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(54) PROCESS FOR TEXTILE PRINTING WITH LASER COPIES OF NORMAL PHOTOCOPYING PAPER USING A SPRAY TEXTILE FIXING BASE

(57) The printing of textile material by the disclosed process makes use of laser photocopies on normal photocopying paper on which is projected a liquid spray of a textile fixing base, achieving the transfer of the print (3) of the copy (1) to the fabric (4) by absorption of the toner by the fixing base and its heat and pressure transfer to any type of natural or synthetic textile materials.

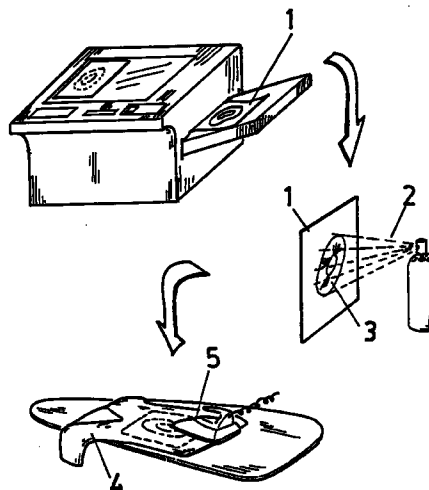


FIG. 1

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Description

OBJECT OF THE INVENTION

The invention object of this specification refers to a ingenious usage of a textile fixing base in a textile stamping procedure, allowing the use of laser photocopies made upon normal photocopier paper.

It incorporates the treatment of the copy obtained through the fore mentioned liquid spray, in fact a textile fixing base, generating with it a sui generis image transfer, from the copy to the fabric.

With his procedure the fixing base absorbs the toner and the liquid thus impregnated is then ready for its transfer, thermal and through pressure, upon any type of textile materials, whether natural or synthetic.

BACKGROUND OF THE INVENTION

Only one procedure is known for the stamping of textile materials through photocopies, which consists of using a transfer paper, previously chemically treated, before passing it through the conventional photocopier.

This special transfer paper, once photocopied, is then dry stamped, in the color photocopier and upon the fabrics selected.

This undoubtedly ingenious procedure does still feature a number of inconveniences for its practical use, such as:

- The damage caused in the copier due to the continuous use of chemically treated paper.
- Fabric stamping is very superficially effected, and therefore stamping resistance to consecutive garment washing is very low.
- The selectivity of the procedure, given that the stamping may not be effected upon all kind of materials.
- The high cost of the chemically treated paper.

Up to date there is no knowledge of any type of procedure allowing image transfer upon all kinds of textile material, inexpensive, such as that using normal photocopier paper and effecting fluid based stamping, so that it penetrates deeply into the fabric, thus facilitating transfer maintenance over consecutive washing.

DESCRIPTION OF THE INVENTION

The solution advanced herewith consists of a textile stamping procedure, using normal photocopier paper, incorporating the copy so obtained through a liquid spray, generating a stamping transfer procedure, from the copy to the fabric.

To this end normal photocopier paper is placed into a laser photocopier, obtaining a color copy.

Then, upon this color copy is applied, using a spray, a textile fixing base, which absorbs the toner off the copy.

In the third operation the copy, already impregnated with the fixing base fluid, is then placed upon any light colored fabric, proceeding then to stamp the illustration, signs or marks from the paper on to the fabric through the use of a clothes iron, manual, pneumatic or hydraulic, previously heated to a temperature of approximately 200 °C. The fabrics to be stamped may be of any type, either natural (cotton, silk, wool, etc.) or synthetic.

The toner absorbed by the spray is then passed on to the fabric, deeply penetrating therein, which shall then offer a high degree of resistance to the successive washing of the garment to be made with this stamping, directly related to the resistance to washing of the fixing base chemical product.

The paper placed upon the fabric is then withdraw.

DESCRIPTION OF THE DRAWINGS

In order to complement the description given and so as to facilitate a better and easier comprehension of the characteristics of the invention, this patent specification is accompanied, as integral part thereof, of a diagram in which with a merely illustrative but never limitative character the following has been represented:

The diagram shows in a graphical and schematic manner the stamping procedure following by this invention.

PREFERRED EXECUTION OF THE INVENTION

Upon seeing these commented figures it may be observed how the invention here advanced consists of a textile stamping procedure, using normal photocopier paper, whence the copy so obtained is treated with a spray based fluid textile fixing base, generating a copy to fabric stamping transfer procedure.

Using normal photocopier paper, in a laser photocopier, is first obtained a color copy (1) upon which is extended, using a spray, a textile fixing base (2) that absorbs the toner, being this copy (1) later placed upon any kind of light colored fabric (4), proceeding then to stamp the drawing (3) or the signs or marks upon the fabric (4) through the use of a, manual, pneumatic or hydraulic clothes iron (5), heated up to a temperature of approximately 200 °C, transferring then the toner absorbed by the spray to the textile, penetrating it deeply into the fabric, reason for which it shall offer a high level of resistance to successive washing, as a function of the resistance to washing of the own fixer fluid, being then withdrawn the copy paper (1) previously placed upon the fabric (4).

This description needs not be extended any further as any expert in this art would already have enough information to understand the scope of the invention and the advantages derived from it, as well as to be able to reproduce it.

It is further understood that, as long as the essential qualities of the invention is not altered, its materials and shape, size and arrangement of the elements may be varied within the same characteristics.

The terms used during the description, as well as their sense must at all times be considered in a non limitative manner.

