Oct. 16, 1934. A. H. EDWARDS 1,977,473

MOP

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Fig. 1.

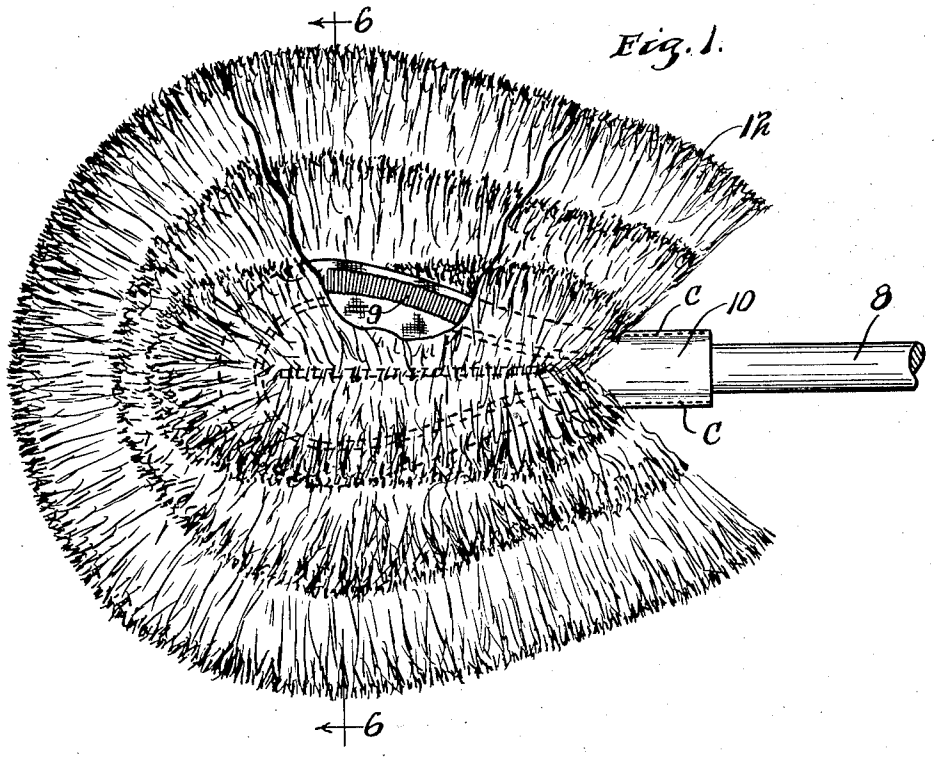


Fig. 4.

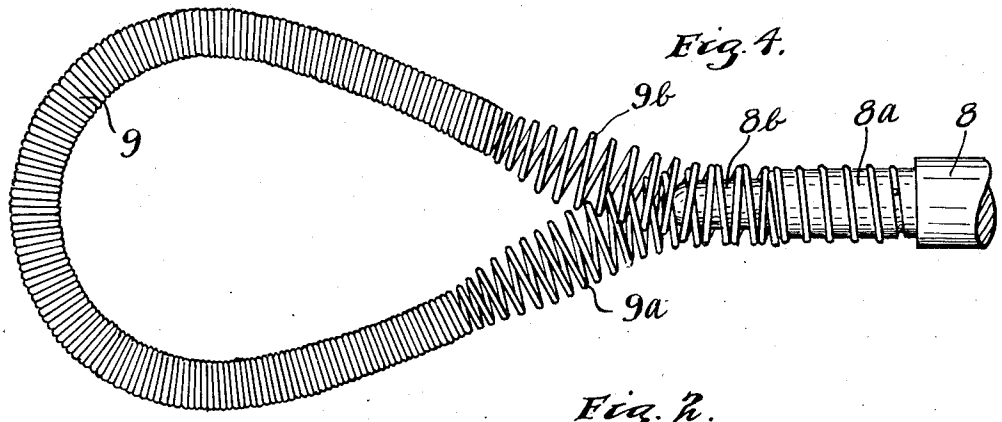


Fig. 2.

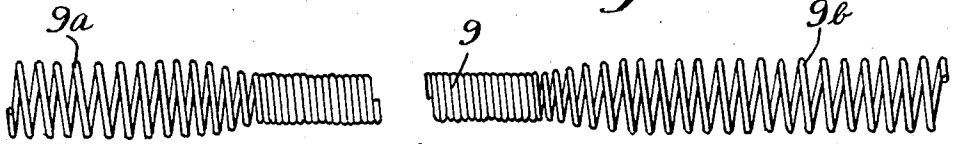
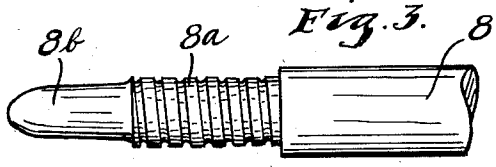


Fig. 3.



