Oct. 13, 1970 W. HESENER 3,533,122

HANDLE FOR A HAND MOP FOR CLEANING HOUSEHOLD CROCKERY

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Fig.1.

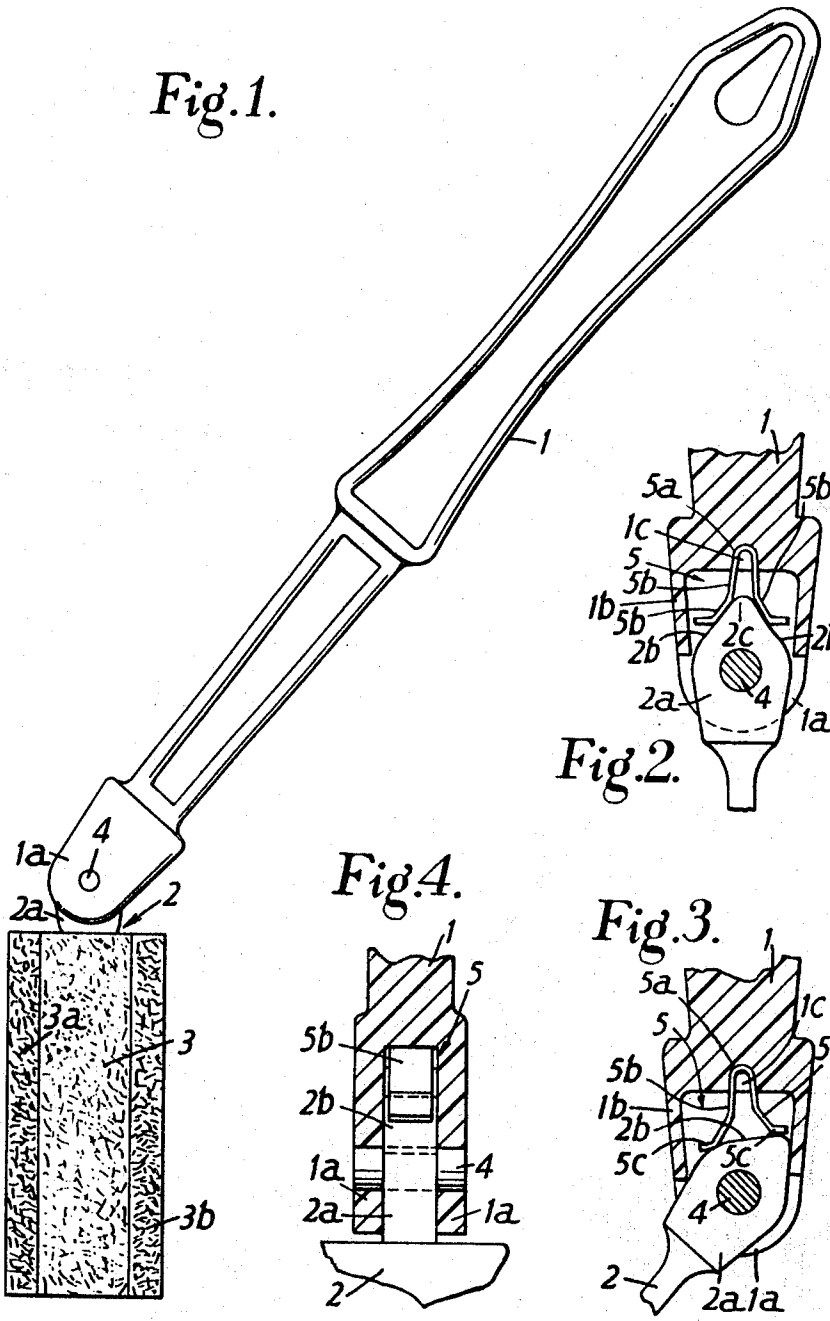

Fig.2.

Fig.4.

Fig.3.

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Fig.5.

