Dec. 1, 1925.

1,563,745

N. S. HILLYARD

MOP

Filed Sept. 27, 1924

2 Sheets-Sheet 1

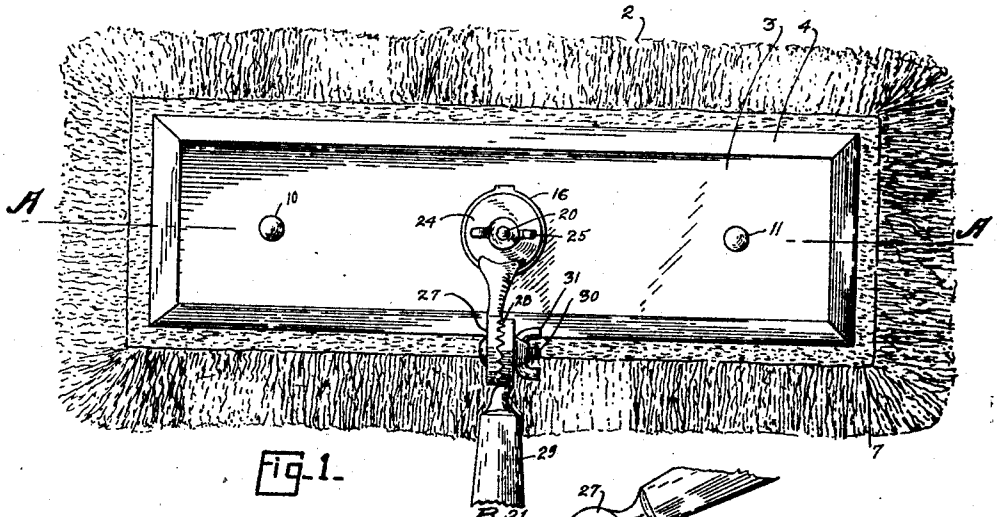


Fig. 1.

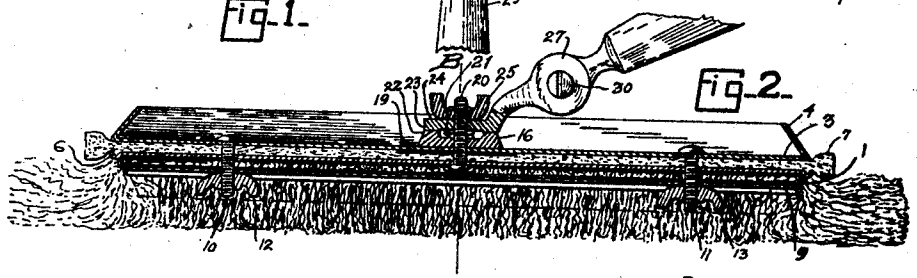


Fig. 2.

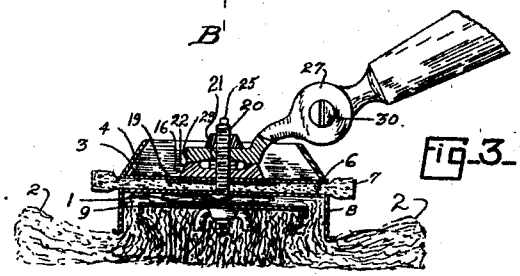
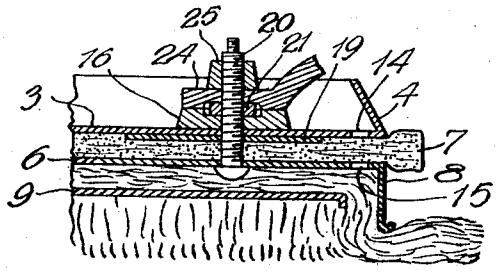


Fig. 3.

Fig. 3a



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2 Sheets-Sheet 2

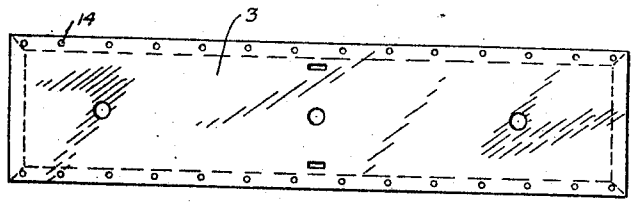


Fig. 4.

