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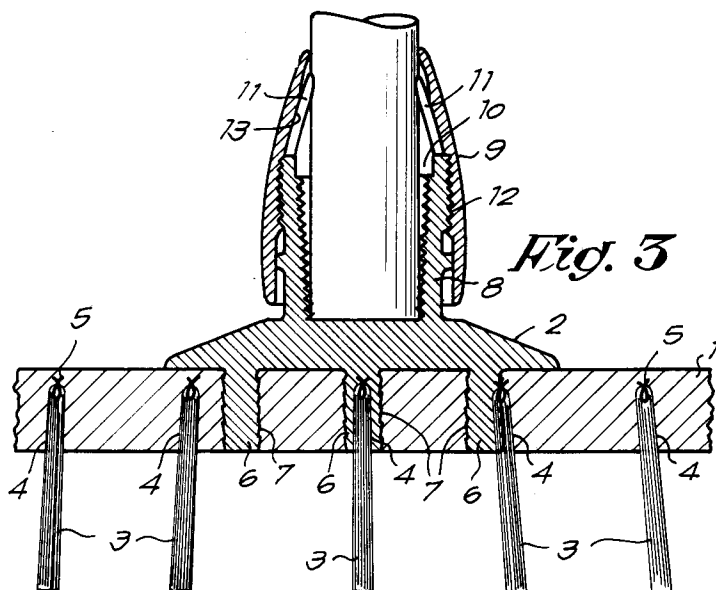
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(54) **Brush.**

(57) Brush to be fixed on a handle, whereby this brush contains a brush element (1,2) which is provided with means (8,9) for fixing a handle and hair bundles (3) inserted in this brush element (1,2), characterized in that the brush element (1,2) is formed of a thin plate (1) in which the hair bundles (3) are inserted in one side and of a separate su-

perstructure (2) on top of the other side, whereby this superstructure (2) only extends over part of this side and has at least two legs (6) which are fixed in openings (7) in the plate (1), whereas the means (8,9) for mounting the handle are provided on this superstructure (2).



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The invention concerns a brush to be fixed on a handle, whereby the brush contains a brush element which is provided with means to fix a handle, and bundles of hair inserted in said brush element.

With the known brushes of this type, the brush element is an elongated block, usually made of wood or synthetic material, whereas the means for fixing a handle consist of an opening in said block or a handle holder mounted on this block.

In the first case, the block is relatively thick at least there where the opening for the handle is provided.

The opening for the handle must be deep enough to allow for a secure mounting of the handle. Moreover, it is usually avoided that the opening for the handle extends right through the block, as no hair bundles can be provided at the height of the opening in this case, and a bare spot is formed.

When the handle has to stand aslant on the brush element, for example, as is the case with certain scrubbing brushes, said block is provided with a slanting surface in which the opening for the handle is situated. This slanting surface also requires a relatively thick block.

Even when a handle holder is used, the block must be relatively thick. The opening for the handle is formed by the handle holder in this case, and it can be situated partly or entirely above the block. The handle holder may contain a clamp element which is part of the block as described in patent FR-A-1084871 or it may form a separate whole, a part of which is fixed in the block, such as represented for example in patents DE-U-8524050 and EP-A-252187. In the first case the clamp element partly determines the thickness of the block, whereas in the second case the part mounted in the block must stick sufficiently deep in the block for a secure mounting, which also requires at least at the height of this part a large thickness of the block.

Consequently, relatively much wood is required for the block in the manufacture of these known brushes. It is clear that even if only the middlemost part of the block is made thick, one always has to start with a thick block of wood.

The invention aims to remedy this disadvantage and to provide a brush which can be made with a minimum of material, in particular wood.

To this aim the brush element is formed of a thin plate in which the hair bundles are inserted in one side and of a separate superstructure on top of the other side, whereby this superstructure only extends over part of this side and has at least two legs which are fixed in openings in the plate, whereas the means for mounting the handle are provided on this superstructure.

The opening for the handle or brush holder is situated entirely out of the plate, in the superstructure. The plate only has to be sufficiently thick so that the hair bundles can be provided. The thickness required for mounting the handle, either directly or via a handle holder, is formed by the superstructure, which is a separate part.

Moreover, the superstructure is preferably made of synthetic material.

