

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
05.10.2005 Bulletin 2005/40

(51) Int Cl.7: A47L 13/12, A47L 13/24

(21) Application number: 04255102.8

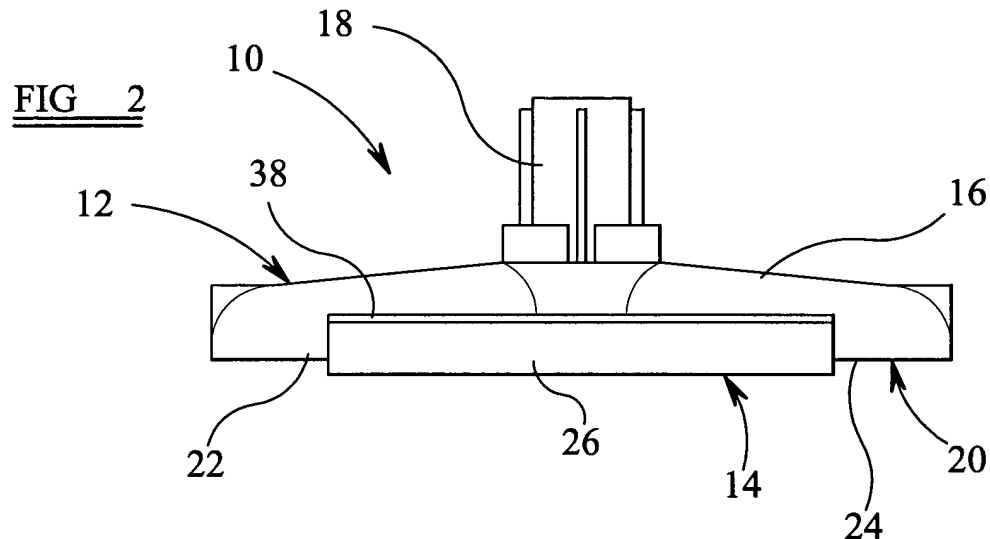
(22) Date of filing: 25.08.2004

(84) Designated Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR Designated Extension States: AL HR LT LV MK (30) Priority: 02.04.2004 US 815854 (71) Applicant: Young, Ronald Alexander West Midlands DY2 0EE (GB)	(72) Inventor: Young, Ronald Alexander West Midlands DY2 0EE (GB) (74) Representative: Bailey, Richard Alan A.R. Davies & Co., 27 Imperial Square Cheltenham, Gloucestershire GL50 1RQ (GB)
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(54) Mophead and cleaning implement

(57) A mophead 10/10/10" comprises a holder 12, flexible absorbent mop material held by the holder 12, and a cleaning implement 14/14/14". The cleaning im-

plement 14/14/14" is independent of the mop material and is permanently attached, or disengageably attachable, to the holder 14 at a position adjacent to the outside of the mop material.



Description

[0001] This invention relates to a mophead for mops which are used, primarily, for wet mopping of floors. In particular, this invention relates to a mophead having a cleaning implement.

[0002] Mops comprise a mophead and a handle. The mophead is generally formed from flexible absorbent mop material held by a holder. It is known from GB2323024 to provide such a mophead where the mop material is in the form of strands and a brush or like cleaning implement is positioned amongst the strands. Such an arrangement is beneficial due to the ease by which the brush or like implement can contact the surface being cleaned. However, a problem becomes apparent in that the mop strands interfere with the brush or like implement. This results in the brush or like implement not only being unable to easily contact the cleaning surface uniformly, but also damage to the strands.

[0003] A further problem presents itself in that other types of mop material, such as a sheet or sheets of absorbent material, cannot readily be used.

[0004] The task of having to change mops when a different type of brush or other cleaning implement is required also needs to be addressed.

[0005] The present invention therefore seeks to provide a solution to these problems.

[0006] According to a first aspect of the present invention, there is provided a mophead comprising a holder, flexible absorbent mop material held by the holder, and a cleaning implement which is independent of the mop material and which is permanently attached or disengageably attachable to the holder at a position adjacent to the outside of the mop material.

[0007] Preferable and/or optional features of the first aspect of the invention are set forth in claims 2 to 4, 10 and 11, inclusive.

[0008] According to a second aspect of the present invention, there is provided a cleaning implement for use with a mophead in accordance with the first aspect of the invention, when the cleaning implement is releasably attachable to the holder, the cleaning implement including at least part of a retaining mechanism by which the cleaning implement is engageable with the holder of the mophead.

[0009] Preferable and/or optional features of the second aspect of the invention are set forth in claims 6 to 8, inclusive.

[0010] According to a third aspect of the present invention, there is provided a mophead in combination with a cleaning implement in accordance with the second aspect of the invention, wherein the retaining mechanism further includes one or more catch elements formed on the holder of the mophead for engagement with the channel element of the cleaning implement.

