

March 18, 1969

T. V. MOSS

3,432,873

MOP CONSTRUCTION

Filed Dec. 14, 1965

Sheet 1 of 2

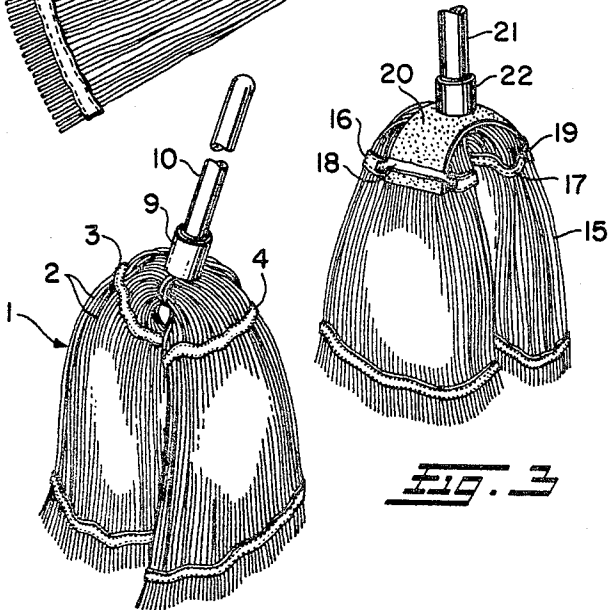
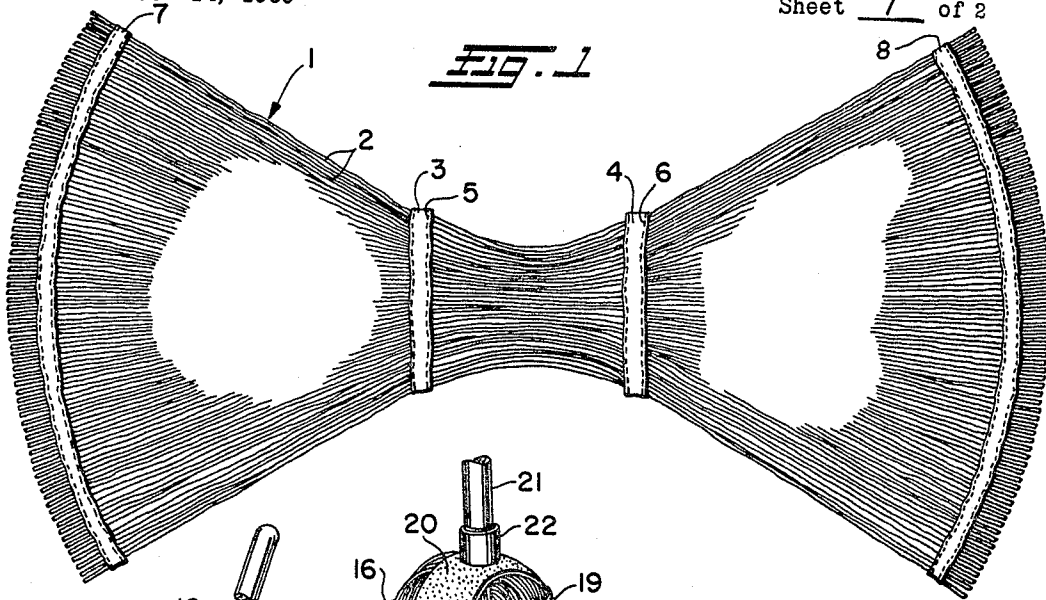


