Aug. 5, 1969 A. C. GOETTEL 3,458,886

COLLAPSIBLE MOP HOLDER

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Fig. 1.

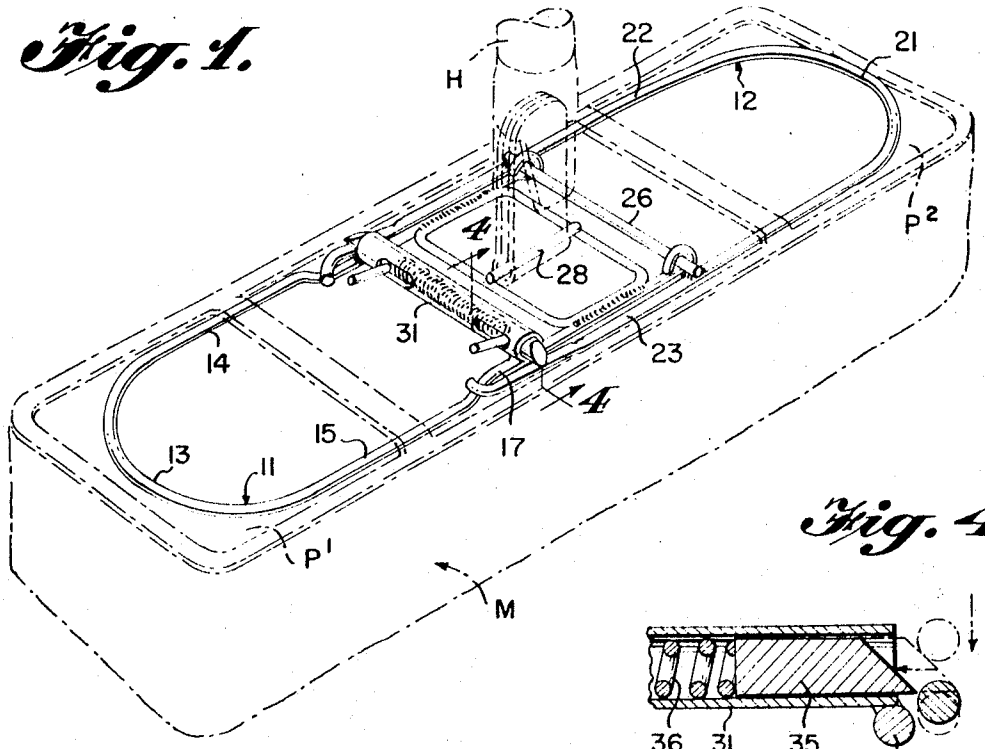
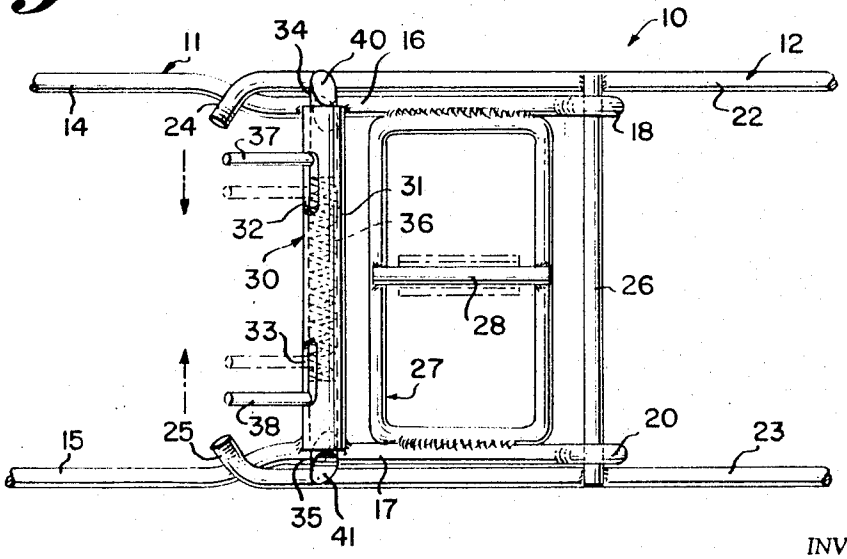


Fig. 4.

