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(54) Surface cleaning cloth

(57) A surface cleaning cloth (20) is disclosed, comprising a first flexible laminar support (21) to which a second flexible laminar support (22) is applied, having the outer surface (22a) covered with cleaning material (23) adapted to be put in contact with the surface to be cleaned. Along at least a stretch of the perimeter of the

flexible laminar supports (21, 22) there is a fringe (24) having filamentary elements (26) projecting from the corresponding sides of the flexible laminar supports (21, 22) and provided with at least an edge (24a) which is inserted between the first (21) and the second (22) flexible laminar support, to which it is joined through fastening means (25).

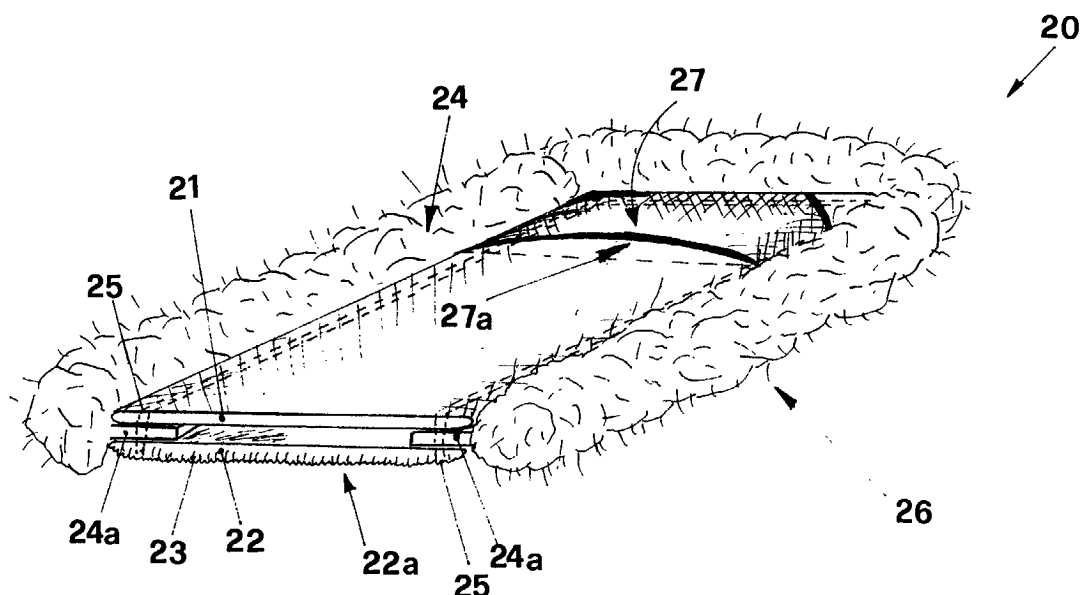


FIG.4

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Description

[0001] The present invention relates to a surface cleaning cloth particularly adapted to be used to clean, wash or polish floors.

[0002] It is well known that to carry out cleaning of surfaces such as floors made of tiles, parquet, linoleum and others, cloths are used that are passed manually on the surfaces to be cleaned or applied to a proper tool such as a plate articulated to a handle which is gripped by the user.

[0003] A cloth of known type generally referred to as mop is shown in fig. 1, where it is shown in a cross sectional view for sake of simplicity.

[0004] This mop comprises a first flexible laminar support 1 connected through a seam 2 to a second laminar support 3 facing the first support, whose outer surface 3a is provided with projecting filamentary elements made of natural or synthetic material, constituting the cleaning surface.

[0005] The second flexible laminar support 3 has lower perimetral dimensions relative to the first laminar support 1 so as to define at one or more sides of the latter an edge along which a fringe 4 is fixed, said fringe protruding laterally from the first laminar support 1 to which it is connected by a seam 4a.

[0006] On the first laminar support 1, at the side opposite to the application of the second laminar support 3 there are pockets 5 allowing the mop to be applied to the above mentioned tools.

[0007] A first drawback shown by the cloths of the above described kind consist in that the lateral arrangement of the fringe having the cleaning filaments mainly oriented horizontally, causes its reduced adhesion to the surface to be cleaned relative to the central zone where the cleaning surface S is located, thus obtaining a reduced cleaning capability at the cloth perimetral edge.

[0008] Another drawback consist in that such reduced cleaning capability of the fringe is felt especially at the corners, for instance near furniture legs or bases or at wall corners.

[0009] A further drawback mainly arising from the generally horizontal arrangement of the fringe filaments, consists in that said fringe has a poor cushioning effect in case of impact against things like table and chair legs, bases and the like.

