

Title (en)
Method of brush manufacture

Title (de)
Verfahren zur Herstellung von Bürsten

Title (fr)
Procédé pour la fabrication de brosses

Publication
EP 1142505 A2 20011010 (DE)

Application
EP 01107718 A 20010330

Priority
DE 20006311 U 20000406

Abstract (en)
To bond bristles to the heads of brushes, where the bristle tufts (16) are mounted on platelets (14) of plastics and the same material as the brush body (10), an edge is formed around the platelets. As the platelet is bonded to the brush head by ultrasonic welding, the shaped edge acts as an energy concentrator. The shaped edge tapers (18) towards the brush body, to lie at the base of the opening (12) formed in the brush body to hold the platelet with the bristles in a shaped fit. The outer contour of the bristle platelet is shaped to form a shoulder over the rim of the opening in the brush body to hold the bristle platelet, and lie on the surface surrounding the opening. Or the peripheral shoulder around the platelet can lie within a recess around the opening, to lie flush with the brush body surface. The platelet peripheral shoulder extends as far as the transit zone of the brush body, forming the neck piece of a toothbrush. A press unit holds the platelet of bristle tufts against the brush body during ultrasonic welding. The gap between the bristle platelet and the brush body is filled with a plastics mass in an injection mold, where the plastics mass is injected into the gap. The ultrasonic welding unit is combined with an adhesive applicator. The opening in the brush body, to accommodate the platelet with the bristle tufts, has a peripheral wall which converges inwards. The peripheral wall of the bristle platelet is angled to fit into the opening wall, and is bonded in place by ultrasonic welding or an adhesive.

Abstract (de)
Zum Verbinden von mit Borstenbüscheln (16) versehenen Plättchen (14) aus Kunststoff mit Bürstenkörpern (10) aus, insbesondere demselben, Kunststoff mittels Ultraschallschweißen wird jeweils an einem zum Bürstenkörper (10) weisenden Umfangsrand des Plättchens (14) eine Kante (18) geformt, die beim Ultraschallschweißen als Energie-Konzentrator wirkt. <IMAGE>

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A46D 3/04

IPC 8 full level
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Cited by
EP3753448A1; WO2020257819A1; EP2135526A1; DE102008029499A1; EP3753446A1; WO2020257817A1; EP3753445A1; EP3753447A1; EP3753449A1; WO2020257818A1; WO2020257816A1; WO2020257820A1

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