Fig. 2.



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Fig. 3.

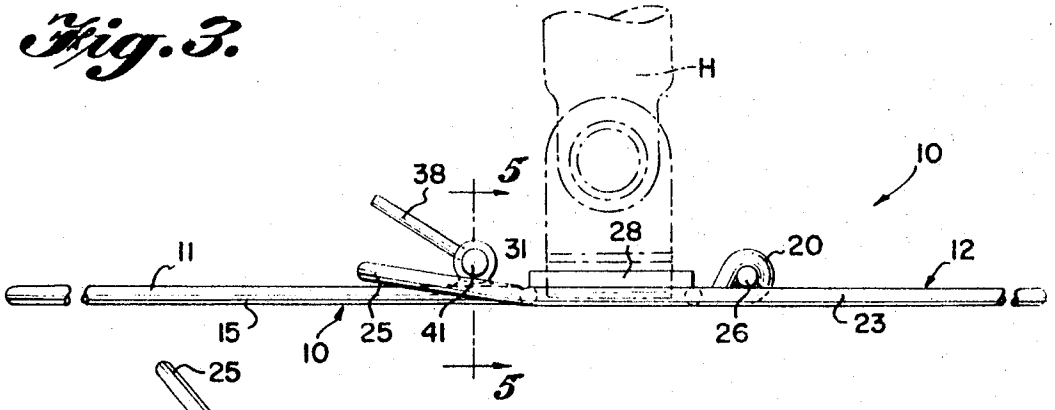


Fig. 6.

