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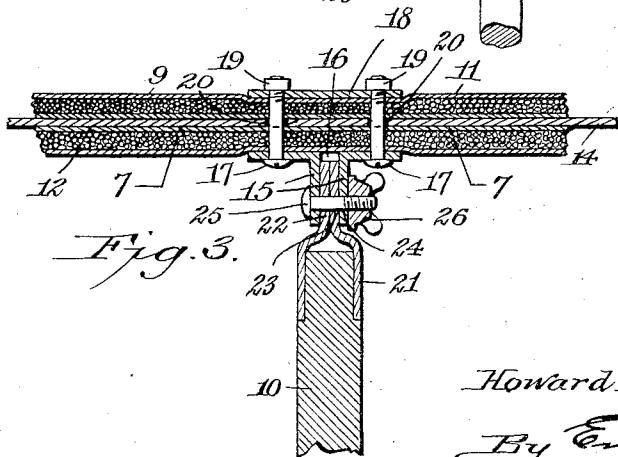
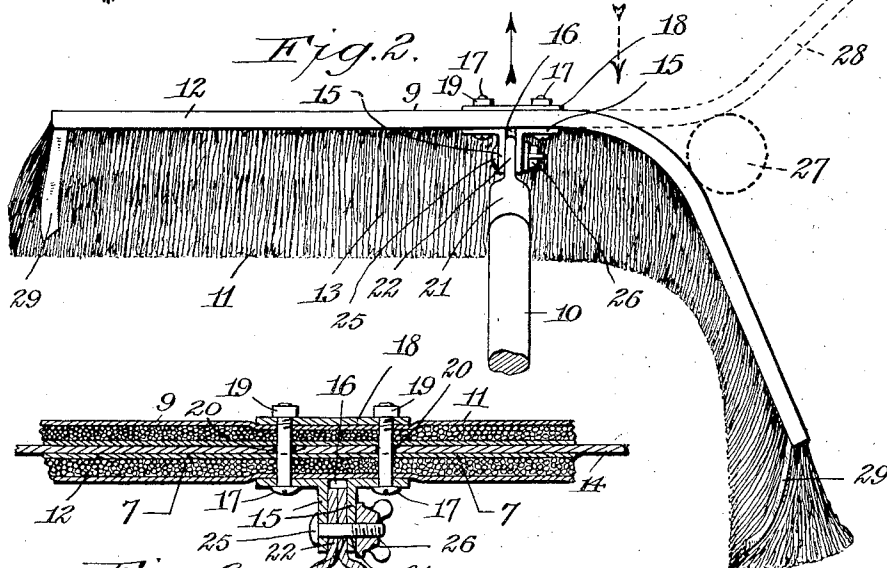
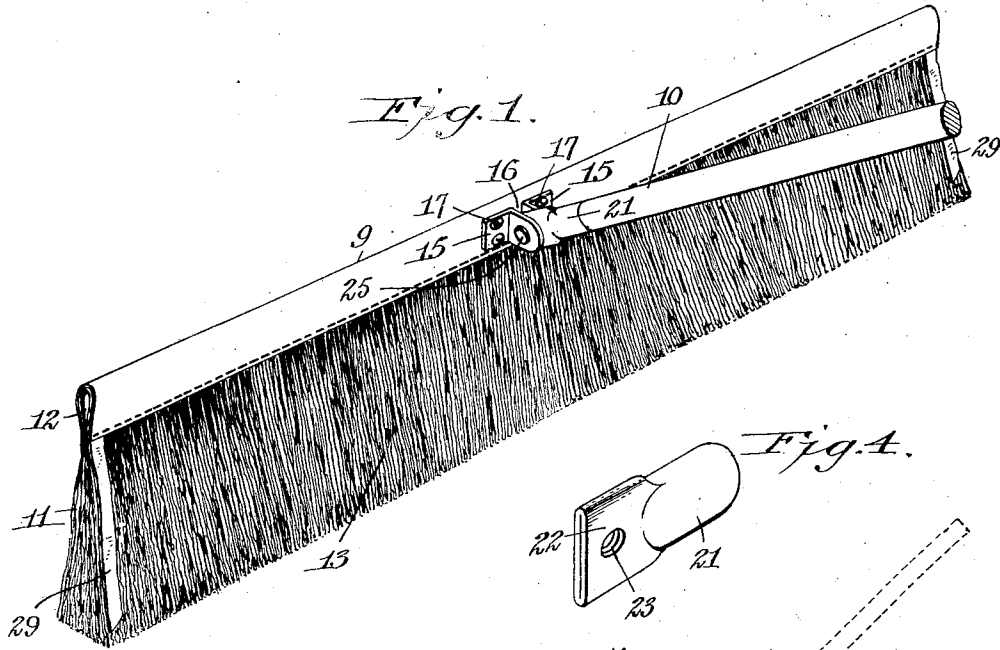
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2,060,012

POLISHING MOP OR DUSTER

Filed Aug. 26, 1933.

