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(54) Kit of sanding blocks and sanding blocks to treat variously shaped surfaces

(57) Kit, especially for use with abrasive disks or similar abrasive sheets having an abrasive side and a non-abrasive side, consisting of a main block (1) having an upper portion (3) acting as an handle for the user and a bottom surface (5) defining a coupling surface with one of said disks or with one of a plurality of fitting blocks (2a-2e) each of them has a first coupling surface (7) corresponding to said coupling surface (5) of the main block (1) and a second coupling surface (8) defining a coupling surface with the non-abrasive side of one of said disks, the second coupling surfaces of said fitting blocks having different curvilinear shapes in order to be suitable to the sanding of variously shaped surfaces to be treated.

And sanding blocks (1'), especially for use with abrasive disks or similar abrasive sheets having an abrasive side and a non-abrasive side, having a curvilinear coupling surface (8') defining a coupling surface with the non-abrasive side of one of said disks.

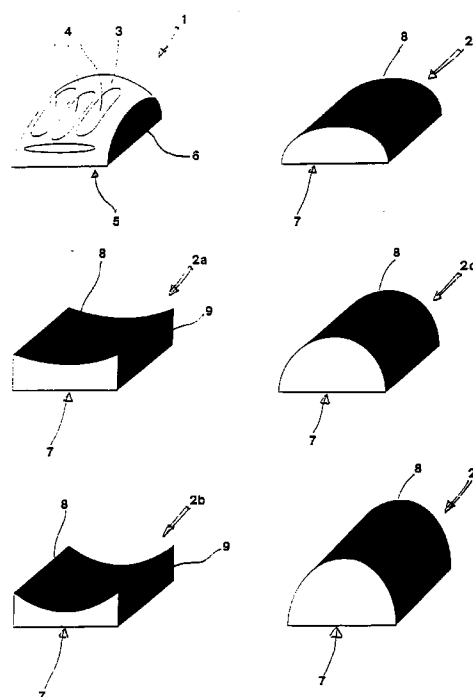


Fig. 1

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Description

Field of the Invention

[0001] The present invention refers to a kit of sanding blocks and to sanding blocks suitable to treat variously shaped surfaces.

[0002] Abrasive paper sheets or disks are used to sand surfaces, and in particular to sand the body panels of cars. These disks, or paper sheets, have to be handled with the help of suitable sanding supports, herein-after called "blocks", to which they are coupled.

[0003] The blocks are mechanically resistant elements bearing the abrasive sheet or disks.

[0004] An intermediate layer of a specific material, known as "velcro" (registered Trademark), is provided to join the abrasive sheet, or disk, to a block. The velcro material consists of two sheets which can be coupled approaching the one to the other and then easily detached. In practice, one sheet of the velcro, and specifically a sheet provided with plastic hooks, is applied to the bottom surface of the block, while the other sheet, which is made of a sort material suitable to adhere to said hooks, is applied to the non-abrasive side of the abrasive disk.

[0005] The bottom surface of the already known sanding blocks, which defines the active surface of the blocks during the sanding operation, has a flat shape. For this reason the conventional blocks are not suitable to treat curvilinear and/or variously shaped surfaces.

[0006] Furthermore, the shape of the bottom surface of these blocks can not be modified when the shape of the surface to be treated changes.

Summary of the Invention

[0007] The present invention overcomes the above-mentioned drawbacks providing sanding blocks having a curvilinear active surface which can be variously shaped and which can be coupled with the non-abrasive side of an abrasive disk. The invention refers also to a Kit comprising a main block which acts as a handle for the user and several fitting blocks having active surfaces of different shapes so that they are suitable to be used to treat curvilinear and/or variously shaped surfaces. The fitting blocks have a first coupling surface corresponding to the bottom surface of the main block and a second coupling surface which can be variously shaped and which can be coupled with the non-abrasive side of an abrasive disk.

Brief description of the Drawings

[0008] Further advantages will be evident from the following description and the annexed drawings, given as non limiting examples, in which:

Fig.1 shows an upper perspective view of a possi-

ble embodiment of the kit according to the invention, in which a main block and several fitting blocks are provided.

