April 26, 1932. V. B. BYARS 1,855,181

MOP

Filed March 28, 1930 3 Sheets-Sheet 1

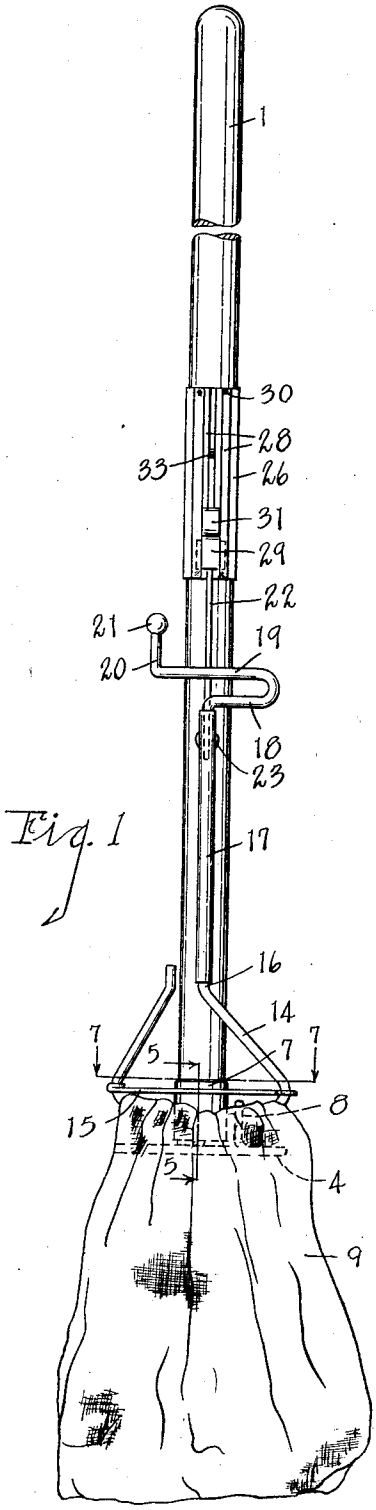


Fig. 1

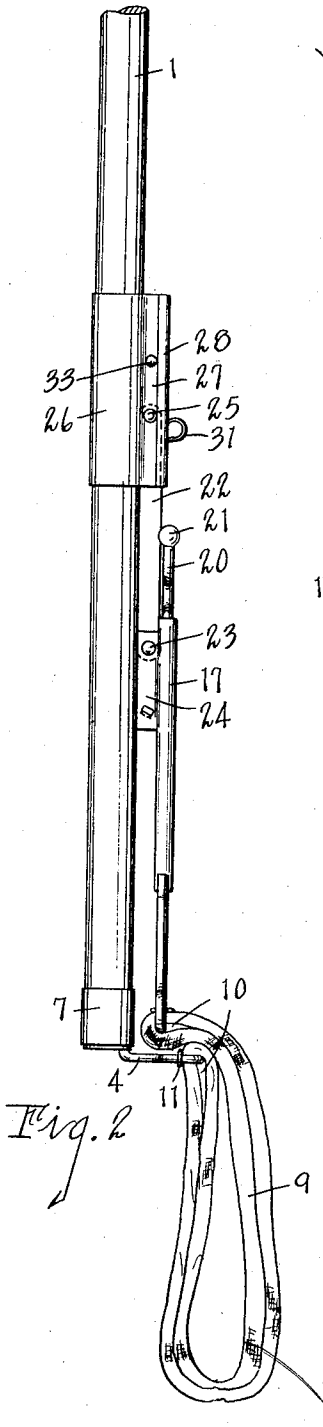


Fig. 2

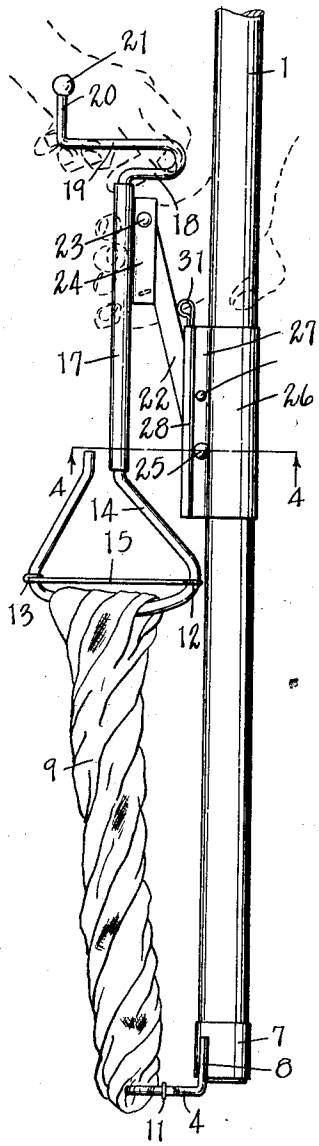


Fig. 3

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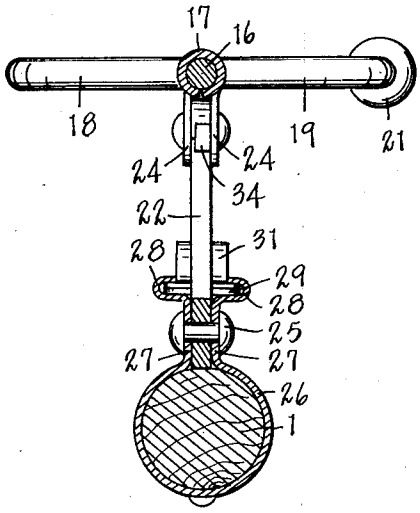


