Nov. 29, 1960 N. G. TERZIAN 2,961,681

APPLICATOR FOR APPLYING AND POLISHING WAX

Filed Sept. 6, 1957

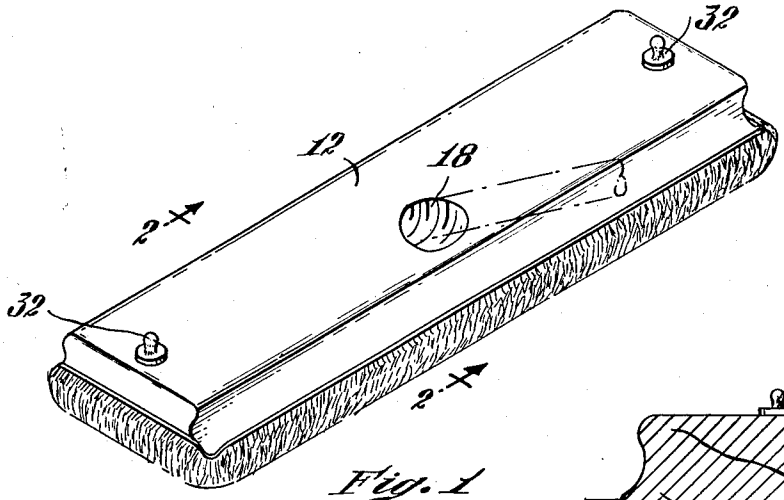

Fig. 1

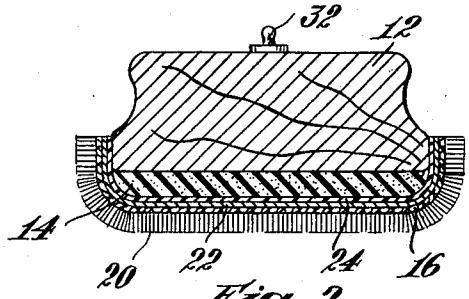

Fig. 2

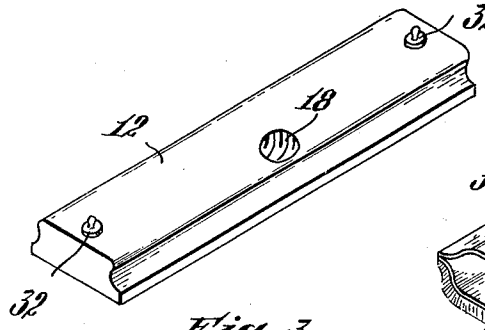

Fig. 3

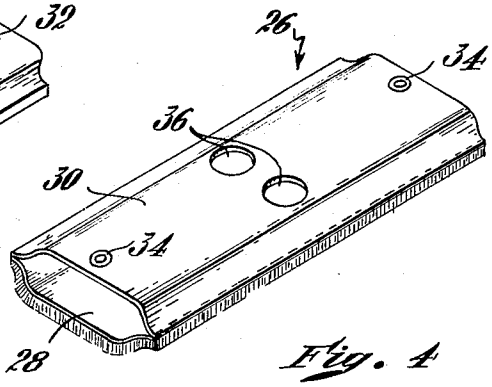

Fig. 4

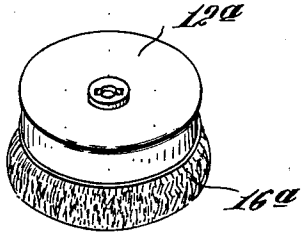

Fig. 5

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APPLICATOR FOR APPLYING AND POLISHING WAX

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6 Claims. (Cl. 15—209)

This invention relates to an improved applicator for applying and spreading paste or liquid wax on the floor or other surface which is to be wax-coated and also for polishing a coating of wax.

The principal objects of the invention are to provide an applicator which will be long wearing, which will not be adversely affected by the wax, water or the wax solvent, which can be cleaned easily, which can be renewed in part, and which will throughout its life spread the wax uniformly.

