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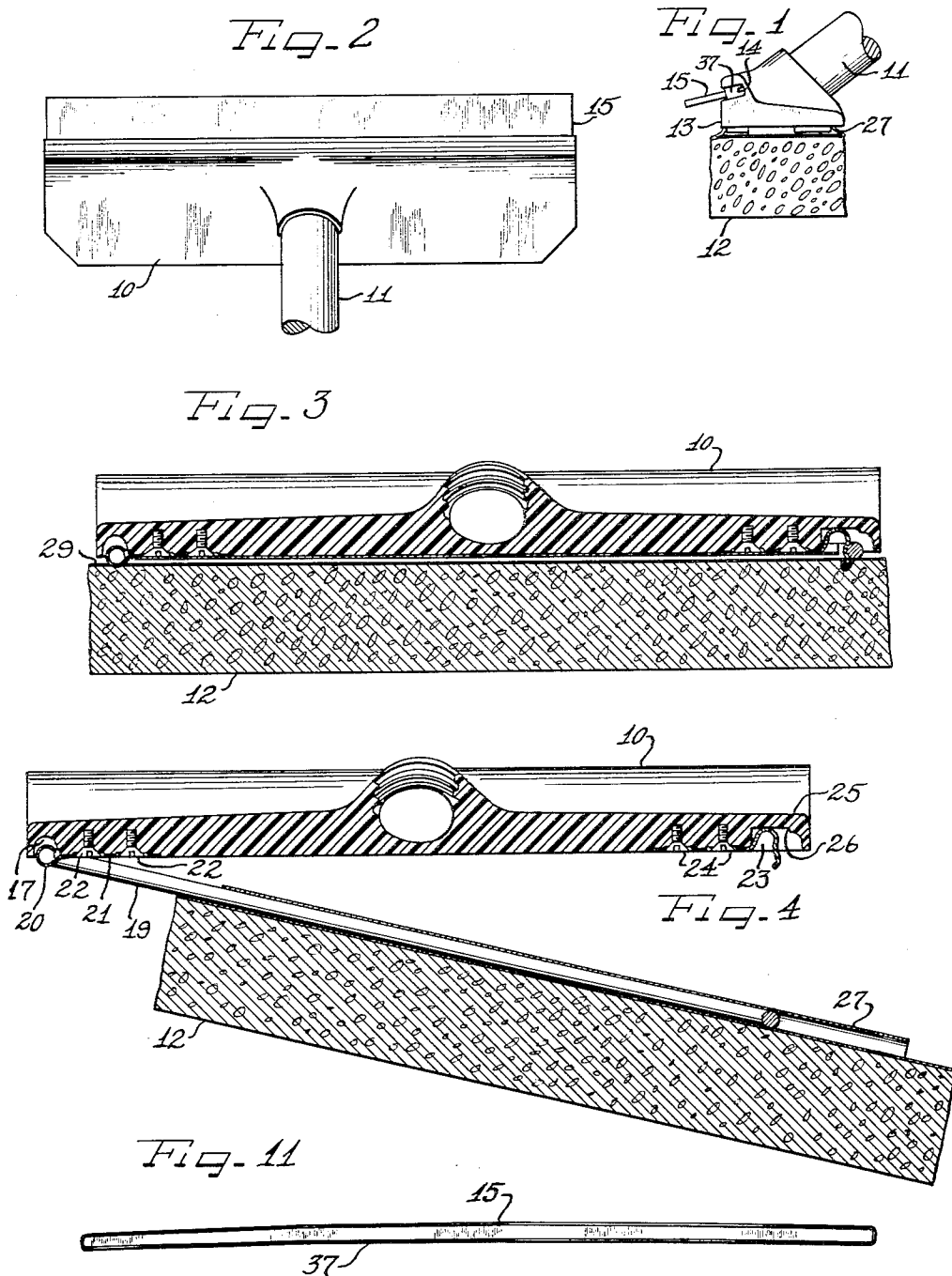
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2,715,237

