March 31, 1936. A. S. T. LAGAARD 2,035,816

MOP

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Fig. 1

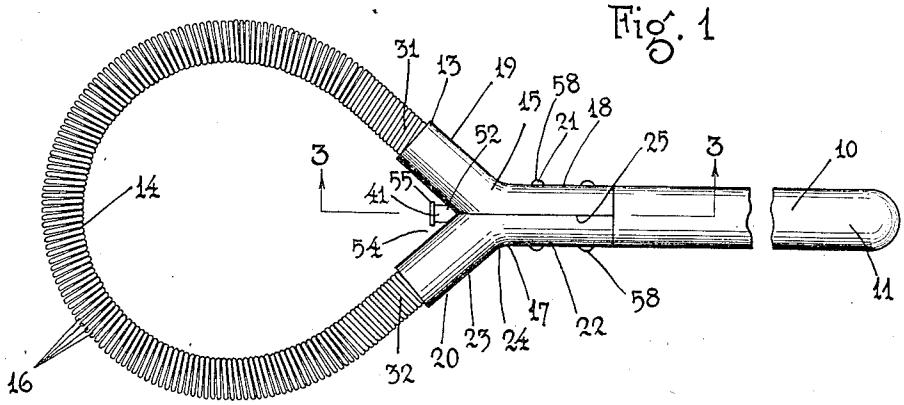


Fig. 2

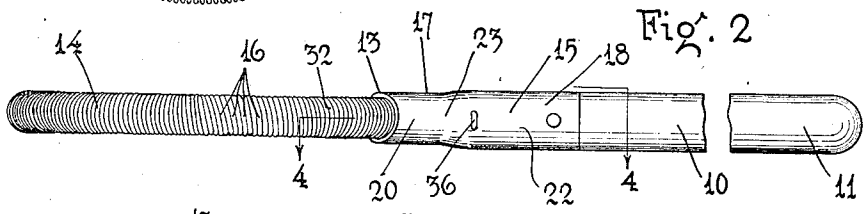


Fig. 3

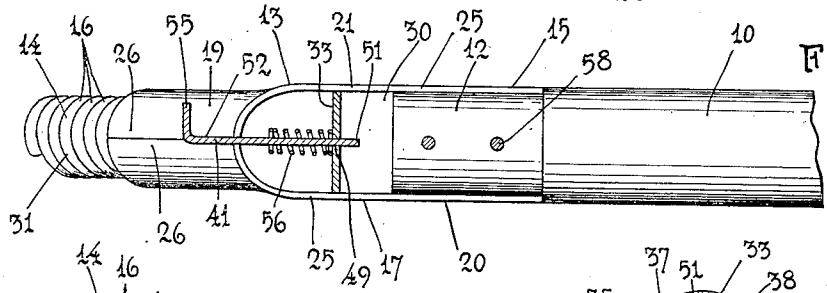


Fig. 5

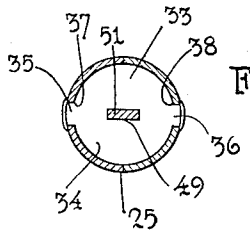


Fig. 4

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MOP

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Fig. 6

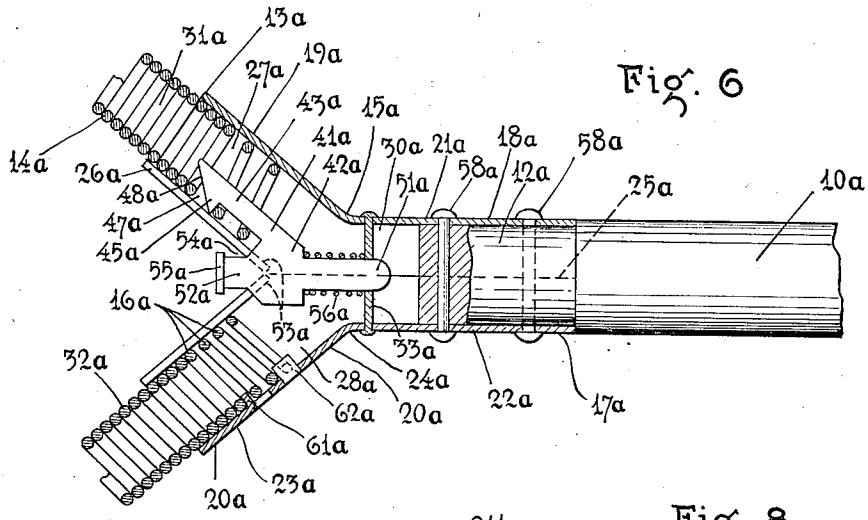


Fig. 8

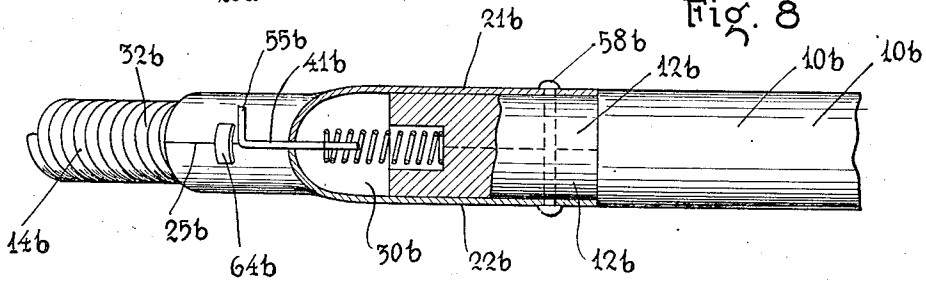


Fig. 9

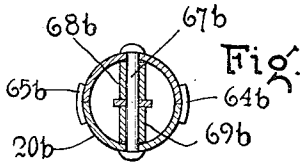


