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Roth

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[54] **RUG CARE IMPLEMENT**

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 178,082, Sept. 7, 1971, abandoned.

[52] **U.S. Cl.**..... **15/105,** 15/106, 15/142, 15/176, 15/246

[51] **Int. Cl.**.....**A46b 9/02,** A471 13/42, A47/13/12

[58] **Field of Search**...15/104 E, 105, 106, 114, 142, 15/186, 210 R, 246, 398–400, 402, 422; 24/204; 26/27, 28, 30, 31; 119/88, 93

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Primary Examiner—Daniel Blum
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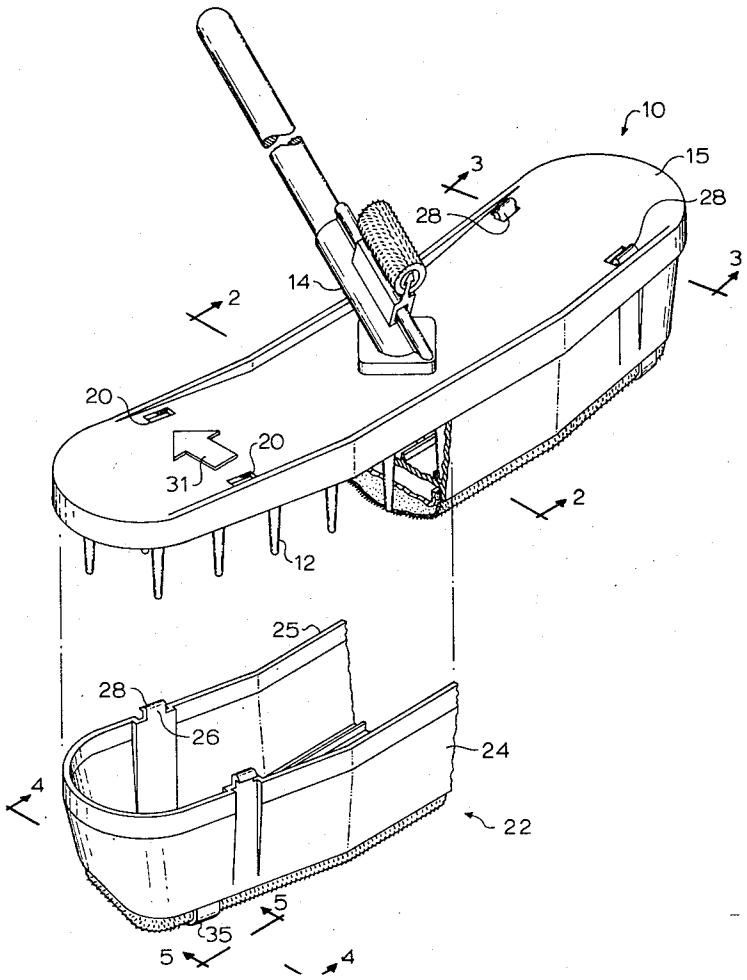
[57] **ABSTRACT**

Slides mounted over a slant pile fabric and extending approximately in the direction of the slanting pile allow use of such fabric to brush a rug. The fabric, its holder and slides can form part of an adaptor for a rug rake.

