

(19)



(11)

EP 3 192 907 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

19.07.2017 Bulletin 2017/29

(51) Int Cl.:

D03D 11/00 (2006.01)

(21) Application number: **17151399.7**

(22) Date of filing: **13.01.2017**

(84) Designated Contracting States:

**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

Designated Extension States:

BA ME

Designated Validation States:

MA MD

(30) Priority: **14.01.2016 BE 201605024**

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(54) **METHOD FOR PRODUCING A PRINTED CARPET**

(57) The present invention relates to a method for producing a printed carpet, the method comprising the following steps: producing a substrate comprising a top and bottom fabric which are connected to each other by means of connecting threads, in which each fabric comprises weft threads and warp threads which are connect-

ed to each other according to a predetermined weaving pattern; applying a print to the top fabric. According to the invention, the warp threads of the top fabric are darker than the weft threads of the top fabric, so that the weaving pattern of the top fabric remains visible after the print has been applied.

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Description

[0001] The present invention relates, on the one hand, to a method for producing a printed carpet, in which a substrate is produced comprising a top and bottom fabric which are connected to each other by means of connecting threads, in which each fabric comprises weft threads and warp threads which are connected to each other according to a predetermined weaving pattern and in which a print is applied to the top fabric. On the other hand, the present invention relates to a carpet which is provided with a print.

[0002] Printed fabrics are generally known, on the one hand it is known to imprint carpets composed of a base fabric made up of warp and weft threads, optionally provided with pile-producing threads, by means of a known printing technique. However, such produced printed fabrics (carpets) are visually less attractive, because the weaving structure disappears almost completely due to the printing, resulting in a rather artificial product to which an image (photograph) is applied.

[0003] On the other hand, it is known to provide plain-woven furniture fabrics which are woven on a known jacquard device with a print. However, such fabrics have the drawback that they are much too light to be used as a carpet.

[0004] US 142 947 A describes a method for manufacturing a printed carpet according to the preamble of the first claim.

[0005] The present invention thus has the object of providing a method for producing a printed carpet which is sufficiently strong and the appearance of which to the user is still clearly that of a carpet.

[0006] The object of the invention is achieved by providing a method for producing a printed carpet, the method comprising the following steps:

- producing a substrate comprising a top and bottom fabric which are connected to each other by means of connecting threads, in which each fabric comprises weft threads and warp threads which are connected to each other according to a predetermined weaving pattern;
- applying a print to the top fabric,

in which the warp threads of the top fabric are darker than the weft threads of the top fabric, so that the weaving pattern of the top fabric remains visible after the print has been applied.

[0007] By producing the substrate in such a way, it becomes possible to ensure that the weaving pattern remains visible after the print has been applied. The base fabric provides more stability for the assembly and contributes to the weight of the carpet produced.

[0008] A carpet produced according to this method gives the impression that it is a carpet in which the pattern or design has been created by weaving, whereas the pattern or design is in fact a print. By working in this way,

carpets can be manufactured in a less expensive manner. In addition, this method is flexible, thus allowing carpets of different designs to be manufactured at short notice. Consequently, this method offers many more possibilities for variety. Thus, made-to-measure carpets, for example carpets provided with an image of a specific person, can be produced in an economically viable way.

[0009] The print is preferably applied by means of transfer printing, in which the colours are applied to the top fabric indirectly by means of screen printing. In practice, the necessary colours are applied to a sheet of paper by means of pigment transfer ink as a mirror image in screen printing. These sheets are then placed on a polyester fabric and are baked (at approximately 220°C) together, under pressure (approximately 4 bar) for a certain amount of time (30 to 60 s). Due to the heat, the ink detaches from the paper and transfers onto the top side (visible side) of the carpet.

[0010] In another preferred embodiment, the print is applied by means of digital printing. In this case, an inkjet printer is preferably used.

[0011] According to a preferred method, the base fabric is provided with a support layer, preferably a flexible support layer, in order to produce a thicker and stronger assembly (carpet). This support layer is preferably a coating, such as for example latex - or another coating or a non-woven layer, such as for example felt. Another option is for example gluing a woven or knitted cloth to the base fabric.

[0012] If the support layer is made of latex or a similar material, the support layer is applied by means of a coating process. If the support layer is a non-woven layer (e.g. felt), this is applied by means of a lamination process.