[0011] The invention will now be more particularly described, by way of example only, with reference to the accompanying drawings, in which :

Figure 1 is a top plan view of a first embodiment of a mophead, in accordance with the first aspect of the invention, having a cleaning implement;

Figure 2 is a side view of the mophead shown in Figure 1;

Figure 3 is an end view of the mophead with cleaning implement removed;

Figure 4 is a transverse sectional view taken along the line A-A in Figure 1 with cleaning implement removed;

Figure 5 is an end view of the cleaning implement shown in Figure 1;

Figure 6 is a perspective view of the cleaning implement shown in Figure 5;

Figure 7 is a top plan view of a second embodiment of a mophead, in accordance with the second aspect of the invention, having a cleaning implement; Figure 8 is a side view of the mophead shown in Figure 7;

Figure 9 is a perspective view from below of the mophead shown in Figure 7;

Figure 10 is an end view of the mophead shown in Figure 7;

Figure 11 is a transverse sectional view taken along the line B-B in Figure 7;

Figure 12 is a perspective view of the cleaning implement shown in Figure 7;

Figure 13 is a reverse side view of the cleaning implement shown in Figure 12;

Figure 14 is a top plan view of a third embodiment of a mophead, in accordance with the first aspect of the invention, having a cleaning implement;

Figure 15 is a side view of the mophead shown in Figure 14;

Figure 16 is an end view of the mophead; and

Figure 17 is a transverse sectional view taken along the line C-C in Figure 14.

[0012] Referring firstly to Figures 1 to 6, there is shown a first embodiment of a mophead 10 which comprises a holder 12, mop material (not shown), and a cleaning implement 14.

[0013] The holder 12 is, typically, formed from moulded plastics, and includes an elongate body part 16 and a tubular portion 18 integrally formed centrally or substantially centrally on the body part 16. The tubular portion 18 defines a socket or boss for receiving a mop handle (not shown) to form a complete mop.

[0014] The body part 16 of the holder 12 defines a generally U-shaped channel 20 (see Figure 4) which, when in use, is typically inverted.

[0015] The mop material is flexible absorbent material, and, for example, can be a bundle of flexible strands, or a sheet or sheets of flexible absorbent material. The holder 12 shown in the drawings is intended to include an elongate releasable clamping member to releasably clamp the mop material in the channel 20 of the body part 16 of the holder 12. Although not shown in the draw-

ings, the clamping member may take the form suggested in GB2323024, with or without the suggested brush or other cleaning device. As such, the body part 16 of the holder 12 is adapted to accept releasable engagement of the clamping member.

[0016] In an alternative, the holder 12 may be formed in a manner which is intended to permanently hold the mop material.

[0017] A cleaning implement 14 is releasably attachable to the body part 16 of the holder 12 and, when attached, resides adjacent to the outside, but independent, of the mop material.

[0018] To provide for this, both interior longitudinal surfaces 28 of the channel 20 of the body part 16 are each formed with an elongate recess 30 (shown in Figure 4, but best seen in Figure 9) which extends along a major portion of the longitudinal extent of the body part 16. Two spaced tabs 32 are formed in the channel 20 and extend in a direction towards main opening 34 of the channel 20. The tabs 32 extend over part of each recess 30. Although not shown, the tabs 32 preferably extend through the main opening 34 and thus project below an adjacent edge 24 of the channel 20.

[0019] Each recess 30, at a position adjacent to the respective edge 24 of the channel 20, is formed with two spaced catch elements 36, typically being a tooth, barb or serration. Each catch element 36 projects into the channel 20 and meets, or approaches, its respective tab 32. The catch elements 36 and the tabs 32 together form part of a cleaning implement retaining mechanism.

[0020] The cleaning implement 14 includes an elongate, generally U-shaped, plastics channel element 38 to the outside of which an abrasive pad 26 is mounted or formed. The abrasive pad 26 extends fully along a first longitudinal exterior side 40 of the channel element 38 and at least partway around the bottom edge 42. However, the abrasive pad 26 could be split into discrete parts, for example, placed selectively along the exterior side 40 of the channel element 38.

[0021] The channel element 38 is typically extruded plastics and is formed with an inwardly projecting shoulder 50. The shoulder 50 extends along the longitudinal extent of the channel element 38, adjacent to the edge 52 of a second longitudinal side 46 of the channel element 38. The second side 46 is opposite the first side 40. The shoulder 50 is adapted to cooperate with the catch elements 36 of the holder 12.

[0022] The channel element 38 and the shoulder 50 form the remaining parts of the cleaning implement retaining mechanism.

[0023] The channel element 38 is dimensioned to be an interference fit on the edge 24 of the channel 20 of the holder 12.

[0024] To engage the cleaning implement 14 with the body part 16 of the holder 12, the cleaning implement 14 is urged or pushed onto the holder 12 so that the edge 24 of the body part 16 enters the channel element 38. The urging or pushing is continued until the leading

edge 52 of the channel element 38 within the body part channel 20 has passed between the catch elements 36 and the respective tabs 32, and the catch elements 36 have snapped into releasable engagement with the shoulder 50.

[0025] The projecting tabs 32 enable a user to more easily determine when the cleaning implement 14 has engaged with the holder 12.

[0026] The recess 30, tabs 32 and catch elements 36 are also provided on the other longitudinal side of the channel 20, and thus a further cleaning implement 14 can be releasably attached to the other side of the body part 16 of the holder 12 in a similar manner.

[0027] The or each cleaning implement 14 is thus removable from the holder 12 by releasing the respective catch elements 36 from the shoulder 50. The or each cleaning implement 14 can thus be changed or dispensed with.

[0028] Referring now to Figures 7 to 13, there is shown a second embodiment of a mophead 10'. This embodiment differs in respect to the first embodiment only in cleaning implement 14'. Therefore, the other parts, which are identical to those of the first embodiments, have the same references and detailed description is omitted.

[0029] In this embodiment, the cleaning implement 14' is again releasably attachable to the body part 16 of the holder 12 and, when attached, the abrasive pad 26 again resides adjacent to the outside, but independent, of the mop material.

