

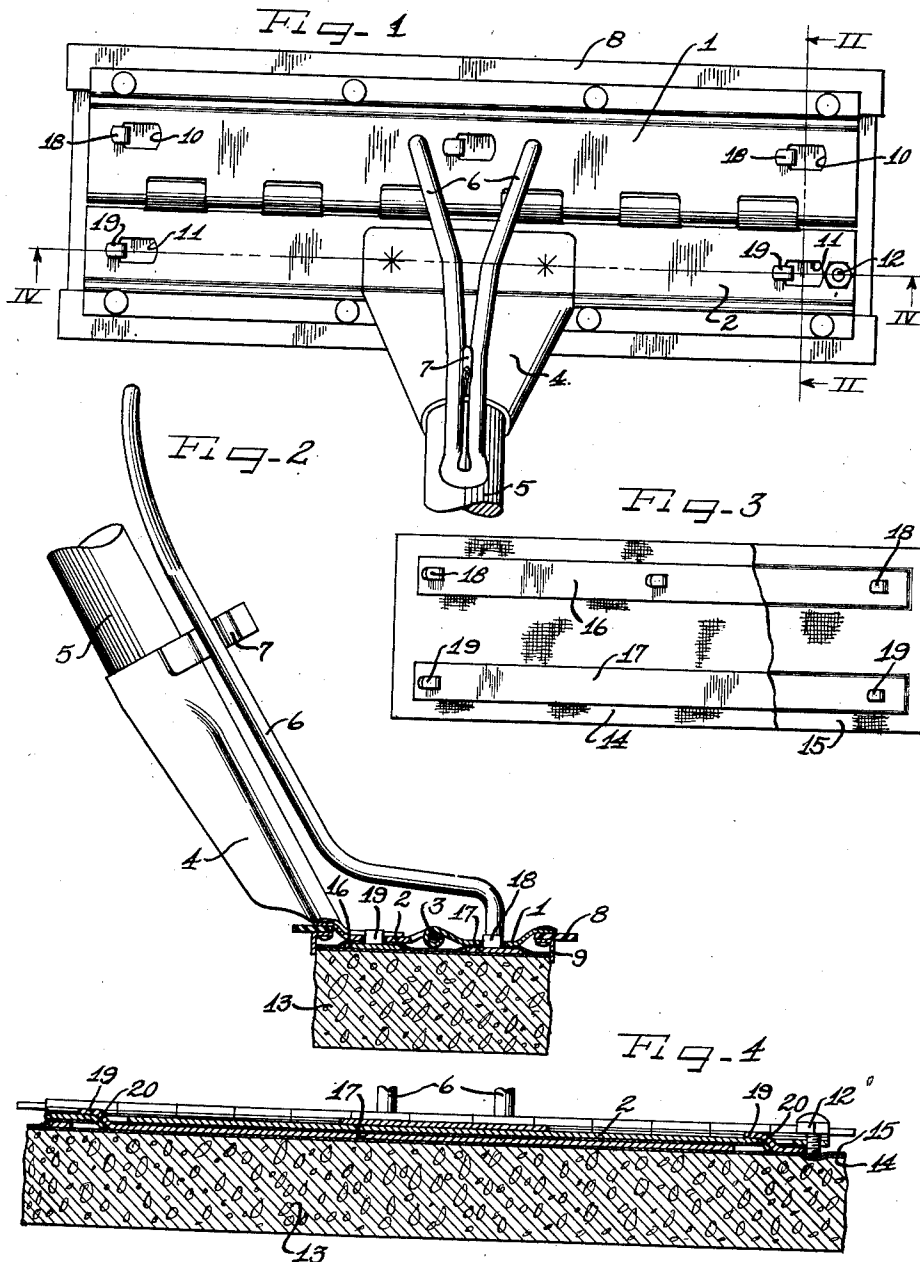
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MOPHEAD AND REFILL ASSEMBLY

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MOPHEAD AND REFILL ASSEMBLY

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4 Claims. (Cl. 15—119)

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This invention relates to improvements in a mop and refill assembly, and more particularly to a mop of the character embodying a permanent head and a replaceable cleaning element, commonly referred to as a refill, the mop being highly desirable for household purposes as a scrubbing, cleaning, or polishing mop either in a wet or substantially dry condition, although the invention will obviously have other uses and purposes as will be apparent to one skilled in the art.

