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(54) **BRUSH COMPRISING A HANDLE AND A BRISTLE-BEARING HEAD**

PINSEL MIT GRIFF UND TEIL MIT HAAREN

PINCEAU POURVU D'UN MANCHE ET D'UNE TETE DE SUPPORT DE POILS

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(73) Proprietor: **Nespoli Engineering Kereskedelmi  
Korlatolt  
Felelossegu Tarsasag, known in trade as Nespoli  
Engineering Trade L.L.C.  
1146 Budapest (HU)**

(72) Inventor: **ZOTTI, Carmen  
I-23896 Sirtori (LC) (IT)**

(74) Representative: **Lanza Murciano, Marino Manuel  
et al  
C/ Manuel de Falla, 4  
28036 Madrid (ES)**

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## Description

**[0001]** The present invention relates to a brush comprising a handle and a bristle-bearing head.

**[0002]** Traditionally, classic brushes have been used in which the handle is rigidly attached to the bristle-bearing head, comprising a collar (generally metal), resin (for example epoxy resin) and bristles. The join between the head and the handle can include rigid teeth joined to the handle and immersed in the resin or else tacks that attach the collar to the handle.

**[0003]** The disadvantages of the traditional system lies in the fact that the handle is slippery and does not allow firm grip in conditions of use in which, for example, the user has sweaty hands; and moreover the rigidity of the brush is a common cause of blister formation on the hands of said user (though this is infrequent) and in any case, it causes notable tiredness during the operation of painting. On the other hand, in cases in which there is no flexible intermediate element, as for example in the case of British patent GB 238.1189, in relation to a "Brush", in which a brush formed by a handle adaptable to different kind of heads by incorporating in itself the means that allow its fixing is described and which adopts a certain angle in respect of the head that lifts itself when placing it over a surface, this is useful just for carrying out the joint between the handle and the head in a static way, this acts merely to provide the link between the handle and the head without allowing tipping movement and the inclination of the head during the action of painting.

**[0004]** Thus, the main aim of the present invention is to produce a less slippery brush that allows a more comfortable and surer hold which reduces the drawbacks in its use, such as tiredness and the formation of blisters on the skin of the occasional user and which, moreover, can be used as a multifunctional tool.

**[0005]** This aim, along with others that will be better clarified for the expert in the art in the detailed presentation that follows, is achieved with a brush in accordance with the technical teachings of the attached claims.

**[0006]** The invention will be better understood from the following detailed description that is provided merely by way of example and relates to the attached design in which:

Figures 1, 6 and 9 show a side view of a detachable brush in which the handle and head can be separated in three different embodiments;

Figures 2, 7, 10 and 12 show a side view of the brush in which the handle and head are immovably connected to one another in four different embodiments; Figures 3, 8 and 13 show a frontal view of the bristle-bearing head in three different embodiments;

Figures 4 and 11 show a frontal view of the brush in the position of use in two different embodiments;

Figures 5a and 5b show an open side sectional view of the bristle-bearing head;

Figure 14 shows a perspective view of the handle-

flexible element set in the embodiment of Figures 11, 12 and 13;

Figure 15 shows a perspective view of the flexible element 3b joined to the embodiments of Figures 11, 12, 13 and 14;

Figure 16 shows a view of the brush in position of use, lying on once side on a supporting surface.

**[0007]** In a first embodiment, the head 5 is formed from bristles 1, collar 2 and a flexible element 3 (Figures 1, 2 and 3) which is joined to the handle, for example by immersion of one of its ends into the epoxy resin 10 (Figure 5a), which in addition is attached to the collar itself of the bristles 1.

**[0008]** Alternatively, the flexible element can be attached to the collar 2 by means of tacks 14 that are introduced through the holes made for that purpose in the collar 2 and in the appendage of the flexible element 3 (Figure 5b).

**[0009]** The flexible element 3 is laminar and a buttonhole 12 can be made in it that facilitates the flexibility of the element itself and which lightens its structure. Its end part forms a T such that it is possible to fit the head into its corresponding niche 4 made in the end part of the handle 6 (Figure 2).

**[0010]** The handle 6, for its part, is formed from a grip 11 that ends in a part in the form of a ridge 8 with which the aforementioned coupling niche 4 such that the bristle-bearing head is immovably attached to the handle 6. It can be seen that the two opposite surfaces 7 of the ridged element 8 are appropriate to allow a firm grip, and as low as possible, of the brush with the fingers, and above all, to limit movement of the bristle-bearing head during use.