FIG. 2

FIG. 3

FIG. 4

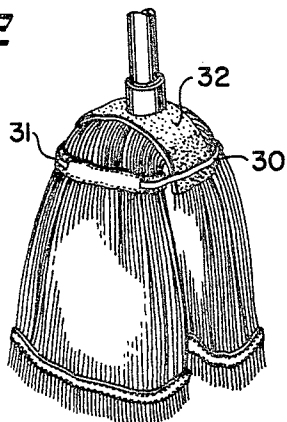


FIG. 5

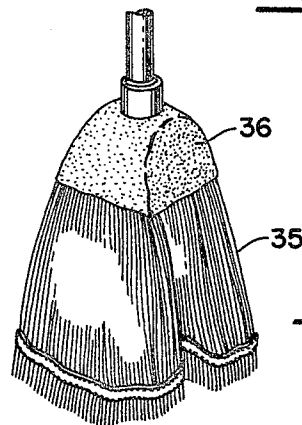


FIG. 6

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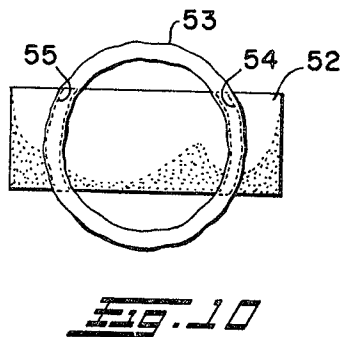
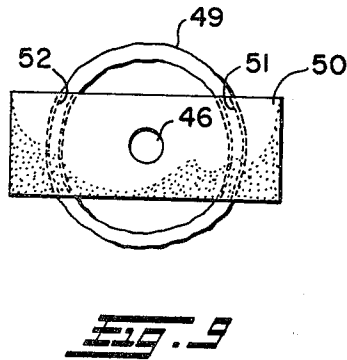
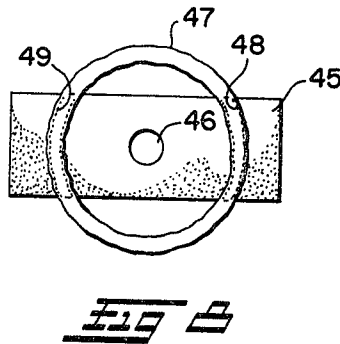
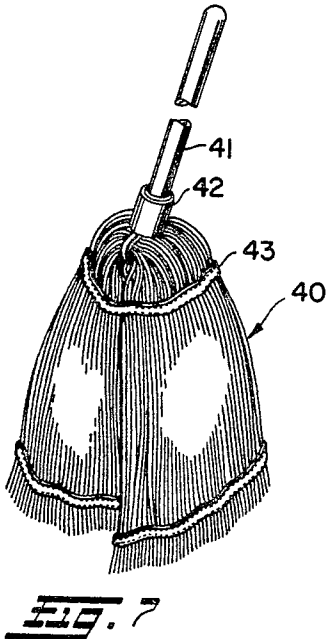
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Sheet 2 of 2



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MOP CONSTRUCTION

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8 Claims

ABSTRACT OF THE DISCLOSURE

A mop swab including absorbent cords secured together substantially centrally of the length by flexible interconnecting means from which the cords flare outwardly into a fanned out relationship adjacent the ends thereof. The flexible interconnecting means are positioned on the flare of the swab and assist in maintaining the cords in the desired fanned relationship. A cleaning pad or assembly may also be secured to the mop, including an abrasive element to facilitate cleaning of floors and also to assist in maintaining the individual cords in the spread relationship.

This invention relates generally as indicated to a mop construction and more particularly to a new mop and mop swab constructed and arranged for maximum efficiency in mopping floors and the like.

Reference may be made to my prior Patents 2,825,914, 3,011,198 and 3,115,658 for a disclosure of certain features which are highly advantageous in the construction of mops particularly suited and arranged for mopping floors dry. Many of these features may, if desired, be included in the novel and improved construction disclosed herein to provide a mop which combines maximum effectiveness in picking up water with a rugged construction affording relatively long mop life.

The mop constructions which have been previously known have usually comprised bundles of yarn secured to an appropriate elongated handle by means of a metallic clamp type holder with two sides or swab portions extending separately therefrom. A certain amount of skill is required in the proper manipulation of such mops for effective results, and the use of a metallic clamp or similar attachment means has the serious disadvantage that furniture, baseboards, etc. can be easily damaged due to contact with the attachment means as the mop is used.

Moreover, in many mops now in use, the individual strands or cords tend to become easily tangled, to unravel at the ends and eventually to become matted together, thus making them very inefficient in their primary function of absorbing water. It is accordingly a principal object of the present invention to provide a mop in which the strands are oriented and maintained in a particular arrangement or disposition so as not to become tangled in use or when the swab is washed.

It is a further object of this invention to provide a mop in which the cords are maintained in a somewhat spread out or fanned relationship to provide for maximum floor coverage and efficiency of water absorption as a mop is used.

An additional object of this invention is to provide a mop which is especially suitable for use with attachment means other than the aforementioned metallic clamps and which has the individual strands disposed and maintained in a spread out relationship for maximum floor coverage and water absorption.