[0030] The shoulder 50 of the first embodiment is dispensed with, and the channel element 38' is, instead, formed with two slots 44 which correspond to the two catch elements 36 formed in the channel 20 of the body part 16 of the holder 12. The cleaning implement slots 44 are formed in the second longitudinal side 46' of the channel element 38'. In this case, the channel element 38' and the slots 44 form the remaining parts of the cleaning implement retaining mechanism.

[0031] The channel element 38' is dimensioned to be an interference fit on the edge 24 of the channel 20 of the holder 12.

[0032] To engage the cleaning implement 14' with the body part 16 of the holder 12, the cleaning implement 14' is urged or pushed onto the holder 12 so that the edge 24 of the body part 16 enters the channel element 38'. The urging or pushing is continued until the leading edge 52' of the channel element 38' within the body part channel 20 has passed between the catch elements 36 and the respective tabs 32, and the catch elements 36 have snapped into the respective cleaning implement slots 44.

[0033] As in the first embodiment, a further cleaning implement 14/14' can be attached to the other side of the body part 16 of the holder 12.

[0034] The cleaning implement slots 44 are apertures, but may simply be recesses.

[0035] In this embodiment, the catch elements 36

may be formed on the tabs 32, instead of in, or adjacent to, the recesses 30.

[0036] The or each cleaning implement 14' is thus removable from the holder 12 by releasing the respective catch elements 36 from the slots 44. The or each cleaning implement 14' can thus be changed or dispensed with.

[0037] More than two catch elements and/or tabs can be provided along each interior side of the body part channel 20, if necessary. It is also possible that only a single elongate catch element, which runs substantially the length of the respective channel recess 30, need be provided. In this case, and with respect to the second embodiment, only a single cleaning implement slot, which corresponds to the single catch element, need be provided.

[0038] Other means are also envisaged for releasably engaging the cleaning implement 14/14' with the holder 12. For example, push-fit stud fastenings, twist-and-lock fastenings, disposable plastic push-through barbed rivets, or any other suitable releasable fastening means could be utilised.

[0039] Referring now to Figures 14 to 17, there is shown a third embodiment of a mophead 10". This embodiment differs in respect to the first and second embodiments only in cleaning implement 14". Therefore, the other parts, which are identical to those of the first and second embodiments, have the same references and detailed description is omitted.

[0040] In this embodiment, the channel 20 of the previous embodiments is dispensed with, and the cleaning implement 14" simply comprises an abrasive pad 26'. The cleaning implement 14" is located externally along one longitudinal side 22 of the body part 16 of the holder 12. In this embodiment, the cleaning implement 14" also extends along the edge 24 of the channel 20 of the body part 16, but does not extend into the channel 20.

[0041] A second cleaning implement 14" can be similarly affixed to the other longitudinal side 22 of the holder 12.

[0042] The cleaning implement 14" is permanently attached to the body part 16 of the holder 12, and resides adjacent to the outside, but is independent, of mop material held by the holder 12.

[0043] The cleaning implement 14 is fixed to the body part 16 using a non-releasable fastening (not shown), such as bonding, riveting, welding or, if appropriate, stitching.

[0044] Although the cleaning implement 14/14'/14" shown in the drawings is, or includes, an abrasive pad 26/26', the cleaning implement 14/14'/14" could be, or include, a scraper, a brush or any other suitable cleaning device. The type of cleaning implement to be used can be selected based on the task at hand.

[0045] In the third embodiment, it may be advantageous to unitarily form the cleaning implement 14" on the body part 16 of the holder 12. For example, in the case where the cleaning implement 14" is a scraper, this

would be particularly convenient.

[0046] Although the mophead holder and channel element are preferably formed from plastics, any suitable material can be utilised.

[0047] A combination of the removable cleaning implement 14/14" of the first two embodiments and the permanent cleaning implement 14" of the third embodiment can be used with a single holder 12. In this case, the removable cleaning implement 14/14' is attachable to one side of the holder 12, and the permanent cleaning implement 14" is provided on the other side.

[0048] It is envisaged that the removable cleaning implements 14/14' will also be available, typically for purchase, independently of the mophead 10/10'. The availability of the cleaning implements 14/14' will be either as a single item or in packs.

[0049] The mophead 10/10'/10" is typically used with a cleaning liquid container, such as a domestic or commercial bucket or pail, which may or may not have a mop wringer. The mop wringer may be mechanical or manual.

[0050] The holder 12 of the mophead 10/10'/10" can be dimensioned to fit, and is thus useable with, any suitable mop wringer.

[0051] The cleaning implement 14/14'/14" is not, and does not include, a bundle of mop strands.

[0052] It is thus possible to provide a mophead having a cleaning implement which does not interfere with, and is not impeded by, mop material held by the mophead. It is also possible to provide a mophead which has a cleaning implement which does not damage the mop material, and which uniformly contacts the surface to be cleaned. It is further possible to provide an independent cleaning implement which is attachable to a holder of a mophead and which can be swapped or replaced as necessity dictates.

[0053] The embodiments described above are given by way of examples only, and further modifications will be apparent to persons skilled in the art without departing from the scope of the invention as defined by the appended claims.

Claims

1. A mophead comprising a holder (12), flexible absorbent mop material held by the holder (12), and a cleaning implement (14;14';14") which is independent of the mop material and which is permanently attached or disengageably attachable to the holder (12) at a position adjacent to the outside of the mop material.
2. A mophead as claimed in claim 1, wherein, when the cleaning implement (14") is permanently attached, the cleaning implement (14") is unitarily formed as part of the holder (12).