[0010] Cloths of the kind shown in fig. 2 are also known, comprising a first flexible laminar support 10 and a second flexible laminar support 11 having its cleaning surface with dimensions bigger than the first support, so that the projecting lateral zones may be turned over and perimetally blocked to the first laminar support 10 by a seam.

[0011] Cloths of the just described kind have a greater cushioning effect on at least two perimetral edges relative to the previously described mops, however they have the drawback that the lateral turned over zones have a rounded profile which is not optimal to carry out

cleaning and dust collection at the corners, for instance near furniture bases or legs such as tables.

[0012] The present invention aims at removing the above mention drawbacks.

5 **[0013]** A first object of the invention is to provide a surface cleaning cloth allowing to obtain a better cleaning relative to the prior art cloths more particularly at the corner or near curved zones.

10 **[0014]** Another object of the invention is to provide a cloth having a greater cushioning effect against impact in comparison with the known cloths of equivalent kind.

[0015] These and other objects are attained by a surface cleaning cloth that according to the first claim comprises a first flexible laminar support to which a second flexible laminar support is applied, having the outer surface covered by cleaning material adapted to be put in contact with the surface to be cleaned and having along at least a perimetral stretch a fringe with filamentary elements projecting from one or more sides of said flexible laminar support, characterized in that said fringe has at least an edge that is inserted between said first and second flexible laminar support to which it is joined through fastening means.

25 **[0016]** According to a preferred embodiment the fastening means are developed along the whole fringe length and consist of one or more seams.

30 **[0017]** The fringe consists of filamentary elements mutually juxtaposed and connected at the end for instance by seams, so as to define the edge which is arranged between the flexible laminar supports.

35 **[0018]** The first and the second laminar support are preferably but not exclusively made of polyester, while the cleaning material covering the second support and the filamentary elements of the fringe are made of polyester micro-fibers.

40 **[0019]** The foregoing objects will be better understood by the following description of a preferred embodiment of the invention which is given as an illustrative but not limiting example with reference to the accompanying sheets of drawings in which:

- Fig. 1 shows a cloth of the prior art;
- Fig. 2 shows another cloth also belonging to the prior art;
- 45 - Fig. 3 shows the cloth of the present invention applied to a flat plate provided with an articulated handle manipulated by the user;
- Fig. 4 is a cross sectional view of the cloth of the invention; and
- 50 - Fig. 5 shows a detail of fig. 4.

[0020] The cloth of the invention is shown in figs. 3 and 4 where it is generally indicated with numeral 20.

55 **[0021]** More particularly as shown in fig. 4, the cloth 20 comprises a first flexible laminar support 21 of a general rectangular shape, to which a second flexible laminar support 22 is applied, of which one of the outer surfaces 22a is covered with cleaning material 23 that on

use of the cloth is put in contact with the surface to be cleaned.

[0022] Along the perimeter of the laminar supports 21, 22 there is a fringe 24 provided with filamentary elements 26 projecting from one or more sides of said laminar supports 21, 22.

[0023] In the embodiment shown in the drawings, both laminar supports 21, 22 have a generally rectangular shape, but it is clear that they could have any desired shape for different embodiments.

[0024] The laminar supports 21 and 22 are preferably made of polyester, while the cleaning material 23 and the filamentary elements 26 of fringe 24 are preferably made of polyester micro-fibers.

[0025] For different embodiments however they could be made also with different materials such as cotton, wool, or others.

[0026] According to the invention the fringe 24 has an edge 24a which is inserted between the first 21 and the second 22 flexible laminar support to which the fringe is joined by fastening means generally indicated with numeral 25.

[0027] The fastening means 25 are developed peripherally to the first 21 and the second 22 laminar support for the whole length of the fringe 24 and in the embodiment of fig. 4 consist of yarn seams.

[0028] It is clear that in different embodiments these fastening means 25 may consist of equivalent fastening elements of known type such as for instance gluing substances.

[0029] With regard more particularly to the fringe 24 that is illustrated in detail in fig. 5, it is made of filamentary elements generally indicated with numeral 26. They are arranged juxtaposed one another along a generally longitudinal direction X and are preferably but not necessarily made of polyester micro-fibers like the cleaning material 23 covering the second laminar support 22.

[0030] In order to give a bulky form to the fringe 24 enhancing the cleaning action, all the ends 26a of the filamentary elements 26 arranged on one side, are fixedly joined together preferably through seams. In such a way an edge 24a is obtained, intended to fix the fringe 24 to the laminar supports 21, 22.