2 Sheets-Sheet 1



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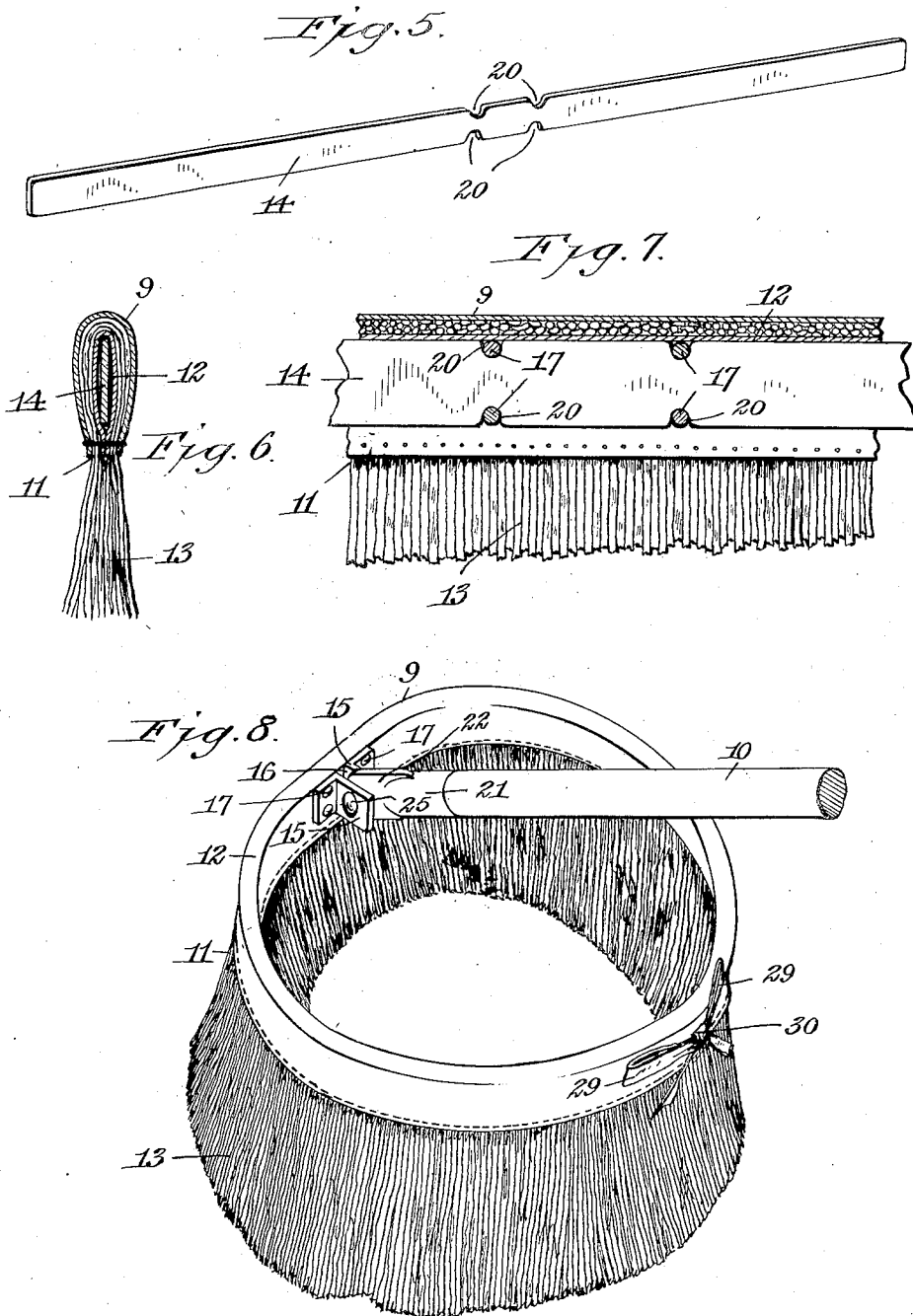
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POLISHING MOP OR DUSTER

Filed Aug. 26, 1933

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,060,012

POLISHING MOP OR DUSTER

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Application August 26, 1933, Serial No. 686,973

14 Claims. (Cl. 15—229)

My invention relates to improvements in mops or dusters, and it particularly relates to that type of mop or duster designed for polishing or dusting floors.