SPONGE TYPE MOP HAVING A DETACHABLE HEAD

Filed July 8, 1950

2 Sheets-Sheet 1



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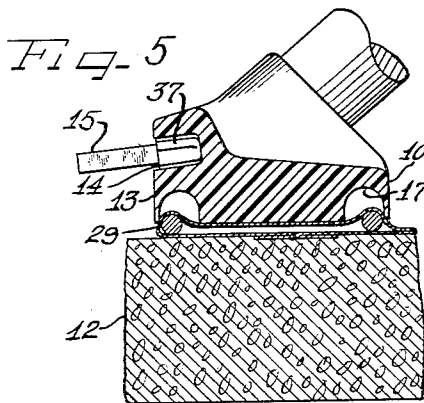
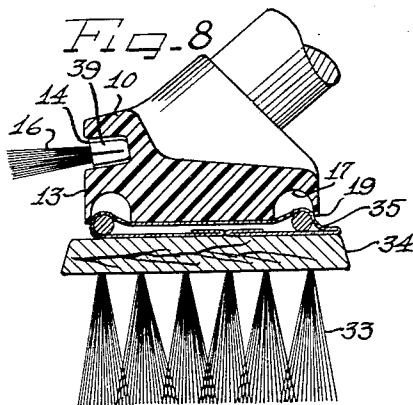
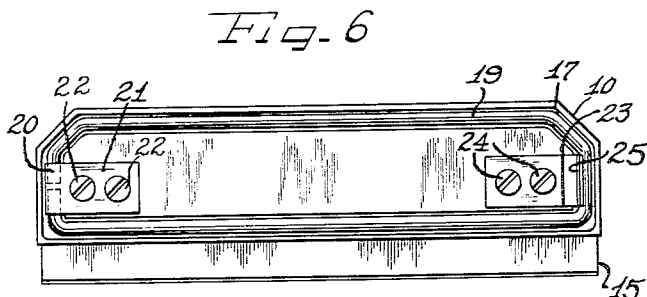
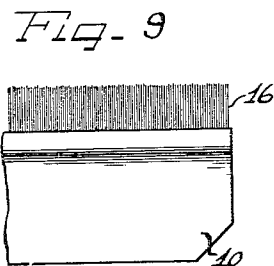
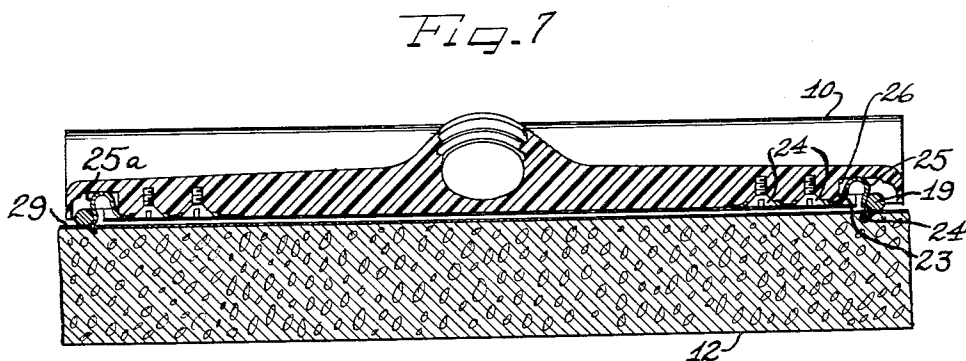
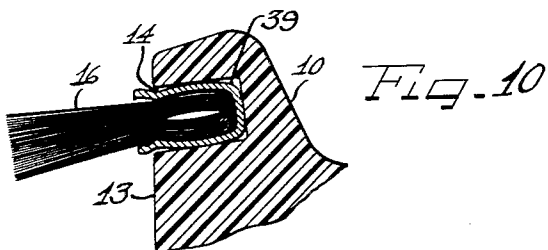
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SPONGE TYPE MOP HAVING A DETACHABLE HEAD

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2 Sheets-Sheet 2



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SPONGE TYPE MOP HAVING A DETACHABLE HEAD

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2 Claims. (Cl. 15—244)

This invention relates to improvements in mop structures and more particularly relates to a new and improved fastening means for detachably securing a cleaning element to a mop head.

A principal object of my invention is to provide a novel form of securing means arranged with a view toward securing a cleaning element to a mop head in a simpler and more expeditious manner than formerly.

A further object of my invention is to provide a new and improved form of securing means for detachably securing a mopping element to a mop head by the insertion of a retaining member on the mop head through a fabric sleeve on the mopping element.

A further and more detailed object of my invention is to provide a securing means for detachably securing a cleaning element to a mop head by the use of a fabric sleeve secured to the cleaning element by mounting the sleeve on an attaching and securing member releasably secured to the mop head.