Yet another object of this invention is to provide a mop in which an abrasive pad may be utilized to maintain the two sides or swab portions in desired position and to assist in maintaining the individual strands in the spread out relationship.

A further object is the provision of an abrasive cleaning assembly for use with mops and the like.

Other objects, features and advantages of this invention will become apparent to those skilled in the art upon a reading of the following more detailed description of the invention.

These and other objects are achieved by means of this invention in which a new mop is provided comprising a multiplicity of absorbent strands or cords which flare outwardly from the mid-section or central portion into a fanned out relationship and are secured together in a plurality of layers intermediate their ends by spaced apart flexible interconnecting means which are positioned on the flare of the swab substantially uniformly from the mid-section of the swab to assist in maintaining the strands in a spread out relationship.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features herein after 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.

In said annexed drawings:

FIG. 1 is a plan view of one form of the invention;

FIG. 2 is a perspective view illustrating the swab of FIG. 1 attached to a handle;

FIG. 3 is a perspective view showing another embodiment of the swab of this invention;

FIG. 4 is a fragmentary perspective view showing the embodiment of FIG. 3 in a slightly modified form;

FIGS. 5 and 6 are perspective views illustrating further modifications of the embodiment of FIG. 3;

FIG. 7 is a perspective view illustrating a modification of the FIG. 2 form; and

FIGS. 8 through 10 are plan views illustrating various embodiments of the abrasive pad and attachment means.

Referring now more particularly to FIGS. 1 and 2, a mop swab, designated generally by the numeral 1, is illustrated which comprises a multiplicity of twisted stranded absorbent cords 2 (the terminology "cords" as used herein is intended to be generic to all similar materials such as yarns, strands, etc.) which flare outwardly from the midsection of the swab into a fanned out relationship and are secured together in a plurality of layers in a generally bunched relationship intermediate their ends by spaced apart flexible, interconnecting means 3 and 4 positioned substantially uniformly from the mid-section of the swab to assist in maintaining the strands or cords in a spread or fanned relationship as will be more fully described. The flexible interconnecting means are preferably in the form of a pair of narrow fabric bands secured to the absorbent cords by stitching designated by numerals 5 and 6 in bands 3 and 4 respectively and may also completely encircle the absorbent cords, as illustrated in FIGS. 2 and 3. It will be readily appreciated, however, that in lieu of bands 3 and 4, the absorbent cords may be secured in the desired relationship only by stitching, and accordingly such modification is to be within the confines of the present invention.

The swab also preferably has means 7 and 8 flexibly interconnecting the outer end portions of the individual strands in a region spaced a short distance from the end portions of the cords to assist in maintaining the cords in the desired configuration. Such means is illustrated as being flexible fabric tapes stitched directly to the absorbent cords. Such flexible interconnecting means may also include adhesive tapes positioned beneath the fabric tapes, as described and claimed in my aforesaid Patent 3,115,658, or alternatively, the outer end portions may be interconnected merely by stitching directly to the cords.

A connecting device 9 of the general type illustrated in U.S. Patent 2,835,914 groups the cords near the mid-section thereof into a tightly bunched relationship and has a handle 10 secured thereto. In general, the holder comprises a pair of separate flexible plastic pieces, with one piece being a threaded hollow cylinder at its upper portion and including a ring or strap section to engage the underside of the cords to assemble them into the generally bunched relationship while the other piece is a hollow cylindrical member designed to engage the external surface of the upper portion of the ring section and to retain such surface therein to define the composite article. One particularly preferred embodiment of such a holding device is defined and claimed in my co-pending application, entitled "Attachment Device for Mops and the Like," Ser. No. 518,813, filed Jan. 5, 1966.

The narrow bands 3 and 4 are generally spaced apart a distance of from about 5 to about 8 inches and are positioned substantially centrally of the length of the swab but uniformly from the midsection on opposite sides thereof. The distance which the bands are spaced apart may, of course, vary depending upon the overall length of the swab and the degree of spread relationship which is desired at the ends of the two swab portions. As shown more clearly in FIGS. 1 and 2, these bands are positioned on the flare of the swab and thus maintain the cords in the desired relationship relative to one another in the central portion of the swab and accordingly assist in maintaining the individual cords in a spread out relationship, which is not the situation where such bands are not provided as the cords are then free to arrange themselves haphazardly which serves to encourage entanglement, etc.