Fig.2a-2b show an embodiment of a sanding block according to the invention. In the drawings, reference number 1 refers to the main block and numbers 2a,2b,2c,2d,2e refer to five fitting blocks of the sanding kit.

Detailed description of the Invention

[0009] The main block 1 consists of a body which is preferably made of a synthetic resin and which presents an upper portion 3 anatomically shaped in order to act as a handle for the user during the sanding operation.

[0010] The hand grip is made easier by several grooves 4 which define an anatomically shaped housing for the parts of the user's hand which rest on the main block.

[0011] Main block 1 presents a bottom portion 5 having a shape and/or a coating which makes it suitable to be joined with both a fitting block and an abrasive disk using a "velcro" layer. In the described embodiment, also lateral surfaces 6 of the main block 1 are made in a similar manner to portion 5.

[0012] The main block can be used separately (without any fitting block applied thereto).

[0013] In this case, an abrasive disk is directly applied on the main block 1. The abrasive disk matches the frontal and rear outline of surface 5 of the main block, while the portions of the disk exceeding the lateral outline of the bottom surface 5 can be applied on the semicircular lateral surfaces 6 of main block 1.

[0014] As already said, the present kit comprises several fitting blocks 2a-2e, the number and the shape of which can change. Each fitting block is provided with a coupling surface 7 (the bottom surface in the drawings) which corresponds and can be coupled to the bottom surface 5 of the main block 1. Each fitting block is also provided with an active surface 8 (in the drawings the upper surface) intended to be joined with the non-abrasive side of an abrasive disk.

[0015] Accordingly, a fitting block can be joined with a main block simply approaching the coupling surfaces 7 and 5, so that the non-abrasive side of a disk can be applied on and adhere to the active surface 8 of the fitting block.

[0016] In this way is possible to treat with an abrasive disk whatever curvilinear or flat surface.

[0017] For example, the fitting blocks of the drawings present active surfaces 8 having various curvilinear shapes which make it possible to treat both convex and concave surfaces having various radii of curvature.

[0018] The fitting blocks 2a,2b of fig.1 present concave active surfaces 8 and lateral surfaces 9 which can be joined with the non-abrasive side of an abrasive disk. In particular, the fitting block 2a, having a slightly concave active surface 8, is suitable to treat slightly convex

surfaces, and the fitting block 2b, having a remarkably convex active surface 8, is suitable to treat very concave surfaces.

[0019] In a similar way, the fitting blocks 2c-2e can be used to treat variously shaped surfaces, depending on their radius of curvature.

[0020] The invention refers also to sanding blocks 1', having an upper portion 3' similar to the upper portion 3 of the already described main block 1 and curvilinear coupling surfaces 8' similar to the already described second coupling surfaces 8 of said fitting blocks 2a-2e.

[0021] In this case the upper portion and the coupling surface do not present sharpe edges, and lateral coupling surfaces 6' of the main block are provided to be coupled with the lateral portions of the non-abrasive side of an abrasive disk which possibly exceed the lateral outline of the bottom surface 8' of the block 1'.

[0022] Advantageously, the coupling surfaces 5,6,8' of blocks 1,1' and the coupling surfaces 8 of the fitting blocks 2a-2e are suitable to be coupled with the abrasive disks already known in the market which have a diameter of 150 mm and which are provided with a coupling surface coated with a velcro sort sheet.

[0023] The present invention has been described with reference to preferred embodiments, is anyway obvious that equivalent changes can be made, without going outside the scope of the invention.