Fig. 7

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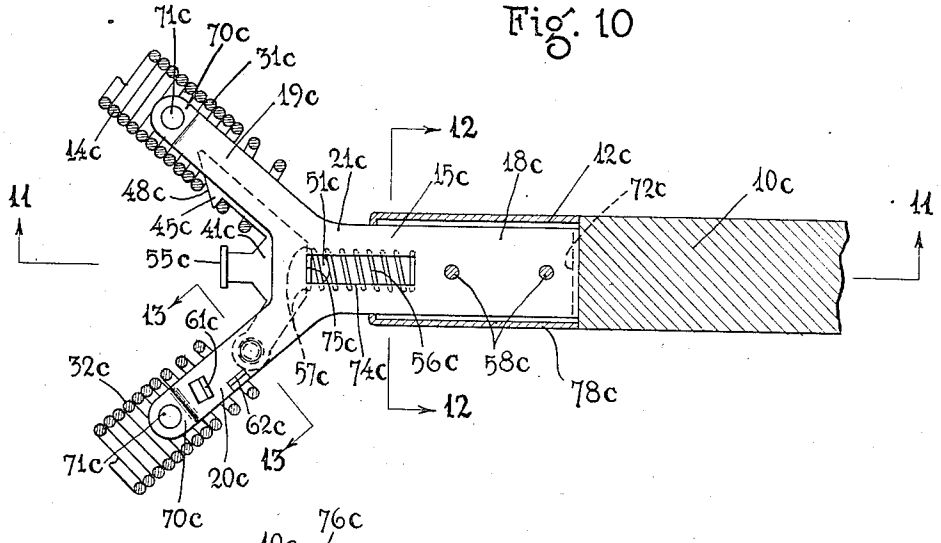
Attorneys

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Fig. 10



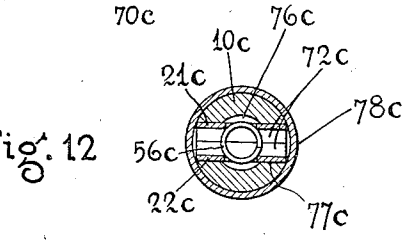


Fig. 12

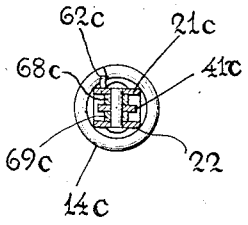


Fig. 13

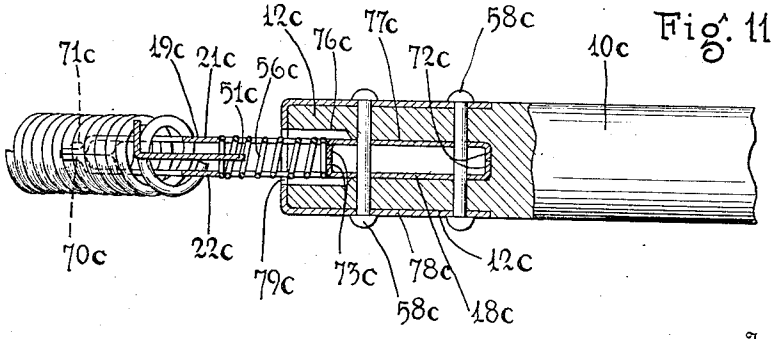


Fig. 11

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Patented Mar. 31, 1936 2,035,816

UNITED STATES PATENT OFFICE

2,035,816

MOP

Alexander S. T. Lagaard, Minneapolis, Minn., assignor to Clarence J. Ostdiek, Minneapolis, Minn.