3. A mophead as claimed in claim 1, wherein, when the cleaning implement (14") is permanently attached, the cleaning implement (14") is fastened to the holder (12) using a non-releasable fastening. 5
4. A mophead as claimed in any one of the preceding claims, wherein the cleaning implement is positioned or positionable on an edge (24) of the holder (12). 10
5. A cleaning implement for use with a mophead as claimed in claim 1, when the cleaning implement (14;14') is releasably attachable to the holder (12), the cleaning implement (14;14') including at least part of a retaining mechanism (38,50;38',44) by which the cleaning implement is engageable with the holder (12) of the mophead (10;10'). 15
6. A cleaning implement as claimed in 5, wherein the said retaining mechanism includes a channel element (38;38') by which the cleaning implement is push-fit engageable with the holder (12). 20
7. A cleaning implement as claimed in claim 6, wherein the said retaining mechanism further includes a shoulder (50) formed in the channel element (38) for engagement with the holder (12) of the mophead (10). 25
8. A cleaning implement as claimed in claim 6, wherein the said retaining mechanism further includes one or more slots (44) formed in the channel element (38') for engagement with the holder (12) of the mophead (10'). 30
9. A mophead in combination with a cleaning implement as claimed in any one of claims 6 to 8, wherein the retaining mechanism further includes one or more catch elements (36) formed on the holder (12) of the mophead (10;10') for engagement with the channel element (38;38') of the cleaning implement. 35
10. A mophead as claimed in any one of claims 1 to 4 and 9, wherein the mop material is a bundle of flexible strands. 40
11. A mophead as claimed in any one of claims 1 to 4 and 9, wherein the mop material is a sheet or sheets of flexible absorbent material. 45

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FIG 1

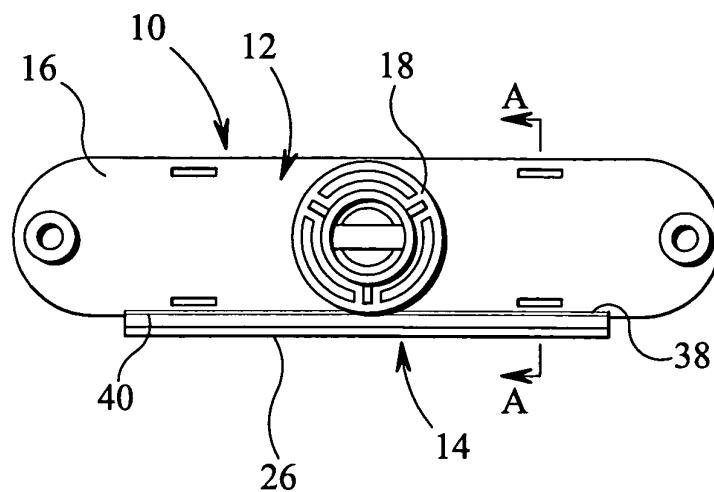


FIG 2

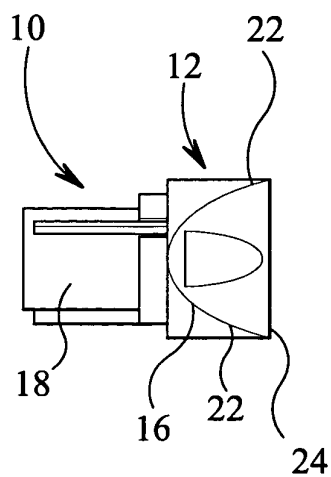
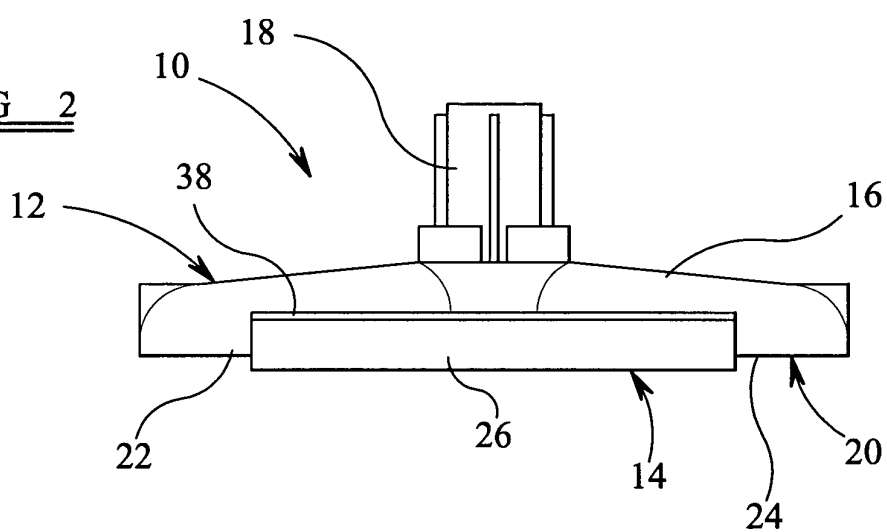


