



07-17-2003



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U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

EET

Attorney's Docket No. 021238-497

To the Director of the United States Patent and Trademark Office. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): 7-14-03  
Shuzhong Zhuang, Jay A Fournier, John B. Paine, III  
and Lixin Xue

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name

Other: \_\_\_\_\_

Execution Date: 7/2, 6/4, 7/2, 5/30/2003 respectively

2. Name and address of receiving party(ies):

Name: PHILIP MORRIS USA INC.

Address: 120 Park Avenue

New York, New York 10017

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

10/404,440

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Peter K. Skiff

Address: BURNS, DOANE, SWECKER & MATHIS, L.L.P.

P.O. Box 1404

Alexandria, Virginia 22313-1404

6. Total number of applications and patents involved: ONE

7. Total fee (37 CFR § 3.41): \$ 40.00

☐ Enclosed

☒ Authorized to be charged to deposit account, if necessary

8. Deposit account number:

02-4800

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Peter K. Skiff  
Name of Person Signing

[Signature]  
Signature

July 14, 2003  
Date

Total number of pages including cover sheet, attachments, and document: 4

Mail documents to be recorded with required cover sheet information to:

07/16/2003 LIMEILLER 00000294 024000

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40.00 BA

Director of the United States Patent and Trademark Office  
Mail Stop Assignment Recordation Services  
P.O. Box 1450  
Alexandria, VA 22313-1450

# ASSIGNMENT

(JOINT)

THIS ASSIGNMENT, by 1) Shuzhong Zhuang, 2) Jay A Fournier, 3) John B. Paine, III and 5) Lixin Xue (hereinafter referred to as "the Assignors"), residing at 1) 7601-B Belasco Drive, Richmond, VA 23225, 2) 11771 Wexwood Drive, Richmond, VA 23236, 3) 13630 Trilithon Road, Midlothian, VA 23113 and 5) 14307 Huntgate Woods Road, Midlothian, VA 23112, respectively, witnesseth:

WHEREAS, the Assignors have made certain new and useful inventions in ACTIVATED CARBON-CONTAINING SORBENT set forth in an application for Letters Patent of the United States of America, [ ] having an oath or declaration executed on even date herewith; [X] bearing Serial No. 10/404,440, and filed on April 2, 2003; and

WHEREAS, PHILIP MORRIS USA INC., a corporation duly organized under and pursuant to the laws of the State of Virginia and having an office and place of business at 120 Park Avenue, New York, New York 10017, is desirous of acquiring the entire right, title, and interest in and to the inventions for the United States and the application for Letters Patent of the United States, and in and to any United States Letters Patent or Patents, to be obtained therefor and thereon; and

WHEREAS, PHILIP MORRIS PRODUCTS S.A. (formerly known as Fabriques de Tabac Reunies S.A.), a corporation organized and existing under the laws of Switzerland and having an office and place of business at Quai Jeanrenaud 3, CH-2000, Neuchâtel, Switzerland, is desirous of acquiring the entire right, title, and interest in and to the inventions for countries foreign to the United States, and in and to any foreign patent applications, and in and to any foreign Letters Patent or Patents to be obtained therefor and thereon; and

NOW, THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) to each of us paid and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged:

## ASSIGNMENT OF UNITED STATES PATENT RIGHTS

We do hereby sell, assign and transfer unto PHILIP MORRIS USA INC., its successors, assigns and legal representatives, all right, title, and interest in and to the inventions, for the United States, and in and to the United States patent application, including any continuations and divisions thereof, and any substitute applications therefor and any United States patents which may issue thereon and any reissues and extensions of the same; and we hereby authorize and request the Commissioner of Patents to grant and issue any and all patents on the inventions in the United States to PHILIP MORRIS USA INC. as the assignee thereof.

**ASSIGNMENT OF  
FOREIGN PATENT RIGHTS**

Further in view of the consideration hereinabove referred to, we do hereby sell, assign, and transfer unto PHILIP MORRIS PRODUCTS S.A., its successors, assigns and legal representatives, all right, title and interest in and to the inventions for all countries foreign to the United States, including the right to claim priority under the International Convention based on the United States patent application, and in and to any foreign patent application, including renewals, revivals, continuations and divisions thereof, and any substitute applications therefor, and any foreign patents which may issue thereon, and any reissues and extensions of the same; and we hereby authorize and request competent authorities to grant and issue any and all patents on the inventions in any foreign country to PHILIP MORRIS PRODUCTS S.A. as the assignee thereof.

We further agree to execute upon request of the assignee PHILIP MORRIS USA INC. such additional documents, if any, as are necessary and proper to secure patent protection on the inventions in the United States, and to execute upon request of assignee PHILIP MORRIS PRODUCTS S.A. such additional documents, if any, as are necessary and proper to secure patent protection on the inventions in countries foreign to the United States, and to otherwise give full effect to and perfect the rights of the assignee PHILIP MORRIS USA INC. in the United States and of assignee PHILIP MORRIS PRODUCTS S.A. in countries foreign to the United States.

AND for the same consideration, the Assignors hereby covenant and agree to and with the assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions and any and all applications for Letters Patent above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the assignees, their successors, legal representatives, and assigns, that the Assignors will, whenever counsel of the assignees, or counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with the inventions or any and all applications for Letters Patent, or any proceeding in connection with Letters Patent for the inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation, or continuation-in-part of any application for Letters Patent, or any reissue or extension of any Letters Patent to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent for the inventions, without charge to the assignees, their successors, legal representatives, and assigns, but at the cost and expense of the assignees, their successors, legal representatives, and assigns;

IN TESTIMONY THEREOF, we have hereunto signed our names on the dates hereinafter indicated:

Date 07/02/2003 Name of Assignor   
Shuzhong Zhuang


STATE OF VIRGINIA )  
: ss  
CITY OF RICHMOND )

On this 2nd day of July, 2003, appeared before me in person the above-named individual, and acknowledged the above to be his signature and that he signed, sealed and delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set forth.

My Commission Expires:

  
NOTARY PUBLIC

(Notarial Seal)

Date 6/4/03 Name of Assignor   
Jay A Fournier

STATE OF VIRGINIA )

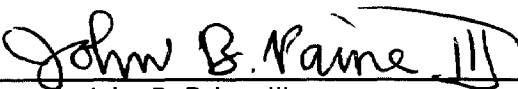
: ss  
CITY OF RICHMOND )

On this 4<sup>th</sup> day of June, 2003, appeared before me in person the above-named individual, and acknowledged the above to be his signature and that he signed, sealed and delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set forth.

My Commission Expires:

October 31, 2003   
NOTARY PUBLIC

(Notarial Seal)

Date JUNE 2, 2003 Name of Assignor   
John B. Paine, III

STATE OF VIRGINIA )


: ss  
CITY OF RICHMOND )

On this 2<sup>nd</sup> day of June, 2003, appeared before me in person the above-named individual, and acknowledged the above to be his signature and that he signed, sealed and delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set forth.

My Commission Expires:

October 31, 2003   
NOTARY PUBLIC

(Notarial Seal)

Date 05/30/2003 Name of Assignor   
Lixin Xue

STATE OF VIRGINIA )

: ss  
CITY OF RICHMOND )

On this 30<sup>th</sup> day of May, 2003, appeared before me in person the above-named individual, and acknowledged the above to be his signature and that he signed, sealed and delivered the above instrument as his voluntary act and deed, and for the uses and purposes therein set forth.

My Commission Expires:

October 31, 2003   
NOTARY PUBLIC

(Notarial Seal)