5 Mop heads now in general use are of a form having both transverse and longitudinal dimensions approximating each other, oftentimes being circular in form, many being more or less heart-shaped, and others having varying forms, but 10 all being more or less rigid so that it is necessary to move furniture about in order to properly dust or polish a floor; failure to do so resulting in the furniture being bumped and marred by reason of the fact that no yielding or flexible and 15 especially no resilient parts are provided to come in contact with the furniture. Moreover, considerable difficulty is encountered when attempting to thrust the mop head into corners or small spaces more or less inaccessible.

20 The primary object of my invention is the provision of a polishing or dusting mop having slender resilient portions readily insertable into spaces usually considered inaccessible and surface-padded or cushioned so that when coming in contact with an article of furniture or other object 25 they will become flexed and be self-conformable to the spaces through which the mop head is to be thrust; such flexed portions being self-recoverable to normal shape after passing through the spaces.

30 Another object of my invention is the provision of a mop head which is inherently resilient and capable of being used in a substantially rectilinear form with a handle disposed at a right angle thereto, yet being capable of being flexed 35 with a view of bringing the opposite ends thereof together to form a mop head of the conventional type, or closely approaching such a type, and in which the swab portion of the mop is fashioned into a form approaching the outline of a heart 40 and approximating dimensions in directions at right angles to each other which closely approach each other.

45 A further object of my invention is the provision of a resilient normally rectilinearly disposed mop or duster swab adapted for use in small spaces and provided with means at opposite ends to connect said ends together when flexing the swab so as to approximate the usual outline of a polishing or dusting mop in which the 50 dimension of the head in one direction approximates that at a right angle thereto.

55 A further object of my invention is the provision of a mop or duster head which is inherently resilient and normally retained in a straight-

lined condition, said head being flexible under strain so that when passing it between the legs of two articles of furniture, or between other spaced objects, the mop head may be thrust through such space, even though considerably 5 smaller in dimension than the normal length of said mop or duster head, said head having a handle secured between its ends so as to provide opposite resilient portions capable of being flexed individually or together in one direction 10 like or different degrees upon pushing or pulling the mop, depending upon the obstructions which it encounters under operation of the user.

A further object of my invention is to provide the conventional swab comprising assembled 15 strands of cotton or the like arranged in an extended series and having canvas or other flexible material secured to opposite sides of the series of strands to provide a tubular upper portion for the swab into which a resilient metallic strip is 20 adapted to be inserted, said strip being retained within said tubular upper portion in any approved manner, but preferably with screws or other fastening means serving to secure handle 25 brackets to the swab.

With the above and other objects in view to appear hereinafter, my invention consists in the novel features of construction and in the arrangement and combination of parts to be hereinafter described and more particularly pointed out in 30 the subjoined claims.

In the drawings:

Fig. 1 is a perspective view of my improved polishing or dusting mop shown with the handle broken away and the mop head in normal transversely-disposed rectilinear position. 35

Fig. 2 is a top plan view of the swab showing one of the resilient end portions encountering an obstruction to cause it to be flexed, while the opposite end portion is passing through free space 40 and retains its normal rectilinear condition.

Fig. 3 is an enlarged longitudinal section through the central portion of the mop head, showing the manner of securing the resilient retainer therein and also the manner of connecting 45 the handle thereto.

Fig. 4 is a detached perspective view of the ferrule forming part of the handle secured to the mop head.

Fig. 5 is a detached perspective view of the 50 resilient retainer strip forming part of the mop head.

Fig. 6 is an enlarged cross section through the upper portion of the mop head showing the resilient retainer strip inserted therein. 55

Fig. 7 is an enlarged longitudinal section through the mop head taken on line 7—7, Fig. 3.

Fig. 8 is a perspective view of the mop showing the end portions of the mop head flexed to bring their free extremities together and showing these extremities connected to form a mop head approximating the form of mop heads now in general use.

In the form in which my invention is illustrated, it comprises two main parts 9, 10, which I respectively term the mop head, and the handle secured to the mop head.