FIG 3

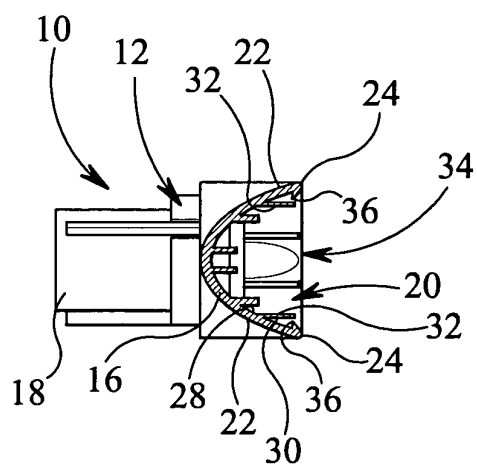


FIG 4

FIG 5

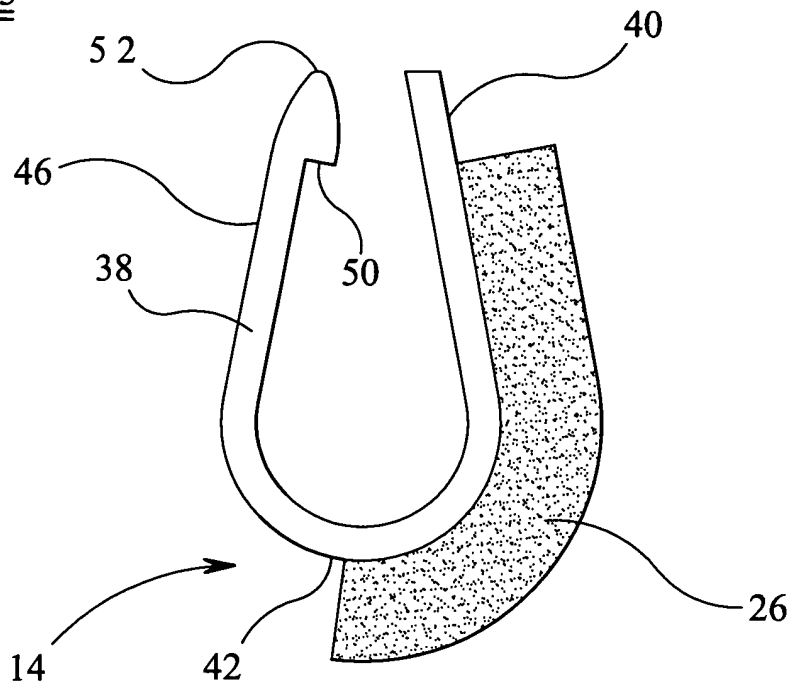


FIG 6

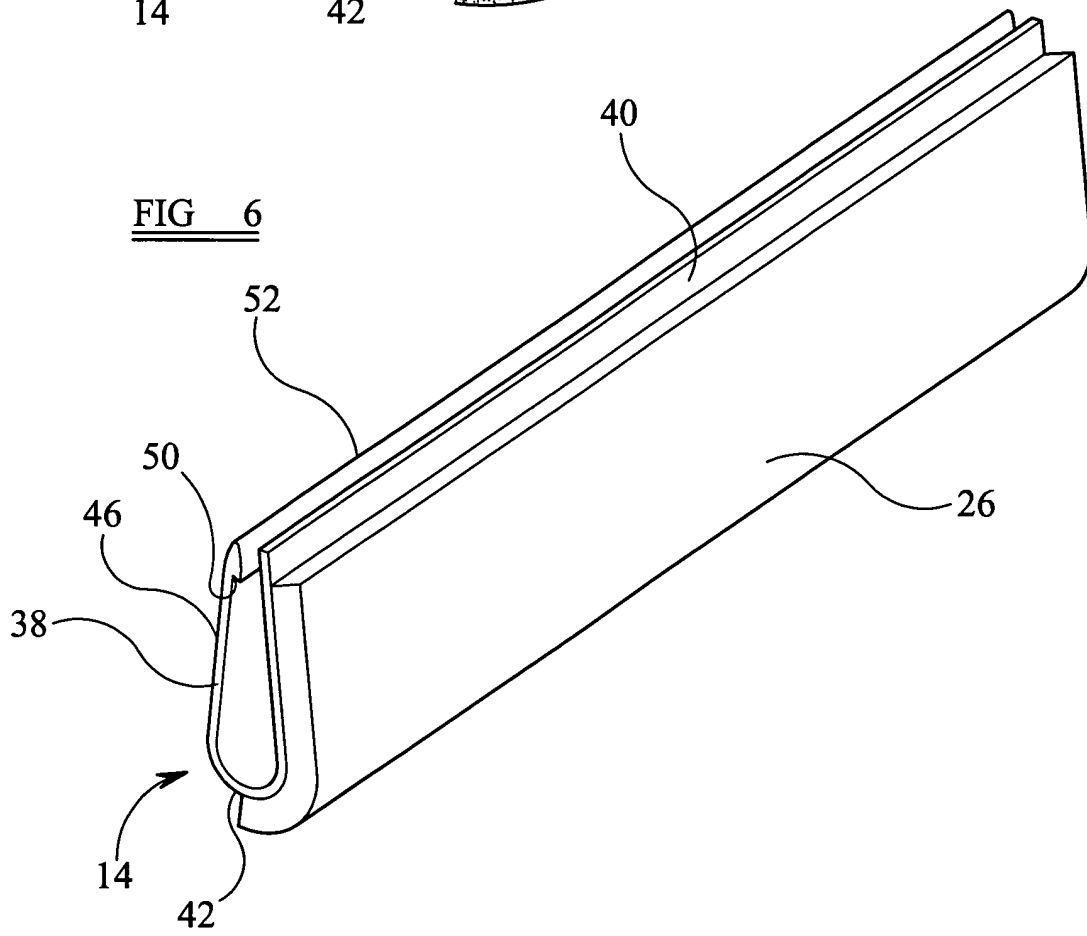


FIG 7

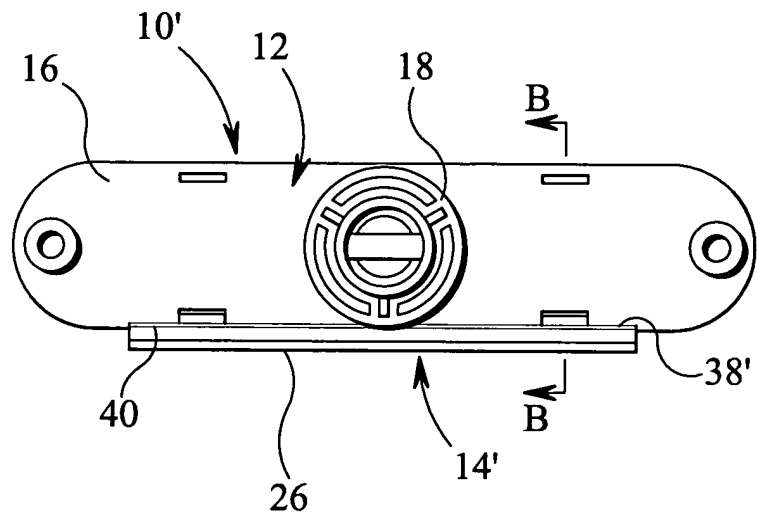
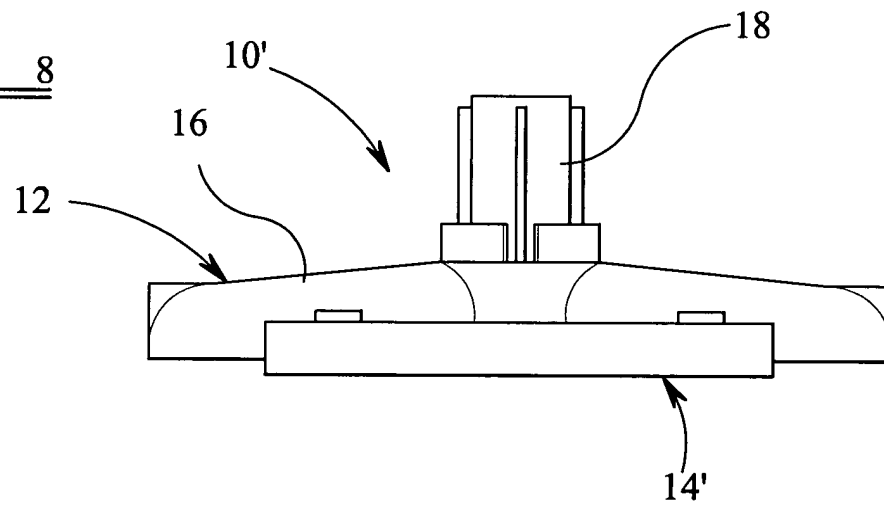