Claims

1. Kit of sanding blocks, especially for use with abrasive disks or similar abrasive sheets having an abrasive side and a non-abrasive side, characterised in that it consists of a main block (1) having an upper portion (3) acting as an handle for the user and a bottom surface (5) which is a coupling surface with one of said disks or with one of a plurality of fitting blocks (2a-2e) each of them has a first coupling surface (7) corresponding to said coupling surface (5) of the main block (1) and a second coupling surface (8) defining a coupling surface with the non-abrasive side of one of said disks, the second coupling surfaces of said fitting blocks having different curvilinear shapes in order to be suitable to the sanding of variously shaped surfaces to be treated.
2. Kit according to claim 1, characterised in that said second coupling surfaces (8) are concave.
3. Kit according to claim 1, characterised in that said second coupling surfaces (8) are convex.
4. Kit according to claim 1, characterised in that said bottom surface (5) and said first coupling surfaces are flat.
5. Kit according to claim 1, characterised in that said upper portion (3) of the main block (1) is rounded.
6. Kit according to claim 1, characterised in that said upper portion (3) of the main block (1) has a plurality of grooves (4) in order to be anatomically shaped for an hand grip.
7. Kit according top claim 1, characterised in that the coupling surfaces (7) of said fitting blocks are provided with at least layer of a material suitable to be coupled with the bottom surface (5) of said main block (1) and removed again.
8. Kit according to claim 1, characterised in that said main block (1) has lateral surfaces (6) suitable to be coupled with the lateral portion of the non-abrasive side of a disk applied to the block (1) and exceeding the lateral outline of its bottom surface (5).
9. Kit according to claim 1, characterised in that said fitting blocks have lateral surfaces (9) suitable to be coupled with the lateral portion of the non-abrasive side of a disk applied to the second coupling surface (8) of a fitting block and exceeding its lateral outline.
10. Sanding block, especially for use with abrasive disks or similar abrasive sheets having an abrasive side and a non-abrasive side, characterised in that it has a curvilinear coupling surface (8') defining a coupling surface with the non-abrasive side of one of said disks.
11. Sanding block according to claim 10, characterised in that said coupling surface (8') is concave.
12. Sanding block according to claim 10, characterised in that said coupling surface (8') is convex.
13. Sanding block according to claim 10, characterised in that it has lateral surfaces (6') which are suitable to be coupled with the lateral portions of the non-abrasive side of an abrasive disk attached on said coupling surface (8') and which exceed the lateral outline of the same.
14. Sanding block according to claim 10, characterised in that it has an anatomically shaped upper portion (3') acting as an handle for the user.