According to a particular embodiment of the invention, the legs are provided with barbs and pinched in openings in the plate.

According to a practical embodiment of the invention the legs have an oblong cross section.

According to another practical embodiment of the invention, the superstructure has three legs which are fixed in three openings in the plate.

Although wood is the obvious material for the plate, the plate can also be made of synthetic material.

According to a practical embodiment of the invention, the means for fixing a handle consist of a handle holder which is part of the superstructure.

Other particularities and advantages of the invention will become clear from the following description of a brush according to the invention. This description is given as an example only and does not limit the invention in any way. The figures refer to the accompanying drawing where:

figure 1 shows a side view of a brush according to the invention;

figure 2 shows a top view of the brush in figure 2;

figure 3 shows a cross section according to line III-III in figure 2.

The brush shown in the figures consists of a brush element which mainly consists of a flat plate 1 and a superstructure 2 mounted thereupon on one side and of a number of hair bundles 3 which are fixed in openings 4 in the other side of the flat plate 1 in the usual manner, for example by means of clamping plates 5.

The plate 1 is made of wood and has a constant thickness. Its shape depends on the nature of the brush and is for example rectangular with rounded corners as represented in the figures. The plate 1 is just thick enough to be able to contain the openings 4, for example between 0.8 and 1.5 cm.

The superstructure 2 is made of synthetic material and covers only a part of the plate 1. The superstructure is mounted in the middle but is not necessarily symmetrical itself. The superstructure 2 is fixed to the plate 1 as it has three legs 6 which are provided with barbs on their exterior and which are pinched in three openings 7 in the plate 1. The legs 6 and the opening are oblong in the cross direction of the plate 1.

The legs 6 extend right through the plate 1. The superstructure 2 is fixed to the plate 1 before the openings 4 for the hair bundles 3 are provided, such that these openings can be partly or entirely situated in a leg 6 and the brush may also have hair bundles 3 at the height of the legs 6.

At the top, the superstructure 2 may have an opening in which the base part 8 is fixed upon which the eye screw 9 of a two- or three-piece handle holder is screwed. Preferably, however, this base part 8 forms a whole with the rest of the superstructure 2, as represented in the figures.

The handle holder which is represented is of the two-piece type described in European patent No. 252 187 of the applicant, whereby said base part 8 has a conical opening 10 which is internally provided with screw thread and contains elastic, flexible fingers 11 at the top. Under these fingers 11, the base part 8, i.e. the topmost end of the superstructure 2 itself, is externally provided with screw thread 12 such that the eye screw 9, which has an opening 13 which is conical at the top, can be screwed upon it so as to bend over the fingers 11 and thus pinch a handle.

In the embodiment shown this handle holder is placed rectangular upon the plate 1. If it is required that the handle is placed aslant in relation to the plate 1, the superstructure can be made asymmetrically such that the handle holder is pointed aslant in relation to the plate 1.

As the plate 1 is thin and has the same thickness everywhere, it requires only little material. Since there is no relief, its manufacture is relatively easy. The sight of the brush is mainly determined by the superstructure 2 which can be easily moulded in any form whatsoever. The superstructure can also be easily manufactured with a built-in handle holder, whereby this handle holder can be pointed in any direction whatsoever.

The present invention is by no means limited to the embodiments described by way of example and shown in the accompanying drawings; on the contrary, such a brush can be made in all sorts of variants while still remaining within the scope of the invention, as described in the following claims.

In particular, the plate of the brush element does not necessarily have to be made of wood. It can also be made of synthetic material.

Also, the brush element does not necessarily have to contain a handle holder. The means for fixing a handle may consist of an ordinary opening in the brush element.

The superstructure does not necessarily have to be mounted centrally or symmetrically on the plate.