**[0011]** The opening 9 is made in the end of the handle 6 and its purpose is to allow attachment of the handle itself 6 with a generic attachment hook (Figure 4).

**[0012]** In a second embodiment, in contrast, the head 5 is formed of bristles 1, collar 2 and a coupling niche 4, so that the flexible element 3 is now joined to the handle 6 and with the ridged element 8 (Figures 6, 7 and 8).

**[0013]** In a third embodiment, the laminar element 3b is equipped, respectively, with two (Figures 14 and 15) or four (Figure 13) small ratchets 15, which fix the ridged element 8 by means of appropriate openings 16 made in the grip 11 and immediately adjacent to the base thereof (Figure 14).

**[0014]** The laminar element 3b presents a buttonhole 16 which lightens the structure and two appendages 17 for coupling by immersion in epoxy resin in the collar (Figure 15).

**[0015]** A possible variation of the first embodiment (Figures 1, 2, 3 and 4) consists of making the flexible element 3 in a serpentine form (Figures 9 and 10, where it is indicated as 3a) such that the flexibility is even greater and the action of painting is facilitated.

**[0016]** Another variation consists of a co-formed device in the upper end of the handle 6 which can be different on each occasion, such as for example tin-open-

ers, scrapers, screwdrivers (see in particular Figures 11 and 12, where it is indicated as 20), corkscrews, cutters, knives, saws.

**[0017]** Said device can also be made separately in the different aforementioned forms and inserted into the corresponding niche of the head of the handle according to the usage needs.

**[0018]** In all embodiments of the brush, during its use, it can be left on its side in a safe position on a flat surface. If the immobile bristle-bearing head 5 is wider than the ridged part 8, the side parts 21 of the laminar element 3b will be flat, such that they guarantee the stability of the brush when it is left lying on a flat surface (Figures 14 and 15); if on the other hand the bristle-bearing head 5 is narrower, the stability of the brush lying on a surface is ensured by the flat form of the side part of the ridged part 8.

**[0019]** With the flexibility of the intermediate element 3 and the subsequent inclination with respect to the handle 6 that the bristle-bearing head may have during use of the brush, the noteworthy advantage of reducing the fatigue of the user is obtained.

## Claims

1. Brush comprising a handle (6) and a bristle-bearing head (5) joined by an intermediate flexible and elastic element (3, 3a, 3b) forming one piece with the bristle-bearing head (5) and insertable in the corresponding groove (4) located on the handle (6), or forming one piece with this and insertable in the corresponding groove on the head, such that the handle (6) and bristle-bearing head (5) can be separated, **characterized in that** the intermediate flexible and elastic element (3b), of laminar form, allows the bristle-bearing head (5) to move during the action of painting, moving between two arms of a ridge (8) in which the handle (6) ends, which also act to limit the movement of said bristle-bearing head (5).
2. Brush comprising a handle (6) and a bristle-bearing head (5), according to the first claim, **characterized in that** the intermediate flexible and elastic element (3b), of laminar form, can have a hole that lightens its structure, facilitating the flexibility of the element itself.
3. Brush comprising a handle (6) and a bristle-bearing head (5), according to the first claim, **characterized in that** the intermediate flexible element (3a) may have a winding form.
4. Brush comprising a handle (6) and a bristle-bearing head (5), according to the first claim, **characterized in that** the end part of the intermediate flexible element (3) can be T-shaped, such that it is possible to fit the head into its corresponding groove (4) made

in the end part of the handle (6).

5. Brush comprising a handle (6) and a bristle-bearing head (5), according to the first claim, **characterized in that** the intermediate flexible element (3b) is equipped with appendages (17) opposite the pawls (15) for coupling by immersion in the resin (10) contained in the ferrule (2).
6. Brush comprising a handle (6) and a bristle-bearing head (5), according to the first claim, **characterized in that** the side parts (21) of the intermediate flexible element (3, 3a, 3b) are flattened, such that they allow the brush to be placed on its side on a support surface during use when the bristle-bearing head (5) is wider than the element in form of a ridge (8).
7. Brush comprising a handle (6) and a bristle-bearing head (5), according to the first claim, **characterized in that** the lateral outline of the element in form of a ridge (8) is flattened such that the brush can be placed stably on its side on a support surface when the bristle-bearing head (5) is narrower than the ridge-shaped element (8).