Claims

1. Procedure for the stamping of textiles with laser copies on normal copier paper using a spray based textile fixing base, essentially characterized for using a fluid spraying textile fixing base, as well as normal photocopier paper, in a laser photocopier, in which a paper copy is first obtained (1) upon which is extended, using a spray, a textile fixing base (2) that absorbs the toner, being this copy (1) later placed upon any kind of light colored fabric (4), proceeding then to stamp the drawing (3) or the signs or marks upon the fabric (4) through the use of a, manual, pneumatic o hydraulic clothes iron (5), heated up to a temperature of approximately 200 °C, transferring then the toner absorbed by the spray to the textile, penetrating into it deeply into the fabric, reason for which it shall offer a high level of resistance to successive washing, as a function of the resistance to washing of the own fixer fluid, being then withdrawn the copy paper (1) previously placed upon the fabric (4).
2. Procedure for the stamping of textiles with laser copies on normal copier paper using a spray based textile fixing base.

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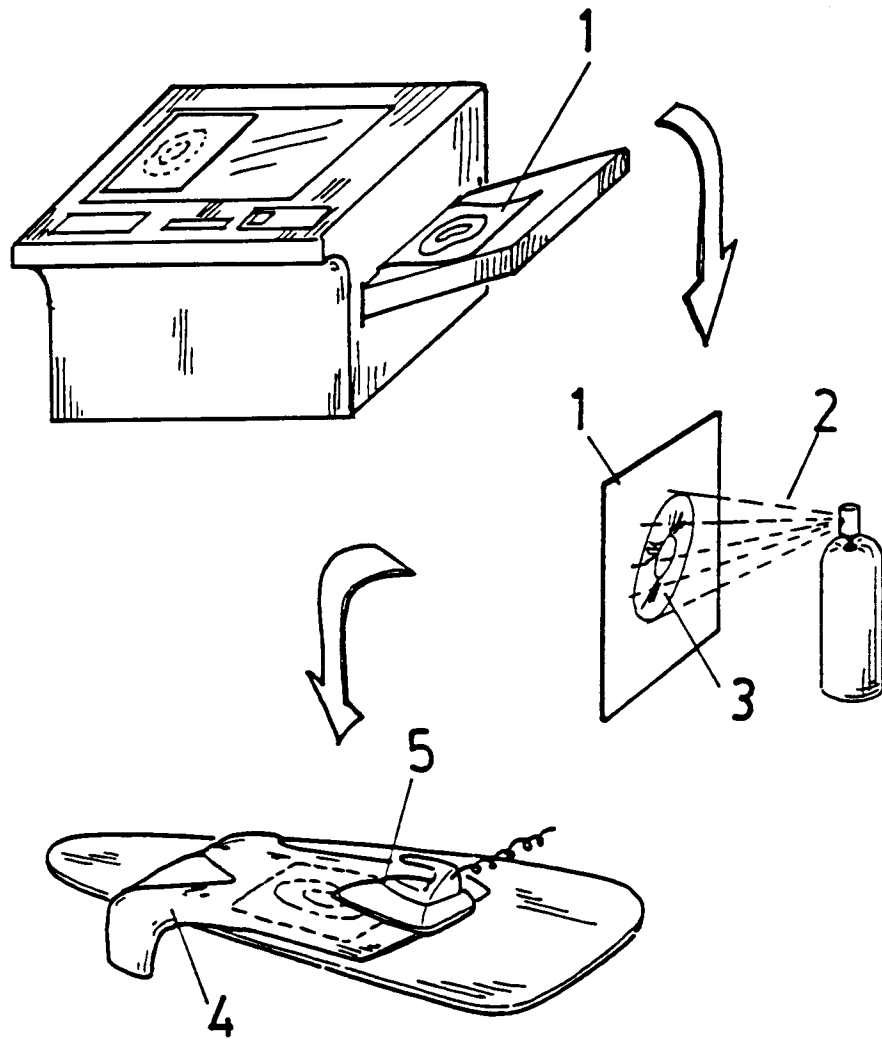


FIG. 1

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES95/00023

A. CLASSIFICATION OF SUBJECT MATTER		
IPC6: D06P5/00, D06Q1/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC6: D06P, D06Q		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
CIBEPAT, EPODOC, WPIL, PAJ, JOPAL		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR-2627871-A (SOENEN ANTOINE) (01.09.1989) *the whole document*	1,2
Y	Data Basic WPIL, Section Ch, Semina 9420 Derwent Publications Ltd., London, GB; Clase F06, AN 94-159590 BR-9300968-A (ADLER S E) (05.04.1994) see abstract.	1,2
Y	EP-0397606-A (CALCO CLOTH S R L) (14.11.1990) *page 2, column 1, line 31-column 2, line 36*	1,2
A	US-4064285-A (MAMMIMO JOSEPH) (20.12.1977) *column 3, lines 26-37, column 5, lines 8-19; column 6, line 58-column 7, line 34*	1,2
A	EP-0466503-A (KALRO DENNY DAMORAR) (15.01.1992) *page 2, line 18-page 4, line 27*	1,2
A		
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
03 April 1996 (03.04.96)		03 April 1996 (03.04.96)
Name and mailing address of the ISA/ European Patent Office Facsimile No.		Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES96/00023

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR-2673397-A (MURRE JEAN PIERRE) (04.09.1992) *page 1, line 30-page 2, line 5*	1,2
A	DE-3425576-A (ALBIEZ ERWIN) (16.01.1986) *the whole document*	1,2

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