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Fig. 6.

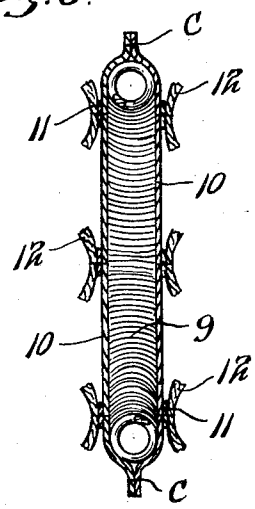


Fig. 5.

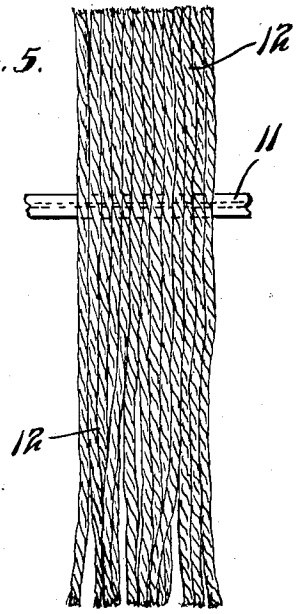
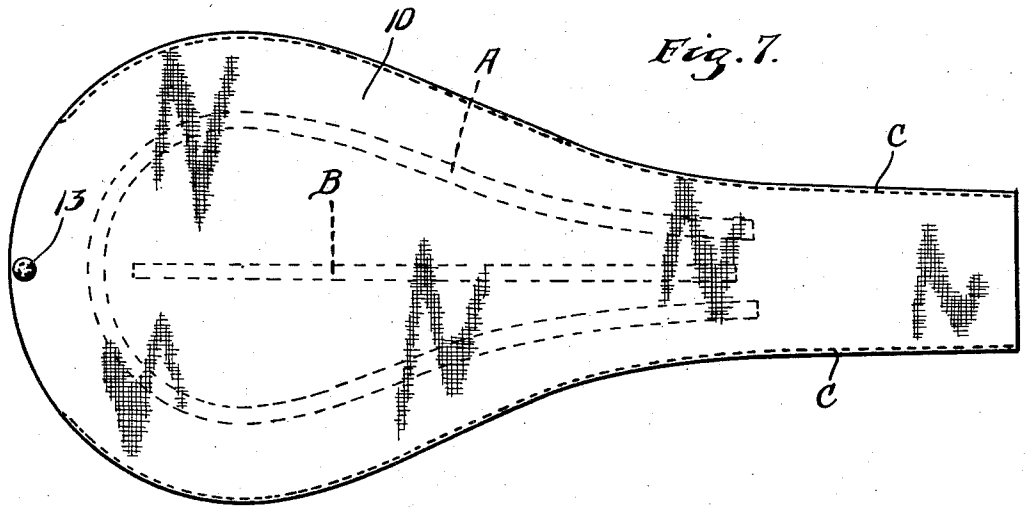


Fig. 7.



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MOP

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Application June 29, 1933, Serial No. 678,179

5 Claims. (Cl. 15—229)

This invention relates to mops of the general nature disclosed in U. S. Letters Patent No. 1,545,510 granted July 14th, 1925 and U. S. Letters Patent No. 1,849,150 granted March 15th, 1932.

It is an object of my present invention to improve upon the mops disclosed in said above identified patents by materially simplifying the construction through the elimination of an attachment head or other device for securing the ends of the resilient swab holder thus economizing in the cost of manufacture.

It is another object to provide an improved mop wherein all metal or abrasive parts will be covered and protected by the swab; wherein the construction of the swab holder and its connection with the handle as well as the construction of the swab itself is such that swabs may easily be removed and replaced upon the holder in the manner of a mitten.

A further object is the provision of an improved mop, the swab of which is distended by a bowed or annularly arranged resilient element and which is relatively thin, enabling the swab to work in a confined space; and which, through the resiliency of the holder, may be shaken to set up a rapid vibration of the swab for the removal of dust and dirt.

A still further object is the provision of a mop including an annularly arranged swab holder with a swab in the form of a mitten removably disposed thereon and traversing the entire area of the holder and provided with swab yarn or the like on both sides thereof.