The mop head is formed of metallic parts and textile material, the textile material forming the swab, which in the main does not differ from swabs now used in polishing mops. The swab designated by the numeral 11 is constructed of parallel strands of cotton or the like arranged in an extended series to form a comparatively thick layer. At opposite sides of this layer of strands strips of cotton or other sheet material is placed, the textile structure thus formed being sewed along the edges of the strips of cotton and through the strands of fiber, after which the structure is folded centrally along the strips of cotton and sewed together to form a tubular upper portion 12 for the swab. This tubular portion is comparatively flat, and from the lower edge thereof the strands of cotton depend in a thick mass so as to form a comparatively flexible brush-like portion 13 of any desired height. The swab thus formed is therefore of a type in common use and it has a flexible or inherently resilient retainer strip 14 inserted into its tubular upper portion which is normally straight-lined so that when inserted into the swab the latter will be normally straight-lined from end to end.

Midway between its ends, the swab has suitable handle-fastening elements secured to one side of the tubular upper portion thereof, the elements being in the form of angular brackets 15 which are spaced apart, as at 16, and are secured to the swab by means of screw bolts 17, or in any other approved manner. The screw bolts 17 are passed through the brackets, through the tubular upper portion of the swab and through a plate 18 co-extensive with the brackets 15 and the space between them, nuts 19 being applied to the ends of the screw bolts and bearing against the plate 18.

Attention is directed to the fact that the resilient retainer strip 14 is held against movement within the tubular upper portion of the swab, and while this may be accomplished in any desired manner, I preferably provide this strip with notches 20 at its upper and lower edges through which the screw bolts 17 are passed, thus preventing endwise movement of the strip and guarding against the strip projecting from the ends of the tubular portion of the swab and causing furniture or other objects to be scratched or otherwise marred. The swab, the resilient retainer strip, the brackets 15, plate 18, and screw bolts 17 constitute the mop head.

The handle has a metallic ferrule 21 at its inner end which is formed of a sheet metal sleeve pressed together along a portion of its length to form a flat securing part 22 through which a bolt hole 23 is formed, and this bolt hole, when the ferrule is thrust between the brackets 15, is alined with bolt holes 24 in said brackets. Through the alined bolt hole a pivot bolt 25 is passed, the head of the bolt bearing against the outer side of one of said brackets, and a wing nut 26 threaded onto said bolt bearing against

the outer side of the other bracket. Thus the handle 10 may be positioned in any angular relation with respect to the mop head and be thus retained upon tightening said wing nut.

It will be apparent from the foregoing that I have provided a straight-lined flexible mop head and, by reason of the handle 10 being secured thereto midway between its ends, resilient opposite end portions are provided which are normally retained in alinement with each other by the resilient normally straight-lined form-retaining strip 14 inserted into the tubular portion of the swab.

As clearly shown in Fig. 2, when moving the swab in the direction of the full-lined arrow with free space to one side of a plane passing axially through the handle and a chair or desk leg encountered at the other side thereof, as indicated at 27, the swab head will be flexed at one side of the handle so as to move in contact with said leg without causing injury thereto while the mop head at the other side is retained in straight-lined condition. Continued movement of the mop in the direction of said arrow will result in further flexing of the mop head at one side of the handle so that the mop can be advanced forwardly and entirely clear of the desk or chair leg and proceed to polish or dust the floor beyond the leg. The mop head is then maintained in straight-lined position, due to the fact that the flexed portion of the mop head will have been returned to its normal straight-lined condition under the inherent resiliency of the form-retaining strip 14 therein; such action occurring as soon as the end of the flexed portion clears the desk or chair leg.

When drawing the mop in a reverse direction, as for example indicated by the dotted arrow in Fig. 2, that portion of the mop head previously flexed toward the free end of the handle will be flexed in a reverse direction, as indicated by the dotted lines at 28. Any obstruction encountered at the opposite side of the handle would cause flexure of the mop head on that side in the same manner as described with reference to the portion of the mop head encountered by the chair leg or desk leg 27.

By reason of the mop head being comparatively long and slender, either end thereof can be thrust into comparatively small spaces, such as are normally considered inaccessible to the conventional mop head. Thus my improved mop assures cleanliness in the remotest corners, as well as in the more exposed portions of a floor.

