SCRUBBING OR BUFFING DEVICE

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ABSTRACT

A device for scrubbing and/or buffing surfaces comprising an inner layer or pad of absorbent material having an open scrim covering which protects the absorbent material from wear and linting off during use and allows dirt and cleaning fluid to pass freely through the scrim covering for absorption by the absorbent material. The scrim covering may extend over one or both sides of the absorbent material, and may also be made in the form of a boot for placement around a conventional dust mop and the like.

9 Claims, 10 Drawing Figures
SCRUBBING OR BUFFING DEVICE

BACKGROUND OF THE INVENTION

This invention relates generally as indicated to a scrubbing or buffing device for use in cleaning carpeting and other surfaces.

An effective carpet cleaning device must provide sufficient agitation of the surface being cleaned to loosen the dirt and also have adequate absorption capability to pick up or remove the loosened dirt and cleaning fluid from the surface. Scrubbing brushes and the like may be used to loosen the dirt but cannot effectively pick the dirt up, whereas scrubbing pads made of absorbent material will effectively pick up the dirt if loosened but are not very effective in loosening the dirt. Scrubbing pads also have the disadvantage that they are relatively short lived and subject to linting off onto the surface being cleaned.

SUMMARY OF THE INVENTION

With the foregoing in mind, it is a principal object of this invention to provide a scrubbing or buffing device which has a high capability for both loosening and picking up dirt from surfaces being cleaned.

Another object is to provide such a device which utilizes absorbent material for dirt and fluid pick up and an open scrim covering over the absorbent material for protecting the same against wear and linting off. The open scrim covering is also desirably somewhat abrasive and agitates the surface being cleaned to loosen the dirt.

Still another object is to provide such a device which remains in place on the head of a square or rotary buff machine without the use of supplemental securing means.

Yet another object is to provide such a device which may be mounted directly on a conventional dust mop frame or used as a covering for a conventional dust mop to clean carpets and other surfaces.

These and other objects of the present invention may be achieved by providing an open scrim covering over an inner layer or pad of absorbent material to protect the absorbent material against linting off and excessive wear and allow dirt and water or other cleaning fluid to pass freely through the scrim covering for absorption by the absorbent material. The scrim covering is also desirably somewhat abrasive and agitates the surface being cleaned to assist in loosening the dirt. Both sides of the absorbent material may be covered by the scrim material to allow either side to be put face down for scrubbing or buffing, and the other side will increase the grip between the pad and the head of either a square or rotary buff machine. Various materials such as yarn, felt, and sponge-like materials may be used as the filler material, and the scrim covering may also be made in the form of a boot for placement around a conventional dust mop or the like if desired.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawings setting forth in detail certain illustrative embodiments of the invention, these being indicative, however, of but a few of the various ways in which the principle of the invention may be employed.

BRIEF DESCRIPTION OF THE DRAWINGS

In the annexed drawings:

FIG. 1 is an isometric view of one form of scrubbing or buffing device constructed in accordance with this invention having portions of the scrim covering broken away to show the filler material therebeneath;

FIG. 2 is a fragmentary transverse section through the device of FIG. 1, taken on the plane of the line 2—2 thereof;

FIG. 3 is a fragmentary transverse section through a modified form of scrubbing or buffing device utilizing looped yarn for the filler material;

FIG. 4 is a fragmentary transverse section through still another form of scrubbing or buffing device in accordance with this invention utilizing a felt pad for the filler material;

FIG. 5 is a fragmentary transverse section through yet another form of scrubbing or buffing device in accordance with this invention utilizing sponge rubber for the filler material;

FIG. 6 is a top plan view of another form of scrubbing or buffing device in accordance with this invention with portions broken way to show the interior thereof;

FIG. 7 is an enlarged schematic illustration showing the manner in which the bristles of a brush extend through the open scrim covering for securing the device to the head of a buff machine;

FIG. 8 is an isometric view of yet another form of scrubbing or buffing device in accordance with this invention provided with a pocket on one side for attachment to a conventional mop frame; portions of the device being broken away to show the interior thereof;

FIG. 9 is an isometric view of still another form of scrubbing or buffing device in accordance with this invention comprising a scrim boot placed around a conventional dust mop, portions of the scrim boot being broken away to show the dust mop therebeneath; and

FIG. 10 is an isometric view showing the scrim boot of FIG. 9 by itself, portions of one side of the boot being broken away to show the other side thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now in detail to the drawings and first initially to FIGS. 1 and 2 thereof, there is shown by way of example one form of scrubbing or buffing device 1 in accordance with this invention comprising an inner layer 2 of absorbent material having an open scrim covering 3 extending over both sides thereof. The absorbent filler material 2 may be retained between the outer scrim layers 3 by binding the edges of the scrim material with nylon or cotton tape 4 with stitching 5 running through the tape, and the outer scrim layers 3 may also be stitched at 6 to the absorbent filler material 2 at suitable spaced apart intervals across the width thereof as shown. A relatively stiff cord 19 may also be placed around the outer periphery of the device as shown in FIG. 2 to enhance the stiffness of the pad, helping to retain its shape when pushed into corners and the like.