## Patentansprüche

1. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, die über ein flexibles und elastisches Zwischenelement (3, 3a, 3b) miteinander verbunden sind, das mit der Zwinge (5) ein Teil bildet und in die entsprechende Vertiefung (4) eingeführt werden kann, die sich am Stiel (6) befindet, oder das mit diesem ein Teil bildet und in die entsprechende Vertiefung in der Zwinge eingeführt werden kann, so dass der Stiel (6) und die Zwinge (5) voneinander getrennt werden können, **dadurch gekennzeichnet, dass** es das flexible und elastische Zwischenelement (3b), das eine flächige Form besitzt, der Zwinge (5) gestattet, beim Anstreichvorgang bewegt zu werden, wobei sie zwischen zwei Armen einer Rippe (8) bewegt wird, in der der Stiel (6) endet, welche die Bewegung dieser Zwinge (5) ebenfalls beschränkt.
2. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, nach dem ersten Anspruch, **dadurch gekennzeichnet, dass** das flexible und elastische Zwischenelement (3b), das eine flächige Form besitzt, ein Loch besitzen kann, welches seine Struktur leichter macht, womit die Flexibilität des Elements selbst gefördert wird.
3. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, nach dem ersten Anspruch, **dadurch gekennzeichnet, dass** das flexible Element (3a) eine gewundene Form besitzen kann.

4. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, nach dem ersten Anspruch, **dadurch gekennzeichnet, dass** das Endteil des flexiblen Zwischenelements (3) eine T-Form besitzen kann, so dass es möglich ist, die Zwinge in ihrer entsprechenden Vertiefung (4) anzubringen, die in dem Endteil des Stiels (6) vorgesehen ist.
5. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, nach dem ersten Anspruch, **dadurch gekennzeichnet, dass** das flexible Zwischenelement (3b) mit Fortsätzen (17) ausgestattet ist, die den Klinken (15) gegenüber liegen, zur Verbindung durch Eintauchen in dem Harz (10), das in der Metallhülse (2) enthalten ist.
6. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, nach dem ersten Anspruch, **dadurch gekennzeichnet, dass** die Seitenteile (21) des flexiblen Zwischenelements (3, 3a, 3b) abgeflacht sind, so dass sie es dem Pinsel gestatten, auf seiner Seite auf einer Halterfläche während der Benutzung platziert zu werden, wenn die Zwinge (5) breiter als das Element in Form einer Rippe (8) ist.
7. Pinsel, der einen Stiel (6) und eine Zwinge (5) umfasst, nach dem ersten Anspruch, **dadurch gekennzeichnet, dass** der seitliche Umriss des Elements in Form einer Rippe (8) abgeflacht ist, so dass der Pinsel auf seiner Seite auf einer Halterfläche stabil platziert werden kann, wenn die Zwinge (5) schmaler als das rippenförmige Element (8) ist.

#### Revendications

1. Brosse comprenant un manche (6) et une tête portant des poils (5) reliés par un élément intermédiaire flexible et élastique (3, 3a, 3b) formant une pièce avec la tête portant des poils (5) et insérable dans la rainure correspondante (4) située sur le manche (6), ou formant une pièce avec celui-ci et insérable dans la rainure correspondante sur la tête, afin que le manche (6) et la tête portant des poils (5) puissent être séparés, **caractérisée en ce que** l'élément intermédiaire flexible et élastique (3b), en forme de lame, permet à la tête portant des poils (5) de se déplacer durant l'application de la peinture, en se déplaçant entre deux bras d'une crête (8) dans laquelle le manche (6) se termine, laquelle intervient aussi pour limiter le mouvement de ladite tête portant des poils (5).
2. Brosse comprenant un manche (6) et une tête portant des poils (5), selon la première revendication, **caractérisée en ce que** l'élément intermédiaire flexible et élastique (3b), en forme de lame, peut présenter un trou allégeant sa structure, qui favorise la

flexibilité de l'élément lui-même.