[0031] Moreover the sewing action of the ends 26a presses the fibers of the filamentary elements 26 thus promoting their expansion at the free ends 26b so as to create, also in combination with the kind of material being polyester micro-fibers, a bulky effect that is best seen in fig. 5.

[0032] It should be pointed out that the filamentary elements 26 are of the open end type but may also be of the closed end type, in other words generally consisting of a closed loop filament with overlapping ends.

[0033] In this way when handling the cloth 20, the fringe 24 carries out a cushioning effect preserving the bottom parts of furniture, chairs and other things resting on the floor from violent impacts that could damage them, at the same time improving the cleaning effect as

well.

[0034] Two of the intended objects are therefore attained.

[0035] According to different embodiments the edge 24a may be made for instance by gluing the ends 26a of the filamentary elements 26.

[0036] In order to use the cloth 20 as shown in fig. 3, one could use a flat plate P provided with a long gripping handle S with articulated connection G, to which the cloth 20 is applied to coupling means 27 in this case consisting of pockets 27a into which the plate P is received.

[0037] In different embodiments the cloth 20 may have coupling means 27 consisting of a glove in case a direct hand use of the cloth 20 is desired.

[0038] From the foregoing it is clear that the cloth of the invention fully attains the intended objects.

[0039] In the implementing stage many constructional variations may be resorted to the cloth of the invention, for instance concerning the shape of the laminar supports or the coupling means.

[0040] Obviously the filamentary elements and the cleaning material may be made of any kind of material, at the choice of the manufacturer as a function of the use for which the product is intended.

[0041] The cited variations and possibly others not cited, when falling within the scope of the appended claims, should be considered covered by the present patent.

Claims

1. A surface cleaning cloth (20) comprising a first flexible laminar support (21) to which a second flexible laminar support (22) is applied having the outer surface (22a) covered with cleaning material (23), adapted to be put in contact with the surface to be cleaned and being provided along at least a stretch of the perimeter with a fringe (24) having filamentary elements (26) projecting from one or more sides of said flexible laminar supports (21, 22), **characterized in that** said fringe (24) has at least an edge (24a) which is inserted between said first (21) and said second (22) flexible laminar support, to which said edge is joined through fastening means (25).
2. The cloth (20) according to claim 1) **characterized in that** said fastening means (25) are developed along the entire length of said fringe (24).
3. The cloth (20) according to claim 1) **characterized in that** said fastening means (25) are seams.
4. The cloth (20) according to claim 1) **characterized in that** said fastening means (25) are gluing substances.

5. The cloth (20) according to claim 1) **characterized in that** said filamentary elements (26) are arranged juxtaposed one another along a generally longitudinal direction (X) and are mutually connected at one end (26a) to make said edge (24a). 5
6. The cloth (20) according to claim 5) **characterized in that** said ends (26a) of said filamentary elements (26) are mutually connected by seams. 10
7. The cloth (20) according to claim 5) **characterized in that** said ends (26a) of said filamentary elements (26) are mutually connected by gluing substances. 10
8. The cloth (20) according to claim 1) **characterized in that** said cleaning material (23) consists of polyester micro-fibers. 15
9. The cloth (20) according to claim 1) **characterized in that** said cleaning material (23) consists of cotton. 20
10. The cloth (20) according to claim 1) **characterized in that** said filamentary elements (26) consist of polyester micro-fibers. 25
11. The cloth (20) according to claim 1) **characterized in that** said filamentary elements (26) consist of cotton. 30
12. The cloth (20) according to claim 1) **characterized in that** said first flexible laminar support (21) and said second flexible laminar support (22) have the same shape. 35
13. The cloth (20) according to claim 1) **characterized in that** said first flexible laminar support (21) is provided with coupling means with a user's hand on the surface (21a) opposite to the surface covered by said cleaning material (23). 40
14. The cloth (20) according to claim 1) **characterized in that** said first flexible laminar support (21) on the surface (21a) opposite to the surface covered by said cleaning material (23), is provided with coupling means connected to a plate (P) provided with a handle (S) adapted to be gripped by a user. 45
15. The cloth (20) according to claim 1) **characterized in that** said first flexible laminar support (21) is made of cotton. 50
16. The cloth (20) according to claim 1) **characterized in that** said first flexible laminar support (21) is made of polyester. 55
17. The cloth (20) according to claim 1) **characterized in that** said second flexible laminar support (22) is made of cotton.
18. The cloth (20) according to claim 1) **characterized in that** said second flexible laminar support (22) is made of polyester.
19. The cloth (20) according to claim 1) **characterized in that** said filamentary elements (26) have a free end (26b).
20. The cloth (20) according to claim 1) **characterized in that** said filamentary elements (26) have closed loop ends.