Claims

1. Brush to be fixed on a handle, whereby this brush contains a brush element (1,2) which is provided with means (8,9) for fixing a handle and hair bundles (3) inserted in this brush element (1,2), characterized in that the brush element (1,2) is formed of a thin plate (1) in which the hair bundles (3) are inserted in one side and of a separate superstructure (2) on top of the other side, whereby this superstructure (2) only extends over part of this side and has at least two legs (6) which are fixed in openings (7) in the plate (1), whereas the means (8,9) for mounting the handle are provided on this superstructure (2).
2. Brush according to the above claim, characterized in that the superstructure (2) is made of synthetic material.
3. Brush according to any of the above claims, characterized in that the legs (6) are provided with barbs and are pinched in openings (7) in the plate (1).
4. Brush according to any of the above claims, characterized in that the legs (6) have an oblong cross section.
5. Brush according to any of the above claims, characterized in that the superstructure (2) has three legs (6) which are fixed in three openings (7) in the plate (1).
6. Brush according to any of the above claims, characterized in that the plate (1) is made of wood.
7. Brush according to any of claims 1 to 6, characterized in that the plate (1) is made of synthetic material.
8. Brush according to any of the above claims, characterized in that the plate (1) is between 0.8 and 1.5 cm thick.
9. Brush according to any of the above claims, characterized in that the means (8,9) for fixing a handle consist of a handle holder which is part of the superstructure (2).
10. Brush according to the above claim, characterized in that the handle holder (8,9) contains a base part (8) which forms a whole with the rest of the superstructure (2) and an eye screw (9) which can be screwed upon this base part (8).

11. Brush according to the above claim, characterized in that the base part (8) contains a part which is externally provided with screw thread (12) for the eye screw (9) and which is provided with a conical opening (10) and has a number of elastic, flexible fingers (11) on the side of the broadest end of said opening (10) fitting up onto this part which, by screwing on the eye screw (9) can be elastically bent inward against a handle.