3. Brosse comprenant un manche (6) et une tête portant des poils (5), selon la première revendication, **caractérisée en ce que** l'élément intermédiaire flexible (3a) peut avoir une forme courbe.
4. Brosse comprenant un manche (6) et une tête portant des poils (5), selon la première revendication, **caractérisée en ce que** l'extrémité de l'élément intermédiaire flexible (3) peut être en forme de T, afin qu'il soit possible de fixer la tête dans sa rainure (4) correspondante faite à l'extrémité du manche (6).
5. Brosse comprenant un manche (6) et une tête portant des poils (5), selon la première revendication, **caractérisée en ce que** l'élément intermédiaire flexible (3b) est équipé d'appendices (17) en face des cliquets (15) pour le couplage par immersion dans la résine (10) contenue dans la virole (2).
6. Brosse comprenant un manche (6) et une tête portant des poils (5), selon la première revendication, **caractérisée en ce que** les parties latérales (21) de l'élément intermédiaire flexible (3, 3a, 3b) sont aplaties afin de permettre à la brosse d'être placée sur son côté sur une surface de support durant l'utilisation lorsque la tête portant des poils (5) est plus large que l'élément en forme d'arête (8).
7. Brosse comprenant un manche (6) et une tête portant des poils (5), selon la première revendication, **caractérisée en ce que** le profil latéral de l'élément en forme d'arête (8) est aplati afin que la brosse puisse être placée de façon stable sur son côté sur une surface de support lorsque la tête portant des poils (5) est plus étroite que l'élément en forme d'arête (8).

