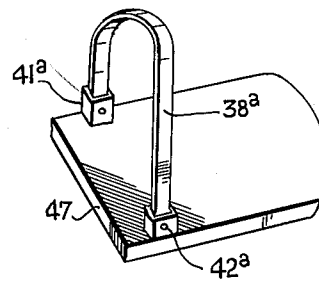


Fig. 10.



Fig. 11.

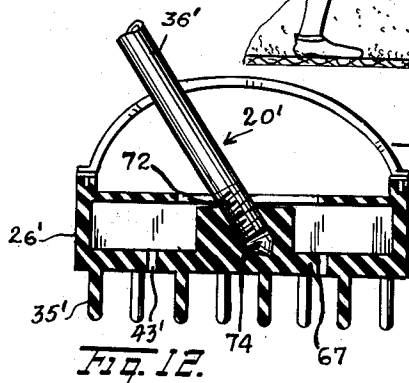


Fig. 12.

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NAP RAISING ATTACHMENT FOR CLEANING DEVICES

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2 Claims. (Cl. 15—396)

This invention concerns a nap raising attachment for vacuum cleaning devices or the like.

According to the invention there is provided an elongated hollow member or body which is mountable to a floor cleaning device of a vacuum cleaner. The member has an outer wall with a plurality of integrally formed flexible fingers which can be drawn through the nap of a carpet or rug to raise the nap, restoring its resiliency, improving its appearance, and rendering it more easily cleanable by the vacuum cleaner. The outer wall of the hollow member is formed with elongated slots or openings through which air enters the body under suction drawing dust and debris from the rug or carpet being cleaned.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a perspective view of a vacuum cleaning device with an attachment embodying a modification of the invention mounted thereon.

FIG. 2 is a top plan view of the attachment per se.

FIG. 3 is a bottom plan view of the attachment.

FIG. 4 is a sectional view taken on line 4—4 of FIG. 2.

FIG. 5 is a sectional view taken on line 5—5 of FIG. 2.

FIG. 6 is an end elevational view of another attachment.

FIG. 7 is a top plan view of the preferred attachment embodying the invention.

FIG. 8 is a sectional view taken on line 8—8 of FIG. 7.

FIG. 9 is an exploded perspective view on a reduced scale of components of the attachment of FIGS. 7 and 8.

FIG. 10 is a perspective view of a valve element employed in the attachment of FIGS. 8 and 9.

FIG. 11 is a perspective view of a nap raising device shown in use on a carpet or rug.

FIG. 12 is a sectional view on an enlarged scale of the device of FIG. 11.

Referring to FIGS. 1—5, there is shown a device 20 including an elongated generally rectangular body 21 preferably formed of molded rubber. The body has flat parallel outer walls 22, 24 and narrow side walls 26. The upper, outer wall 22 is formed with an elongated central opening 28 which may be disposed in registration with a similar opening 30 in the head 32 of a conventional vacuum cleaning device 33, such as generally used for cleaning floors. A vacuum hose 34 is attached to a pipe 36 secured to a socket 37 on head 32 as shown in FIG. 1. The head 32 is elongated in form and is engaged by elastic bands or straps 38 secured in brackets 41 by pins 42. The brackets are formed in pairs on the upper wall 22 and spaced apart. The straps securely engage the ends of head 32.

The underside or lower wall 24 of the body 21 is formed with a plurality of slotted openings 43. When the device 20 is drawn over a rug or carpet in the manner of a rake or comb, the fingers 35 disturb the nap or pile thereon and an air stream drawn through the slotted openings 43 sucks the nap or pile upwardly thereby raising the same, and at the same time sucks any dust that might be in the rug or carpet.

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In the attachment 20^a of FIGS. 7 and 8, the upper wall 22^a is a removable plate secured by screws 23 inserted through holes 29 to the elongated rectangular body 21^a. Body 21^a is preferably formed of rubber or flexible plastic material such as polyethylene or vinyl and has integrally formed flexible fingers 35^a on its underside or lower wall 24^a. Slotted openings 43^a in the wall 24^a pass air and dust therethrough. Slot 28^a in plate 22^a may be placed in registration with opening 30 of head 32 of the vacuum cleaner device of FIG. 1. Brackets 41^a are secured to generally rectangular plates 47 shown to best advantage in FIG. 10. These plates of which two are provided slide in the space defined between walls 22^a and 24^a. Elastic straps 38^a are secured to the brackets by pins 42^a. The brackets move in cutouts 45 formed at the edges of wall 22^a and are guided between the edges of the cutouts and the adjacent side walls 26^a of the body 21^a. By grasping the straps and moving the plates toward and away from each other the size of the opening defined between edges of the plates 47 is adjusted. This regulates the size of opening through wall 22^a at slot 28^a through which the air stream passes and thus controls the speed and force of the suction applied to the rug or carpet being treated. The straps 38^a mount the attachment on the head of the vacuum cleaning device in the same manner as illustrated in FIG. 1.

The straps 38 and 38^a may be made of rubber. If desired the straps may be formed as elastic coil springs as shown by springs 50 in FIG. 6. These springs have coiled ends 51 engaging the pins 42 in brackets 41. Other parts of the attachment 20^b correspond to the structure of attachment 20, and are identically numbered.

In FIGS. 11 and 12 is shown a nap raising device 20' provided with an interchangeable handle 36'. The handle 36' has a threaded bottom end 72 adapted to be threaded into a threaded socket opening 74 formed in the top surface of the body 26' of the device 20'. The body has a flat outer wall 67 with flexible fingers 35'. The device 20' raises the nap of the rug to enhance its appearance and to restore its resiliency. In other respects this form of the invention is similar to the previous form and the corresponding parts may be recognized by the same reference numerals with a prime added.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A device for raising the nap of a rug or the like, comprising an elongated hollow body with flat spaced upper and lower walls, said upper wall having an opening adapted for placement in communication with an opening in a vacuum cleaner head, said lower wall having a plurality of openings adapted to pass an air stream therethrough, a plurality of spaced flexible fingers extending from said lower wall for combing and raising the nap of the rug while the rug is being cleaned by the vacuum cleaner, and a pair of generally rectangular plates slidably disposed in said body between said walls for adjusting the size of said opening to regulate the air stream passing through the body, said upper wall being a plate removably secured on the body, said upper wall having recesses at opposite edges thereof, said plates carrying spaced brackets extending through said recesses, with ends of flexible straps secured in said brackets for attaching said body to said head.

2. A device for raising the nap of a rug or the like,

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comprising an elongated hollow body with flat spaced upper and lower walls, said upper wall having an opening adapted for placement in communication with an opening in a vacuum cleaner head, said lower wall having a plurality of openings adapted to pass an air stream there-through, a plurality of spaced flexible fingers extending from said lower wall for combing and raising the nap of the rug while the rug is being cleaned by the vacuum cleaner, and a pair of generally rectangular plates slidably disposed in said body between said walls for adjusting the size of said opening to regulate the air stream passing through the body, said upper wall being a plate removably secured on the body, said upper wall having recesses at opposite edges thereof, said plates carrying spaced brackets extending through said recesses, with ends of flexible straps secured in said brackets for attaching said body to said head, said fingers being integrally formed with said

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lower wall of the body, the openings in said lower wall being elongated slots.

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