FIG 8



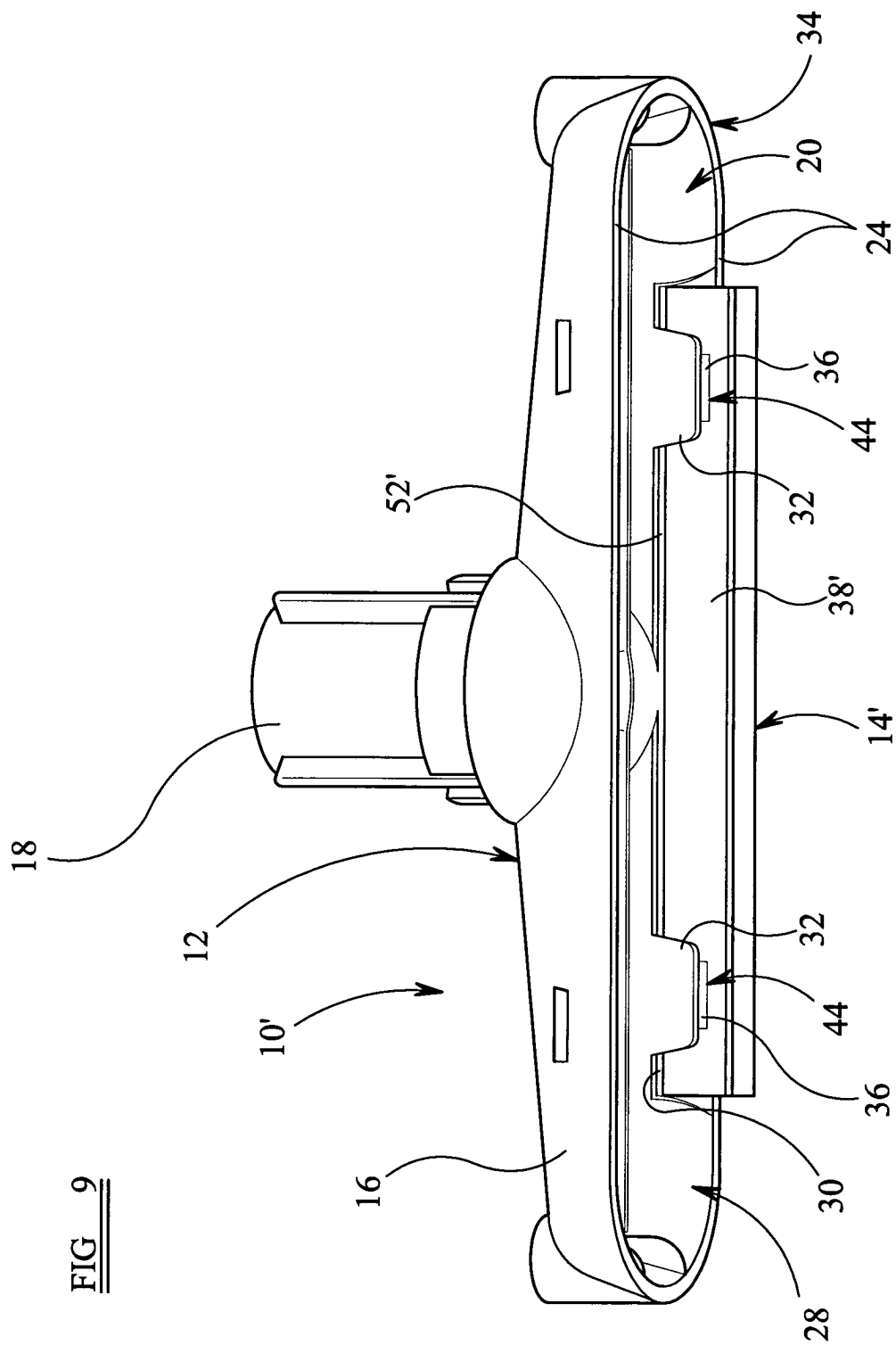


FIG. 9

FIG 10

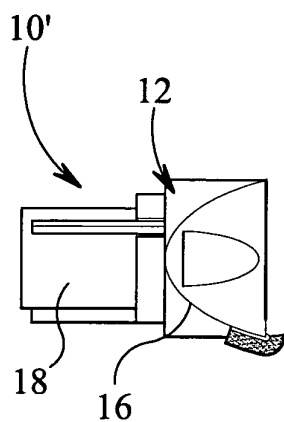


FIG 11