These and other objects and advantages of the invention will be more fully set forth in the following description made in connection with the accompanying drawings, in which like reference characters refer to similar parts throughout the several views, and in which:—

Fig. 1 is a plan view with some portions broken away showing the assembled mop;

Fig. 2 is a fragmentary view showing the elongated helical element which forms the swab holder;

Fig. 3 is a detail view showing the outer portion of the handle with the thread for securing the ends of the swab holder;

Fig. 4 is a plan view showing the swab holder operatively attached to the handle;

Fig. 5 is a detail view showing a suitable yarn element for the mop;

Fig. 6 is a cross section taken substantially along the line 6—6 of Fig. 1 with the outer ends of the yarn broken away to more clearly bring out the structure of the mitten and its distension by the resilient molder, and

Fig. 7 is a plan view of the assembled swab mitten with the yarn detached, the dotted lines indicating the location and arrangement of the yarn carrying strips.

The embodiment of my invention illustrated includes an elongated handle 8 which may be constructed from a wooden pole of small cross section. The outer portion of this handle is turned or machined to provide attachment means for the swab holder. To this end, as shown, a section of the handle adjacent the outer extremity is provided with a coarse screw thread 8*a* to a distance of preferably a few inches and the outer extremity itself is diminished somewhat and left smooth to form a stud 8*b* the purpose of which will later be explained. While I have illustrated a complete screw thread 8*a*, it will, of course, be understood that thread segments or other equivalent protruding attachment elements may be formed on the atttachment end of the handle for screw engagement with the holder. It will also be apparent that instead of threading the outer end of the handle a metal ferrule having an external screw thread like the thread 8*a* may be utilized.

My swab holder is in the form of an elongated flexible and preferably resilient element 9 having helically formed ends 9*a* and 9*b* respectively. I prefer to utilize an integrally formed coiled spring which has its ends of larger diameter than the greater part of its length or body. The coils at the ends 9*a* and 9*b* are also preferably spaced slightly apart, while the coils of the smaller body portion are preferably disposed in close relation. It will be noted that one end (9*b*) of the swab holder has the spaced coils extending for a greater distance than the opposite or left hand end 9*a*. The enlarged ends preferably taper into the smaller body portion so that substantially uniform expansion of the coils will take place when the swab holder is bowed.

In assembling the device the elongated swab holder 9 is flexed in the shape of a loop and the shorter enlarged end 9*a* is meshed with the inner portion of the longer enlarged end 9*b*. That is, the coils of the respective end portions are actually intermeshed or interlocked as clearly shown in Fig. 4 leaving the extremity of the longer or right hand and enlarged end 9*b* in extended position beyond the meshed coils whereby it may be screwed onto the thread or attachment means 8*a* at the outer end of the handle 8. The extended stud 8*b* at the attachment end of the

handle, it will be noted, projects within the meshed portions of the ends, fitting the inner periphery thereof snugly and positively preventing disengagement or unlocking of the meshed ends. The pitch and width of the threads are such that the helical extremity of the end 9*b* will nicely fit the same and once applied there will be no tendency for the holder to unscrew, since any torque in a direction to release, causes contracting of the resilient helix causing it to bind very tightly to the attachment portion of the handle. No additional securing means are therefore needed and in fact the resilient holder is firmly locked upon the handle when the extremity of the end 9*b* is screwed to extreme position on the externally threaded portion 8*a*.

I prefer to provide a detachable swab which fits the resilient holder in the manner of a glove or mitten and in this connection, as shown in Fig. 7, a pair of flexible blanks 10 are prepared in more or less the shape of a paddle or racket. The blanks may be constructed from cloth such as duck or canvas or some other suitable flexible sheet material. To the outer surfaces of each of the blanks 10 swab yarn is secured covering the surfaces with a thick mat of loose ended material which forms an efficient medium for collecting dust, dirt, moisture and the like.

I prefer to first construct yarn elements, stitching a multiplicity of arranged yarn lengths transversely upon a heavy cloth strip 11 of very narrow width. A fragment of such an element is illustrated in Fig. 5 and it will be noted that the strip is not disposed centrally of the yarn lengths, but is preferably positioned to divide the lengths unequally so that when the yarn is folded in application to the mitten the ends of the lengths will overlap. The yarn lengths 12 are laid transversely on the strip 11 and may be securely stitched thereto by a machine. An elongated yarn-carrying element is stitched or otherwise secured to each of the blanks and arranged in loop formation, symmetrically with the edge of the blank, as indicated by the dotted lines A shown in in Fig. 7. A second and shorter yarn-carrying element is stitched longitudinally and centrally of the blank in the position indicated by the dotted lines B, also shown in Fig. 7. Both of the blanks are thus covered with a thick matting of yarn and are then stitched together along the dotted lines C forming the envelope or mitten shown in Fig. 7 and leaving the reduced end of the envelope open, as well as the opposite and enlarged end through a distance sufficient to insert the swab holder when the same has been yieldingly pressed together to reduce its width.