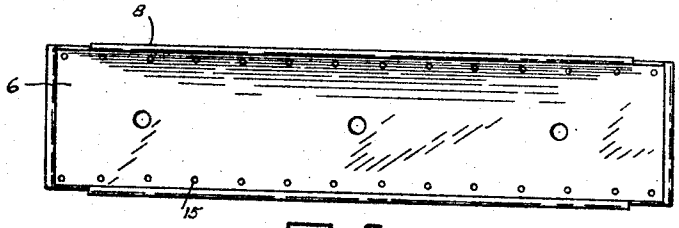


Fig. 5.

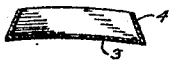


Fig. 6.

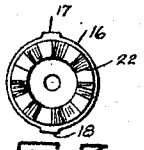


Fig. 7.

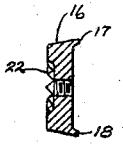


Fig. 8.



Fig. 9.

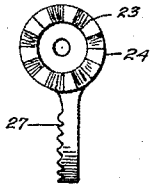


Fig. 10.

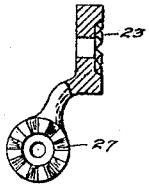


Fig. 11.

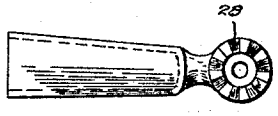


Fig. 12.

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UNITED STATES PATENT OFFICE.

NEWTON S. HILLYARD, OF ST. JOSEPH, MISSOURI.

MOP.

Application filed September 27, 1924. Serial No. 740,329.

To all whom it may concern:

Be it known that I, NEWTON S. HILLYARD, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Mops; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to mops and particularly to floor mops, sometimes designated polishing mops and the primary object of the invention is to provide a simple, durable and efficient mop construction whereby the swab may be conveniently assembled with the mop head and conveniently removed for the purpose of substitution cleaning or repairs.

The invention consists of certain novel parts and combination of parts all of which will be specifically described hereinafter, reference being had to the accompanying drawings, in which:

Fig. 1 is a plan view of the mop complete.

Fig. 2 is a sectional view on the line A—A of Fig. 1.

Fig. 3 is a sectional view on the line B—B of Fig. 1.

Figure 3ª is an enlarged detailed sectional view similar to that shown in Figure 3 taken on the line intersecting the aligned openings of the reservoir and swab plate.

Fig. 4 is a bottom view of the reservoir.

Fig. 5 is a bottom view of the swab casing or retainer.

Fig. 6 is a cross sectional view of the reservoir.

Fig. 7 is a plan view of the bottom ratchet member.

Fig. 8 is a cross sectional view through the bottom ratchet member.

Fig. 9 is a cross sectional view of the swab carrier.

Fig. 10 is a plan view of the ratchet link.

Fig. 11 is a view partly in section and partly in elevation of the link.

Fig. 12 is an elevational view of the handle socket.

The swab may consist of any suitable material but I have illustrated it as comprising a plurality of cords arranged transversely and secured together by a tape or fabric stitched longitudinally of the swab between the ends of the cords. The cords are generally preferable on account of the fact that they will feed the liquid by capillary attraction, thereby insuring liquid to all parts of the swab. I have therefore designated the swab fabric tape by the reference numeral 1 and the cords by the reference numeral 2. The particular novelty of this invention resides in the swab holder or mop head which is illustrated as comprising a reservoir or back plate 3 with upwardly and inwardly directed peripheral flange 4 to provide a pan-like receptacle into which the polishing liquid may be introduced. The plate 3 of the reservoir co-operates with a similar pan-like plate 6 between which may be clamped a buffer of felt or other suitable material designated by the reference numeral 7. While the members 3 and 6 are preferably co-extensive, the felt 7 is somewhat larger than the members 3 and 6 so that its edge may project beyond the plates 3 and 6 to prevent contact of metal with the polished surface as for example with the furniture, baseboards and the like. The flange 8 for the member 6 is directed oppositely to the flange 4 so that the member 6 constitutes a swab holder or mop fabric holder of trough-like construction so that the mop fabric or swab may be received within the trough-like member and be secured by a clamping plate 9. The clamping plate 9, the member 6 and the member 3 are all fastened together by the bolts 10 and 11 which extend through the members 3 and 6 and through the felt 7 between them. These bolts also extend through the tape 1 and they are provided on their lower ends with suitable fastening devices illustrated as wing nuts 12 and 13. The depending flange is of sufficient width to extend below the ends of the bolts 10 and 11 so that when the swab is fastened against the lower face of the member 6 the wing nuts and the end of the bolts will be raised above the floor due to two causes, that is, the width of flange 8 and the thickness of the mop fabric which extends over the edge of the holder. This is best shown in Figures 2 and 3. It will, therefore, be apparent that no metal parts can contact with the floor or the surface which is being polished and that liability of the furniture, baseboards or the

like becoming marred by the metallic sides of the holder will be entirely eliminated due to the protruding edge of the felt buffer 7.

