March 8, 1932. H. HERTZBERG **1,848,481**

MOP WITH WRINGER

Filed March 17, 1930

Fig. 1

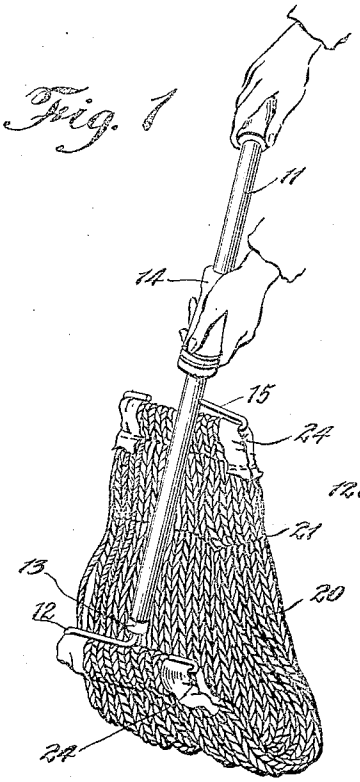


Fig. 6

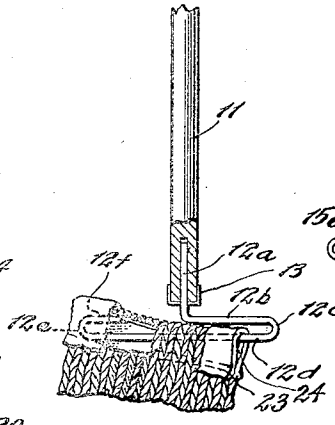


Fig. 7

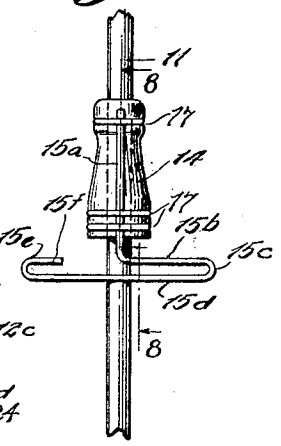


Fig. 5

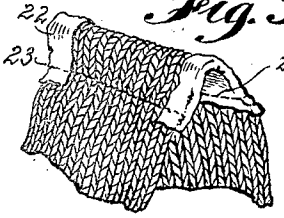


Fig. 8

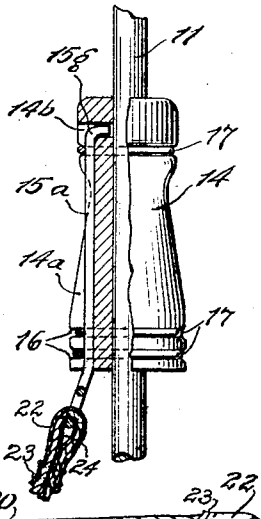


Fig. 2

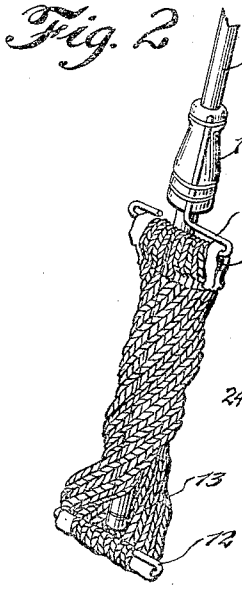
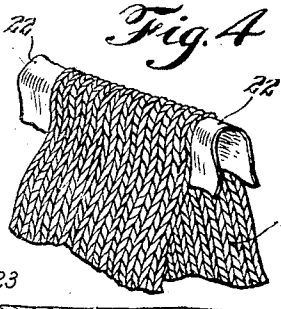


Fig. 4



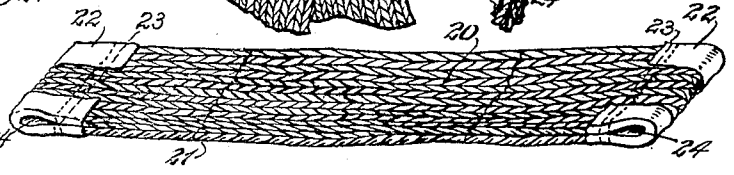


Fig. 3

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Patented Mar. 8, 1932

1,848,481

UNITED STATES PATENT OFFICE

HARRY HERTZBERG, OF BROOKLYN, NEW YORK, ASSIGNOR TO HERTZBERG PATENTS INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

MOP WITH WRINGER

Application filed March 17, 1930. Serial No. 436,462.

This invention relates to mops which are provided with means for wringing water from the mop cloth or other mop material, and particularly to that type of such mops in which the mop material is twisted around the mop handle for the operation of wringing.

It is the object of the present invention to provide a mop of this type which permits an instant exchange of the mop material by novel means of its attachment to the mop frame.