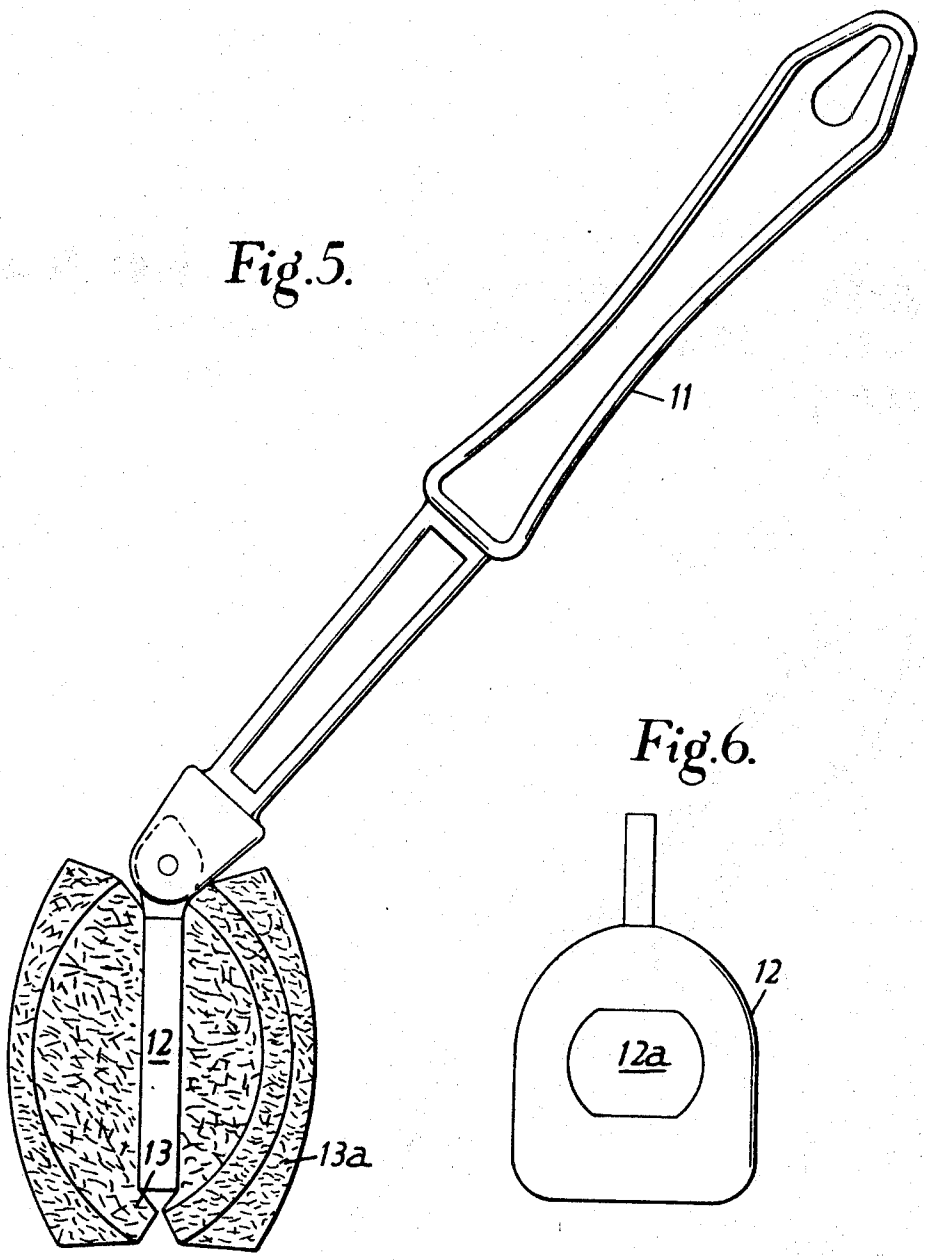

Fig.6.

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HANDLE FOR A HAND MOP FOR CLEANING HOUSEHOLD CROCKERY

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U.S. Cl. 15—147 5 Claims

ABSTRACT OF THE DISCLOSURE

In a handle for a hand mop for cleaning household crockery, a sponge is carried by a sponge-fastening member which can pivot relative to a grip portion of the handle. A V-shaped leaf spring maintains the fastening member in either of its two limit positions as desired.