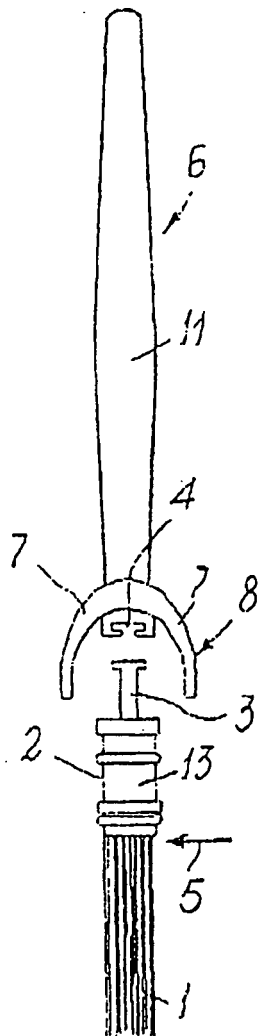


FIG. 1

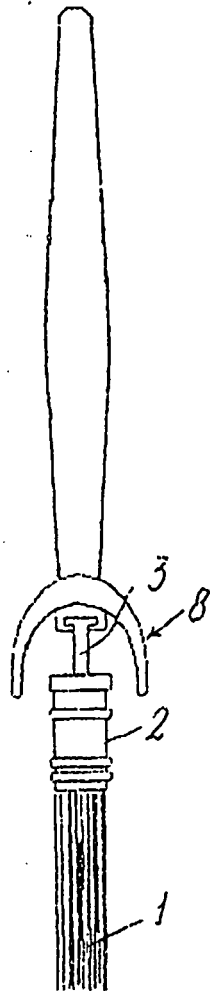


FIG. 2

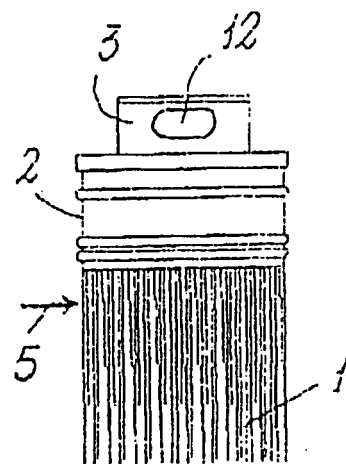


FIG. 3

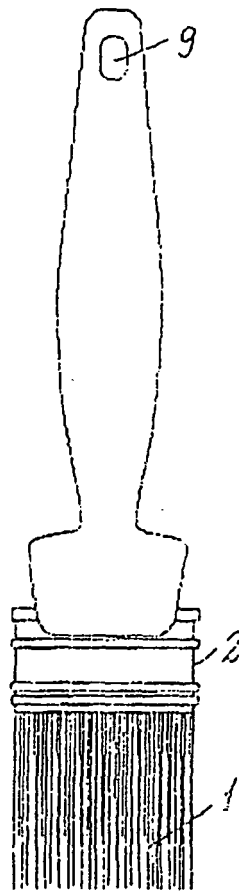


FIG. 4

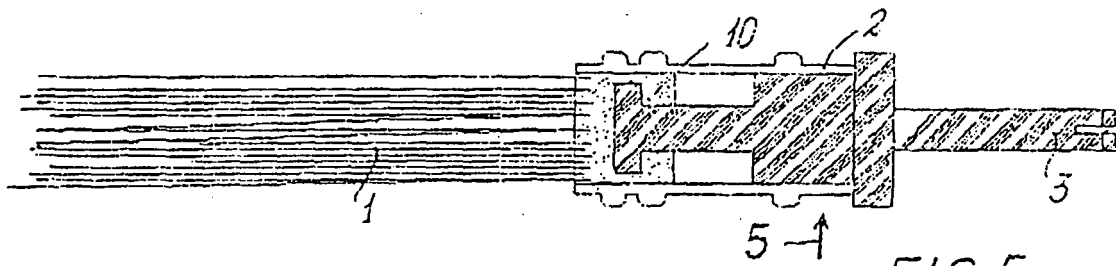


FIG. 5a

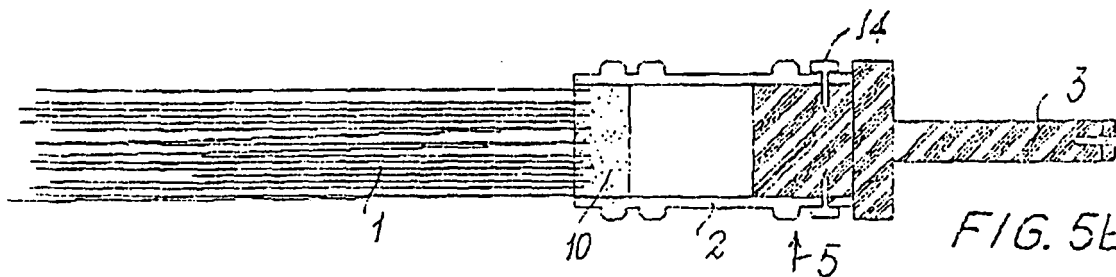