Fig. 4

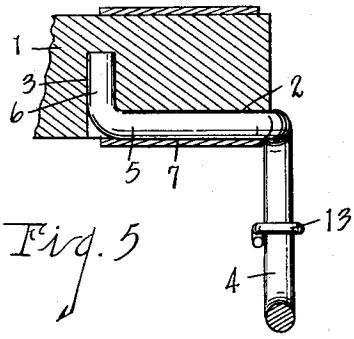


Fig. 5

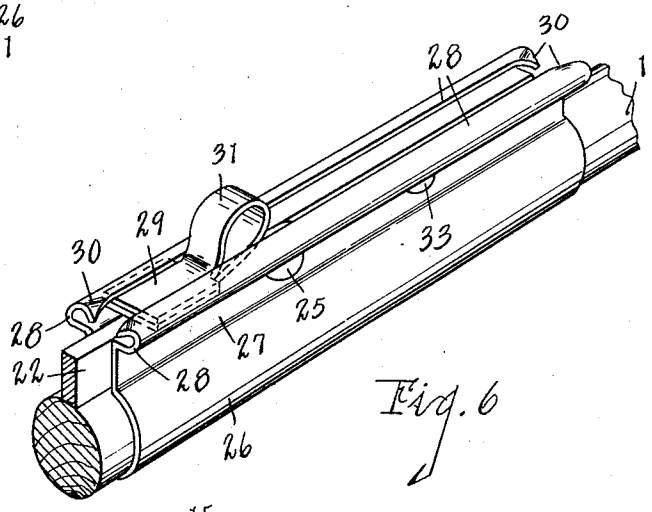


Fig. 6

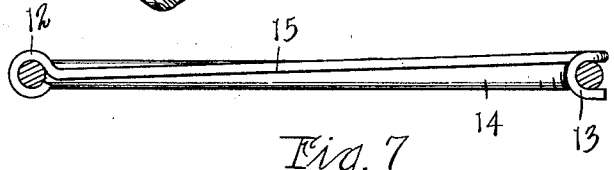


Fig. 7

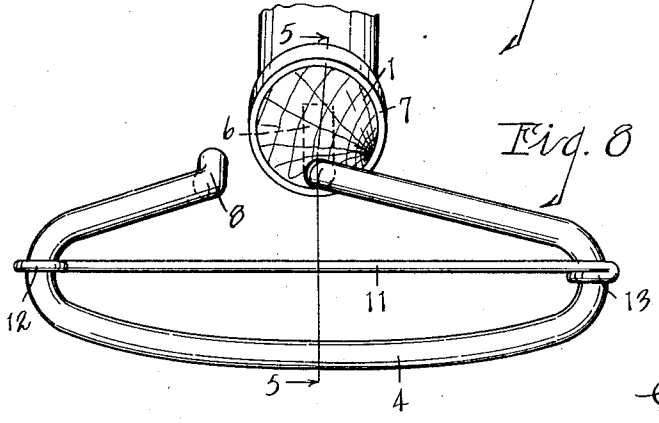


Fig. 8

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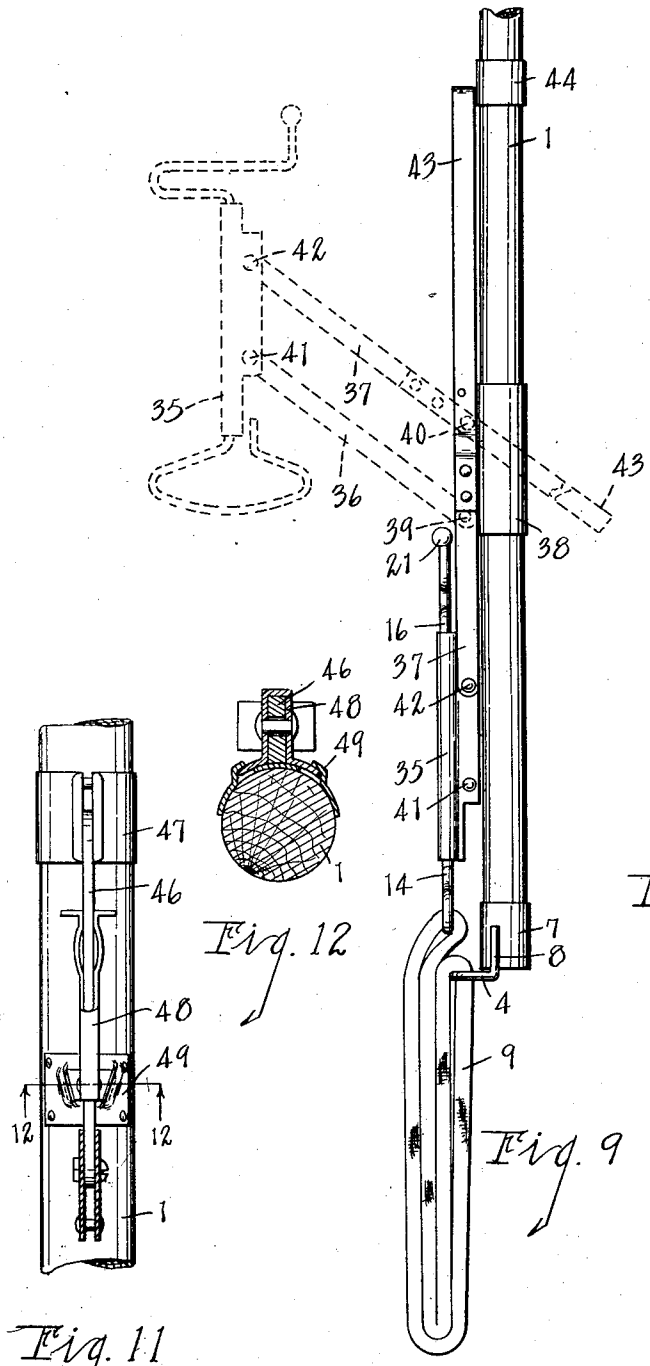


Fig. 9

Fig. 12

Fig. 11

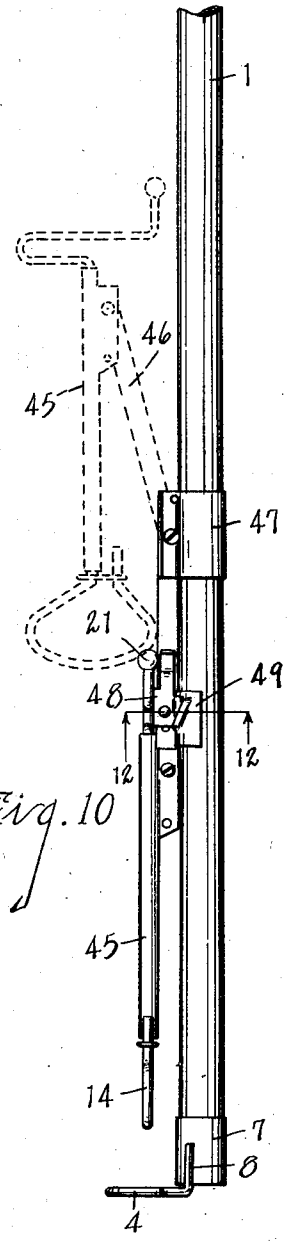


Fig. 10

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Patented Apr. 26, 1932 1,855,181

UNITED STATES PATENT OFFICE

VERDA B. BYARS, OF GOSHEN, INDIANA

MOP

Application filed March 28, 1930. Serial No. 439,554.

The main objects of this invention are:

First, to provide a wringer mop which is very convenient to manipulate.

Second, to provide a wringer mop which is comparatively light in weight and at the same time strong and durable.