As herein illustrated the applicator comprises a rigid head block, a cushion layer and a layer of fabric arranged one beneath the other in the order named with the marginal edge of the fabric layer covering the entire lower surface of the cushion layer, folded upwardly about its edges, and overlapping and being adhesively secured to the cushion layer and to the peripheral edge of the head block. The cushion layer is preferably a sponge. The fabric layer is preferably mohair having a thick stiff pile on its outer side and the adhesive which unites the layers is in the form of an impervious barrier situated between the fabric layer and the cushion layer which is insoluble in water and the wax solvent and is not adversely affected by the wax itself. Optionally a slip cover comprised of mohair fabric may be applied to the applicator and secured thereto when the original pile surface becomes so worn as to have lost its efficacy, thereby to renew the use of the applicator and to obtain the benefits of the unworn cushion layer without having to obtain a completely new applicator.

The invention will now be described in greater detail with reference to the accompanying drawings in which—

Fig. 1 is an isometric view of an applicator embodying the invention;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Fig. 3 is an isometric view of the head block with the cushion layer omitted;

Fig. 4 is an isometric view of a slip cover which may be used to renew the surface of the applicator shown in Figs. 1 and 2 or applied to the head block shown in Fig. 3 without benefit of the cushion; and

Fig. 5 is an isometric view of a circular or disc-like applicator for use on motor driven applying and polishing machines.

Referring to the drawings the applicator as shown in Figs. 1 and 2 is comprised of a wooden head block **12**, a cushion layer **14** and an applying layer **16**. The head block **12** is rectangular and has a threaded opening **18** in its top side set at an angle for receiving the lower threaded end of a handle by means of which it may be pushed over the surface to which the wax is to be applied. The bottom side of the block is flat and the cushion layer **14**, which is substantially coextensive therewith, is suitably attached to the block for example with adhesive. The layer **14** is of a soft yieldingly resistant material and preferably is porous, being comprised of porous rubber such as sponge rubber or foam rubber or of one of the porous synthetics. The cushion layer

14 is preferably about a quarter (¼) to a half (½) inch thick and its outer surface may be of somewhat smaller area than the side having contact with the block so that its marginal edges may be rounded off.

The applicator layer **16** is of larger area than the cushion layer **14**, covers its outer surface, its marginal edges and is turned upwardly about the edges of the block **12** so as to cover the junction between the cushion layer and the block. The applicator layer **16** is a woven fabric having a stiff pile **20** on one side, for example about one-eighth (⅛) inch in thickness and on its opposite side a layer of rubber or rubber-like material **22** which helps to anchor the pile in place and also to make the layer impervious. The layer **16** is fastened to the cushion layer **14** and the block **12** by a continuous layer of adhesive **24** which is impervious and insoluble to water and the common solvents employed in the manufacture of wax and also to the wax itself.

The adhesive employed herein which gives the impervious and insoluble characteristics desired is comprised of a mixture of two (2) parts of a rubber cement M244 Part 1 and one (1) part of M244 Part 2 made by the Rubber and Asbestos Corporation of Bloomfield, New Jersey, which after being thoroughly mixed is thinned with a solvent so as to be easily spreadable. The composition is applied to the back side of the mohair over the rubber coating, whereupon the coated mohair is laid over the cushion layer **14** and folded upwardly so as to have contact with the edges of the block and held in this position under enough tension to slightly compress the cushion layer **14**. Conveniently this is accomplished by pressing the block with the cushion layer and applicator layer facing down into a hollow mold and leaving it there until the adhesive cures. At room temperature curing takes place in about twenty-four hours to make a permanent bond. The imperviousness and insolubility of the bond may be increased by aging, that is storing the applicators for a few days up to several weeks before use.

The time necessary to effect curing and hence bonding may be reduced by employing artificial heat. At a temperature of 175° F. curing may be effected in four hours, at 200° F. two hours and at 250° F. one hour.

The combined effect of the rubber layer **22** and the adhesive layer **24** is to make a continuous barrier between the inner surface of the applicator layer **16** and the cushion layer **14** which prevents penetration of water, wax, solvents, dirt and any other extraneous matter through the layer **16** into the cushion layer with the result that the cushion layer remains perfectly elastic and yielding as long as the layer **16** remains intact, that is, is not worn through or otherwise broken. Consequently the elastically yielding nature of the applicator is preserved almost indefinitely unlike applicators of the conventional type wherein the wax, dirt and the like enters the pores of the pad or cushion and eventually clogs it up so that it becomes hard and stiff, rendering it useless after a short time in spite of careful washings after each use. The impervious and insoluble character of the adhesive also resists the caustic action of hot soapy wash water and strong solvents used in the wax so that the bond remains intact and there is no danger that the applicator layer will become detached from the block. By having the outer or applicator layer **16** overlap the block and hence the junction between the cushion layer and the block there is no danger that solvents or water can gain entrance between the block and the cushion layer.

