

MOP HOLDER.

1,037,703.

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MOP-HOLDER.

1,037,703.

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To all whom it may concern:

Be it known that I, FERDINAND R. WOLTER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Mop-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved mop-head, the term mop-head being used in a broad sense to include devices adapted to hold mop rags, floor and window scrapers, and the like.

Generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention in its preferred form, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a plan view of the improved mop-head, with some parts broken away, and some parts sectioned; Fig. 2 is a side elevation of the parts shown in Fig. 1, some portions being broken away; Fig. 3 is a fragmentary view partly in plan and partly in section on the line $x^3 x^3$ of Fig. 2; Fig. 4 is a detail in elevation, with parts broken away showing the relatively movable clamping bar of the mop-head; Fig. 5 is a detail in transverse section taken on the line $x^5 x^5$ of Fig. 1; and Fig. 6 is a transverse section taken on the line $x^6 x^6$ of Fig. 1.

The numeral 1 indicates a pole, to one end of which a cast socket or cap 2 is rigidly secured in any suitable way. The socket 2 is provided with a fork made up, preferably, of a pair of stiff metal rods 3, the converging ends of which are cast, or otherwise rigidly secured in one end of the said socket 2, and the outer ends of which are bent inward or toward each other to form hook-like projections to fingers 4.

The mop cloth or scraper blade is adapted to be clamped and held between relatively fixed and relatively movable clamping bars 5 and 6, respectively, both of which, as shown, are channel-shaped in cross section, the channel of the bar 6 being large enough to receive the channel bar 5. The channel bar 5 is preferably a stamped metal piece

provided in its channel near its ends with depressions or bulged seats 7 which are normally engaged by the hook ends 4 of the fork rods 3. This affords one extremely simple and efficient way of detachably connecting the bar 5 to the fork rods 3. The importance of this detachable feature will be later noted.

The relatively movable clamping bar 6 is preferably a cast part having a centrally located stem portion 8 cast integrally therewith, and formed with diametrically opposite longitudinally extended ribs 9. This stem 8 is guided by, and movable endwise, in a guide tube 10, the other end of which is rigidly seated in the cap 2, being preferably cast therein. This guide tube 10 is provided with long diametrically opposite longitudinally extended slots 10^a in which the ribs 9 of the stem 8 are arranged to work. In its extreme end, the said stem 8 is provided with a depression 8^a that is engaged by an approximately spherical head 11 of a clamping lever 12 and which lever has a curved cam acting section 12^a that works through the slots 10^a and bears also against the round head of a plunger 13. This plunger 13 affords a yielding abutment against which the said lever acts, and it is spring-pressed by a quite strong coiled spring 14 seated in the guide tube 10, and re-acts against the cap 2. As the head 11 is wider than the slots 10^a, it affords a sliding pivotal connection between the said lever and the tube 10, which prevents the lever from being accidentally disconnected from the tube. As the head 11 rests in the depression 8^a of the stem 8, and this, in turn, bears against the walls of the guide tube 10, it affords additional support for the head 11 so that these parts will not readily wear out. By the construction employed, it obviates the necessity of weakening the tube 10 by any bolt or rivet holes, and renders the clamping lever 12 readily movable from the tube 10 for placing of a new spring.

As already indicated, any form of mop or scraper, such as a mop cloth or soft rubber scraper bar, is adapted to be clamped between the clamping bars 5 and 6. The feature of making the relatively fixed bar 5 detachable, is, however, of greatest importance when the mop-head is used to clamp a mop cloth or rag of bulky form, and which cannot be easily applied between the clamping bars of an ordinary mop-head, or easily re-

moved therefrom. With this bar 5 made detachable, any kind of a bulky rag or mop cloth may be easily applied between the co-operating clamp bars, or removed from between the same when the said bar 5 is detached from the rods 3. When such mop cloth or rag is placed between the two clamping bars 5 and 6, the former may be quickly and easily applied in working position, or detached. Otherwise stated, the feature of making the relatively fixed bar 5 removable is, however, of greatest importance because of the easy and ready means it affords for putting in and removing the mop cloth or rag (especially the latter process) from the mop-head. It has been found in practice, that the fabric, such as is being used for this purpose, after continued use, will become badly soiled and tangled up so that the removal from the mop-head is rendered a very tedious and unpleasant task or operation.

When the clamping lever 12 is turned into the position indicated by dotted lines in Fig. 1, the relatively movable clamp bar 6 may be retracted from the bar 5, as indicated by dotted lines in said view. When, however, the said lever is turned into the position indicated by full lines in said Fig. 1, the two clamping bars will be tightly pressed toward each other and will be caused to tightly pinch and hold the mop cloth. The yielding abutment 13, when cammed backward by the curved portion 12^a of the lever 12, will move into a position that will depend somewhat upon the thickness of the mop cloth or the article clamped between the bars 5 and 6. The spring 14, of course, will exert sufficient pressure to properly clamp the mop cloth or scraper blade.

A nut 15 is preferably applied on the split end of the tube 10.

The so-called mop-head may, of course, be made of different sizes and may be used, for instance, in connection with mop cloths or blades for cleaning floors, or in connection with smaller scraper blades or other cleaning devices for cleaning windows.

In actual practice, the device has been found highly efficient, very convenient, and easily operated. Furthermore, it may be constructed at comparatively small cost.

What I claim is:

1. A mop-head comprising a member having diverging prongs, a clamping bar hav-

ing detachable engagement with the said prongs, a relatively movable clamping bar, and means for pressing the latter toward the said detachable clamping bar.

2. A mop-head comprising a member having projecting prongs, a clamping bar detachably engageable with the offset ends of said prongs, a relatively movable clamping bar, and means for pressing the latter toward the said detachable clamping bar.

3. In a mop-head, the combination with a member having diverging prongs and a central guide tube, of a pair of co-operating clamping bars, one removably connected to said prongs and the other slidably mounted on said guide tube, a cam lever slidably pivoted to said guide tube and operative on one of the said clamping bars, and a yielding abutment against which the said cam lever is arranged to act, substantially as described.

4. In a mop-head, the combination with a member having diverging prongs and a central guide tube projecting therefrom, said tube having diametrically opposite longitudinal slots, of a clamping bar detachably engaged with the ends of said prongs, a co-operating movable clamping bar having a stem working in said guide tube, and a lever having a head slidably pivoted in said guide tube and bearing against the stem of said movable clamping bar, and the said lever having a cam portion working through the slots of said guide tube and operative on said yielding abutment.

5. In a mop, the combination with a member having diverging prongs and a central guide tube projecting therefrom, said prongs having inwardly bent hook-like ends, and said guide tube having diametrically opposite longitudinally extended slots, of a channel-shaped clamping bar engageable at its ends with inwardly turned ends of said prongs, a relatively movable clamping bar having a stem working in said guide tube and having ribs working in the slots thereof, and a spring-pressed cam lever working in the slots of said guide tube and operative on the stem of said relatively movable clamping bar, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FERDINAND R. WOLTER.

Witnesses:

HARRY D. KILGORE,
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