[0013] According to a preferred method according to the present invention, the top fabric comprises at least two weft threads having a different colour, effect and/or appearance. It is also possible to introduce weft threads of different thicknesses. The weft threads are preferably chenille yarns, matt or shiny yarns, spun or unspun yarns, twisted or untwisted yarns. The weft yarns used are made of natural fibres, such as e.g. cotton, wool, etc., synthetic fibres, such as e.g. polyester (PE), synthetic fibres (e.g. viscose) or mixed fibres (cotton/PE fibres).

[0014] In a more preferred method according to the invention, the warp threads of the top fabric are made in the same colour. In particular, the colour of the warp threads of the top fabric is black. Black warp threads have the advantage that these remain visibly dark after printing. As a result thereof, the weaving pattern produced by these warp threads remains clearly visible.

[0015] In a specific method according to the invention, at least 10 and at most 80 warp threads are present per centimetre of carpet.

[0016] Since, according to the present invention, a carpet is being produced, the method also comprises the step of providing a border on the outer periphery of the substrate. The border may be produced by folding the

edges and optionally attaching them by stitching. Other ways of providing a border, such as e.g. by means of an overlock or a combination of the different techniques, are also possible. In this way, a satisfactorily finished carpet is produced.

[0017] Another subject of the present invention relates to a carpet, comprising a top and base fabric which are connected to each other by means of connecting threads, in which each fabric comprises weft threads and warp threads which are connected to each other according to a predetermined weaving pattern, in which the top fabric is provided with a print and in which the warp threads of the top fabric are darker than the weft threads of the top fabric, so that the weaving pattern of the top fabric is visible. Such a carpet gives the impression that it is a carpet whose pattern or design is the result of a weaving process, whereas the pattern or design has in reality been applied by means of printing. The carpets according to the present invention offer many more possibilities in terms of variety.

[0018] Preferably, the top fabric of the carpet according to the present invention is a structure fabric.

[0019] The weight of the carpet according to the present invention is preferably at least 400 g/m² and at most 4 kg/m².

Claims

1. Method for producing a printed carpet, the method comprising the following steps:
 - producing a substrate comprising a top and bottom fabric which are connected to each other by means of connecting threads, in which each fabric comprises weft threads and warp threads which are connected to each other according to a predetermined weaving pattern;
 - applying a print to the top fabric,

characterized in that the warp threads of the top fabric are darker than the weft threads of the top fabric, so that the weaving pattern of the top fabric remains visible after the print has been applied.
2. Method according to Claim 1, **characterized in that** a support layer is applied to the bottom fabric.
3. Method according to Claim 2, **characterized in that** the support layer is a coating, a non-woven or a woven cloth.
4. Method according to one of the preceding claims, **characterized in that** the top fabric comprises at least two weft threads having a different colour, effect and/or appearance.
5. Method according to one of the preceding claims,

characterized in that the warp threads of the top fabric are made in the same colour.

6. Method according to Claim 5, **characterized in that** the colour of the warp threads of the top fabric is black.
7. Method according to one of the preceding claims, **characterized in that** at least 10 and at most 80 warp threads are present per centimetre of carpet.
8. Method according to one of the preceding claims, **characterized in that** the print is applied by means of transfer printing or digital printing.
9. Carpet, comprising a top and base fabric which are connected to each other by means of connecting threads, in which each fabric comprises weft threads and warp threads which are connected to each other according to a predetermined weaving pattern, **characterized in that** the top fabric is provided with a print and **in that** the warp threads of the top fabric are darker than the weft threads of the top fabric, so that the weaving pattern of the top fabric is visible.
10. Carpet according to Claim 9, **characterized in that** the top fabric is a structure fabric.



EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 142 947 A (SCOTT, ROBERT) 16 September 1873 (1873-09-16) * left-hand column, line 31 - right-hand column, line 2 * * right-hand column, lines 30,31; figures 1-4 *	1-10	INV. D03D11/00
A	JP H10 37084 A (NEGI SANGYO KK) 10 February 1998 (1998-02-10) * abstract; figures 1,2 *	1-10	
A	US 57659 A (BAKER, SETH W.) 4 September 1866 (1866-09-04) * the whole document *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC)
			D03D A47G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 May 2017	Examiner Louter, Petrus
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			

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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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10-05-2017

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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