May 8, 1923. 1,454,544

J. L. JOYCE

MOP

Filed Nov. 14, 1921

FIG. 1.

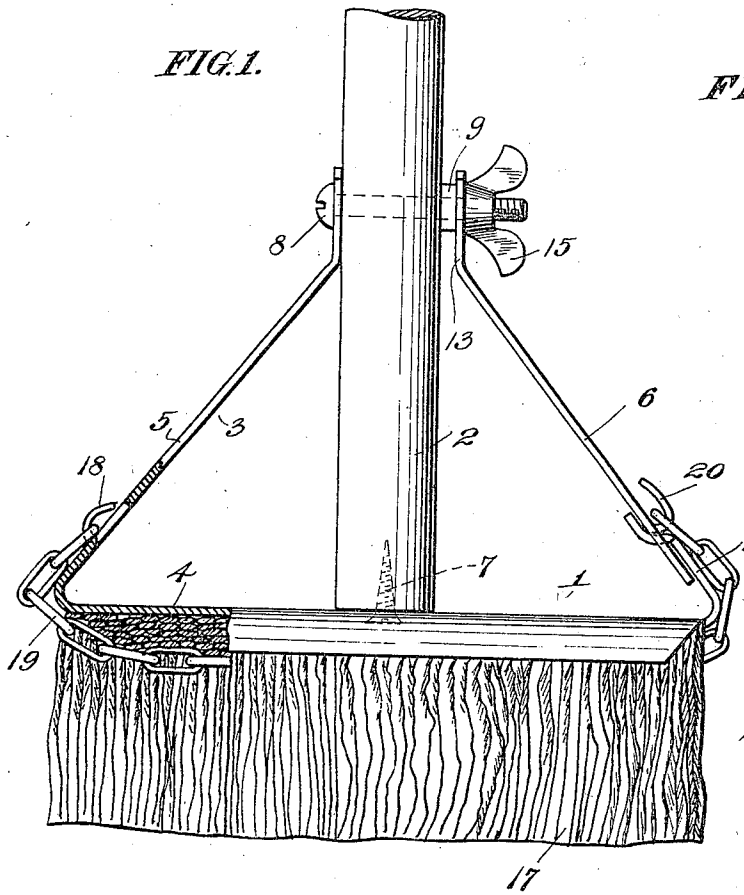
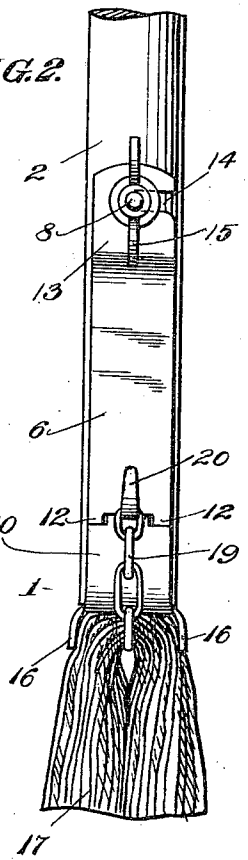


FIG. 2.



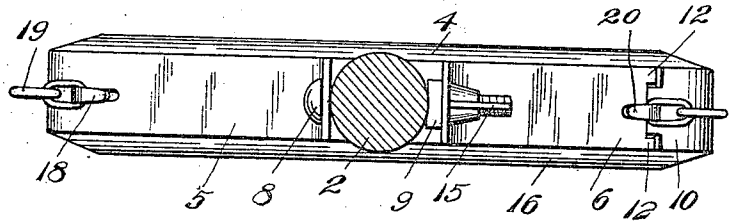


FIG. 3.

FIG. 4.

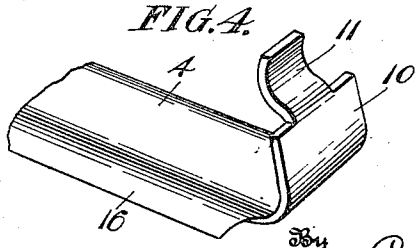
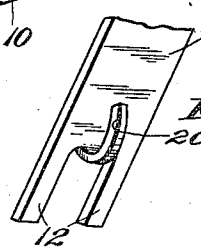


FIG. 5.



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Patented May 8, 1923. 1,454,544

UNITED STATES PATENT OFFICE.

JOHN L. JOYCE, OF COLUMBUS, OHIO.

MOP.

Application filed November 14, 1921. Serial No. 514,847.

To all whom it may concern:

Be it known that JOHN L. JOYCE, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, has invented certain new and useful Improvements in Mops, of which the following is a specification.

This invention relates to improvements in mops, and has particular reference to an improved mop holder wherein features of construction are provided for the purpose of securing and removably retaining the fabric member of the mop in operative relationship with the holder.

Another object of the invention resides in the provision of a mop holder wherein is embodied a relatively elongated handle and a substantially triangular holding or clamping frame on the lower end thereof, and wherein the frame is formed to include a flexible chain or cable element capable of being tautly drawn and maintained at a tension for the purpose of frictionally retaining the cloth or fabric element of the mop in a retained position in connection with the frame.

A further object of the invention rests in forming the frame to include a pivotally movable arm with which one end of the chain or cable may be connected, the said arm being so constructed and mounted that upon oscillation thereof toward the handle of the mop, the said chain or cable will be placed under tension and drawn tautly toward the base portion of the said triangular frame.

Other objects of the invention are to provide a mop holder of simple, inexpensive and yet efficient construction, in which the cloth or fabric element may be connected or disconnected with the holder quickly and securely and with but a minimum of difficulty, and wherein the chain element may have its effective length varied so as to adapt the same to mop cloths of varying proportions.