Application July 8, 1935, Serial No. 30,262

12 Claims. (Cl. 15—147)

My invention relates to mops and particularly to the type of mop known as a dust mop which comprises a swab holder including an elongated flexible swab holding member arranged in the form of a loop and secured through a suitable supporting structure to a handle.

An object of the invention resides in providing a mop by means of which one or both ends of the swab holding member may be quickly and easily attached to or detached from the supporting structure when the occasion arises.

Another object of the invention resides in providing a supporting structure for the swab holding member by means of which one or both of the ends of the swab holding member can be snapped into position upon the supporting structure.

An object of the invention resides in providing a latch having means thereon for engagement with the swab holding member and in further providing a finger piece for operating said latch, said finger piece being disposed at a locality of the mop which is protected from engagement with extraneous objects during use of the mop so as to prevent unintentional disengagement from the supporting structure of the swab holding member.

Another object of the invention resides in constructing the supporting structure with three branches arranged in the form of a Y, said handle being attached to one of said branches and the other of said branches forming supports for the ends of the swab holding member.

A still further object of the invention resides in constructing the supporting structure in two halves joined along a plane extending along the axis of one of said branches and said handle and at right angles to the plane of the Y.

A feature of the invention resides in providing a cross head within the supporting structure for holding the parts thereof secured together.

Another object of the invention resides in providing a rivet extending jointly through both parts of the supporting structure and the handle for holding the same attached to the handle and for further securing the parts together.

An object of the invention resides in constructing the supporting structure hollow and in providing a latch within the supporting structure having an arm extending into one of the branches thereof and constructed with a hook for engagement with the swab supporting member attached to said branch and in further constructing said latch with a stem extending through said supporting structure at the crotch between said supports for the swab holding member, said stem having a finger piece attached thereto by means of which the latch may be moved into and out of engagement with the swab supporting member.

A feature of the invention resides in providing the cross head with a slot and in constructing said latch with a shank slidable in said slot for guiding said latch for movement longitudinally with respect to said handle.

Another object of the invention resides in constructing the latch with shoulders adjacent one end of said shank and in providing a compression coil spring encircling said shank and seated between said shoulders and cross head for urging the latch into latching position.

A feature of the invention resides in providing an alternate construction in which one end of the latch is pivoted to one of the branches and is provided with an arm extending into the other of the branches and engaging the end of the coil spring attached to said branch.

Other objects of the invention reside in the novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawings:

Fig. 1 is a plan view of a dust mop with the swab removed and illustrating an embodiment of my invention.

Fig. 2 is an elevational view of the structure shown in Fig. 1.

Fig. 3 is a fragmentary sectional view taken on line 3—3 of Fig. 1 and drawn to a larger scale.

Fig. 4 is a fragmentary plan sectional view taken on line 4—4 of Fig. 2 and drawn to a larger scale.

Fig. 5 is a cross sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 4 illustrating a modification of the invention.

Fig. 7 is a view similar to Fig. 4 showing still another form of the invention.

Fig. 8 is an elevational sectional view taken on line 8—8 of Fig. 7.

Fig. 9 is a cross sectional view taken on line 9—9 of Fig. 7.

Fig. 10 is a view similar to Fig. 4 of still another form of the invention.

Fig. 11 is an elevational sectional view taken on line 11—11 of Fig. 10.

Fig. 12 is a cross sectional view taken on lone 12—12 of Fig. 10.

Fig. 13 is a cross sectional view taken on line 13—13 of Fig. 10.

In the use of dust mops, it becomes highly desirable to be able to quickly and easily remove the swab from the swab holder for the purpose of cleaning the swab or for replacement of the same. The present invention provides a device in which the swab holding member may be snapped into attached position with respect to the supporting structure therefor whenever the occasion requires or may be easily detached by pressing suitable finger engaging means and in which the finger engaging means is disposed in such a manner as to prevent accidental disengagement thereof.