8 Claims, 6 Drawing Figures



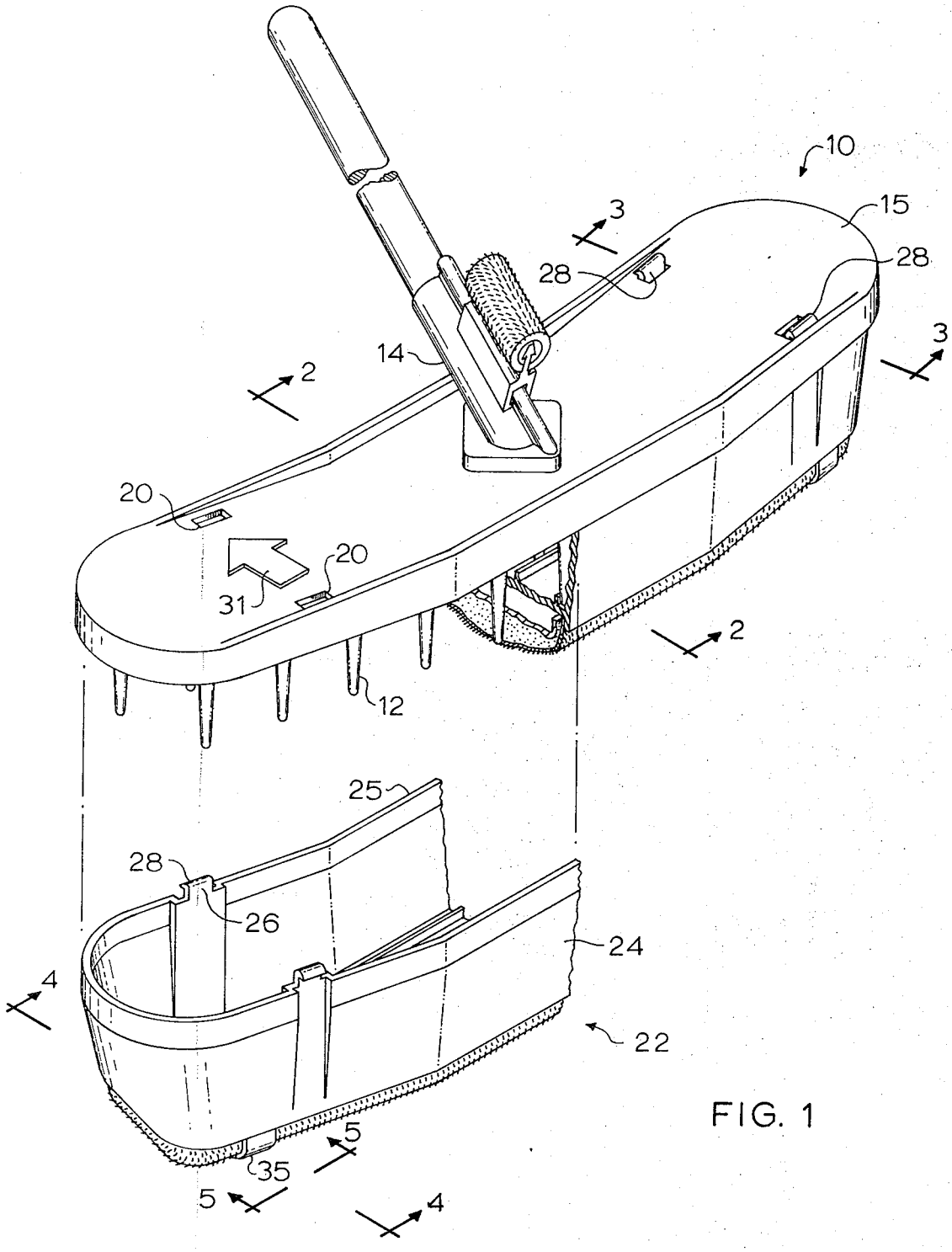


FIG. 1

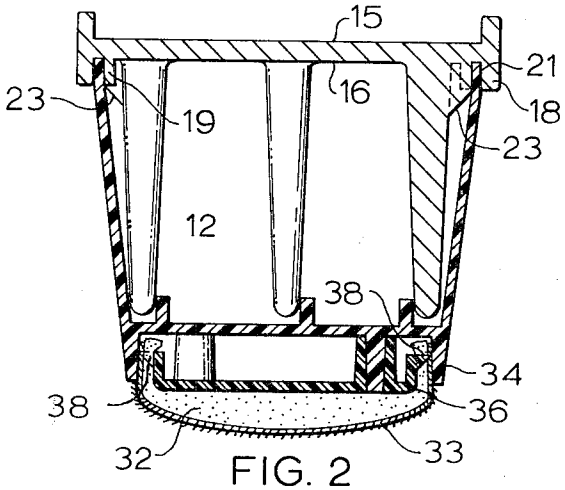


FIG. 2

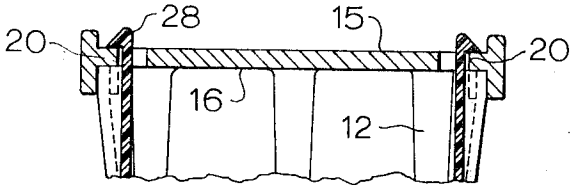


FIG. 3

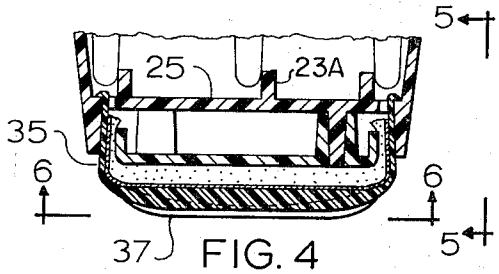


FIG. 4

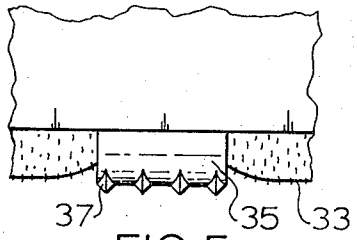


FIG. 5

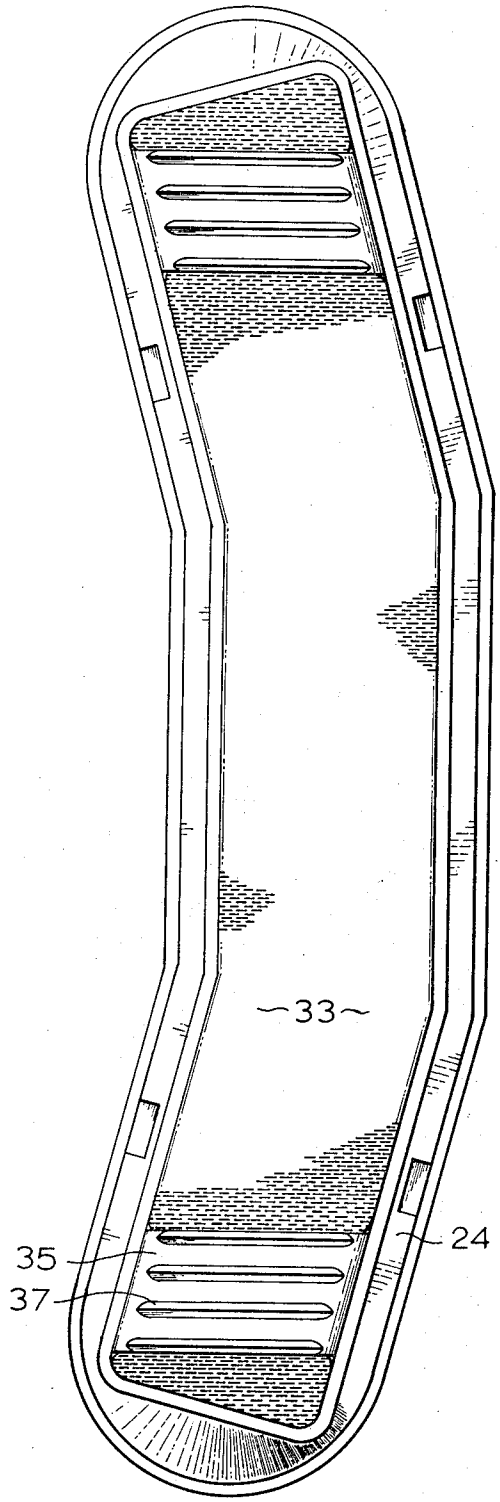


FIG. 6

RUG CARE IMPLEMENT

This application is a continuation-in-part of application Ser. No. 178,082, filed Sept. 7, 1971, now abandoned.

This invention relates to a device for adapting a rug rake so that it may be converted to a brush as and when desired, and to means for rendering a fabric type of brush suitable for brushing or sweeping rugs.

It is an object of the invention to provide an adaptor for a rug rake, which adaptor mounts a brushing surface and which adaptor is detachably attachable to the rug rake.

It is an object of the invention to provide means for adapting a slant pile fabric, known for use as a brush, to use as a device for brushing or sweeping rugs.

