April 23, 1929. G. P. REGAN 1,710,190

COMBINED MOP HOLDER AND WRINGER

Filed Nov. 16, 1927

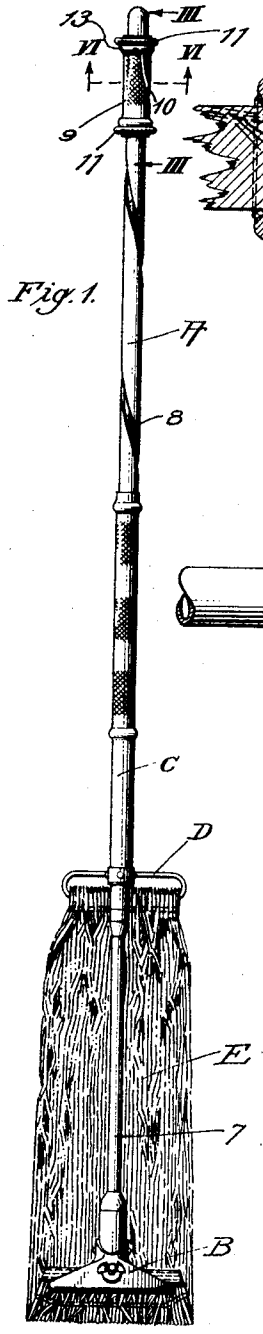

Fig. 1.

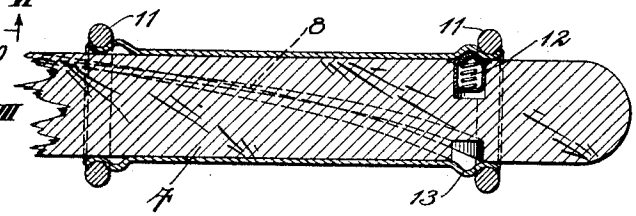

Fig. 3.

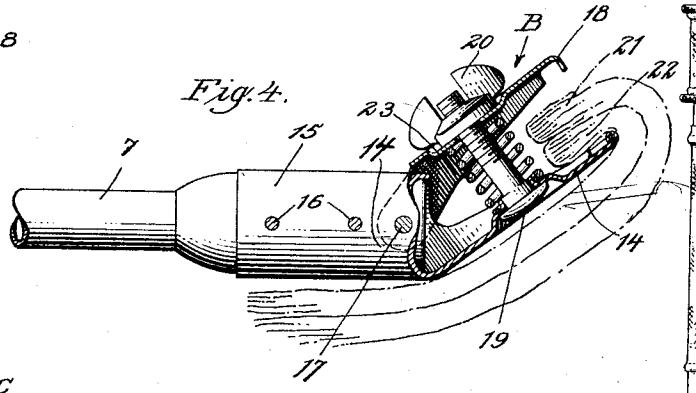

Fig. 4.

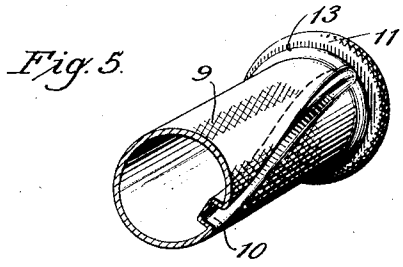

Fig. 5.

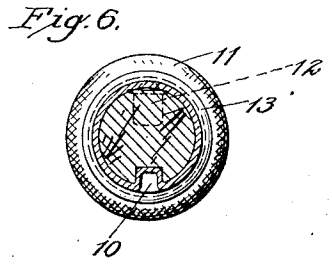

Fig. 6.

Fig. 2.

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COMBINED MOP HOLDER AND WRINGER.

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This invention relates to a mop holder and wringer of this type used by janitors when mopping floors, hallways, etc.

The object of the present invention is to generally improve and simplify the construction and operation of devices of the character described; to provide a mop holder to which any suitable type of mop may be attached, such as cloth mops, rope mops, etc.; to provide a wringing attachment whereby the mop may be easily manipulated and thoroughly wrung without soiling or wetting the hands of the operator; and further, to provide a wringing attachment whereby the initial twisting or wringing of the mop is rapidly accomplished and whereby a slower and more powerful wringing movement is thereafter imparted to insure complete wringing of the mop.