The present invention relates to a handle for a hand mop for cleaning household crockery, having a fastening member for carrying a cleaning member such as a sponge or the like, the fastening member being pivotally mounted at one end of the handle.

According to one aspect, the invention is concerned with the problem of developing a locking device which permits a large angle of pivotal movement between the handle and the fastening member and is extremely simple and reliable in operation.

According to the invention there is provided a handle for a hand mop for cleaning household crockery, the said handle comprising:

(a) a grip portion by which the user can hold the handle,
(b) a fastening member pivotally connected to the said grip portion,
(c) a pivot pin effecting the said pivotal connection between the said grip portion and the said fastening member,
(d) means for mounting a sponge or like cleaning member on the said fastening member,
(e) V-shaped cam means including two stop faces at an acute angle to each other constituting a portion of the said fastening member,
(f) a recess in that end region of the said grip portion that is adjacent to the said fastening member, and
(g) a leaf spring partly accommodated in the said recess and engaging at least one of the said stop faces to maintain the said fastening member at a desired pivotal orientation relative to the said grip portion.

The said grip portion may be bifurcated into two fork arms at its end adjacent to the said fastening member and may include lateral walls joining the said fork arms, the said lateral walls serving in operation as limit stops engaging the said stop faces to limit pivotal movement between the said grip portion and the said fastening member.

The said leaf spring is preferably substantially V-shaped and has the end of each limb of the V bent outwardly.

The invention also provides a handle for a hand mop for cleaning household crockery comprising:

(a) a grip portion by which the user can grip the handle,
(b) a fastening member by which a cleaning member constituted by a sponge or the like can be carried by the handle,
(c) the said fastening member having the shape of a substantially flat blade or spade with rounded corners and having a central orifice therein through which the cleaning member can be passed by compressing the same, whereby the blade or spade provides support over an extended area for the cleaning member in use.

With a fastening member of this type, a large pressure area always bears against the particular sponge pad being used, whereby the effective part of the working face is considerably enlarged. In addition, by holding the device itself at an angle, a high pressure can be exerted on the corner regions of the sponge pads, which is particularly useful when cleaning the inside corners of pans.

As is readily apparent, these advantages of the larger pressure face are found independently of whether the fastening member is rigid or fixed to the handle by means of a hinge and independently of the construction of the hinge.

With previously known mops for cleaning household crockery, the sponge fastening rings have been constructed with a frame cross section which is round or elongated in the axial direction of the ring. Such rings exert a satisfactory working pressure only on a small central region of the sponge working faces while the outer regions and particularly the corner regions of the sponge are not supported. The efficiency of such devices is low, the rate of wear of the central regions of the working faces very high and the working life of such a sponge extremely short.

Illustrative and nonlimitative embodiments of the invention are illustrated in the accompanying drawings, in which:

FIG. 1 shows a side view of a sponge mop provided with the hinge according to the invention, with the sponge in an inclined working position,

FIG. 2 shows the hinge region of FIG. 1 with a longitudinal section through the bifurcation taken in a plane parallel to the plane of pivotal movement, with the fastening member in its central position.

FIG. 3 shows a similar view as to that of FIG. 2, but with the fastening member in an inclined working position,

FIG. 4 shows the hinge region corresponding to FIGS. 2 and 3, with a longitudinal cross section of the bifurcation taken perpendicularly to the plane of pivotal movement and with the fastening member in its central position,

FIG. 5 shows a side view of a further embodiment of a mop with an annular sponge fastening member in an inclined working position, and

FIG. 6 shows a plan view of the sponge fastening member shown in FIG. 5.