FIG. 5b

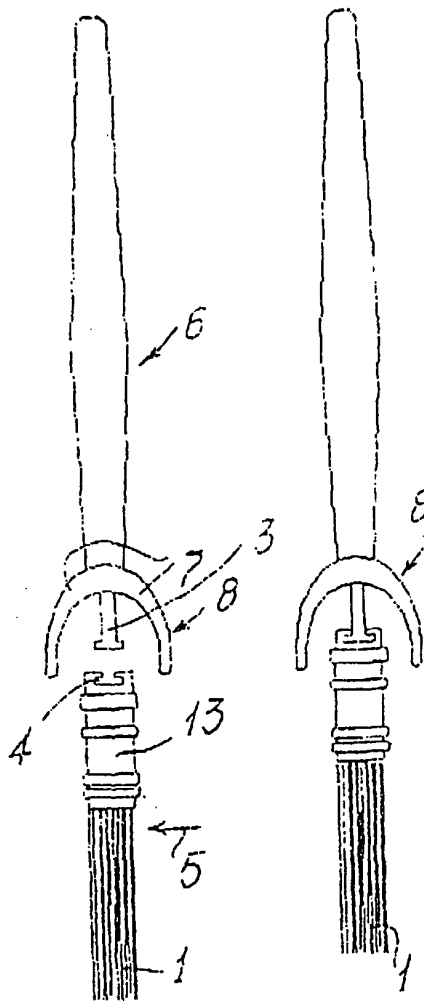


FIG. 6

FIG. 7

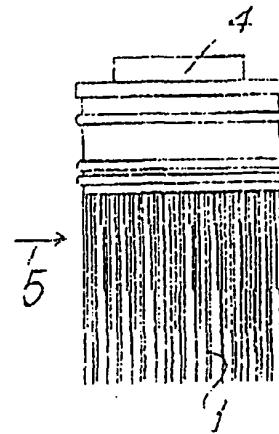


FIG. 8

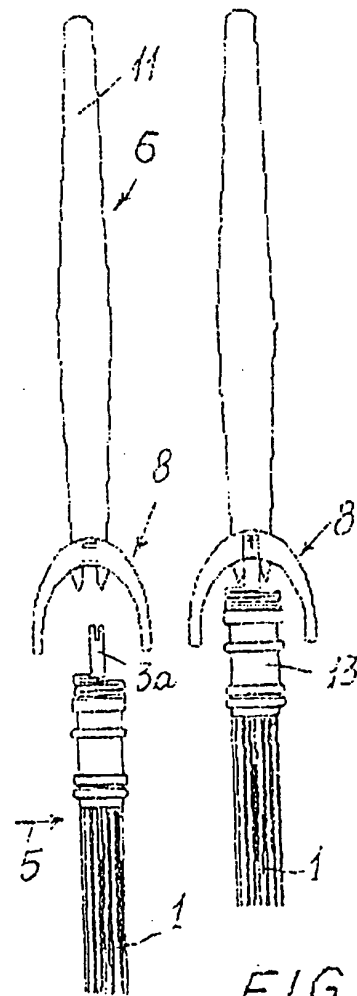


FIG. 9

FIG. 10

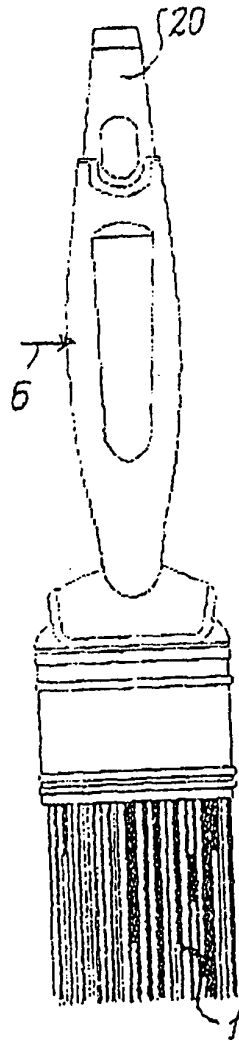


FIG. 11

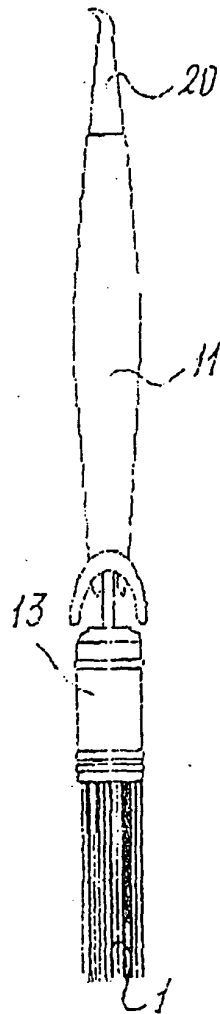