Third, to provide a structure having these advantages which is very economical in its parts and the parts easily assembled.

Objects relating to details and economies of my invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is illustrated in the accompanying drawings, in which:

Fig. 1 is an inverted view of a mop embodying the features of my invention, the handle being partially broken away.

Fig. 2 is a side view with the handle partially broken away.

Fig. 3 is a side view with the handle partially broken away illustrating the mop adjusted for wringing, the position of the hands of the operator being indicated by dotted lines.

Fig. 4 is an enlarged transverse section on line 4—4 of Fig. 3.

Fig. 5 is a detail section on line 5—5 of Fig. 1 showing details of the head mounting.

Fig. 6 is an inverted fragmentary perspective view showing details of the supporting bracket for the mop holder.

Fig. 7 is an enlarged detail of the mop holder on line 7—7 of Fig. 1.

Fig. 8 is a perspective view of the mop head.

Fig. 9 is a side elevation of a slightly modified form or embodiment of my invention, parts being shown in wringing position by dotted lines.

Fig. 10 is a side elevation with the handle partially broken away of still another modification, the parts in wringing position shown by dotted lines.

Fig. 11 is an inverted fragmentary view of the parts of the structure shown in Fig. 10.

Fig. 12 is a sectional view on line 12—12 of Figs. 10 and 11.

In the preferred embodiment of my invention shown in Figs. 1 to 8 inclusive, the handle 1 is provided with a longitudinal groove 2 and a radial bore 3 at the inner end of this groove.

The loop-like head 4 is formed integrally of a piece of rod, one end of the loop terminating in a laterally disposed shank 5 disposed in the groove 2, the shank having a lug 6 at its end engaged in the bore 3. The ferrule or sleeve 7 is slipped over the shank, clamping it in the groove 2, the lug supporting the head against longitudinal movement. The head is thus secured to the shank without the aid of screws or bolts and at the same time the connection is very substantial and is capable of withstanding severe strains.

The other arm of the loop terminates in a guard finger 8 which is disposed parallel and in spaced relation to the handle so that one end of the mop 9 which has loops 10 at its ends may be engaged with the head by passing over this finger.

I preferably provide in this connection a wire retaining clip 11 having an eye 12 at one end engaging one side of the head and an outwardly facing hook 13 at the other end engaging the opposite side of the head.

This clip is of resilient material so that it may be sprung to engage and disengage the hook 13, its resiliency retaining the hook in engagement.

The other loop of the mop cloth is engaged with the loop-like holder 14 which has a guard 15 corresponding to the guard 11. This holder is provided with an integral shank 16 journaled in the support 17.

The spindle is provided with a crank 18 preferably formed integrally therewith and being of U-shape, the outer arm 19 of the U-shaped crank being longer than the inner arm so that it extends to both sides of the spindle and terminates in a finger piece 20 having a knob 21 at its end.

With this form of crank, the spindle may be rapidly rotated by grasping the finger piece until it is desired to apply wringing stress when the outer arm of the crank may be grasped by the operator as is indicated in Fig. 3 so that substantial wringing stress may be easily applied without injuring the

hand of the operator and without likelihood of the hand slipping from the crank.

The support 17 is supported by the link 22 which is pivoted to the support at 23, the support having spaced flanges 24 to receive the link. The link is pivotally connected at 25 to the bracket 26 mounted upon the handle, this bracket as is also the support 17 being formed as sheet metal stampings.

The bracket 26 has a barrel portion embracing the handle and spaced flanges 27 between which the link is disposed. The edges of these flanges are formed into inwardly facing channels 28 providing a slideway for the locking slide 29, this slide being retained in the ways by indenting the outer ends of the channels at 30 providing stops for the slide.

The slide 29 is formed of a piece of metal folded upon itself to provide a finger piece 31 and plate-like slide portions which frictionally engage in the channels so that the slide remains in its adjusted positions.

The link 22 being pivoted to the bracket 26 between its flanges and also to the holder between the flanges may be sprung into supporting engagement with the handle as shown in Figs. 1, 2 and 6, being retained in that position by moving the slide 29 forwardly to the position shown in Fig. 6. In this position the holder 14 is supported in close proximity to the head of the mop as shown in Figs. 1 and 2.

When it is desired to wring the mop, the locking slide 29 is retracted which permits the link being swung rearwardly to the position shown in Fig. 3 in which position the holder may be grasped by the hand grasping the handle as indicated by dotted lines in Fig. 3 thereby supporting it during the wringing operation.