The mop according to FIGS. 1 to 4 essentially comprises a handle **1** pivoted to a fastening member **2**. The latter carries a cleaning member **3** which in this example of the invention is in the form of a sponge. The cleaning member **3** is provided with two working faces **3***a*, **3***b* of different abrasive characteristics. The lower end region of the stick **1** is in the form of a fork and has the two fork arms **1***a* (FIG. 4). Above the pivot pin **4** the two fork arms **1***a* are laterally joined to form a cap, by the integral walls **1***b*. A central arm **2***a* is pivotally mounted between the two fork arms **1***a* and is moulded to the fastening member **2**. The arm **2***a* is inverted-V-shaped in its upper end region and thereby has two stop faces **2***b* which are set at angles corresponding to the desired limiting angles of pivotal movement. The faces **2***b* cooperate with the walls **1***b* of the fork which act as stops. A substantially V-shaped leaf spring **5** serves to resist and prevent undesired pivoting of the fastening member **2**. The leaf spring **5** is loosely mounted with its lower end region **5***a* in a recess **1***c* disposed centrally in the base of the fork. With the fastening member **2** in the central position the two limbs **5***b* of the spring lie in contact with the inverted-V-shaped end region of the central arm **2***a*. During

pivotal movement of the fastening member **2** both ends of the limbs of the spring **5** remain in sliding contact with the corresponding faces **2***b* of the central arm **2***a*. The whole device is so arranged that the highest point of the cam means **2***c* formed by the two stop faces **2***b*, when the fastening member **2** is in its inclined working position, lies radially outside (with reference to the pivot axis) the highest (i.e. furthest from the axis) points of the bent portions **5***c* of the ends of the limbs of the spring. As particularly apparent from FIG. 3, the spring **5** has a slight clearance for movement in the recess **1***c* in the plane of pivotal movement and can therefore take up a position at a slight angle to the longitudinal axis of the handle **1**, due to the two limbs **5***b* lying against one of the faces **2***b* of the central arm **2***a*.

An alternative embodiment of the invention is shown in FIGS. 5 and 6. A spade-shaped or pallet-shaped fastening member **12** encircles in a girdle-like manner the sponge **13**, which is hinged to the handle **11**. A hole **12***a* is provided approximately in the centre of the fastening member **12** and is surrounded by a wide frame, which is overlapped in use by parts of the sponge whereby pressure can be applied to the sponge **13** over a large area. The sponge in this embodiment is provided on one side with a scouring layer **13***a*.

I claim:

1. A handle for a hand mop for cleaning household crockery, said handle comprising: a grip portion by which the user can hold the handle; a fastening member pivotally connected to said grip portion; a pivot pin effecting said pivotal connection between said grip portion and said fastening member; means for mounting a cleaning member on said fastening member; V-shaped cam means including two stop faces at an acute angle to each other constituting a portion of said fastening member; a recess in that end portion of said grip portion adjacent said fastening member; and a leaf spring partly accommodated in said recess and engaging at least one of said stop faces to maintain said fastening member at a desired pivotal orientation relative to said grip portion, the leaf spring being substantially V-shaped and having the end of each limb of the V bent outwardly.

2. The handle as defined in claim **1**, wherein said recess is dimensioned to allow limited tilting movement of said spring.

3. The handle defined in claim **1**, wherein said grip portion is bifurcated into two fork arms at its end adjacent said fastening member and includes lateral walls joining said fork arms, said lateral walls serving, in operation, as limit stops for engaging said stop faces to limit pivotal movement between said grip portion and said fastening member.

4. A handle for a hand mop for cleaning household crockery, said handle comprising: a grip portion by which the user can grip the handle; a fastening member pivotally connected to said grip portion by which a cleaning member can be carried by the handle, said fastening member being substantially flat with rounded corners and having a central orifice therein through which the cleaning member can be passed by compressing the same, whereby the fastening member provides support over an extended area for the cleaning member in use; and a leaf spring for maintaining said fastening member at a desired pivotal orientation relative to said grip portion, the leaf spring being substantially V-shaped and having the end of each limb of the V bent outwardly.

5. The handle recited in claim **4**, wherein the fastening member is defined by first and second smoothly merging regions, the first region being nearer to the grip portion than the second and having an external peripheral shape of a half-circle, and the second region having an external peripheral shape of a rectangle with rounded corners.

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U.S. Cl. X.R.

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