FIG. 12

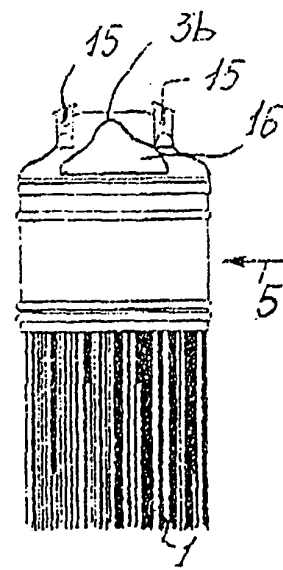


FIG. 13

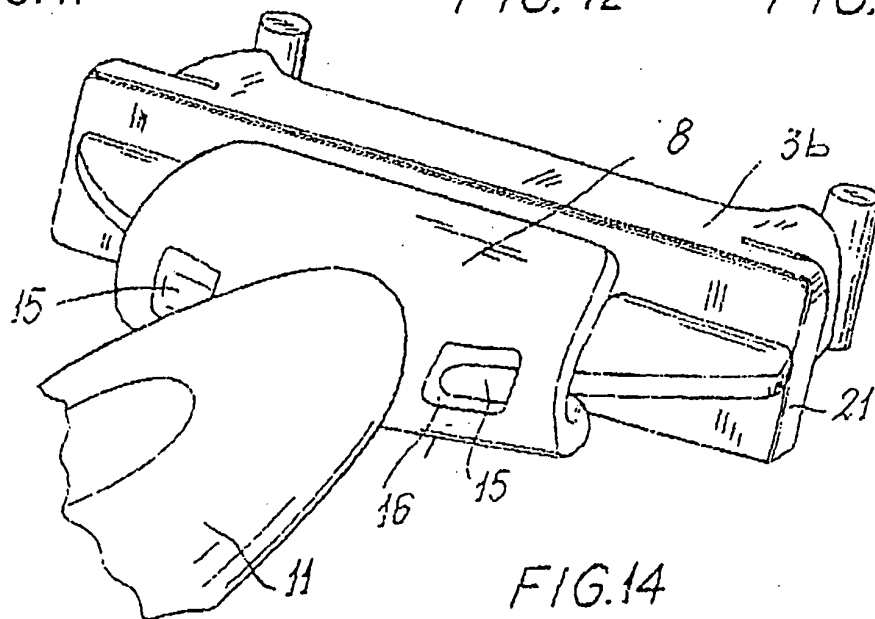
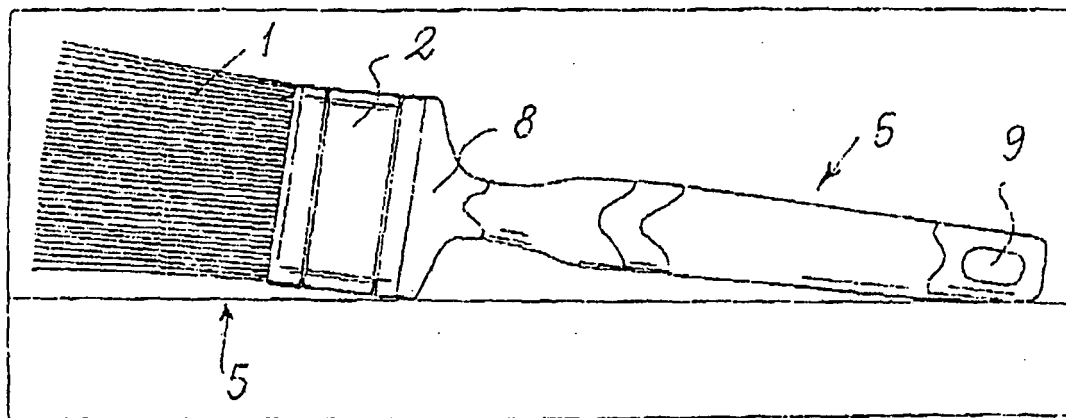
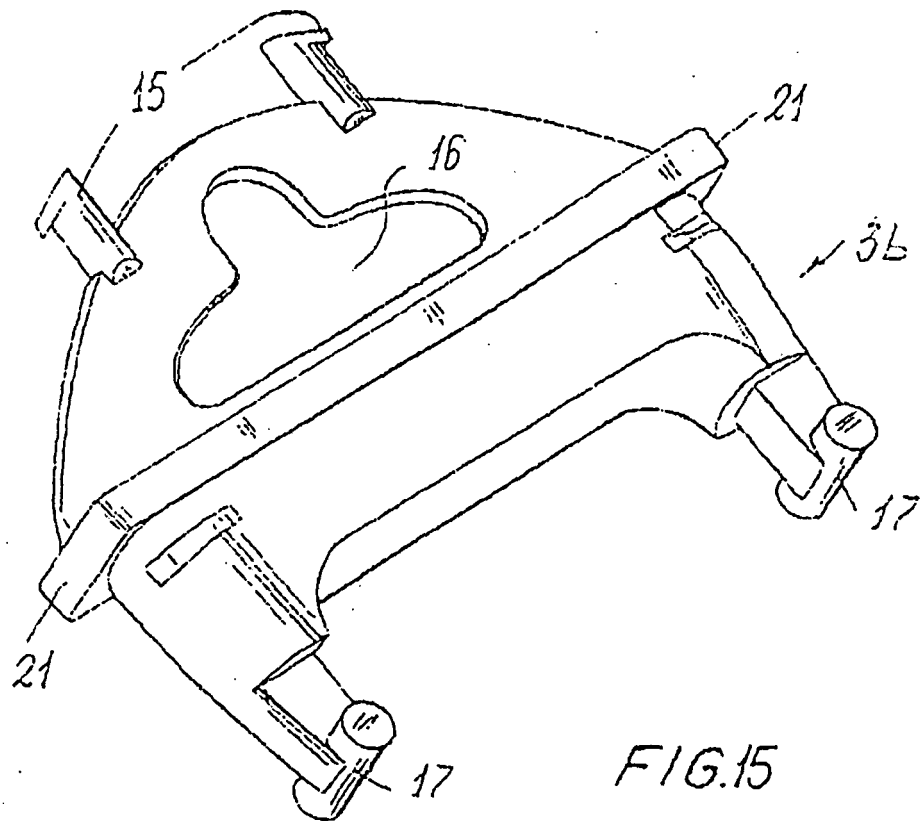


FIG. 14



**REFERENCES CITED IN THE DESCRIPTION**

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