Securing means, such as the snap button 13 may be provided to close the outer open end of the envelope, although the resiliency of the spring and its normal maximum width will prevent withdrawal of the envelope.

The envelope is of course applied to the swab holder by passing the free end of the handle longitudinally through the larger open end and then through the restricted open end and sliding the handle through to such position that the holder by first being pressed to diminish its width, is positioned symmetrically within the envelope. The length of the restricted portion of the envelope is such as to cover the meshed helical ends 9*a* and 9*b* of the holder as well as the extremity of the end 9*b* which is attached to the attachment portion of the holder and the resiliency of the swab holder distends the envelope nicely affording a very thin mop which may be inserted in small spaces.

The flexibility and resiliency of the holder enable the mop to be compressed to conform to the shape of recesses, etc., in dusting.

It will be noted that while a loop shaped or annular holder is utilized, the entire area of the holder is traversed by swab material on both sides thereof.

The inter-meshing of the ends of the resilient helical holder and the external connection with the handle add flexibility to the mop head, which facilitates cleaning and dusting.

To remove dust or dirt from the mop it is only necessary to vigorously shake the handle, thereby producing a rapid vibration upon the resilient holder which rapidly expels dust and dirt.

From the foregoing description it will be seen that I have provided a very simple, highly efficient mop which may be manufactured at low cost, which eliminates the attachment head or other clamping means for securing the swab holder to the handle and which provides a degree of flexibility and resiliency heretofore not attained in mop construction.

It will further be seen that all metal or abrasive parts of the swab holder are completely covered by the swab in its extended handle-covering portion. The meshing of the ends of the spring and the screw attachment of the extended longer helical end 9*b* afford a highly resilient and effective attachment means. An attempt to unscrew the connected end 9*b* from the handle causes the helix to bind itself more tightly upon the threaded portion.

My mop with the swab holder and swab constructed in the manner disclosed is very thin and will pick up dust on both sides of the swab. It will be noted there are no openings in the swab other than the end openings in the envelope which allow the handle and swab holder to be slipped through.

It will, of course, be understood that various changes may be made in the form, details, proportions and arrangement of the parts, without departing from the scope of my invention, which, generally stated, consists in a device capable of carrying out the objects above set forth and in the novel parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:—

1. In a mop, a handle having at its outer end attachment means in the nature of an external screw thread, an elongated flexible swab holder arranged in the form of a loop and having a pair of helical ends which are intermeshed substantially axially, at least one of said helical ends having screw engagement with said thread and a swab mounted on said holder and the outer end of said handle having a longitudinal projection extending into the intermeshed portion of said helical ends to prevent disconnection of the same.

2. In a mop, a handle having, adjacent its outer end, attachment means in the nature of an external screw thread, an elongated coiled spring constituting a swab holder and arranged in the form of a loop and having helical ends which are intermeshed axially and interlocked to form a stem, said stem having screw engagement with said thread for attachment to said handle and a swab mounted on said holder.

3. In a mop, a handle having a diminished outer extremity and having an external screw thread immediately adjacent thereto, an elongated coiled

spring constituting a swab holder arranged in the form of a loop and having its helical ends meshed and interlocked to form a stem, one of said ends projecting beyond the other, said projecting end having screw engagement with the thread of said handle and the diminished extremity of said handle extending into the meshed and interlocked portions of said spring ends to prevent disconnection of the same.

4. In a mop, a handle, a swab holder in the form of an elongated resilient element arranged in the form of an oval loop, means for securing the ends of said swab holder to one end of said handle and a swab comprising an envelope shaped similar to said holder and surrounding the same and having a tubular extension at its inner end covering said holder securing means, said envelope having an open outer end to facilitate slipping of said handle and attached oval swab holder through the envelope and swab material secured to at least one face of said envelope.

5. In a mop, a handle having adjacent its outer end attachment means in the nature of an exterior screw thread, an elongated flexible swab holder arranged in the form of a loop and having a pair of helical ends which are detachably intermeshed substantially axially to form a stem, said stem having screw engagement with said thread for attachment to said handle and a swab mounted on said holder.

ALICE H. EDWARDS.