My improved mop comprises a handle 10, and a swab holder which I have indicated in its entirety by the reference numeral 13. This swab holder comprises a swab holding member 14 and a supporting structure 15 therefor. The latter structure is attached to the handle 10. These parts will now be described in detail.

The handle of my invention is shown in Fig. 1 and may be constructed of wood or any other suitable material. Said handle is preferably cylindrical and is formed with a rounded spheroidal portion 11 at one end and a reduced cylindrical portion 12 at its other end and to which the swab holder proper is attached.

The swab holding member 14 is constructed from spring wire which is coiled to provide a number of convolutions 16 which form a coil spring. This coil spring when first constructed is straight but is adapted to be bent in the form of a loop as shown in Fig. 1 and is attached to the supporting structure 15 as will be presently described in detail.

The swab which is not shown in the drawings is constructed with a hem or similar construction through which the said coil spring is inserted and by means of which the swab is attached to the swab holder. Inasmuch as the swab does not form any particular feature of this invention, the same has not been shown in the drawings, though it can readily be comprehended that any construction such as is now in common use and such as is disclosed in Patent No. 1,849,150, may be used for the purpose. The swab holding member 14 being constructed as a coil spring is flexible and permits of bending the swab to cause the same to follow the contour of the surface on which it is applied and permits of readily manipulating the mop in contacting corners and localities where a rigid holder could not be effectively used.

The supporting structure 15, as best shown in Figs. 1, 4 and 5, comprises a hollow head 17 having three branches 18, 19 and 20 arranged in the form of a Y. The handle 10 is attached to the branch 18 while the branches 19 and 20 form supports for the ends of the coil spring 14. The head 17 is preferably constructed of sheet metal and is formed in two halves 21 and 22, which halves are identical in construction. The half 21 embodies the branch 19 and part of the branch 18, while the half 22 similarly embodies part of the branch 18 and the branch 20. In the construction of the parts 21 and 22 a suitable blank is first cut out of flat sheet material and the same pressed in dies to form a U-shaped structure, the connecting portion of which is indicated at 23 in the drawings. This U-shaped structure is simultaneously bent to provide the bight 24 between the supports 18 and 20 which issue outwardly from each other in diverging relation. With the structure so formed the edges 25 of the blank lie along the medial plane of the branch 18. The ends 26 of the blank, however, extend outwardly from the connecting portion 23 in parallel relation. With one operation of the punch press, these ends are brought together until the same engage one another as best shown in Fig. 3 which completes the respective branches 19 and 20. By means of this construction cylindrical sockets 27 and 28 are formed in the two branches 19 and 20 which are of such a diameter as to receive the ends 31 and 32 of the coil spring 14. When the two halves 21 and 22 are brought together as shown in Figs. 1 and 4, the edges 25 of the same meet and form a socket 30 in the branch 18. These two edges form the surface of joinder of the two halves of the supporting structure and the said surface of joinder lies in a plane containing the axis of the socket 30 and disposed at right angles to the plane of the Y.

For the purpose of securing the two parts of the supporting structure together, a cross head 33 is employed which is best shown in Fig. 5. This cross head consists of a circular disk of sheet metal 34 which is formed with two ears 35 and 36 issuing outwardly therefrom. Said ears are adapted to pass through slots 37 and 38 in the portions 23 of the two halves 21 and 22 of the supporting structure and may be bent over or riveted over as designated at 39 in Fig. 4.

The socket 30 formed in branch 18 is of such dimensions as to tightly receive the reduced end 12 of handle 10. By means of two rivets 58 which pass jointly through the halves 21 and 22 of the supporting structure and the reduced end 12 of handle 10, the said supporting structure is rigidly secured to the handle. These two rivets also assist in holding the two halves of the supporting structure in proper relation with respect to one another and securely attached to one another.

As previously stated, the ends 31 and 32 of the coil spring are received in the sockets 27 and 28 in the supporting structure 15. For holding the same attached to said supporting structure, a latch 41 is employed. This latch is constructed with a body portion 42 having two arms 43 and 44 issuing angularly therefrom and extending into the sockets 27 and 28. These arms are formed at their ends with hooks 45 and 46 which are adapted to engage the convolutions 16 of the ends 31 and 32 of coil spring 14. For this purpose, the said convolutions are spaced apart to provide spaces 47 at the extreme ends of the coil spring into which said hooks may extend. The said hooks are further constructed with cam surfaces 48 which serve to bring about engagement of the hooks with the convolutions of the coil spring by merely forcing the ends of the coil spring into their respective sockets.