The mop and wringer are shown by way of illustration in the accompanying drawings in which:

Fig. 1 is a front view of the mop holder and wringer,

Fig. 2 is a similar view showing the position assumed by the mop during the wringing operation,

Fig. 3 is an enlarged section taken on line III—III, Fig. 1,

Fig. 4 is an enlarged section of the mop clamp,

Fig. 5 is a perspective view of a portion of the sleeve nut,

Fig. 6 is an enlarged cross-section taken on line VI—VI, Fig. 1.

Referring to the drawings in detail and particularly Figs. 1 and 2, A indicates the handle which may be constructed of wood or any other suitable material. Secured on the lower end of the handle is a mop clamp generally indicated at B. Slidably mounted on the handle is a tubular sleeve C, on the lower end of which is secured a loop-shaped mop holder D. The mop proper may be of any suitable construction, i. e., it may be a cloth mop or a rope mop as illustrated at E. The mop is passed through the loop D and the lower free ends are secured between the jaws of the clamp B. The mop assumes the position shown in Fig. 1 when in actual use and it is twisted about the reduced portion 7 of the handle, as shown in Fig. 2 when it is being wrung. A helical-shaped groove 8 is formed in the surface of the handle and extends substantially from the upper end to the tubular sleeve C. This helical-shaped groove, together with a sleeve-like nut indicated at 9, serves the function of imparting a rotary movement to the handle when the mop is to be wrung, this being accomplished by sliding the sleeve-like nut along the handle from the position shown in Fig. 1 to the position shown at 9^a in Fig. 2, the sleeve-like nut being held by one hand and pulled downwardly on the handle while the tubular sleeve C is grasped by the other hand. The sleeve nut 9 is tightly gripped when it is being pulled downwardly over the handle and a rotary movement is thus transmitted to the handle, and as the mop clamp is secured to the lower end of the handle, it will rotate with the handle while the loop D which is secured to the tubular sleeve C is held stationary with the other hand. Hence, the mop cloth is wrapped around the reduced portion 7 of the handle and may be thoroughly wrung.

The sleeve nut is perhaps best illustrated in Figs. 3, 5 and 6. It consists of an elongated sleeve 9 in which is formed a depression 10, this depression entering the helical groove 8 and serving as a key or thread in conjunction therewith. The opposite ends of the sleeve are provided with rings such as indicated at 11 which are free to rotate and these rings are grasped when it is desired to move the sleeve nut from one end of the handle to the other, without imparting rotary movement to the handle, rotary movement being only imparted to the handle when the sleeve nut is grasped and secured against rotation. A spring latch 12 is mounted in the upper end of the handle and this latch engages with an annular groove 13 formed in the sleeve nut, thus securing the sleeve nut in its uppermost position shown in Fig. 1 when not in use.

The mop clamp may be constructed in any suitable manner but preferably, as shown in Fig. 4, it consists of a stationary jaw 14 which is secured to the lower end of the handle by means of a tubular extension 15 formed thereon, rivets 16 or the like being passed through the handle and sleeve to secure it against removal. Pivotally mounted on the sleeve 15, as at 17, is a movable jaw 18. Secured to the stationary jaw is a bolt 19. This extends through a perforation in the pivoted jaw 18 and the outer end is provided with a thumb nut 20. By rotating the nut, the movable jaw may be brought into clamping engagement with the free ends of the mop indicated by

dotted lines at 21 and 22. They may thus be rigidly secured against removal when the mop is in place. A spring 23 surrounds the bolt 19 and is interposed between the two jaws, this spring serving the function of automatically opening the pivoted jaw when the nut is in screw and the mop is to be released.

In actual operation, the mop will normally assume the position shown in Fig. 1. As the mop becomes soiled, it is desired to rinse it and wring it out. This is accomplished by dipping the mop in a bucket or like receptacle and then sliding the sleeve C up and down on the handle so as to thoroughly rinse and swash the mop. When it is thoroughly rinsed, the sleeve is pulled up to the position shown in Fig. 1. It is there grasped with one hand while the other hand grasps the sleeve nut 9. The sleeve nut 9 is then pulled downwardly as shown in Fig. 2 and as it is securely grasped against rotation by the hand, the key will engage the helix 8 and thereby impart a rotary movement to the rod and the mop clamp B, and the mop cloth will thus wrap or wind itself around the reduced portion 7 of the handle, as shown in Fig. 2. The initial movement of wrapping or wringing the mop is rapidly accomplished by a mere downward pull on the sleeve nut 9. A slower and more powerful wringing movement may thereafter be imparted to insure complete wringing of the mop cloth by rotating the sleeve nut and sliding it downwardly a slight distance and then holding the nut stationary and turning it, together with the rod. This may be done two or three times and the powerful wringing action is thus exerted at the last moment, this being accomplished without changing the pitch of the helical groove. After the mop has been wrung, it is necessary to unwind it to assume the position shown in Fig. 1 and this is accomplished by merely sliding the sleeve nut in the reverse direction, while grasping it. During the reverse or upward movement of the sleeve nut a reverse rotary movement is transmitted to the handle and the mop is thus unwound and ready for use when the sleeve nut reaches its uppermost position and here engages the spring latch 12, being thus retained until it is again required.