The reservoir 4 has perforations 14 along its edge which coincide with similar perforations in the felt buffer and like perforations 15 in the swab holder. Therefore, when liquid is supplied to the reservoir 4 it will percolate through the openings 14 and 15 and throughout the openings in the felt to feed to the swab and the capillary attraction of the fibres of the mop fabric or swab will cause the liquid to flow into the fabric in a manner well understood. While I recommend that the felt be provided with openings to register with the openings 14 and 15 this may not be necessary in all cases. The advantage or disadvantage of using openings in the felt will depend upon the character of the liquids and the rapidity of feed decided, so it is not improbable that in some cases I may wish to eliminate the openings in the felt.

In a device of this class it is necessary to adjust the handle to various angles and positions depending upon the character of work to be performed so I have provided a connection between the mop head and handle socket whereby a substantially universal adjustment may be effected, that is, the handle socket may be adjusted in a lateral plane with respect to the mop head. Means are also provided for raising and lowering the handle to compensate for persons of different heights, as well as, to provide means whereby the mops may be introduced under furniture where there is little clearance and to this end the connecting means is illustrated as consisting of a lower ratchet plate 16 provided with studs 17 and 18 adapted to enter openings in the reservoir plate 3. The studs also enter openings in a retainer plate 19 on the under side of the member 3 and the bottom ratchet member 16 is secured in place by an upstanding bolt 20. The purpose of providing the studs on the lower ratchet plate 16 is to prevent its turning about its axis. The bolt 20 engages threads in the ratchet plate 16 and the ratchet plate is clamped rigidly to the member 3 by a nut 21. The plate 16 is provided with ratchet teeth 22 which engage ratchet teeth 23 on the lower face of the upper ratchet plate 24. The upper ratchet plate is held in fixed position by a wing nut 25. The wing nut is adapted to be loosened for the purpose of adjusting the upper ratchet plate axially with respect to the plate 16. The upper ratchet plate is provided with a like arm 26 having at one end a vertical ratchet plate 27. The teeth of which cooperate with the ratchet teeth 28 on the handle socket 29, the two ratchets being held in clamped position by bolt 30 and a wing nut 31, which is threaded into the member 27 and extends loosely through the member 28.

The handle not shown may be received in the socket in the usual way and by reason of the ratchet connection including the members 27 and 28 the handle may be adjusted vertically and secured in place by tightening the wing nut. The axial adjustment, that is the adjustment in a horizontal or lateral plane, may be effected by loosening the wing nut which holds the upper and lower ratchet plates 16 and 20 together.

It will be apparent from the foregoing description that an inexpensive, durable and easily assembled mop construction has been provided; that by reason of the fact that the felt buffer extends beyond the vertical walls of the holder, it will be impossible for metal to contact with the walls or the furniture, baseboards or the like and that the overlapping swab will prevent the edges of the swab retainer or holder from coming into contact with the surface to be treated. It will also be apparent that the recess or trough-shape swab holder will be of sufficient depth to maintain the fastening devices 13 and 14 and the ends of the bolts 10 and 11 above the floor surface.

While I have specifically described what at this time appears to me to be the very best form of my invention, it is obvious the changes in form, proportions and minor detailed construction may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim and desire to secure by Letters Patent is:

1. A mop comprising a mop head having a reservoir, a swab holder carried by the under side of said reservoir and having depending flanges to provide a swab receiving recess and means for fastening a swab in the recess, the reservoir and the adjacent wall of the holder having openings so that liquid may flow from the reservoir into the recess to contact with the swab and a pad arranged between the reservoir and swab holder sealing the space between the reservoir and swab holder at the edges thereof and projecting outwardly therefrom to thereby provide a buffer.

2. A mop comprising a reservoir, a swab holder having a peripheral flange to provide a swab recess, a pad clamped between the reservoir and the holder and having projecting edges to provide a buffer, a swab in the recess of the holder and means for feeding liquid from the reservoir to the swab.

In testimony whereof I affix my signature.

NEWTON S. HILLYARD.