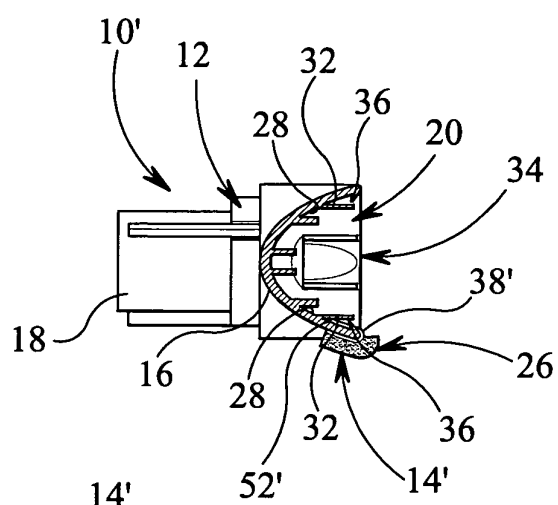


FIG 12

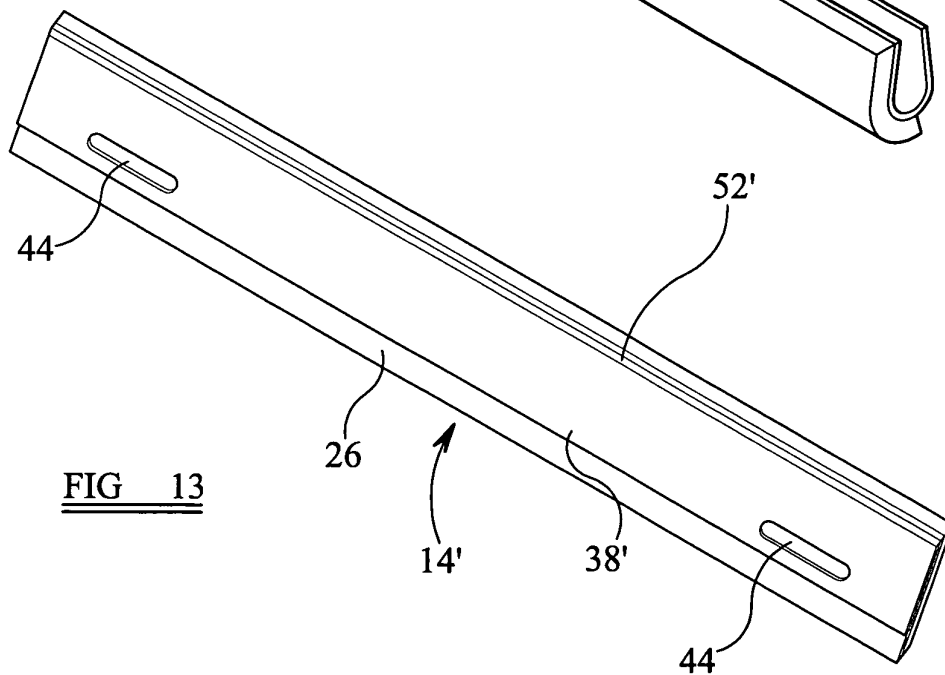
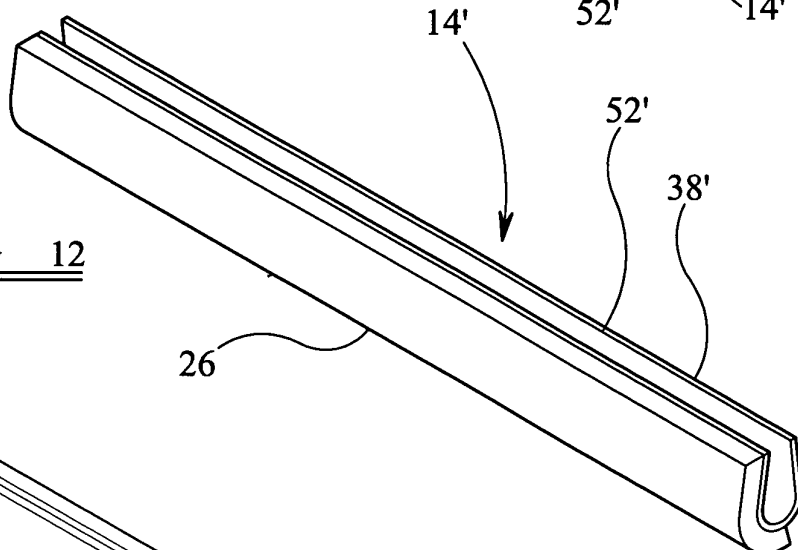