Preferably, the scrim material is made of nylon, but it will be apparent that other materials may also be used for the scrim covering, including polyethylene, polyester, polypropylene, and rayon. The scrim material provides a protective covering for the filler material, preventing excessive wear and linting off of the filler mate-
rial during use of the device, and the openings 7 therein also permit free passage of dirt and cleaning fluid such as water through the scrim covering for absorption by the filler material. In the form shown in FIGS. 1 and 2 the filler material 2 desirably consists of a plurality of substantially parallel cords 8 of yarn. However, it will be apparent that the cords need not be arranged in parallel relation; nor is it necessary that the cords be laid flat as shown in FIGS. 1 and 2. Thus, for example, in FIG. 3 the filler material 2′ is shown as comprising looped cords 9 interposed between the outer scrim coverings 3′. Preferably, the looped cords 9 are on both sides of a fabric backing 10, but it will be apparent that the loops may be provided on only one side if desired, in which event the backing for the loops may be one of the scrim coverings.

Moreover, materials other than yarn may also be used for the filler material 2′, including a felt pad 11 as shown in FIG. 4 or a sponge pad 12 as shown in FIG. 5. The advantage in using a sponge pad is that it may be made out of nylon or other suitable material which has a high absorbency, capable of picking up and releasing water readily, and also dries very quickly. In any event, the filler material, whether made of yarn, felt, or sponge material, may be of any desired thickness, and the type of material may also be varied to control the amount of absorption by the filler material.

The shape of the device 1 may also be varied in accordance with the desired use. In FIGS. 1 and 2, for example, the device is shown as being of a generally rectangular shape making it especially suitable for use on a square buff machine, whereas in FIG. 6 the device is shown as being of a generally circular shape 13 for use with a rotary buff machine. The device may also be made in other shapes as well such as the oval shape 14 shown in FIG. 8.

Whether the device is used on a square or rotary buff machine, the scrim covering 3 or 3′ minimizes the friction between the device and carpet or other surface being scrubbed whereby the device will remain in position on the machine due to the weight thereof without the need for additional gripping means to retain the device in place. However, a brush may be left on a rotary buff machine to more securely retain the device in place by means of the bristles 15 of the brush through the openings 7′ in the upper scrim covering 3′ as schematically illustrated in FIG. 7, and other supplemental securing means may also be used as desired, including the use of an abrasive pad between the driving disc and scrim pad. The driving disc may also be provided with holes for flow of shampoo or other cleaning agent through the disc to and from the device through the openings 7′ in the upper scrim covering 3′. The openings 7′ in the scrim covering 3′ on the other side of the device allow the carpet fibers to extend partially into the device which aids in agitating the carpet to loosen dirt ground deeply therein, and the scrim covering also has a slight abrasive action which aids in loosening dirt as well.

While the various devices shown in FIGS. 1 through 7 are provided with a scrim covering 3 or 3′ on both sides of the filler material 2 or 2′, it will be apparent that the scrim covering need only be provided on one side of the filler material, and the other side may either be exposed or covered by a suitable fabric material 1′ (see FIG. 8). Moreover, suitable means may also be provided on such other side for attachment of the device to a suitable support. Thus, for example, in the FIG. 8 embodiment a fabric pocket 16 is provided on the other side of the device for receipt of a conventional dust mop frame, and ties 18 are also provided for tying the device to the frame.

In FIG. 9 the device consists of a conventional dust mop 20 attached to a conventional dust mop frame 21 in the usual manner and having an open scrim covering in the form of a boot 22 shown more clearly in FIG. 10 placed around the dust mop 20. One side of the open scrim covering has an enlarged central opening therein to permit insertion and removal of the absorbent material from between the top and bottom layers of the open scrim covering as shown in FIGS. 9 and 10, respectively. With the scrim boot 22 in place around the dust mop, the dust mop may be used to scrub carpet or other surfaces, after which the boot may be removed and the mop used as a conventional dust mop as before.

From the foregoing, it will now be apparent that the various forms of scrubbing and/or buffing devices described above provide a very simple and effective means for scrubbing and cleaning various surfaces and especially carpeting by agitating the surface to loosen the dirt and absorbing the dirt and cleaning fluid without linting off or causing excessive wear of the device. The devices may also be made in various shapes for use with different shaped holders, and they may be retained in place on both square and rotary buff machines without the use of supplemental securing means. After the devices have become saturated with dirt, they may also readily be washed and wrung out on the job as required.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A device for scrubbing and/or buffing surfaces comprising a layer of absorbent material having an open scrim covering over at least one side of said absorbent material, said absorbent material consisting of plural cords of yarn, said open scrim covering protecting said cords against excessive wear and linting off and allowing dirt and cleaning fluid to freely pass through the openings in said scrim covering for absorption by said cords.

2. The device of claim 1 wherein said cords of yarn are elongated and disposed parallel to each other.

3. The device of claim 1 wherein said cords are in the form of loops.

4. A device for scrubbing and/or buffing surfaces comprising a layer of absorbent material having open scrim coverings over both sides of said absorbent material, and means securing said open scrim coverings together around their entire outer peripheries, one of said open scrim coverings being provided with an enlarged central opening for insertion and removal of said absorbent material from between said open scrim coverings.

5. A device for scrubbing and/or buffing surfaces comprising a layer of absorbent material having an open scrim covering over both sides of said absorbent material, a tape extending around the entire outer periphery of said absorbent material and scrim covering binding the edges of said device, and a relatively stiff cord also extending around the outer periphery of said scrim covering and retained in place by said tape thus enhancing the stiffness of said device and helping to retain its shape.
5. The device of claim 5 wherein said absorbent material is in the form of a felt pad.
6. The device of claim 5 wherein said absorbent material is in the form of a sponge pad.
7. The device of claim 5 which is generally rectangular in shape for use with a square buff machine.
8. The device of claim 5 which is generally rectangular in shape for use with a rotary buff machine.
9. The device of claim 5 which is generally circular in shape for use with a rotary buff machine.