While I have referred to the mop head as being particularly adapted for polishing or dusting floors, it is quite apparent that the brackets 15 and plate 18 at opposite sides of the tubular portion of the swab form a rigid center, and these or some other medium providing a rigid center may be used as a hand grip after removing the pivoted handle 10 from the swab head. In such cases the mop head could be employed for dusting furniture and other articles, or such use may be provided for the mop head by merely shortening the handle 10.

It is, of course, understood that mop heads constructed according to this invention may be made in various lengths, depending on the conditions under which and surroundings at which they are to be used. In large quarters, such as hotel lobbies and the like, a comparatively long straight-lined mop head would be of advantage over one of medium length, and since in some instances

the purchaser may desire to use the mop in a form approaching those now in common use, I have provided means for connecting the ends of the normally straight-lined mop head together after flexing the portions of the mop head extending from opposite sides of the handle connection thereof. This may be accomplished in various ways, but I have provided a means which will in no manner interfere with the operation of the mop head while in straight-lined form, nor will it in any manner cause furniture or other objects to be marred.

With this in view, I provide at either the front or rear side of the swab at opposite ends thereof, tie straps 29, which may be strips of cotton or any other suitable material attached to the textile strips forming the tubular portion of the swab by the same stitching employed to form said tubular portion. These tie straps dangle downwardly from the tubular portion of the swab in the same manner as the cotton strands forming the brush portion of the swab, and it is only necessary to flex opposite portions of the swab, either forwardly or rearwardly, with a view of bringing the free extremities thereof together, after which they may be so retained by the tie straps 29.

In Fig. 8 I have shown the resilient portions of the swab bent rearwardly or in the direction in which the handle 10 extends, and whether or not the tie straps are at the inner or outer side of the swab, they may be easily tied together, as shown at 30. In this manner a swab head is formed which has considerable dimension longitudinally and transversely, in contradistinction to the straight-lined dimension illustrated in Fig. 1.

However, thus arranged it would be as difficult to operate the mop over a floor with furniture or other objects arranged close together, and as in the case of the mops now commonly in use, it would be found necessary to move the furniture, in order to properly polish or dust the floor. However, since with some purchasers accustomed to using a two-dimensioned swab, it may be found desirable to employ my improved swab in the form shown in Fig. 8, especially when there is a desire to clean in a superficial or haphazard manner. In the event, however, of a careful cleaning being considered advisable, and the mop is to be used in its normal one-way extended manner, it is simply necessary to untie the tie straps 29, whereupon the inherently resilient form-retaining strip 14 will snap into straight-lined form and thus retain the swab in a straight-lined condition. It is, however, to be understood that the swab head may be one-way extended, yet be otherwise than straight-lined.

By securing the handle to the mop head midway between its ends and providing a transversely extended fastening element, a rigid central portion is provided for the mop head, at opposite sides of which are resilient portions self-conformable to spaces larger than the rigid center portion and smaller than the maximum straight-lined length of the mop head, said resilient portions being subjected to degrees of flexure according to the width of the spaces through which the mop is being passed and the obstructions encountered and returning into aligned relation immediately resistance to advancement under pulling or pushing strain ceases, such strains being created by the resilient portions coming in contact with obstructions.

It will be apparent from the foregoing that I

have provided what may be termed a single or one-direction mop head formed of a single strand swab which is inherently resilient by reason of the fact that it has built into it a metallic resilient element which is straight-lined, or substantially so, and thus provides a frameless mop head which differs from any other mop head known, in that a rigid intermediate portion is provided merely by means of the connection of a handle thereto and free unrestrained resilient outwardly-extending portions which possess equal resiliency in both forward and rearward directions, which results in a mop head capable of being inserted into small spaces larger than the rigid portion of the mop head and smaller than the longitudinal dimension of said head.

Having thus described my invention, what I claim is:

1. A mop, comprising a mop head having a swab provided with a tubular portion along its upper edge, strands depending from said tubular portion and a resilient metallic strip devoid of bends inserted into said tubular portion, and a handle secured to said mop head between its ends to provide free outwardly-extending portions possessing like resiliency in both forward and rearward directions.

2. A mop, comprising a mop head having a swab provided with a tubular portion along its upper edge, strands depending from said tubular portion and a resilient normally straight-lined strip inserted into said tubular portion to normally maintain said swab in straight-line condition, means to prevent movement of said strip within said tubular portion, and a handle secured to said mop head between its ends and limiting the flexing of said swab to directions in the line of force applied to said handle, said swab being capable of flexing at opposite sides of said handle to like degrees in forward and rearward directions.