It is another object of the invention to construct the mop cloth in such a manner that it is better able to withstand the wear and tear of the wringing operation.

With these and other objects in view the invention consists in certain novel combinations and arrangements of parts which will become clearer as the description progresses and which are illustrated in the accompanying drawings forming a material part of these specifications and in which:

Fig. 1 is a perspective view of my wringer mop when ready for use.

Fig. 2 is a similar perspective view showing the mop during the wringing operation.

Fig. 3 is a perspective view of the mop material when separate from the frame.

Fig. 4 is a detail perspective view illustrating the manner of making the mop cloth.

Fig. 5 is a detail perspective view illustrating the completed reinforcement of the mop cloth.

Fig. 6 is a detail elevation showing the manner of attaching the mop cloth to the yoke at the lower end of the mop handle.

Fig. 7 shows the slidable mop sleeve and yoke in place on the mop handle.

Fig. 8 is a detail elevation of the mop sleeve partly in section to show the attachment of upper yoke to the mop sleeve.

Referring to the drawings, 11 represents a mop handle to which is attached at its lower end a yoke 12, preferably bent from a metallic rod. This yoke has a stem 12*a* (see Fig. 6) lodged in an axial aperture of handle 11 into which it is tightly driven. Outside of the mop handle the rod is bent to extend perpendicularly to the stem 12*a*, forming the leg 12*b* which extends a limited distance horizontally away from the handle 11. At 12*c* the direction of the rod is reversed forming bar 12*d* parallel to 12*b* and spaced therefrom. The bar 12*d* extends symmetrically equal distances to either side of stem 12*a* and its direction is reversed at 12*e* similarly to the bend at 12*b* so that the short portion 12*f* is in axial alinement with 12*b* but the end of 12*f* is spaced from stem 12*a* leaving an opening in the flat loop formed by the rod 12. The end of the mop handle 11 is preferably protected by a ferrule 13.

On mop handle 11 is slidably mounted a sleeve 14 preferably made from wood to provide a substantial hand-grip for the operator. To this handle is fastened a yoke 15 similar to yoke 12 above described, the loop portion of 15 is bent to have the same shape and parts 15*b*—*c*—*d*—*e*—*f* corresponding to 12*a*—*b*—*c*—*d*—*e*—*f* respectively. Stem 15*a* is lodged in a vertical groove 14*a* on the outside of sleeve 14 (see Fig. 8). The uppermost end 15*g* of bar 15 is bent perpendicularly towards the axis of mop handle 11 and occupies a transverse aperture 14*b* of sleeve 14. At the lower face of sleeve 14 bar 15 is bent angularly outward so that the plane of the loop portion forms an angle with the handle 11.

A plurality of annular recesses 16 are formed in the surface of sleeve 14 near the upper and lower ends of stem 15*a*. These recesses are occupied by strong wire rings 17 which press against stem 15*a* and lock it in groove 14*a*.

The mop cloth which I preferably use with the above described frame consists of mop cords 20 which are wound lying parallel to each other into an endless loop which when laid flat upon any surface provides two layers of mop material each of which is separately sewed transversely to unite the cords 20. At the opposite ends of the loop a strip of reinforcing fabric 22 is placed under the cords as shown in Fig. 4. The ends of these reinforcing strips which extend beyond the mop material are then looped around the same as shown in Fig. 5 and sewed to the mop material at 23 and both layers of mop cords sewed to each other to form a transverse pas-

sage or sheath 24 at both ends of the mop material. These passages are threaded over the ends 12*e* and 15*e* of the yokes 12 and 15 as illustrated in Fig. 6 passing a single layer of mop material through the opening between 12*f* and 12*a* or 15*f* and 15*a* into the interior of the yoke loops to assume the position illustrated in Figs. 1 and 6.

A particular advantage of the mop is the facility provided for exchanging the mop cloth without opening any fastening devices or tying means. The reinforcement of the sheath portions 24 and their friction against bars 12*d* and 15*d* holds these portions, also during the wringing operation, stretched along these bars as shown in Fig. 2. The manner in which the sleeve 14 is constructed is of particular advantage for wringing the mop as it has been found that sleeves of metallic tubing by reason of their small diameter do not afford sufficient leverage and easily slip in the hand of the operator particularly when wet.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

In a mop a handle, a sleeve of fibrous material slidably and rotatably mounted on said handle and provided with a longitudinal groove on its outside, mop material having one end attached to the lower end of said handle, a metallic yoke carried by said sleeve comprising a loop portion and a stem thereon extending longitudinally of said sleeve within the groove thereof and holding-means fixing said stem to said sleeve against longitudinal and rotary motion.

Signed at Brooklyn, in the county of Kings, and State of New York, this 12th day of March, A. D. 1930.

HARRY HERTZBERG.