With these and other objects in view, as will appear as the description proceeds, the invention consists in the novel features of construction, combinations of elements and arrangements of parts, hereinafter specifically described and distinctly pointed out in the appended claims.

In the accompanying drawings, forming a part of this specification, and in which similar characters of reference denote like and corresponding parts throughout the several views thereof:

Figure 1 is a side elevation of the improved mop comprising the present invention.

Figure 2 is an edge elevation thereof.

Figure 3 is a top plan view, the staff of the holder being shown in section.

Figure 4 is a detail perspective view of the fulcrum end of the securing frame, and,

Figure 5 is a detail view disclosing the lower end of the movable lever arm of the frame.

Referring more particularly to the details of construction of my improved holder, the numeral 1 designates the holder in its entirety, the same being formed to include an elongated handle or staff 2, of any suitable length and usually formed from wood, so as to possess the necessary degree of strength in construction and to secure lightness in weight. The lower part of the handle or staff 2 is provided with a metallic holding frame 3 which, in this instance, is in the form of an equilateral triangle, and includes a base 4, an integral and immovable arm 5 and a separable and pivotally movable companion lever arm 6. The base 4 of the frame is rigidly secured by means of a screw or other fastening device 7 to the bottom of the staff 2, while the upper end of the arm 5 is vertically bent so as to lie evenly in engagement with the side of the staff 2 and is secured to the latter by means of a bolt 8, which passes transversely through an aperture provided in the upper end of the arm 5 and through a registering bore formed transversely in the staff 2, the said screw being equipped with a threaded nut 9 capable of frictionally engaging with the staff for the purpose of drawing the head of the bolt tightly against the upper end of the arm 5 and to thereby bind the latter firmly and securely in connection with the staff. Thus, through the provision of the screw 7 and the bolt 8, the frame 3 as a whole will be firmly retained in conjunction with the bottom of the staff.

The end of the base 4, opposite to the arm 5 is annularly upturned, a short distance as at 10, and terminates in the reduced hook shaped end 11, which constitutes a fulcrum seat for the movable lever arm 6. This arm has its lower end, as shown in Figure 5, bifurcated to produce spaced legs 12, which

straddle the hook shaped end 11 so that the latter will provide a seat for the arm 6, about which said arm will be permitted to oscillate as if swinging from a pivotal point. The upper end of the lever 6 is angularly bent as at 13, and provided with a laterally directed open ended slot 14, which receives the threaded projecting end of the bolt 8. This end of the bolt is equipped with a wing nut 15, which by being tightened against the end 13 of the arm 6, will serve to retain the latter in clamped engagement with the bolt 8 and thereby serving to produce a rigid frame construction on the lower end of the staff 2.

The base of the frame is provided with spaced depending side walls 16 capable of producing a longitudinally extending groove in said base which receives the intermediate portion of a cloth or fabric mop element 17, usually formed from comparatively soft lengths or strands of fabric. To draw the mop element upwardly into said groove and to thereby frictionally maintain the same in operative relationship with the frame 3, the arm 5 of the latter is formed to include an integral hook 18, with which is connected one of the end links of a clamping chain 19. This chain, as shown, extends around and beneath the intermediate portion of the mop element 17, and by the application of tension applied to the chain, the latter will be forced toward the base 4, thus drawing the intermediate portion of the mop element into the groove of the base 4 and frictionally confining the said mop element between the intermediate links of a chain, the side walls 16 and the upper wall of the base 4, as will be clearly understood. The other end of the chain, that is, the end opposite to that associated with the hook 18, is adapted to be connected with a hook 20, integrally or otherwise formed upon the lower end of the lever arm 6.

In operation, the mop element is first placed over the intermediate links of the chain 19, one end of the latter being connected with the hook 18. The lever arm 6 is then disconnected with the bolt 8, and oscillated outwardly. When in this position the other end of the chain is connected with the hook 20. Then, the final clamping of the mop element is effected by oscillating the lever arm 6 inwardly, against the resistance offered by the compressing of the mop element into frictional engagement with the base 4. When the final degree of friction or compression desired has been obtained, the slot 14 of the lever arm is positioned so that the bolt 8 will pass therethrough. Then by tightening the nut 15, the said lever arm is maintained in its final position and one which will serve to maintain the mop element secured against accidental displacement. By this construction, it will be observed that to connect or disconnect the mop element with the frame, it is simply necessary to rock the lever arm 6. It will be understood that the chain can be adapted to mop elements of varying proportions by associating any of the end links of the chain with either of the hooks 18 or 20.

What is claimed is:

1. A mop holder comprising a staff, a holding frame carried by the lower end of said staff, said frame including a transversely extending base member grooved to accommodate a flexible fabric mop element, a chain connected with said frame contiguous to one end of said base member, the opposite end of said base member being upwardly bent toward said staff, a lever arm pivotally mounted upon the upwardly bent end of said base member and forming a continuation thereof, a hook carried by said lever arm and with which said chain is adapted to be engaged after being flexed about the upwardly bent end of said base member, and a detachable connection between the upper end of said lever arm and staff.

2. A mop holder comprising a staff, a base member fixed transversely of the staff and having one end terminating in a fixed arm which has its upper end secured to said staff, the other end of said member having a hook thereon, a lever arm having spaced legs on one end for straddling said hook to pivotally and detachably connect said arm with the base member, the other end of said arm being detachably connected with the staff and a flexible member having one end connected with the fixed arm and its other end connected with the lever arm.

In testimony whereof I affix my signature.

JOHN L. JOYCE.