3. A mop, comprising a mop head having a swab provided with a tubular portion along its upper edge, a resilient normally straight-lined metallic strip inserted into said tubular portion, a handle secured to said mop head between its ends to provide opposite outwardly-extending free resilient portions having resiliency to like degrees in opposite directions, and means for securing said handle to said mop head serving also to prevent lengthwise movement of said metallic strip within the tubular portion of said swab.

4. A mop head, comprising a swab, a metallic resilient substantially straight-lined flat strip normally serving to retain said swab in transversely-disposed extended condition, and a handle secured to said swab between its ends and to said resilient strip to form free unrestrained outwardly extending portions.

5. A mop, comprising a mop head having a swab provided with a tubular portion along its upper edge, a normally straight-lined metallic strip inserted into the tubular portion of said swab, a handle for said swab disposed at a right angle thereto, and means of connection between said swab and said handle serving also to prevent lengthwise movement of said metallic strip.

6. A mop, comprising a mop head having a swab provided with a tubular portion along its upper edge, a resilient metallic strip inserted into the tubular portion of said swab and normally retaining said swab in substantially straight-lined transversely-extended position, a handle fastened to said mop head between its ends, and means of connection between said handle and said mop

head including a fastening element co-acting with said resilient metallic strip to prevent movement of said strip within the tubular portion of said swab and to provide an unrestrained free resilient portion for the mop head at one side of said handle capable of flexing to like degrees in a forward and rearward direction.

7. A mop, comprising a mop head having a one-direction swab, an inherently resilient substantially straight-lined metallic strip carried by said swab and serving to normally retain said swab in substantially straight-lined end-to-end extended condition, and means to provide a rigid intermediate portion for said mop head whereby the remaining portions extending outwardly therefrom are free to be flexed both forwardly and rearwardly to like degrees under contact with obstructions during use and be returned to normal position under the inherent resiliency of said metallic strip after clearing such obstructions.

8. A mop, comprising a mop head having a swab and a resilient element carried by said swab and serving to normally retain said swab in end-to-end extended condition, a handle secured to said mop head between its ends and having the portions thereof at opposite sides of said handle flexed when coming in contact with obstructions and returned to normal extended positions under the inherent resiliency of said element when clearing such obstructions.

9. A mop head, comprising a normally end-to-end extended flexible swab, a handle secured to said mop head approximately midway between its ends to provide a rigid intermediate portion, and means at opposite ends of said swab adapted to fasten said ends together when said swab is flexed.

10. A mop head, comprising a swab having a brush portion and a resilient metallic strip carried by said swab above its brush portion to normally hold said swab in end-to-end extended position, a handle secured to said swab midway between its ends to allow said swab to be curved and the ends thereof to be brought together, and tie straps secured to opposite ends of said swab and serving to tie the ends thereof together to form a mop head having approximately like dimensions in directions at right angles to each other.

11. A mop, comprising a swab having a tubular upper portion, a resilient straight-lined metallic strip inserted into the tubular portion of said swab and normally holding said swab in straight-lined condition, a handle secured to said mop head midway between its ends to allow the swab to be flexed and the ends thereof to be brought together, and tie straps secured to opposite ends of said swab holding said ends together when fully flexed, said swab being self-returnable to straight-lined condition upon untying said tie straps.

12. A mop, comprising a swab having a tubular portion along its upper edge, a normally straight-lined flexible metallic strip inserted into said tubular portion having a notch at one of its edges, a handle connection secured to the tubular portion of said swab including a part passed through said tubular portion and the notch of said metallic strip, and a handle secured to said handle connection.

13. A mop comprising a handle, a mop head disposed at a right angle to said handle and formed of a single length of swab material having depending strands and a substantially straight-lined inherently-resilient metallic strip carrying said mop material and having said handle secured thereto midway between its ends to provide free ended swab portions movable flexibly with said metallic strip when strained by contact with an obstruction, said resilient strip being returnable to normal position under its inherent resiliency when relieved of such strain and moving said swab material therewith.

14. A mop comprising a handle, a mop head disposed at a right angle to said handle and formed of a single length of swab material having a loop along one of its longitudinal marginal portions and strands depending from said loop and a substantially straight-lined inherently-resilient metallic strip entered into the loop of said mop material and having said handle secured thereto midway between its ends to provide free ended swab portions movable flexibly with said metallic strip when strained by contact with an obstruction, said resilient strip being returnable to normal position under its inherent resiliency when relieved of such strain and moving said swab material therewith.

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