While certain features of the present invention are more or less specifically described, I wish it understood that various changes may be resorted to within the scope of the appended claims. Similarly, that the materials and finishes of the several parts employed may be such as the manufacturer may decide or varying conditions or uses may demand.

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

1. A device of the character described, comprising a handle, a tubular sleeve on the lower end of the handle in which the handle may move longitudinally and also rotate, a loop on the lower end of the sleeve, a clamp on the lower end of the handle, a mop supported by the loop and secured by the clamp, and a member slidable on the handle whereby a rotary movement is transmitted to the handle and the mop clamp and whereby the mop is wound around the handle at a point intermediate the clamp and the loop on the lower end of the sleeve, and thereby causing the mop to be wrung.

2. A device of the character described, comprising a handle, a tubular sleeve on the lower end of the handle in which the handle may move longitudinally and also rotate, a loop on the lower end of the sleeve, a clamp on the lower end of the handle, a mop supported by the loop and secured by the clamp, a helical thread member on the handle, and a nut slidable on the handle whereby a rotary movement is transmitted to the handle and whereby the mop is wound around the handle at a point intermediate the clamp and the loop on the lower end of the sleeve, and thereby causing the mop to be wrung.

3. A device of the character described, comprising a handle, a tubular sleeve on the lower end of the handle in which the handle may move longitudinally and also rotate, a loop on the lower end of the sleeve, a clamp on the lower end of the handle, a mop supported by the loop and secured by the clamp, a helical thread member on the handle, a sleeve slidable longitudinally of the handle, means on the sleeve engageable with the helical thread on the handle, said sleeve when grasped and held against rotation and when moved longitudinally of the handle imparting a rotary movement to the handle and the mop clamp so as to wind the mop around the handle at a point intermediate the clamp and the loop on the lower end of the sleeve, said sleeve and nut also adapted to rotate the handle while held in a stationary position.

4. A device of the character described, comprising a handle, a tubular sleeve on the lower end of the handle in which the handle may move longitudinally and also rotate, a loop on the lower end of the sleeve, a clamp on the lower end of the handle, a mop supported by the loop and secured by the clamp, a helical thread member on the handle, a sleeve slidable longitudinally of the handle, means on the sleeve engageable with the helical thread on the handle, said sleeve when grasped and held against rotation and when moved longitudinally of the handle imparting a rotary movement to the handle and the mop clamp so as to wind the mop around the handle at a point intermediate the clamp and the loop on the lower end of the sleeve, said sleeve and nut also adapted to rotate the handle while held in a stationary position, and means whereby longitudinal movement may be imparted to the sleeve without imparting rotary movement to the handle.

5. A device of the character described, comprising a handle, a tubular sleeve on the lower end of the handle in which the handle may move longitudinally and also rotate, a loop on the lower end of the sleeve, a clamp on the lower end of the handle, a mop supported by the loop and secured by the clamp, a helical thread member on the handle, a sleeve slidable longitudinally of the handle, means on the sleeve engageable with the helical thread on the handle, said sleeve when grasped and held against rotation and when moved longitudinally of the handle imparting a rotary movement to the handle and the mop clamp so as to wind the mop around the handle at a point intermediate the clamp and the loop on the lower end of the sleeve, said sleeve and nut also adapted to rotate the handle while held in a stationary position, and a latch member for retaining the sleeve in an inoperative position.

6. A device of the character described comprising a handle, a tubular sleeve on the lower end of the handle in which the handle may move longitudinally and also rotate, a mop, means securing one end of the mop to the lower end of the sleeve and the opposite end of the mop to the lower end of the handle, a helical thread on the handle, and a nut slidable on the handle whereby a rotary movement is transmitted to the handle and whereby the mop is wound around the handle at a point intermediate the lower end of the sleeve and the lower end of the handle, thereby causing the mop to be wrung.

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