As long as the cushion layer is maintained soft and yieldable the applicator layer **16** will also remain soft and yieldable so that wax being applied to surfaces which are not entirely flat can be spread uniformly. Moreover

the yieldable nature of the cushion layer minimizes damage and wear of the applicator layer, thereby prolonging its life.

Because of the permanence of elasticity afforded by the construction described above, it is inevitable that the pile **20** will wear down to the base fabric eventually and yet the applicator will still have the characteristics of softness that it had in the first place. Accordingly the applicator is provided with a slip cover **26** (Fig. 4) which may be applied to renew the pile layer. As shown in Fig. 4 the slip cover comprises a pile fabric **28** of the same kind attached to the block, stitched along its opposite edges to a ply **30** of suitable material for example a fabric, so as to form a tubular sheath which may be slipped endwise over the head block with the pile fabric overlying the worn out applicator layer. To hold it in place the head block is provided with fastener elements **32** and the ply **30** with corresponding mating fastening elements **34** by means of which the slip cover may be removably secured in place. A pair of openings **36** is made in the ply **30** in such a position that when the slip cover is slipped into place regardless of which side one of the openings **36** will come opposite the threaded opening **18** so as to permit the handle to be screw into place. After each use the slip cover may be removed and washed. Thus the applicator may be used indefinitely by replacing each worn out slip cover with a new cover.

A less desirable form of applicator and one not embodying the yieldable characteristics described above may be made by omitting the elastic layer **14** and applying the slip cover **26** directly to the block **12**, the latter being shown in Fig. 3 without the sponge layer applied thereto. Of course the slip cover has to be made somewhat smaller because of the absence of the cushion layer **14**.

The applicator as described above is of the block type propelled by a handle by pushing and pulling. However the characteristics of the applicator are desirable for motor-driven apparatus such as the single or double brush applicators. Accordingly it is within the scope of the invention to make the head block circular as shown at **12*a*** in Fig. 5. A circular cushion layer is then secured to its underside and an applying layer **16*a*** having a pile on one side and an adhesive on the other such as described above is applied to the lower side of the cushion layer and folded upwardly about the block so as to unite the applicator layer to the sponge layer and the block.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

This application is a continuation-in-part of my copending application Serial No. 340,260, filed March 4, 1953 and abandoned Sept. 9, 1957.

I claim:

1. An applicator for wax or the like comprising a rigid head block having a flat bottom face and side edges, a yieldingly resistant cushion layer of substantial thickness applied to the bottom face of the block, an applying layer of woven fabric having a thick pile on its outer side covering the entire exposed surface of the cushion layer including its edges, said applying layer overlapping the junction between the adjacent faces of the head block and the cushion layer and a layer of adhesive uniting the applying layer to the cushion layer and the lower part of the sides of the head block, said adhesive layer being continuous and impervious and forming a permanent barrier between the base of the fabric applying layer and the cushion layer which excludes wax and extraneous matter from the cushion layer.

2. An applicator according to claim 1 wherein the adhesive layer is insoluble in water and solvents such as are employed as a vehicle for wax.

3. An applicator according to claim 1 wherein the cushion layer is porous.

4. An applicator according to claim 1 wherein the cushion layer is comprised of sponge rubber.

5. An applicator according to claim 1 wherein the applicator layer is mohair and has applied to its inner side a continuous coating of rubber.

6. The combination with an applicator having a rigid head block, a yieldingly resilient cushion layer attached to the bottom face of the head block and a cushion protecting layer which is united to the cushion layer and the block by a layer of adhesive which forms a permanent barrier between the outside of the protecting layer and the cushion layer for excluding water, wax and extraneous matter from the cushion layer; of fastening elements attached to the block, and a slip cover comprising in part a pile fabric adapted to overlie the cushion protecting layer and being substantially coextensive therewith, and a part engaged with the top of the head block carrying fastener elements cooperable with those on the head block for securing it in place.

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