The rivet 33 limits the rearward swing of the link on the bracket while the stop 34 on the holder limits the swing of the support on the link so that the parts are securely held in position during the wringing operation.

With the parts thus arranged, the mop is held in proper position for use on the handle, may be quickly released and swung to wringing position and the wringing mechanism may be easily manipulated.

In the modification shown in Fig. 9, the holder support 35 is supported by a pair of links 36 and 37 pivoted to the bracket 38 at 39 and 40 respectively and to the holder at 41 and 42 so that the links are supported in parallel relation and serve to support the holder against tilting movement. The link 37 is provided with an operating lever or arm 43 which may be sprung outwardly to pass the handle, the parts being supported in operative position, shown by full lines in Fig. 9, by engagement of this lever with the handle which is provided with a metal wear sleeve 44.

In the modification shown in Fig. 10, the support 45 is mounted on a link 46 pivotally connected to the bracket 47, a locking slide 48 being mounted on the link to coact with the keeper 49 mounted on the handle, this locking slide holding the link in supporting engagement with the handle as is the case in the embodiment shown in Figs. 1 to 8 inclusive.

While the several parts are formed as sheet metal stampings with a view of lightness, they are so formed and arranged that the structure possesses the requisite strength.

I have not attempted to show other embodiments and adaptations contemplated by me as it is believed that this disclosure will enable those skilled in the art to adapt or embody my improvements as may be desired.

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

1. In a mop, the combination with a handle, of a head member mounted on said handle, a bracket mounted on said handle in spaced relation to said head member and provided with spaced flanges having inwardly facing channels at their edges, a rivet disposed through said flanges for clamping said bracket upon said handle, a holder having a spindle provided with a crank, a support for said spindle provided with spaced flanges, a link pivoted between the flanges of said bracket and support, and a locking member slidably mounted in said channels of said bracket flanges and adapted when in locking position to hold the link in collapsed position supporting said holder in proximity to said head, said locking slide when retracted permitting the link to be swung upwardly into engagement with said bracket securing rivet in which position the said spindle support may be held against the rivet by the hand of the operator gripping the handle and the spindle support.

2. In a mop, the combination with a handle, of a head member mounted on said handle, a bracket mounted on said handle in spaced relation to said head member and provided with spaced flanges, a rivet disposed through said flanges for clamping said bracket upon said handle, a holder having a spindle provided with a crank, a support for said spindle provided with spaced flanges, a link pivoted between the flanges of said bracket and support to collapse said spindle support against the side of the handle, and a locking member slidably mounted on said bracket flanges and adapted when in locking position to hold the link in collapsed position supporting said holder in proximity to said head, said locking slide when retracted permitting the link being swung rearwardly into engagement with said bracket securing rivet in which position the said spindle sup-

port may be held against the rivet by the hand of the operator gripping the handle and the spindle support.

3. In a mop, the combination with a handle, of a head member mounted on said handle, a bracket mounted on said handle in spaced relation to said head member and provided with spaced flanges, a holder having a spindle provided with a crank, a support for said spindle provided with spaced flanges, a link pivoted between the flanges of said bracket and support to collapse said spindle support against the side of the handle, and a locking member slidably mounted on said bracket flanges and adapted when in locking position to hold the link in collapsed position supporting said holder in proximity to said head.

4. In a mop, the combination with a handle, of a head member mounted on said handle, a bracket on said handle, a holder having a spindle provided with a crank, a support for said spindle, a link pivotally connected to said bracket and support, and a locking means on said bracket for holding said link in collapsed position.

5. In a mop, the combination with a handle, of a head member mounted on said handle, a bracket mounted on said handle, a holder having a spindle provided with a crank, a support for said spindle, a link pivotally connected to said bracket and to said support, means for holding said link in collapsed position, and stops on said bracket and support coacting with said link when the support is in erect position.

6. In a mop, the combination with a handle, of a head member mounted on said handle, a holder having a spindle provided with a crank, a support for said spindle, a link pivotally mounted on said handle and pivotally connected to said support, and a locking slide operatively associated with said link for supporting the link in its collapsed position and in engagement with said handle.

7. In a mop, the combination of a handle, and a head member formed of a rod and disposed in a plane substantially at right angles to said handle, one end of the head member terminating in a shank secured to said handle and the other in a rearwardly projecting finger disposed longitudinally at the side of and adjacent to said handle but spaced therefrom.

In witness whereof I have hereunto set my hand.

VERDA B. BYARS.