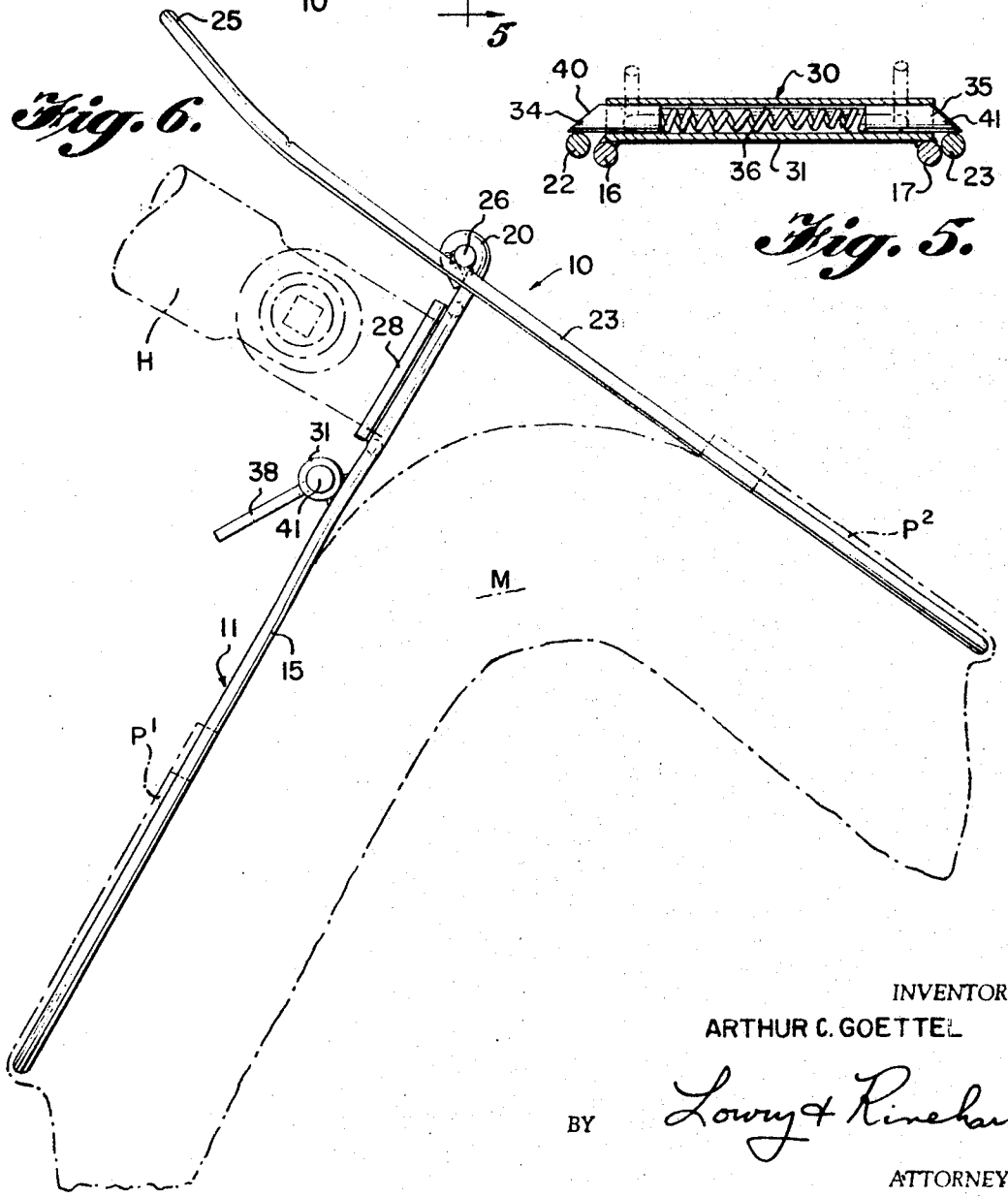


Fig. 5.

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COLLAPSIBLE MOP HOLDER

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ABSTRACT OF THE DISCLOSURE

A collapsible mop holder formed by a pair of relatively pivoted generally U-shaped members which are normally locked relative to each other in a common plane but can be released to facilitate the insertion upon or the removal from of a cloth mop. Cam means are provided for locking the U-shaped members in an operative position, and adjacent legs of the U-shaped member are arranged in overlapping relationship to prevent movement of the member beyond the common planar position thereof.

This invention relates to a novel collapsible mop holder for a cloth mop of the type having opposed pockets for receiving base members of the mop holder, and is particularly directed to a mop holder which is relatively foolproof in operation, is constructed of a minimum number of relatively inexpensive components, and is exceptionally economical from the standpoint of both manufacturing and consumer costs.

Collapsible holders for pocketed cloth mops of the type to which the invention is directed are relatively well known. However, equally well known are the numerous disadvantages thereof, chief among which are the difficulties encountered in assembling pocketed mops upon and removing the same from associated holders. Generally speaking, the loading and unloading of such conventional collapsible holders is a "three-hand" operation, requiring two hands to hold the cloth mop in place (or remove the same) and another to lock (or unlock) the holder. Such mop holders are not only cumbersome to load and unload, but the constructions do not lend themselves to efficient mopping because of their unstable and flimsy construction, as well as the tendency thereof to unlock during a mopping operation.

In accordance with the above, it is a primary object of this invention to provide a novel collapsible mop holder which overcomes the above and numerous other disadvantages of prior art devices, and is particularly directed to a mop holder having a pair of pivotally connected U-shaped base members movable between planar and angularly related positions, means for locking the base member in the planar position, and cam means for automatically actuating the locking means upon relative movement of the base members toward the planar position.

A further object of the invention is to provide a novel mop holder of the type heretofore described, including means for biasing the locking means toward a locked position thereof, means for preventing relative movement of the base members beyond the planar position, and manually grippable means for moving the locking means between locked and unlocked positions.