FIG 13

FIG 14

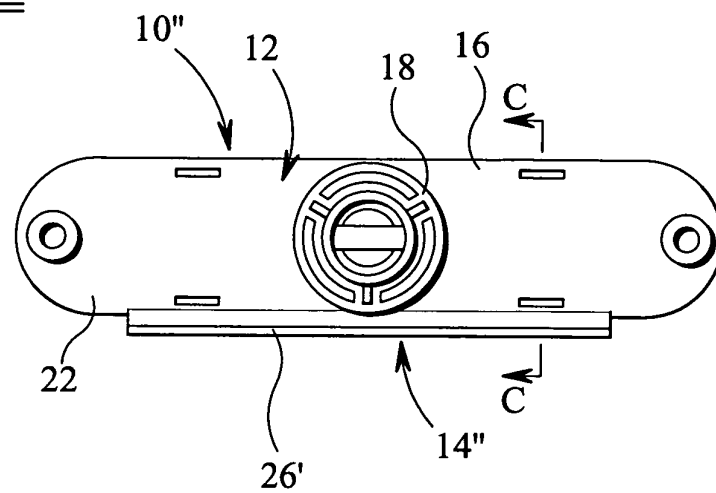


FIG 15

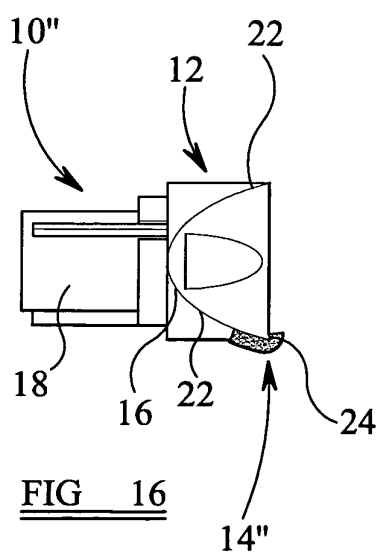
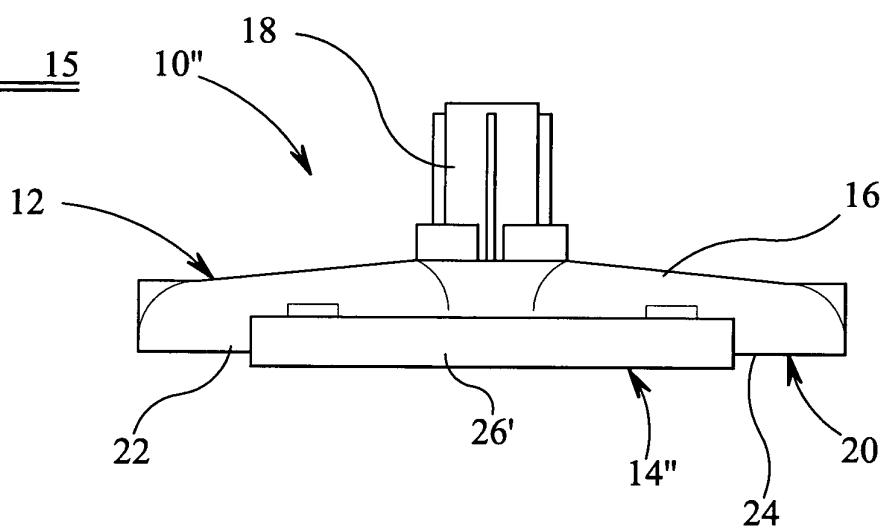


FIG 16

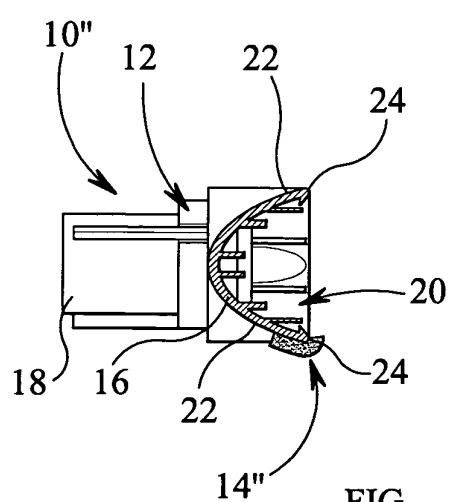


FIG 17