The instant invention is an improvement upon the invention disclosed, described, and claimed in my copending application entitled Mop and Refill Construction, filed May 10, 1950, Serial No. 161,041.

Since the advent of mops embodying refills or replaceable cleaning elements, and especially mops of the self-wringing type wherein the refill element may be compressed by manipulating a handle and the stick socket in opposite directions to squeeze the refill between pivotal portions of the head, some difficulty has been experienced in providing positive and yet very simple connections between the refill and mop head. In most instances, the refill could not be removed from or attached to the mop head without the manipulation of various securing elements and in many cases without the use of some tool for the purpose. This was not only difficult but aggravating, especially to housewives.

With the foregoing in mind, it is an important object of the instant invention to provide a mop head and refill assembly wherein a simple relative movement between the head and refill serves to firmly unite the parts, and such junction may be secured indefinitely by finger manipulation of a simple element.

Another object of the instant invention is the provision of a mop head and refill assembly, wherein both the head and refill embody a plate, one of the plates having a slot or slots therein while the other has a corresponding number of tongues projecting therefrom for passage through the slots and latching engagement with the other plate upon a very simple relative sliding movement between the head and refill.

It is also a feature of this invention to provide a mop head and refill assembly, wherein the mop head is provided with a number of slots, and the refill has an equal number of tongues projecting upwardly and laterally therefrom for latching engagement over the head through the slots, and the head is further equipped with a simple form of set screw to lock the parts in engaged position against accidental release.

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Still another object of the invention resides in the provision of a mop head and refill assembly, wherein the refill and head may be latched together upon a very simple and short relative movement therebetween, and no tools of any kind whatever are necessary either to connect the refill to the head or remove it therefrom.

It is also a feature of this invention to provide a mop head and refill assembly wherein the head and refill may be readily and easily latched together, the latching element or elements being provided as an integral part of the refill.

Still a further feature of the invention resides in the provision of a mop head and refill assembly, wherein either the head or the refill is provided with one or more slots having a formation at the edge of each slot to facilitate latching engagement through the slot by means of an equal number of latches carried by the other member.

While some of the more salient features, characteristics and advantages of the instant invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawing, in which—

Figure 1 is a fragmentary top plan view of a mop head and refill assembly embodying principles of the instant invention, showing the refill connected to the mop head in operative position;

Figure 2 is a fragmentary vertical sectional view of the structure of Fig. 1 taken substantially as indicated by the line II—II of Fig. 1, looking in the direction of the arrows;

Figure 3 is a top plan view of the refill element alone, with a part broken away to illustrate the structure therebeneath; and

Figure 4 is a fragmentary longitudinal section taken substantially as indicated by the line IV—IV of Fig. 1.

As shown on the drawings:

In the illustrated embodiment of the instant invention there is shown a mop head including a pair of front and rear plates 1 and 2 hinged together along confronting edges with the aid of a hinge pin 3. A socket 4 for a mop stick 5 is welded or equivalently secured to the rear plate 2, and a handle 6 is welded or equivalently secured to the front plate 1. As seen clearly in Fig. 1, the handle is divided to resiliently engage over a detent 7 carried by the socket 4, so that in normal position the handle is maintained in intimate association with the socket.

Along the forward edge of the plate 1, a squeeze 8, preferably of rubber or equivalent material, is held in place on the head by means of a suit-

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able angle strip 9 riveted or equivalently secured to the margin of the head plate. As seen clearly in Fig. 1, this squeegee projects forwardly of the entire mop structure, and laterally beyond each end of the entire mop structure. The squeegee is of aid in washing windows or equivalent maneuvers, and further prevents any portion of the mop from contacting baseboards, furniture, and the like. A similar squeegee construction is provided on the rear edge 2, and while this rear squeegee may not function as such, it nevertheless serves the purpose of a resilient bumper preventing contact of metal parts with objects that might be injured during the use of the mop.

Again, with reference to Fig. 1, it will be seen that the front plate of the mop head is provided with a plurality of slots 10 therein, while the rear plate is provided with a plurality of similar slots 11. In the illustrated instance, three such slots are shown on the front plate, while two are illustrated adjacent the ends of the rear plate, since the socket 4 is mounted centrally of the rear plate. Also, threadedly engaged through the rear plate adjacent one end thereof is a hand operable set screw 12 which may be readily and easily extended or retracted with the finger and thumb of an operator, there being no tools required to operate this set screw.