In order to guide the latch 41 for movement, a slot 49 is formed in the cross head 33. A shank 51 issuing from the body 42 of latch 41 and extending longitudinally with respect to the handle 10 passes through said slot and is guided for longitudinal movement with respect thereto. A stem 52 formed on said body extends through a slot 53 formed partly in the branch 19 and partly in the branch 20 of the supporting structure 15 and disposed in the vertex or crotch 54 formed by the said two branches. This slot in conjunction with slot 49 guides the latch 41 for longitudinal reciprocating movement with respect to the handle 10. When the said latch

is moved toward the handle the hooks 45 and 46 are disengaged from the respective convolutions of the coil spring 14 and the ends 31 and 32 thereof may be withdrawn from the supporting structure.

For the purpose of forcing the latch 41 inwardly to disengage the same from the coil spring a finger piece 55 is employed which is disposed on the end of the stem 52 and is formed by bending the material from which the latch is constructed outwardly at right angles to said stem. A compression coil spring 56 encircles the shank 51 and is seated at one end against the cross head 33 and at its other end against shoulders 57 formed on the body 42 adjacent the end of the shank 51. This spring urges the hooks 45 and 46 into engagement with the convolutions of the coil spring and procures latching of the swab holding member.

In the use of the invention, one end of the coil spring is inserted into its proper socket and when the spaced convolutions thereof engage the cam surface 48 of the latch within said socket, the latch is withdrawn and the hook thereof brought into engagement with the said convolution. This end of the coil spring then becomes attached to the supporting structure. The swab is next applied to the coil spring by inserting the coil spring in the hem thereof. The coil spring is then looped and the other end of the coil spring inserted in the other socket and the same procedure followed. The latch is then brought into engagement with the other end of the coil spring. It will be noted that when the second end is being applied that the latch attaching the first end to the supporting structure becomes normally disengaged. However, due to the lateral friction existing between the coil spring and the supporting structure occasioned through the bending of the spring to loop the same, the first applied end of the spring remains within its socket until the latch is released whereupon both ends of the coil spring are securely attached. It will be further noted that due to the fact that the latch moves in a longitudinal direction with respect to the handle which is at an angle with respect to the engaging portion of the hooks 45 and 46 that the ends of the coil spring travel longitudinally within their respective sockets for a slight distance before the hooks become disengaged therefrom. This, however, offers no particular obstacle and the latch is readily disengaged from the ends of the spring when the same are operated by applying pressure to the finger piece 55 of the latch. With this form of the invention, it can readily be comprehended that either end of the coil spring may be disengaged by merely manipulating the finger piece controlling the latch. Upon releasing the latch, the remaining end of the coil spring is again attached and remains so until manually disengaged.

In Fig. 6, I have shown a modification of the invention which is similar to the structure shown in Figs. 1 to 5, excepting that only one hook is formed on the latch and only one end of the coil spring may be quickly detached. This form of the invention being in all other respects identical with that described, the description will not be repeated. However, similar reference characters will be used to designate corresponding parts and the said reference characters modified by applying the suffix "*a*" thereto. In this form of the invention only the end 31*a* of the spring 14*a* is quickly detachable from the supporting structure 15*a*. For this purpose a latch 41*a* is used which is identical with latch 14 except that it has but a single hook 45*a*. For securing the other end 32*a* of the coil spring 14*a* to the supporting structure 15*a* two lugs 61*a* and 62*a* are employed which are struck out of the metal of the part 23*a* of half 22*a* of said supporting structure forming the branch 20*a* thereof. The lug 61*a* extends circumferentially while the lug 62*a* extends axially. The lug 61*a* serves as part of a thread which is adapted to fit in between the convolutions 16*a* of coil spring 14*a* and which permits of screwing the said coil spring into the socket 25*a* to hold the same attached thereto. Lug 62*a* forms a stop for limiting the inward movement of the end 32*a* of coil spring 14*a* so as to prevent the same from interfering with the operation of the latch 41*a*. The operation of the device shown in Fig. 6 is identical with that previously described, excepting that the end of the coil spring 32*a* must be first screwed into the branch 20*a* and only the end 31*a* may be quickly detached from the supporting structure.