In FIGS. 3-6, modified forms of the invention are illustrated. Referring first to FIG. 3, a swab 15 is shown with fabric bands 16 and 17 thereon as in the previous embodiment. Loops or straps 18 and 19 are provided on the fabric bands attached thereto by stitching, and an abrasive cleaning pad 20 is attached to the swab by being inserted into the loops 18 and 19 which are designed to fit tightly over the pad so as to firmly retain the pad therein. The abrasive pad closely fits over the central portion of the swab to restrain the two sides or swab portions from excessive lateral movement and thus assist in maintaining them in the desired relationship relative to each other when a handle such as 21 is connected to the swab as by holder 22 which is of the type previously described. In this arrangement, to accommodate the particular holder, the abrasive pad, of course, has a hole therein through which the holder is inserted. It will thus be appreciated that the abrasive pad cooperates with the fabric bands to assist in maintaining the sides of the swab in the desired position, and at the same time will be readily available for use as necessary to remove scuff marks, hardened pieces of dirt, etc. from the floor while mopping. The provision of such a pad therefore constitutes a significant contribution to the commercially available mops.

A further modification is illustrated in FIG. 4, where, in place of the two narrow fabric bands, a single band 25 is shown stitched to the bundle of cords at the mid-section thereof, such wide band being of the type illustrated in my aforesaid patents. This embodiment is designed primarily for use with the metallic clamp type means rather than the holder illustrated in FIGS. 2, 3, 5 and 6. In this embodiment, loops or straps 26 and 27 are provided as in the FIG. 3 embodiment, and abrasive pad 28 is inserted and retained therein.

In FIG. 5 a further modification is illustrated wherein the loops or straps 30 and 31 extend across the opening formed between the two sides of the swab so that the straps are attached to the fabric bands on the two sides. In such form, the sides of the swab are interconnected by the loops or straps thus serving further to assist in maintaining the two sides of the swab in the desired relationship as the mop is used. In this form, the abrasive pad 32 is inserted into the straps and retained therein and also

serves to restrain the movement of the sides of the swab and thus to assist in maintaining the sides in the desired relationship relative to each other.

In FIG. 6, a slightly different embodiment is shown in which the swab designated by numeral 35, has an abrasive pad in the form of a hood 36 attached thereto and closely fitting over the swab substantially centrally of the length thereof and extending down over the swab a substantial distance, as for example, about four to seven inches from the holder to maintain the two sides of the swab in the desired relationship and also to assist in maintaining the individual strands in the spread or fanned relationship. Due to the configuration of the pad and since it fits snugly over the swab, as shown, movement of the individual strands will be restrained and consequently they will not become easily entangled with one another as the mop is used.

FIG. 7 illustrates a modification of the FIG. 2 form in which a swab 40, attached to handle 41 by holder 42, has a band 43, completely encircling and closely fitting it to hold the two swab portions together and thus prevent excessive lateral movement as the swab is used. The band may be fabric and may be stitched to the swab to maintain it in the desired position. Alternatively, the band may be of a smaller circumference than the swab or may be of an elastic material such as a rubber band in which case no stitching will be necessary. It will be readily appreciated that an abrasive cleaning pad may be used in conjunction with this embodiment of the invention in the manner illustrated with respect to FIG. 3 and FIG. 5.

Referring to FIGS. 8-10 inclusive, various embodiments of the abrasive cleaning pad and means for attaching the pad to the swab are illustrated. In FIG. 8, an abrasive pad 45 is shown with a hole 46 therein which is designed to fit closely over a holder for connecting a handle to the swab, as shown in FIGS. 3, 5 and 6. A circular band 47 positioned substantially concentrically with opening 46 is attached to the pad as shown at 48 and 49, which is preferably by stitching although other methods of attachment may be used, to thus provide a complete abrasive pad assembly for ready attachment to a swab. The assembly as thus formed is easily mounted upon or attached to a swab simply by inserting the handle into the circular opening 46 and sliding the pad down over the holder to a position where it tightly fits the top surface of the swab. The circular band is then pulled down over the swab and the abrasive pad thus arranged in the desired position. Since the circular band is preferably of an elastic material, as explained above, the pad will be tightly held in place by the band, and also the upper part of the two swab portions will, of course, be restrained from excessive lateral movement during use of the swab.

