TAB 5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application: James R. McCulloch
Serial No.: 09/192,393
Filed: November 13, 1998
For: **TRANSFER PRINTING FLOCKED FABRIC**

Art Unit: 1771

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MAR 15 1999
GROUP 1700

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

1. I, William. F. Laird, state that I am Director, Advanced Engineering of Microfibres, Inc.

Crock Fastness

2. The invention sought to be patented in this application provides improved crock fastness--resistance to having dye rub off by friction. In order to compare the crock fastness obtained by transfer printing of flocked fabric with and without the use of pigmentation in the adhesive used to adhere the flock to the substrate, six test samples were prepared. All samples used the same fabric substrate and greige flock. The attached specimens include a square of test fabric that was rubbed against the fabric to ascertain if dye would rub off onto the square.

3. Samples 1-3 are on a black pigmented adhesive base and the crocks are excellent. Very little or no dye is apparent on the test squares. The reason for these results is that the amount of dyestuff has been reduced and, because of the black adhesive, we still obtain the dark shades.

4. Samples 4-6 are on a white adhesive base and the crocks are poor. These samples are printed by our company using our customer's paper. To obtain the dark shades on the white adhesive base, more dyestuff is required, which results in poorer crock results, demonstrated by the noticeable dye on the test squares.

Light Fastness

5. The invention has also been found to provide fabrics with improved light fastness. That is, the color retention after prolonged exposure to ultraviolet (UV) light is better for these fabrics than conventional fabrics. Substrates similar to those used for samples 1-6 were flocked and printed to make samples 7-12.

6. Samples 7-9 are on a white adhesive base and show the poor light fastness obtained. This can be seen by fading that is visible in the open area of the control card on the attached specimens. The shielded area has not faded to the same extent, as can be seen by lifting the shielding portion of the control card. The reason for these poor results is that the dye colors the white adhesive as well as the flock during the printing process. During UV light exposure, the color in the adhesive changes more drastically than the color in the nylon flock, which causes the poor light fastness results.

7. Samples 10-12 are on a black pigmented adhesive base and show excellent light fastness results. The pigment used in the adhesive is not affected by UV light.

8. On the basis of the above tests, it is apparent that the use of a dark pigmented adhesive in combination with transfer printing results in printed flocked fabrics which exhibit *significantly improved light fastness, without significant crocking.*

9. The problems of light fastness and crocking have long existed in the transfer printing of flocked fabrics and have limited the commercial usage of transfer printed fabrics. It is believed that avoidance of these deficiencies by the use of a dark pigmented adhesive in combination with transfer printing would not have been expected by practitioners in the relevant art.

10. In addition to the improvements in light fastness and crock fastness, grin-through is minimized by the use of the invention.

11. The invention has been a commercial success, to the extent that fifty percent (50%) of the production of flocked fabrics of applicant's assignee, Microfibres, Inc., is now based on the invention, which is up from zero before the invention.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

William F. Laird

Date: March 3, 1999

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P.O. BOX 4004
BURLINGTON, NORTH CAROLINA 27215
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MAY 13 1998
HARTFORD FIBRES LTD.

May 5, 1998

Mr. Keith Clark
HARTFORD FIBRES LTD.
675 Progress Avenue
Kingston, Ontario, Canada K7L 4Y8

Reference: Laboratory Test Report
Lab Identification No. 9507
Invoice No. 3461 (Attached)

Dear Mr. Clark:

One (1) fabric sample, identified as Style: Kid Glove; Color: Charcoal; Hartford Lot: #17423-14,. was received and tested in accordance with AATCC Test Method 16-1990, "Colorfastness to Light", Option E, "Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light". The sample was tested for a total of 60 Standard Hours. The results are as follows:

Test Results After 60 Std. Hrs.
Grade 1

The tested specimen is enclosed for your personal observation. If there are any questions or when we can be of further assistance, please let us know.