Still another object of the invention is to provide a holder of the type heretofore defined wherein the locking means is carried by a first of the base members, the locking means including a locking member slidable in a direction parallel to the pivot axis of the base members, and the locking member disposed to contactingly engage a leg of a second of the base members to prevent relative movement away from the planar position.

A further object of the invention is to provide a mop holder as set forth heretofore wherein the means for

preventing movement of the base members beyond the planar position is a portion of one of the base member legs offset in the direction of the pivot axis in overlying contacting relationship with an adjacent leg of the other base member.

With the above and other objects in view which will become more apparent hereinafter, the invention will be fully understood from the following detailed description and the accompanying drawings in which:

FIGURE 1 is a top perspective view of the collapsible mop holder of this invention, and illustrates the holder in its operative or working position and locking means maintaining a pair of U-shaped base members of the holder in a generally common plane;

FIGURE 2 is a fragmentary top view of the mop holder, and illustrates manually grippable means for moving locking members of the locking means to an unlocked position against the force of spring biasing means;

FIGURE 3 is a fragmentary side elevational view of the mop holder, and illustrates an offset portion of one of the base members in contactingly overlying relationship with a leg of the other of the base members to prevent relative movement beyond the planar disposition thereof;

FIGURE 4 is a slightly enlarged sectional view taken generally along line 4—4 of FIGURE 1, and illustrates cam follower means associated with one of a pair of slidable locking members of the locking means, and the locked and unlocked positions thereof;

FIGURE 5 is a sectional view taken generally along line 5—5 of FIGURE 3, and illustrates the biasing means maintaining the locking members in overlying relationship with associated legs of one of the base members; and

FIGURE 6 is a side elevational view of the mop holder, and illustrates the angular disposition of the base member when a pocketed cloth mop is being assembled upon or removed from the holder.

A collapsible mop holder constructed in accordance with the invention is generally designated by the reference numeral **10** and includes a pair of generally U-shaped metallic base members **11, 12.**

The base member **11** includes a bight portion **13** and a pair of legs **14, 15** which have terminal end portions **16, 17** respectively, offset toward one another and terminating in eyes or loops **18, 20,** respectively. The base member **12** likewise includes a bight portion **21** and a pair of legs **22, 23** which have inwardly directed opposed end portions **24, 25,** respectively. In the generally planar position of the base members **11, 12** (FIGURES 1 and 2) the latter members are in generally opposed relationship to each other with portions of the legs **16, 22** and **17, 23** in generally side-by-side overlapped relationship. The base members **11, 12** are mounted for relative pivoting movement by means of a cylindrical rod **26,** welded or otherwise conventionally secured normal to the legs **22, 23,** about which the loops **18, 20** are encircled.

Means **27** in the form of a generally rectangular element having a cross bar **28** is provided for securing the mop holder **10** to a conventional mop handle H. The element **27** is welded to the offset portions **16, 17** of the respective legs **14, 15,** and the cross bar **28** is disposed generally normal to the pivoting axis of the base members **11, 12,** as defined by the rod **26.**

Locking means, generally designated by the reference numeral **30,** are provided for securely but releasably locking the base members **11, 12** in the planar position thereof. The locking means **30** includes a generally hollow tubular member **31** secured, as by welding, to the offset portions **16, 17** of the legs **14, 15,** respectively. The axis of the tubular member **31** is generally parallel to the rod **26** and normal to the cross bar **28.** A pair of aligned elon-

gated slots **32, 33** are formed in the tubular member **31**, and a locking member **34, 35** is slidably positioned in the tubular member **31** adjacent the respective slots **32, 33**. Biasing means **36** in the form of a spring housed in the tubular member **31** normally urges the exposed ends (unnumbered) of the locking members **34, 35** away from each other and into overlying contacting locking relationship with the respective legs **22, 23** in the locked position (FIGURES 1 and 2) of the mop holder **10**. However, when it is desired to release the locking means **30**, gripping means in the form of stems **37, 38**, secured to each locking member **34, 35** and projecting through the respective slots **32, 33**, are manually urged to the phantom outline position shown in FIGURE 2. This compresses the spring **36**, draws each locking member inwardly of the tubular member **31**, as best shown by the solid line position of the locking member **35** in FIGURE 4, and frees the base members for pivoting movement to the angularly disposed non-working position thereof shown in FIGURE 6.