These and other objects of my invention will appear from time to time as the following specification proceeds and with reference to the accompanying drawings wherein:

Figure 1 is a view in side elevation of a cleaning element secured to a mop head in accordance with my invention, showing the mop handle broken away;

Figure 2 is a top plan view of the mop head shown in Figure 1;

Figure 3 is a longitudinal sectional view taken substantially through the center of the mop head and cleaning element;

Figure 4 is a longitudinal sectional view somewhat similar to Figure 3 but showing the attaching member released from the mop head at one of its ends and showing the mop element as being inserted on the attaching member;

Figure 5 is a transverse sectional view taken through the mop head and cleaning element;

Figure 6 is a bottom plan view of the mop head in a closed position with respect thereto, showing the attaching member;

Figure 7 is a longitudinal sectional view taken through a mop head and cleaning element, showing a modified form of detachably securing the attaching member to the mop head;

Figure 8 is a view illustrating a modified form of my invention in which a brush has been substituted for the mopping element;

Figure 9 is a fragmentary plan view of the form of my invention illustrated in Figure 8;

Figure 10 is an enlarged detail fragmentary sectional view showing an elongated brush secured to and extending from the forward wall of a mop head; and

Figure 11 is a rear end view of a cleaning element which may be mounted in the mop head of my invention.

In the embodiment of my invention illustrated in the drawings, a mop head 10 is shown as having a handle 11 extending angularly upwardly therefrom and as hav-

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ing a relatively flat bottom portion having a cleaning element 12 secured thereto. The cleaning element 12 may be made from a block of compressible material such as a natural or cellulose sponge, or any other like material, and in the form of my invention shown in Figures 1 through 7 is shown as comprising a rectangular block of cellulose sponge such as is commonly used for cleaning and mopping purposes.

The mop head 10 is also shown as having a front vertical face 13 having a rectilinear slot 14 extending therealong which is adapted to form a support for a squeegee 15 which may be inserted therein and may project therefrom to be used for cleaning purposes and which may also serve as an end bumper for the mop to prevent damage to the baseboard or furniture during mopping. Also, if desired, a brush 16 may be substituted for the squeegee 15. The squeegee 15 and brush 16 and the mounting thereof in slot 14 will hereinafter be more clearly described as this specification proceeds.

The mop head 10 may be made from metal, wood, or from any of the well known forms of plastic materials on the market and is herein shown as being made from a thermoplastic material. A groove 17 is formed in the flat bottom surface of the mop head 10 and conforms generally to the margins thereof. Said groove is adapted to have an attaching frame 19 recessed therein.

The attaching frame 19 is shown in Figure 6 as being formed from a rod or wire bent to conform to the margins of the mop head. The adjacent ends of said frame are inserted in a rounded inwardly turned end portion 20 of a hinge plate 21. The hinge plate 21 is secured to the bottom of the mop head as by machine screws 22, and the inwardly turned end thereof extends within the groove 17 and forms a pivotal mounting for the attaching frame 19 on the bottom of the mop head. The end of the loop or open portion of the frame 19 opposite the hinge plate 21 is adapted to be engaged by a spring clip 23 secured to the bottom of the mop head by machine screws 24 and having an inwardly and outwardly turned portion 25 extending within an enlarged portion 26 of the groove 17 and outwardly therebeyond. The outer end portion of said outwardly turned portion of said clip has a concave engaging surface engaging the inside of the wire of the frame 19 and releasably holding said frame in parallel relation with respect to the bottom surface of the mop head 10. The frame 19 may readily be hinged about its axis of connection to the hinge member 21 by pulling outwardly with the fingers for insertion within a relatively flat fabric sleeve or loop 29 on the mop element 12, as shown in Figures 4 and 5.

When the frame 19 is in the open position shown in Figure 4, the sleeve may readily be inserted along said frame, and said frame may be moved into engagement with the clip 23 for securing the mop element to the mop head 10 and may be released from said clip to permit ready removal of said mop element.

In Figure 7 I have shown a modified form in which my invention may be embodied wherein a second clip 25a like the clip 23 is employed in place of the hinge member 21 to detachably clip the frame member 19 to the bottom surface of the mop head. In this form of my invention I bodily remove the frame 19 and mop element 12 from the mop head to replace other mop elements or brushing and cleaning elements.

It should here be noted that while the securing frame 19 is herein shown as being an open framework, it may be a plate or any other form of member which may be inserted through the sleeve 29 and detachably secured in parallel relation with respect to the mop head.

The sleeve 29 is shown in Figures 4 and 5 as being formed from a piece of fabric, such as canvas, cemented at its adjacent ends to the top of a mop element 12.