Sincerely,

Bobby E. Puett

BEP/su
Attachment
Enclosure

OUR LETTERS AND REPORTS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESSED. ANY COMMUNICATION TO OTHERS OR THE USE OF OUR COMPANY NAME MUST RECEIVE PRIOR APPROVAL. OUR TEST RESULTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS. SAMPLES NOT DESTROYED IN TESTING ARE RETAINED A MAXIMUM OF THIRTY DAYS. THE LETTERS, REPORTS OR NAME OF DIVERSIFIED TESTING LABORATORIES, INC. MAY NOT BE USED IN ADVERTISING TO THE GENERAL PUBLIC.

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HARTFORD FIBRES LTD.

May 7, 1998

Mr. Keith Clark
HARTFORD FIBRES LTD.
675 Progress Avenue
Kingston, Ontario, Canada K7L 4Y8

Reference: Laboratory Test Report
Lab Identification No. 9535
Invoice No. 3495 (Attached)

Dear Mr. Clark:

One (1) fabric sample, identified as **Style: Kid Glove; Color: Taupe; Paper Lot #8933**, was received and tested in accordance with AATCC Test Method 16-1990, "Colorfastness to Light", Option E, "Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light". The sample was tested for a total of 60 Standard Hours. The results are as follows:

Test Results After 60 Std. Hrs.
Grade 2

The tested specimen is enclosed for your personal observation. If there are any questions or when we can be of further assistance, please let us know.

Sincerely,

Karon S. Matkins

KSM/su
Attachment
Enclosure

OUR LETTERS AND REPORTS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESSED. ANY COMMUNICATION TO OTHERS OR THE USE OF OUR COMPANY NAME MUST RECEIVE PRIOR APPROVAL. OUR TEST RESULTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS. SAMPLES NOT DESTROYED IN TESTING ARE RETAINED A MAXIMUM OF THIRTY DAYS. THE LETTERS, REPORTS OR NAME OF DIVERSIFIED TESTING LABORATORIES, INC. MAY NOT BE USED IN ADVERTISING TO THE GENERAL PUBLIC.

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May 5, 1998

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Mr. Keith Clark
HARTFORD FIBRES LTD.
675 Progress Avenue
Kingston, Ontario, Canada K7L 4Y8

Reference: Laboratory Test Report
Lab Identification No. 9507
Invoice No. 3461 (Attached)

Dear Mr. Clark:

One (1) fabric sample, identified as Style: Billy Glove; Color: Berry; Hartford Lot: #17426-14,. was received and tested in accordance with AATCC Test Method 16-1990, "Colorfastness to Light", Option E, "Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light". The sample was tested for a total of 60 Standard Hours. The results are as follows:

Test Results After 60 Std. Hrs.
Grade 2

The tested specimen is enclosed for your personal observation. If there are any questions or when we can be of further assistance, please let us know.

Sincerely,

Bobby E. Puett

BEP/su
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May 21, 1998

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HARTFORD FIBRES LTD.

Mr. Keith Clark
HARTFORD FIBRES LTD.
675 Progress Avenue
Kingston, Ontario, Canada K7L 4Y8

Reference: Laboratory Test Report
Lab Identification No. 9638
Invoice No. 3605 (Attached)

Dear Mr. Clark:

One (1) fabric sample, identified as **Style: Kid Glove; Color: Berry; 112EREH-16**, was received and tested in accordance with AATCC Test Method 16-1990, "Colorfastness to Light", Option E, "Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light". The sample was tested for a total of 60 Standard Hours. The results are as follows:

Test Results After
60 Std. Hrs.

Grade 4-5

The tested specimen is enclosed for your personal observation. If there are any questions or when we can be of further assistance, please let us know.

Sincerely,

Karon Matkins

Karon S. Matkins

KSM/su
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Kingston, Ontario, Canada K7L 4Y8

Reference: Laboratory Test Report
Lab Identification No. 9638
Invoice No. 3605 (Attached)

Dear Mr. Clark:

One (1) fabric sample, identified as **Style: Kid Glove; Color: Taupe; 110ERE-16,** was received and tested in accordance with AATCC Test Method 16-1990, "Colorfastness to Light", Option E, "Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light". The sample was tested for a total of 60 Standard Hours. The results are as follows:

Test Results After
60 Std. Hrs.