The embodiment of FIG. 9 is similar to that of FIG. 8 but the circular band 49 is attached to the underside of abrasive pad 50 as shown at 51 and 52. This embodiment thus has the advantage that the abrasive surface of the pad, when positioned on a swab, will not be interrupted by the band.

The embodiment to FIG. 10 is similar to those of FIG. 8 and FIG. 9, but the abrasive pad 52 does not have a circular opening therein as in the other embodiments. Rather, circular band 53 is simply attached thereto at 54 and 55, since this embodiment is designed primarily for use with the aforementioned clamp type means of handle attachment.

The abrasive cleaning assembly illustrated in FIGS. 8-10 has several advantages which are of considerable importance to the present invention. First, it will be appreciated that the assembly may be readily attached and detached from the mop since it is not secured to the swab by the handle. The pad also protects the mop cords in the region where cleaning or scrubbing with the swab takes place, as the scrubbing is done with the abrasive element rather than by the swab itself. Moreover, the assembly may be easily used for all types of mops and is readily

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interchangeable from one to the other without the necessity of removing the handle or holder from the swab.

Many materials are suitable for use in the swabs of this invention including rayon yarn or cord, blends of rayon and cotton or rayon, cotton and nylon. Bleached hemp yarn or cord blended with a small percentage of braided nylon or other synthetic plastic strands currently available, such as Orlon and Dacron, may also be used, or alternatively, cotton cord may be utilized.

The cleaning pad is generally a fibrous (normally non-woven) three-dimensional pad of the type which is commercially available for general cleaning and scouring purposes. Such pads are normally impregnated with a resinous plastic, which may contain fine particles of abrasive, to provide the cleaning or abrasive action, and are accordingly defined herein as "abrasive pads."

Other modes of applying the principle of the invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims, or the equivalent of such, be employed.

I, therefore, particularly point out and distinctly claim as my invention:

1. A mop swab comprising a multiplicity of absorbent cords secured together in a plurality of layers in a generally bunched relationship substantially centrally of the length thereof by spaced apart flexible interconnecting means, said cords thus forming the two sides of said swab opposite said spaced apart means, said cords flaring outwardly from the midsection of said swab into a fanned out relationship, said spaced apart interconnecting means being positioned on the flare of said swab substantially uniformly from the midsection of said swab to assist in maintaining said cords in a fanned out relationship.

2. The mop swab of claim 1 in which means are provided on said flexible interconnecting means for attachment of a cleaning pad to said swab.

3. The mop swab of claim 2 in which said means for attachment of a cleaning pad extend across the opening between the two sides of said swab to interconnect said sides.

4. The mop swab of claim 2 including an abrasive pad attached to and closely fitting said swab substantially centrally thereof by said means on said flexible interconnecting means to restrain lateral movement of the sides of said swab.

5. The mop swab of claim 1 in which means are pro-

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vided in a region adjacent the outer end portions of said cords flexibly interconnecting such end portions, to assist in maintaining said cords in a spread relationship.

6. The mop swab of claim 1 in which said spaced apart interconnecting means are a pair of narrow fabric bands completely encircling said swab and stitched thereto.

7. A mop comprising a multiplicity of absorbent cords secured together in a generally bunched relationship substantially centrally of the length thereof and flaring outwardly from the midsection of said swab into a fanned out relationship, means flexibly interconnecting the outer end portions of the individual cords, a plurality of spaced apart flexible interconnecting means positioned on the flare of said swab substantially uniformly from the midsection of said swab to assist in maintaining said cords in said fanned out relationship, said cords forming the two sides of said swab opposite said spaced apart means, means attached to said absorbent cords substantially centrally of the length thereof for connection of a handle thereto and a handle connected to said last-mentioned means.

8. A mop swab comprising a multiplicity of absorbent cords grouped together in a generally bunched relationship substantially centrally of the length thereof and flaring outwardly from the midsection of said swab into a fanned out relationship, a circular band completely encircling and closely fitting said swab adjacent the midsection thereof to hold the two sides of said swab in a swab relationship and to restrain lateral movement of said sides, and an abrasive pad secured to said swab by said circular band.

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DANIEL BLUM, *Primary Examiner*.

U.S. Cl. X.R.

15—229; 51—181