In Figs. 7, 8 and 9 I have shown still another form of the invention. This invention being quite similar to the forms previously described, the description of the similar parts will not be repeated. These parts will, however, be denoted by the same reference numerals with the suffix "*b*" applied thereto.

The supporting structure 15*b* is constructed in two halves 21*b* and 22*b* similar to the form of the invention shown in Fig. 1 which are, however, different in that the surface of joinder thereof designated by the reference numeral 25*b* lies in the medial plane of the three branches 18*b*, 19*b* and 20*b*. These halves are blanked and pressed in suitable dies, the forming operation being a single operation. For holding these parts together, clips 64*b* and 65*b* are employed which are welded to the parts of the supporting structure across the joints thereof. A single rivet 58*b* is used with assists in holding the parts attached to one another and which also serves to hold the supporting structure attached to the reduced end 12*b* of the handle 10*b*.

In this form of the invention the cross head is dispensed with and the latch 41*b* is pivoted to the support 20 instead of being slidably mounted. For this purpose, an arm 44*b* is formed on latch 41*b* which is constructed with a head 66*b* drilled to receive a rivet 67*b* which extends jointly through said head and the two parts 21*b* and 22*b* of the supporting structure 15*b*. To hold the said latch in proper position, two spacing sleeves 68*b* and 69*b* are utilized which encircle the rivet 67*b* and which are seated against the surfaces of the head 66*b* and the inner surfaces of the parts 21*b* and 22*b* of the supporting structure.

Spring 56*b* of this form of the invention is seated against the shoulders 57*b* of latch 41*b* as in the other form of the invention, but due to the fact that the cross head is absent in this form of the invention, a socket 71*b* is formed in the end 12*b* of handle 10*b* and the other end of the spring 56*b* seated in this socket. This form of the invention operates identically the same as that shown in Fig. 6 excepting that the latch swings instead of slides. The use, however, is exactly the same and the same results are produced.

In Figs. 10 to 13 I have shown a modification

of the invention in which the supporting structure of the mop is constructed in a somewhat different manner. In this form of the invention, similar reference characters have been used to designate corresponding parts and the said reference characters modified by applying the suffix "c" thereto.

The supporting structure for the above noted modification, comprises two plates 21c and 22c which are constructed in the shape of a Y to provide three branches 18c, 19c and 20c. The branches 19c and 20c are constructed with offset ears 70c which are attached to one another by means of rivets 71c or which may be welded together, if desired. These offset ears serve to hold the plates 21c and 22c in spaced relation. The said plates are further formed at the end of the branch 18c with inwardly turned lugs 72c which abut one another and hold the said plates spaced from one another at such locality.

The latch 41c used with this form of the invention is identical with the latch 41b shown in Figs. 7, 8 and 9 and is pivoted between the portions of the two plates 21c and 22c forming branch 20c. For the purpose a pintle or rivet 67c is employed which passes through the said latch and the plates 21c and 22c. Spaced sleeves 68c and 69c are also used for holding the latch centrally between the said two plates. The hook 45c on latch 41c is adapted to project outwardly beyond the edges of the plates 21c and 22c on the branch 19c when the latch is in one extreme position or to be receded therefrom and disposed within the confines of said branches when the latch is in its other position.

For urging the latch outwardly a compression coil spring 56c is used which is the same as that shown in Fig. 7. This spring encircles a lug 51c formed on the said latch and is seated at one end against the shoulders 57c formed adjacent the same. The said spring is seated at its other end against two lugs 73c which are bent inwardly from the portion of the plates 21c and 22c forming the branch 18c. Said spring is guided for movement by means of two slots 74c formed in the said plates which are of a width slightly less than the diameter of the said spring. Spring 56c is of a diameter somewhat greater than the distance between the two plates 21c and 22c so that said spring is retained within the said slots. Movement of the spring 56c outwardly and corresponding movement of the latch 41c is terminated when the said spring engages the parts 75c of plates 21c and 22c at the ends of the slots 74c.

The end 31c of the swab holding member 14c is held attached to the branch 19c by means of the latch 41c. The other end 32c of the said swab holding member is secured to the branch 20c by means of lugs 61c and 62c, similar to those used in the form of the invention shown in Figs. 6 and 7.