Grade 4

The tested specimen is enclosed for your personal observation. If there are any questions or when we can be of further assistance, please let us know.

Sincerely,

Karon Matkins

Karon S. Matkins

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675 Progress Avenue
Kingston, Ontario, Canada K7L 4Y8

Reference: Laboratory Test Report
Lab Identification No. 9638
Invoice No. 3605 (Attached)

Dear Mr. Clark:

One (1) fabric sample, identified as **Style: Kid Glove; Color: Blue; 110ERE-16,** was received and tested in accordance with AATCC Test Method 16-1990, "Colorfastness to Light", Option E, "Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light". The sample was tested for a total of 60 Standard Hours. The results are as follows:

Test Results After
60 Std. Hrs.

Grade 4

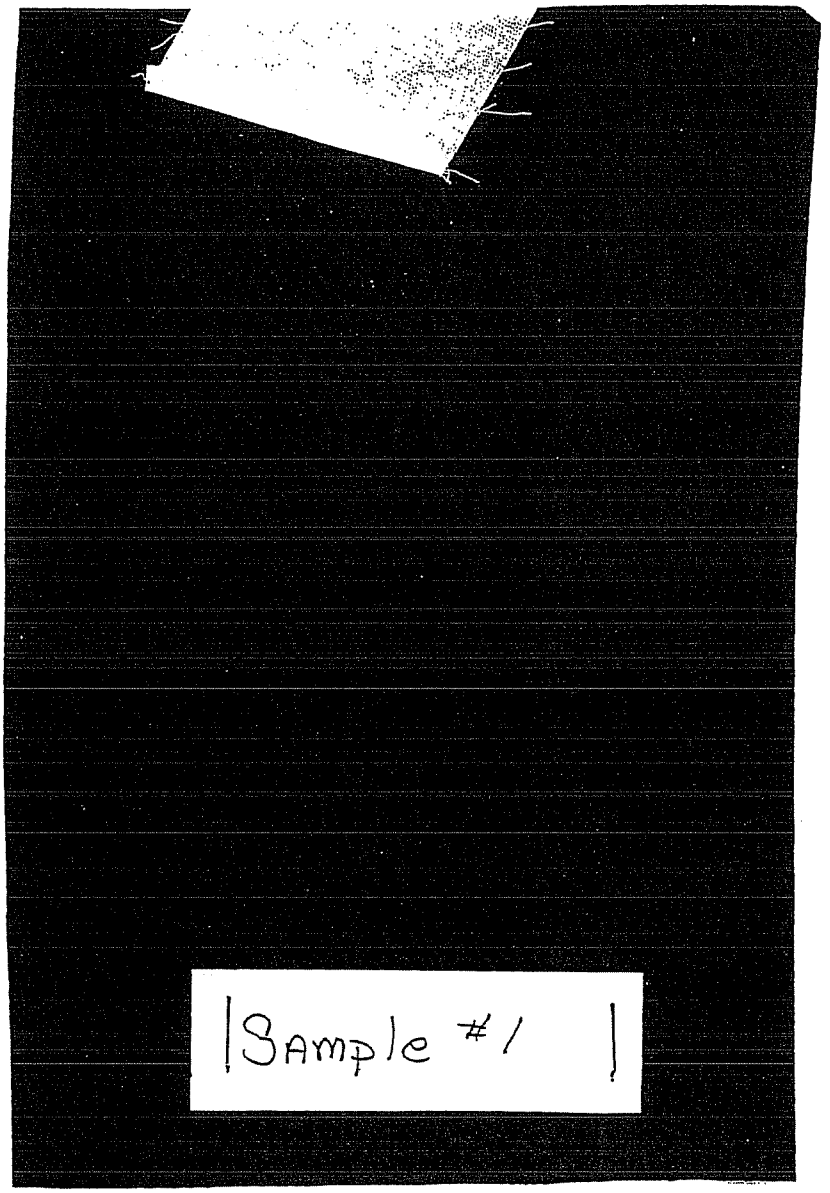
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Sample #1