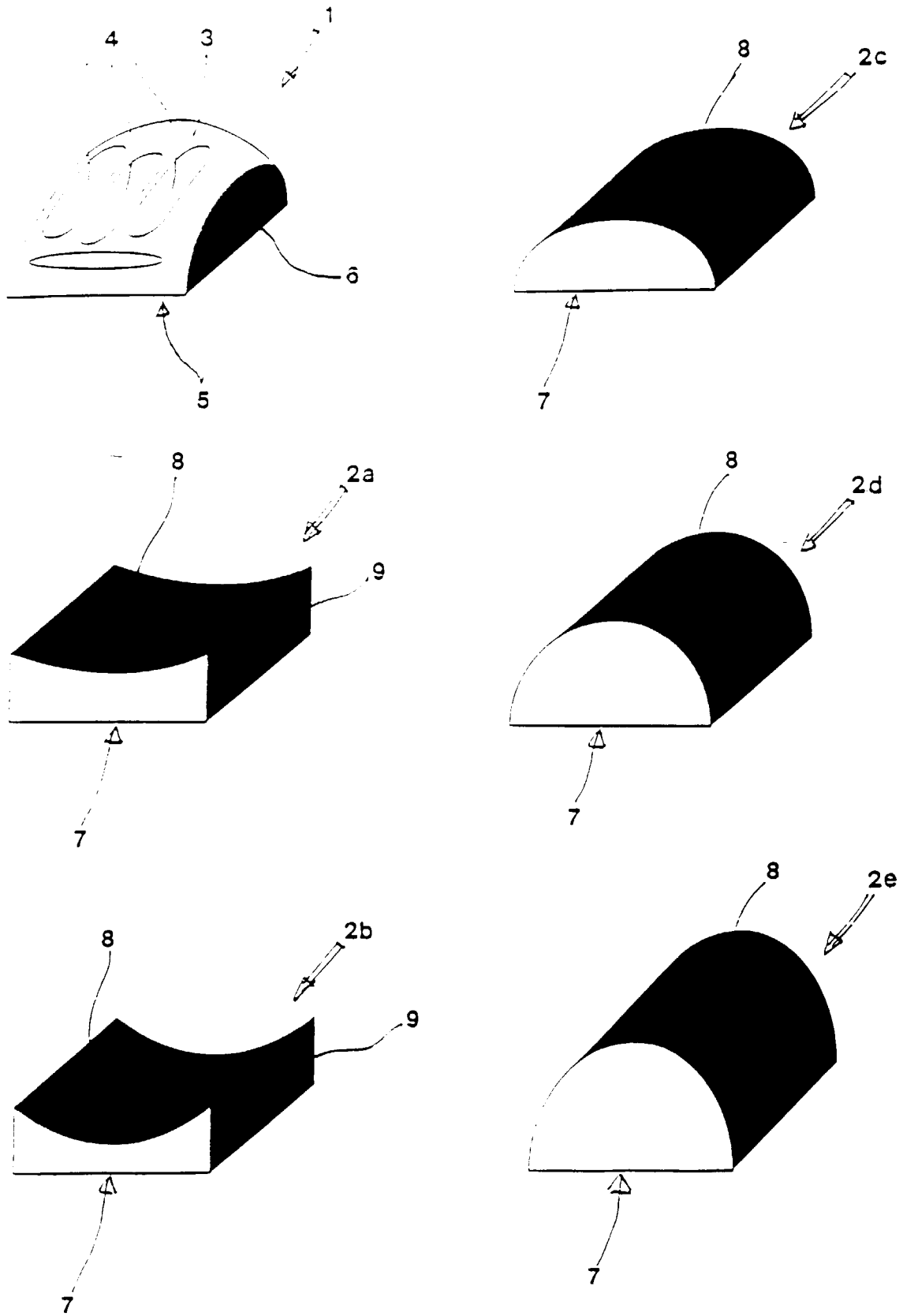


Fig. 1

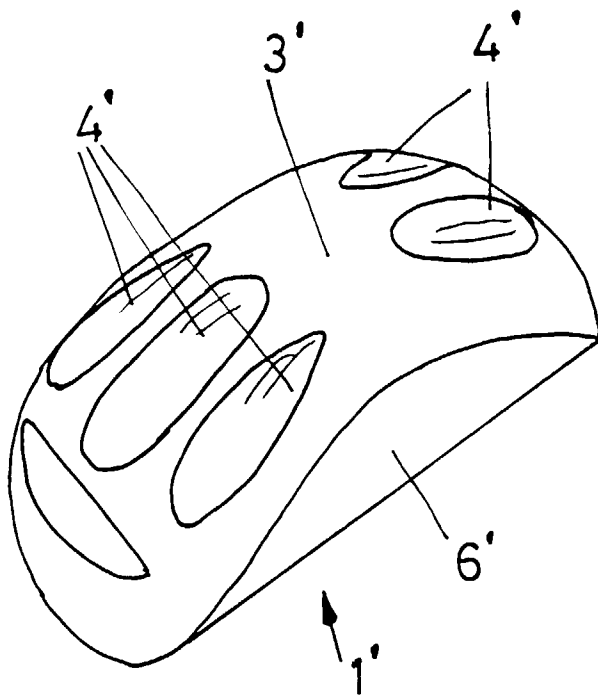


FIG. 2a

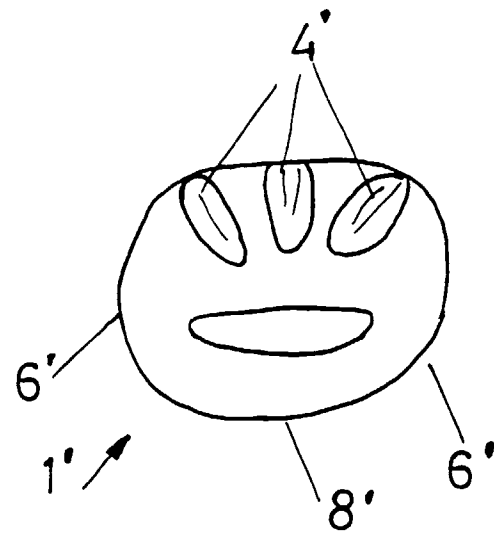


FIG. 2b