For the purpose of applying the supporting structure 15c to the handle 10c, a hole 76c is drilled in the end of the handle 12c of a diameter greater than the diameter of the spring 56c so as to permit the said spring to freely move within the end of the handle. In conjunction therewith, a slot 77c is cut completely across the handle, which slot is of suitable dimensions to snugly receive the branch 18c of the supporting structure 15c. A ferrule 78c encircles the end of the handle. This ferrule is formed with an opening 79c through which the branch 18c may extend and which is suitably enlarged at its center to correspond with the drilled opening 76c in the handle proper. Rivets 58c pass through the ferrule 78c, the two plates 21c and 22c and the handle proper and hold all of the parts of the invention securely attached to one another. It will be noted that the lugs 72c and 73c abut one another and are disposed in close proximity to the rivets 58c. These lugs hold the parts properly spaced and prevent the rivets from collapsing the two plates.

The use of the invention shown in Figs. 10 to 13 is the same as that previously described. Upon applying pressure to the finger piece 55c of latch 41c, the latch is swung inwardly and the hook 45c disengaged from the swab holding member 14c. Thereupon the said end 31c of said swab holding member may be removed and the swab applied to the same. Upon insertion of the end 31c of the swab holding member over the branch 19c the cam surface 48c on the hook 45c throws the hook inwardly and causes the said hook to snap into position when said member has been properly applied.

My invention is highly advantageous in that an extremely simple and practical device is provided, whereby the swab of the mop may be quickly removed whenever desired. The method of operation of the invention is obvious, so that instructions for its operation are entirely unnecessary. The finger piece for releasing the swab holding element from the swab holder is positioned in the vertex between the two supports therefor so that the same cannot be unintentionally disengaged. The swab holding member is readily held while being disengaged and the latching device therefor is extremely convenient to manipulate. The invention is extremely simple and will not readily get out of order and can be constructed at a nominal cost.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

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

1. In a mop, a handle, an elongated flexible swab holding member, a supporting structure for the swab holding member attached to the handle, said supporting structure including two diverging supports to which the ends of the swab holding member are attached, a latch for holding one end of the swab holding member from movement on its support, a finger piece for operating said latch, said finger piece being disposed in the vertex between said supports, and means for holding the other end of the swab holding member attached to its support.

2. In a mop, a handle, a looped coil spring serving as a swab holding member, a supporting structure for the coil spring attached to the handle, said supporting structure including two diverging supports to which the ends of the coil spring are attached, a latch having a hook for engaging a convolution of one of the ends of the coil spring and restraining the coil spring from movement on its support, a finger piece on the latch disposed in the vertex between said supports, means for guiding the latch for movement in a direction toward and from said vertex, and means for holding the other end of the coil spring from movement relative to its support.

3. In a mop, a handle, a looped coil spring serving as a swab holding member, a supporting structure for the swab holding member attached to said handle comprising a hollow head, and

including two diverging supports to which the ends of the coil spring are attached, a latch within said head, said latch having a hook disposed within one of said supports and engaging one of the convolutions of the end of the coil spring attached thereto, a finger piece on said latch extending through said head at the vertex between said supports, means for guiding said latch for movement toward and from said vertex, and means for holding the other end of the coil spring from movement relative to its support.

4. In a mop, a handle, a looped coil spring serving as a swab holding member, a supporting structure for the coil spring comprising a hollow head having three branches arranged in the form of a Y, said handle being attached to one of said branches and the other of said branches serving as supports for the ends of the coil spring, a latch within said hollow head, a hook on said latch for engagement with one of the convolutions of one end of the coil spring, a stem formed on said latch and extending through said head at the vertex between said last named branches, a finger piece on said stem, means for guiding said latch for movement in the direction of the axis of said first named branch, and means for holding the other end of the spring attached to its support.

5. In a mop, a handle, a looped elongated swab holding member, a supporting structure for the swab holding member comprising a hollow head having three branches arranged in the form of a Y, said handle being attached to one of said branches and the other of said branches serving as supports for the ends of the swab holding member, a slot in said head disposed at the vertex between said last named branches, a latch within said hollow head having an arm, a hook on said arm for engagement with said swab holding member at one end, a neck on said latch slidable in said slot, a cross head extending across said first named branch and formed with a slot, a shank on said latch slidable within said second named slot, and means for holding the other end of the swab holding member attached to its support.