In the illustrated instance, the refill element comprises a sponge-like body 13 which may satisfactorily be a block of cellulose sponge. Over the top of the body 13 is a cover 14, preferably of fabric of the type of a light canvas or the equivalent, and which is cemented to the block. A second cover 15 of like character is cemented to the first cover wherever it is possible for the covers to come in contact with each other. Between the two covers 14 and 15 a pair of spaced, preferably metallic, strips 16 and 17 are glued or otherwise held in place by the covers. It will be noted that these strips are disposed to underlie the head plates 1 and 2, respectively, but are shorter than the head plates as well as being shorter than the refill body 13, so there is no possibility of either of these strips ever contacting baseboards or furniture.

Preferably struck bodily from the plates or strips are a plurality of latching tongues. The front plate 16 has three of these tongues 18 corresponding to the three slots 10 in the front head plate 1; while the rear strip or plate 17 has two latching tongues 19, corresponding to the slots 11 in the rear head plate 2. As is evident from the disclosure in Fig. 4, the tongues 18 and 19 extend upwardly through the top cover element 15 and are then extended laterally in spaced relationship to the cover 15.

With this construction, it is an extremely simple expedient to place the refill against the underside of the mop head, with the tongues protruding through the respective slots, and then upon a slight relative movement between the head and refill bring the tongues in their latching engagement over the head plates 1 and 2 as clearly seen in Fig. 1. This latching engagement may then be secured by the simple expedient of tightening the set screw 12 until the shank of this screw extends downwardly past the end of the adjacent strip or plate 17 of the refill as seen clearly in Fig. 4, so that an inadvertent unlatching movement between the refill and mop head cannot happen. When it is desired to remove the refill, it is also a simple expedient to release the set screw, and slide the parts out of latching engagement with each other.

With reference again to Fig. 4, it will be noted that the head plates 1 and 2 are preferably struck downwardly as indicated at 20 on the latching side of each slot, to better facilitate quick and positive engagement between the refill and head.

When it is desired to wring out the refill, it is a simple expedient to free the handle 6 from the detent 7 and move the handle away from the socket 4 thereby folding the body of the refill between the head plates 1 and 2 and compressing out the moisture contained in the refill, all as more fully explained in my aforesaid copending application.

From the foregoing it is apparent that I have provided a mop head and refill assembly wherein the refill is simply and expeditiously joined to or removed from the mop head without the aid of any tools and in a manner readily performed by any housewife. It will also be noted that the entire construction is extremely durable, light in weight, and economical to manufacture.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. In a mop, a head including front and rear plates hingedly connected along adjacent edges thereof, each of said plates having slots therein, a refill element including a sponge body, a pair of spaced metallic strips on said body to underlie said plates, said strips being shorter than said plates, a cover over said strips and secured to said body around said strips, holding the strips to said body, tongues struck from said strips and extending upwardly through said cover and laterally thereabove through said slots and latching over said plates at the ends of the slots, and a releasable set screw in said head extending past the end edge of one of said strips to prevent a relative unlatching movement between said element and the head.

2. In a mop, a head including a pair of hingedly connected plates each having a slot therein, a sponge element removably connected to said head, means for relatively pivoting said plates to compress said sponge element therebetween, a pair of spaced rigid strips carried by said sponge element to underlie said plates, a cover secured to said sponge element and overlying said strips, a bent tongue projecting from each strip through said cover and entering the respective slot and interlocking with the respective plate, and a releasable unitary locking element carried by one of said plates engaging a strip and holding said head and sponge element against an unintentional relative disengaging movement.

3. In a mop, a head including front and rear plates hingedly connected along adjacent edges, each of said plates having a plurality of spaced slots therein, a refill sponge, a pair of spaced metallic strips on top of said sponge and carried thereby and underlying said plates, a cover secured to said sponge over said strips, and latch elements carried by said strips and extending through said cover and said slots into latching engagement with said plates at the ends of said slots, said sponge being removable from said head upon relative movement therebetween to disengage said latch elements.

4. In a mop, a head including front and rear plates hingedly connected along adjacent edges, each of said plates having a plurality of spaced slots therein, a refill sponge, a pair of spaced metallic strips on top of said sponge and carried

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thereby and underlying said plates, a cover secured to said sponge over said strips, spaced tongues struck from each of said strips extending upwardly and laterally all in the same direction through said cover and said slots and latching over said plates at the ends of said slots, and releasable holding means in one of said plates engaging an end of one of said strips to prevent relative movement between the sponge and head to disengage said tongues.

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