In the drawings which illustrate a preferred embodiment of the invention:

FIG. 1 shows a perspective, partially broken away, view of the invention;

FIG. 2 shows a cross-section along the line 2—2 of FIG. 1;

FIG. 3 shows a partial cross-section along the lines 3—3 of FIG. 1;

FIG. 4 shows a partial cross-section along the lines 4—4 of FIG. 1;

FIG. 5 shows a partial side view along the lines 5—5 of FIG. 1; and

FIG. 6 shows a bottom view of the adaptor with the rug rake installed.

In the drawings, the rake comprises a body **10** preferably of flat longitudinally extending slightly bowed form. An array of tines **12** (here about **33**) suitable for raising the fibres on a shag rug, are provided projecting from one side of the body, in roughly the same direction, to contact the rug surface. The body member, on the opposite side from the tines, provides a sloping mount **14** for a manual operating handle. In the preferred embodiment, the mount **14** contains a threaded socket, not shown, into which the handle may be screwed to extend at 45° to a floor, when the tines **12** are in contact with a rug on said floor. As alternatives to the threaded mount, and within the scope of the invention, other means of attachment of the handle may be provided, and other manual grasping means may be provided for manually using the array on a rug. In the preferred embodiment, the handle mount **14** is a separate member glued and/or bolted to the body. However, these members may be made intergral, or separately and capable of being assembled in a different manner, as desired.

The surface **16** of body member **10** from which the tines extend, is provided with a pair of an outer and an inner peripheral flange, defining between them a groove **21** to receive an edge of the adaptor as hereinafter described. Preferably each time adjacent flange **19** is provided with a fin **23** outwardly sloping from the root of the tine and dimensioned and contoured to direct the adaptor edge striking said fin into the groove **21.**

The invention is directed to the combination of the rub rake, so far described, with an adaptor to convert the rake into a brush and with the provision of slides on the brush extending generally in the brushing direction to assist in the operation of the latter.

The body member **10** at a plurality of locations (here four) adacent said flange **18** is provided with slots **20**

immediately adjacent flanges **19** and approximately parallel to the direction of longitudinal extension of the adjacent flanges **18** and **19.** The four slots are arranged in opposed pairs, the pairs being preferably symmetrically disposed on each side of the handle-mount **14.** Slots **20** extend through the wall **15** to surface **16.**

The adaptor comprises a brush support member **22,** preferably of plastic, shaped to overlie the array of tines **12** and here embodied as a solid wall or plate and provided with a brush surface on one side, and having resilient and slightly flexible side walls **24** extending from brush support member **22** in the opposite direction to that faced by said brush surface.

The edge **25** of said adaptor side walls, remote from said wall, is shaped to be received in the groove **21** when the adaptor is mounted on the brush body. The adaptor is also provided with a plurality (here four) of flat prongs **26** inset from the adaptor sidewalls **24** and located and of a length so that they may be directed through slots **20** in the rug rake body wall. The flat prongs **26** are, adjacent their free ends, provided with outwardly directed hook or shoulder members having shoulders **28** designed to contact the rug rake body wall **15** on the side thereof remote from the tines, when the prongs **26** are extending through the slots and in such arrangement, to hold the adaptor in position with the edge of the adaptor side walls **24** received in the groove **21.**

To attach the adaptor to the rug rake body, the side walls **24** are slid about the tines **12** and the prongs **26** directed into slots **20.** The outwardly directed fins guide the edge of wall **24** into groove **21.** The edge presence in the grooves and the engagement of shoulders **28** holds the adaptor in place in the rug rake body. This is assisted by the provision of ribs **23A** (FIG. 4) projecting from the wall **25** of brush body **10** toward the tines **12** and arranged to frictionally contact adjacent tines **12.**

To dismantle the adaptor from the rug rake body the walls **24** thereof and/or prongs **26** are pressed inward to disengage the shoulders **28** from wall **15** after which the adaptor may be slid away from the body. Detachably mounted on handle **14** is a small brush, as shown, which may be used to clean the main brush.