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As shown in these figures, the ends of the fabric are shown as being folded under the body thereof for a short portion of the length thereof and one end of the fabric is cemented to the top of the mop element with the folded portion extending under the top thereof. The fabric is shown as extending from the central portion of the mop element to the rear edge thereof. The fabric then extends forwardly along the mop element over the cemented portion and is loose from the mop element to form a loop through which the securing frame 19 may be inserted. The remaining portion of the fabric then extends rearwardly along the mop element from a position short of the extreme forward end thereof to the adjacent end of the fabric and is cemented to the top portion of the mop element with the folded-over portion extending therealong, forming a relatively flat sleeve. The extreme ends of the top layer of the fabric are shown in Figure 4 as being cut away to allow for the frame member 19 and the hinge member 21 and clip 23 so that the mop element and the sleeve may be inserted on the frame member 19 with the ends of said frame member projecting beyond the ends of said sleeve.

It is obvious from the foregoing that the same form of sleeve construction may be used regardless of whether the securing frame 19 is hinged to the mop head, as shown in Figure 4, or clipped to the mop head, as shown in Figure 4.

It should be noted that the frame member 19 is partially recessed within a marginal slot 17 and engages the top portion of the canvas of the loop with the bottom of the mop head and securely holds the mop element to the mop head but allows a certain amount of flexibility thereof during the mopping operation, thus avoiding undue stress on the fabric backing and the tendency of the backing to loosen from the mop element after repeated mopping operations.

In a modified form of my invention shown in Figure 8, I have shown a brush secured to the bottom of the mop head by means of the attaching frame 19. In this form of my invention the brush is shown as having bristles extending from a head 34, and a fabric sleeve 35 like the sleeve 29 is cemented to the top of the brush head 34 in a manner similar to which the sleeve 29 is cemented to the top of the mop element 12, the only difference being that the intumed ends of the fabric project from the top of the backing to provide a smooth surface of fabric in engagement with the top of the brush head. It is of course obvious that other cleaning devices such as polishing heads, waxing applications, dust mops, or any other type of cleaning devices, may be detachably secured to the mop head 10 in the same manner that the brush 33 or mop element 12 is secured thereto.

The squeegee 15 extends within the channel of a channeled bar 37 which is crimped thereto. The bar 37 is shown in Figure 11 as being bowed so that when it is inserted in the rectilinear slot 14 it will be distorted into a substantially straight formation and hold the squeegee 15 within said slot by the tendency of said bar to assume its original bowed form.

In Figures 8 and 9 the bristles of a brush 16 are shown as extending within the channel of a channeled bar 39 which may be crimped to said bristles and form a support therefor. Said bar is likewise bowed and may be held in engagement with a slot 14 by the force exerted by the tendency of said bar to assume its bowed form.

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

I claim as my invention:

1. In a cleaning device, a mop head having a flat bottom surface, a cleaning element comprising a block of cellulose sponge material adapted to abut the flat bottom surface of said mop head and be secured thereto, means securing said block of cellulose sponge material to said mop head comprising a fabric sleeve secured to and extending along the top of said block of cellulose sponge material and open to each end thereof, an open frame adapted to extend within said sleeve and beyond opposite ends thereof, the flat bottom surface of said mop head having a recessed portion extending thereabout adjacent the margins thereof and conforming substantially to the form of said open frame, means pivotally connecting one end of said open frame to said mop head to extend within the recessed portion thereof, and clip means securing said frame to extend within the recessed portion of said mop head and clipping said frame to maintain tension on said sleeve to hold the block of cellulose sponge material tightly in engagement with the flat bottom surface of said mop head by the tension maintained on said sleeve by said open frame.

2. A cleaning device comprising a mop head and a cleaning element securable thereto, said mop head having a flat bottom surface facing the cleaning element and having a recessed portion extending therearound inwardly of the margins thereof and conforming to the margins thereof, and means detachably securing said cleaning element to said mop head including an open attaching frame movable within said recessed portion of said mop head, means pivotally connecting one end of said frame to extend within said recessed portion, a spring clip carried within said recessed portion for detachably clipping the opposite end of said frame from its pivot to said mop head to extend within said recessed portion, and a relatively flat sleeve secured to the top of the cleaning element for insertion on said frame, said sleeve being shorter than said frame to accommodate the end of said frame to engage said spring clip and said frame maintaining tension on said sleeve by engaging said sleeve with the flat bottom of said mop head.

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