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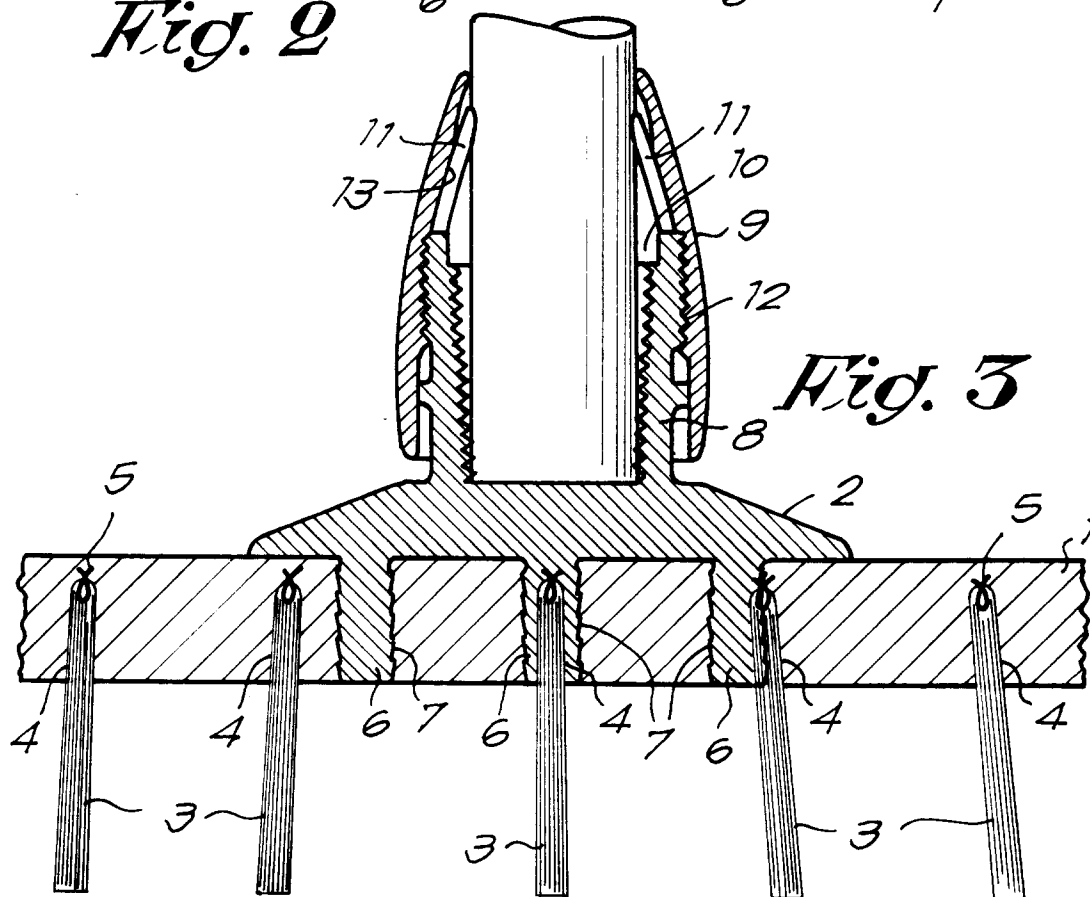
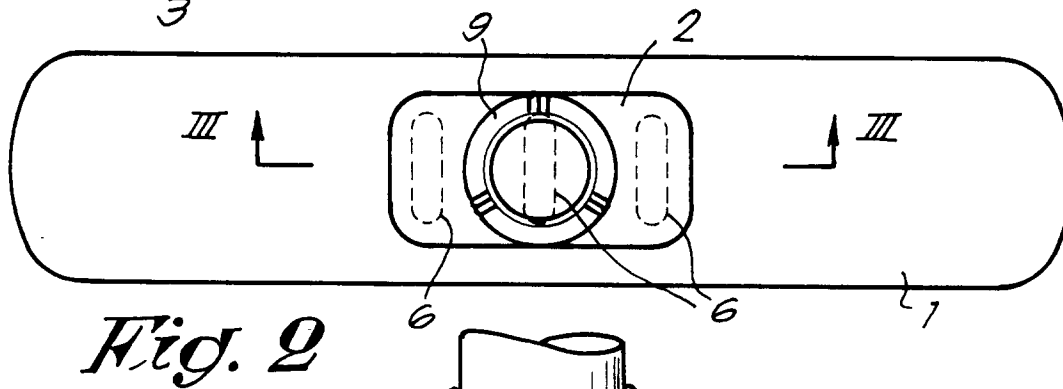
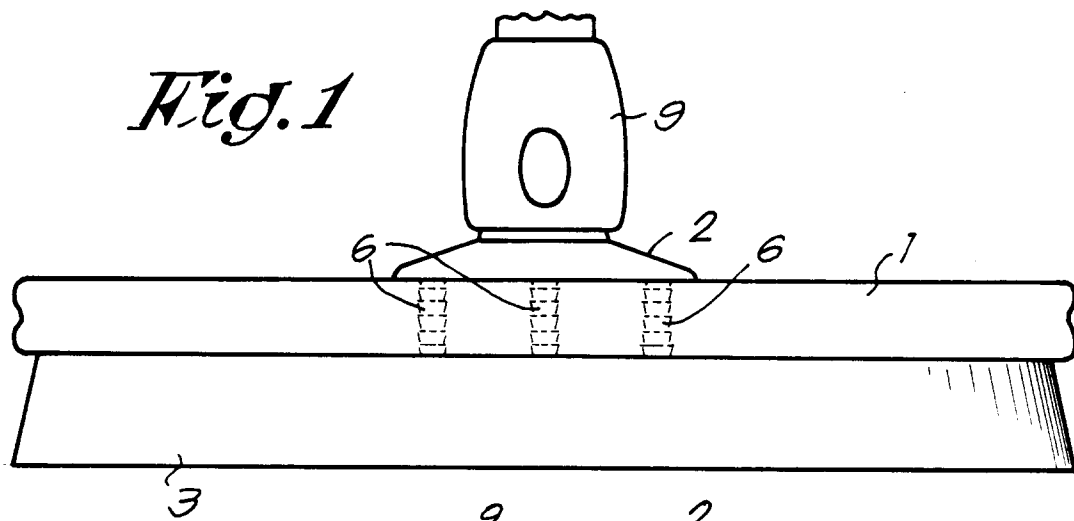
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EUROPEAN SEARCH REPORT

Application Number
EP 93 20 2761

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
Y	BE-A-840 318 (LOOMANS) * page 3, line 7 - page 4, line 15; figures 1,2 *	1-7,9-11	B25G3/10
Y	GB-A-2 236 502 (S. BETTS & SONS LTD.) * page 3, line 23 - page 4, line 9; figures 1,3 *	1-7,9-11	
A	EP-A-0 252 187 (P. D. C. BRUSH) * abstract; figure 1 *	1,9-11	
A	FR-A-1 089 743 (GILLES) * page 1, right column, line 24 - line 29; figures 1,4,5 *	1	
A	DE-C-631 734 (LOCHER) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
			B25G A46B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 5 January 1994	Examiner Ljungberg, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			