The brush surface is formed from a suitably cut pile fabric **33,** produced by synthetic fibre strings (preferably nylon) woven through a fabric matrix or backing, preferably cotton, to provide at the intended front of the fabric, nylon (or other synthetic fibre) extents between stitch apertures which are double the pile length required. These extents are then cut to produce the piles and these are 'panned' which involves the application of a heated surface to the piles in one sense to produce the required slant. With such 'panning' the fibres forming the bristles, slope predominately in one direction, and the brush is used by brushing in the direction wherein the bristles so predominately sloped are advanced, i.e. in which the bristle tips lead the roots. The advance or brushing direction is to the left in FIG. 2 and to the left and rearwardly in FIG. 1, as shown by the slope of the bristles and is, for the assistance of the user indicated by the arrow **31** in FIG. **1.**

Inter alia the bristle pile fabric may be obtained through Collins and Aikman Corporation, Ca-vel Division, Ca-vel, North Carolina, U.S.A. 27112.

The pile fabric **33** may be attached to the support **22** in any desired manner. As shown in FIGS. **2** and **4** the

fabric 33 suitably shaped by spongy or rubber padding 32 may be retained and supported between outer peripheral flanges 34 extending outwardly from the support 22 and an inner member 36 having outwardly directed and pointed tines 38, shaped to contact the inner surface of flange 34 after piercing fabric 33 and padding 32 thus retaining the padding 32 and fabric 33 in position.

It is found, in accord with the invention, that the operation of the brush on the rug requires slides overlying, at spaced locations, the fabric, for contacting the rug to be brushed with the slides directed in the desired brushing direction, determined by the advanced direction of the bristles. It is believed that the reason is that the slides limit the engagement of the bristles with the rug to a suitable amount of interference and also guide the brush, relative to the rug, in the brushing direction.

Slides 35 preferably of 3/16 inch thick plastic, including the preferably provided ribs 37, are attached over the fabric preferably at two spaced locations, to contact the rug surface during brushing. The slides 35 extend longitudinally in their rug contacting extent in a direction having its major component parallel to the direction of brushing as directed by the advanced direction of the bristles and indicated by the arrow. Preferably such slides extend parallel to the extended brushing direction. Preferably a plurality (here 4) of ribs 37 project from slide 35 toward the intended rug position and are directed in the direction of longitudinally extending slides 35, to be preferably parallel to the brushing direction and to guide the direction of the rug rake in such direction. The ribs 37 are preferably downwardly pointed.

The slides 35 are mounted on the body 22 in any desired manner, such as by gluing or clamping and are dimensioned to compress the spongy material 32 under the fabric which they overlie.

I claim:

1. In combination with a rug rake, including a body having: a base surface, an array of tines projecting therefrom, arranged for contact with the surface of a rug, manual grasping means for operating the rake with the tines so contacting the rug:

an adaptor for converting said rug rake into a brush, comprising: a brush support, a brush surface on one side of said brush support facing in a predetermined direction therefrom:

means for attaching said brush support to said body with said brush surface directed to contact a rug,

wherein said brush surface comprises a pile fabric with bristles projecting from the matrix of said fabric slanting predominately in one direction, the improvement comprising, at least one slide mounted to overlie a portion of said brushing surface and arranged to contact the surface to be brushed, said slide being designed to extend longitudinally with its major component in the direction of advance of said bristles.

2. In means as claimed in claim 1 wherein at least two spaced slides are provided.

3. In means as claimed in claim 1 wherein the said at least one slide extends parallel to the advanced direction of said bristles.

4. In means as claimed in claim 2 wherein the said at least two slides extend substantially parallel to the advanced direction of said bristles.

5. In means as claimed in claim 1 wherein said at least one slide is provided with at least one rib projecting therefrom in the rug contacting direction, and extending along said slide in its longitudinally extending direction.

6. In means as claimed in claim 2 wherein said two spaced slides are each provided with at least one rib projecting therefrom in the rug contacting direction and extending along said slide in its longitudinally extending direction.

7. In means as claimed in claim 3 wherein said at least one slide is provided with at least one rib projecting therefrom in the rug contacting direction, and extending along said slide in its longitudinally extending direction.

8. In means as claimed in claim 4 wherein said two spaced slides are each provided with at least one rib projecting therefrom in the rug contacting direction and extending along said slide in its longitudinally extending direction.

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