Means **40, 41** in the form of a cam follower surface are associated with each locking member **34, 35**, respectively, to automatically force the locking members **34, 35** inwardly as the base members **11, 12** are pivoted from the position shown in FIGURE 6 toward the position shown in FIGURES 1 and 2. During this movement of the base members **11, 12**, the legs **22, 23** initially contact the cam follower surfaces **40, 41**, respectively, and progressively urge the locking members **34, 35** into the tubular element **31**. After the legs **23, 24** drop off the respective cam surfaces **40, 41**, the spring **36** urges the locking members **34, 35** outwardly into overlying contacting locking engagement with the legs **22, 23**, in the manner graphically illustrated in FIGURE 4. The bottoming of the stems **37, 38** in the respective slots **32, 33** prevent the locking members **34, 35** from leaving the tubular member **31**, and the contact of the offset ends **24, 25** upon the respective legs **14, 15** prevents the movement of the base member **11, 12** beyond the planar position of FIGURES 1 and 2.

Assuming the mop holder **10** is in the collapsed position of FIGURE 6, a cloth mop M having pockets P_1, P_2 is assembled upon the holder **10** by sliding the base members **11, 12** into the respective pockets P_1, P_2 by a simple one (or at most two) handed operation. The handle H is then pushed down toward and against the floor (not shown), causing the pivoting of the base member **11, 12** toward and into the locked planar position (FIGURES 1 and 2) in the manner heretofore described. In lieu of locking the holder **10** in its operative position by moving the handle H, each base member **11, 12** can be manually grasped and pivoted to the locked position although, of course, this necessitates manually grasping the mop M, which may be undesirable. The weight and inherent tendency of the holder **10** to assume the position shown in FIGURE 6 results in the collapse of the holder upon the compression of the spring **36** in the manner heretofore described. The mop M can then be manually removed from the holder **10** by simply shaking the handle H or grasping and pulling the mop M off the base members **11, 12.**

Although the foregoing description is intended as a preferred embodiment of the invention, it is to be understood that modifications thereof may be made without departing from the spirit and scope of the invention as defined by the following claims.

What is claimed is:

1. A collapsible mop holder comprising:

first and second generally U-shaped base members, each having spaced legs and a bight portion;

said first base member having a first rigid means sesured to and connecting the legs thereof, said rigid means being spaced substantially inwardly from the ends of the legs of said first base member;

said second base member having its legs in substantial overlapping relation to the legs of said first base member, the said legs being pivotally mounted adjacent the rigid means of said first base member, said second base member having a second rigid means secured to and connecting the legs thereof, said second rigid means being spaced inwardly from the ends of the legs of said second base member;

a cam surface actuated locking means adjacent said second rigid means for engaging at least one leg of a base member and automatically locking said first and second base members in overlapped coplanar relationship;

stop means on one of said base members limiting relative movement of said base members between a first position in which the base members are in a substantially common plane and a second position in which the base members are disposed in angular relationship to each other; and

means between said first and second rigid means for attaching a mop handle to said holder.

2. A mop holder as set forth in claim **1**, wherein said second rigid means serves as a housing for said cam surface actuated locking means.

3. A mop holder as set forth in claim **1**, wherein said second rigid means comprises a hollow tube, and said locking means includes at least one spring biased, sliding latch plunger having a beveled projecting face and finger means for retracting said plunger.

4. A mop holder as set forth in claim **1**, wherein said cam surface actuated locking means comprises a hollow tube open at both ends, spaced latch members in said tube biased outwardly by spring means and having beveled projecting faces, and finger means for retracting said latch members.

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