6. In a mop, a handle, a looped elongated swab holding member, a supporting structure for the swab holding member comprising a hollow head having three branches arranged in the form of a Y, said handle being attached to one of said branches and the other of said branches serving as supports for the ends of the swab holding member, a slot in said head disposed at the vertex between said last named branches, a latch within said hollow head having an arm, a hook on said arm for engagement with said swab holding member at one end, a neck on said latch slidable in said slot, a cross head extending across said first named branch and formed with a slot, a shank on said latch slidable within said second named slot, means forming a shoulder on said latch at the end of said shank, a coil spring acting between said shoulder and said cross head and urging said hook into engagement with the swab holding member, and means for holding the other end of the swab holding member attached to its support.

7. In a mop, a handle. a looped elongated swab holding member, a supporting structure for the swab holding member comprising a hollow head having three branches arranged in the form of a Y, said head being constructed of sheet metal formed in two parts, one of said parts embracing half of one of said branches and all of another of said branches, the other of said parts embracing half of said first named branch and the other of said branches, means for securing said handle to said first named branch, and means for securing the ends of the swab holding member to the second named branches.

8. In a mop, a handle a looped elongated swab holding member, a supporting structure for the swab holding member comprising a hollow head having three branches arranged in the form of a Y, said head being constructed of sheet metal formed in two parts, one of said parts embracing half of one of said branches and all of another of said branches, the other of said parts embracing half of said first named branch and the other of said branches, a cross head extending across said first named branch and holding the parts thereof in proper relative position, means for securing said handle to said first named branch, and means for securing the ends of the swab holding member to the second named branches.

9. In a mop, a handle, a looped elongated swab holding member, a supporting structure for the swab holding member comprising a hollow head having three branches arranged in the form of a Y, said head being constructed of sheet metal formed in two parts, one of said parts embracing half of one of said branches and all of another of said branches, the other of said parts embracing half of said first named branch and the other of said branches, a cross head extending across said first named branch and holding the parts thereof in proper relative position, a rivet extending jointly through both of said parts of the head forming said first named branch and said handle, for attaching the head to the handle and for holding said parts in relative position, and means for securing the ends of the swab holding member to said second named branches.

10. In a mop, a handle, a looped coil spring serving as a swab holding member, a supporting structure for the coil spring comprising a hollow head having three branches arranged in the form of a Y, said head being constructed of sheet metal formed in two parts, the line of joinder of said parts lying along a plane extending along the axis of one of said branches and at right angles to the plane of the Y, one of said parts embracing half of the first named branch and one of the second named branches, the other of said parts embracing the other half of the said first named branch and the other of said second named branches, a cross head extending across said parts and disposed in said first named branch in proximity to its locality of connection with said other named branches, ears on said cross head extending through said parts for holding the parts attached to the cross head, said handle being mounted in said first named branch, a slot formed in said cross head, a slot formed in the crotch of said hollow head and being disposed partly in one part and partly in the other part thereof, a latch comprising a shank slidable in said slot in the cross head, and a stem slidable in the slot in said supporting structure, an arm on said latch extending into one of said branches, a hook on said arm for engaging one of the convolutions of the end of the coil spring attached to said branch, a finger piece on the end of said stem for sliding said latch within said slots, a second coil spring for urging said hook into engagement with the convolutions of said first named coil spring, and means for holding the other end

of the first named coil spring attached to the other branch of the supporting structure.

11. In a mop, a handle, an elongated flexible swab holding member, a supporting structure for the swab holding member constructed with three branches arranged in the form of a Y, said handle being attached to one of said branches and the other of said branches serving as supports for the ends of the swab holding member, a latch pivoted to one of said supports and having an arm extending in proximity to the other support, means on said arm for engagement with the end of the swab holding member attached thereto, a coil spring movable in the direction of the axis of said first named branch for urging said means into engagement with the swab holding member, a finger piece attached to said latch and disposed in the vertex between said supports for moving said arm away from the swab holding member in opposition to said spring, and means for holding the other end of the swab holding member attached to its support.

12. In a mop, a handle, a looped elongated swab holding member, a supporting structure for the swab holding member comprising two spaced plates constructed in the form of a Y with three diverging branches, said handle being attached to one of said branches and the other branches forming supports for the ends of the swab holding member, a lever disposed between said plates and pivoted thereto, a finger piece on said lever extending outwardly beyond said plates, and a hook on said lever for engagement with one end of said swab holding member, said hook being adapted to be receded within the confines of said plates by manipulation of said finger piece to become disengaged from the swab holding member, and means for holding the other end of the swab holding member attached to the supporting structure.

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