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U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

## 1. Name of conveying party(ies):

Youhe Zhang (2/28/2006) and Yuelin Shen  
(2/28/2006)Additional name(s) of conveying party(ies)  
attached?☐ Yes☒ No

## 3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ OtherExecution Date: in parentheses after inventor name

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

Name: Smith International, Inc.

Internal Address: \_\_\_\_\_

Street Address: \_\_\_\_\_

16740 Hardy Street

City: HoustonState: TexasZip: 77032Additional 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 new application is: \_\_\_\_\_

A. Patent Application No.(s):

This application

B. Patent No.(s): \_\_\_\_\_

Additional numbers attached?

☐ Yes☒ No5. Name and address of party to whom correspondence  
concerning document should be mailed:Name: Jeffrey S. Bergman  
OSHA · LIANG LLPInternal Address: Atty. Dkt.: 05516/229002Street Address:  
1221 McKinney St., Suite 2800City:  
HoustonState: TX Zip: 770106. Total number of applications and  
patents involved: 17. Total fee (37 CFR 3.41) \$ 40.00☐ Enclosed☐ Authorized to be charged to deposit account☒ Authorized to be charged to credit card  
(Form 2038 enclosed)

## 8. Deposit account number:

50-0591

(Attach duplicate copy of this page if paying by deposit account)

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## 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.*Jeffrey S. Bergman (Reg. # 45,925)

Name of Person Signing

Signature

March 1, 2006

Date

Total number of pages including cover sheet, attachments, and documents: 3I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV701436745US, on the date shown below in an envelope addressed to:  
MS Assignment Recordation Services, Director of the US Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: March 1, 2006

Signature: Staci Harris

(Staci V. Harris)

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## ASSIGNMENT – WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned individual(s) (referred to herein as the "INVENTOR(S)") hereby assign, transfer, and set over to:

**SMITH INTERNATIONAL, INC.**

having the following address:

**16740 HARDY STREET, HOUSTON, TEXAS 77032**

(referred to herein as "COMPANY"), its successors, and assigns, the entire right, title, and interest, worldwide, in and to the invention known by the following title:

### CUTTER FOR MAINTAINING EDGE SHARPNESS

for which the undersigned has/have executed an application for patent in the United States of America on or about this same day, together with said patent application, all divisions, continuations, continuations-in-part, reissues, and extensions thereof, and all Letters Patent (domestic and foreign) that may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by COMPANY, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the INVENTOR(S) if this assignment had not been made.

In addition, the undersigned INVENTOR(S) each hereby agrees:

1. To sign and execute any further documents that may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to COMPANY;
2. To execute all papers and documents and to perform all lawful acts that may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
3. To perform all lawful affirmative acts that may be necessary to obtain the grant of valid and enforceable patents to COMPANY.

The undersigned INVENTOR(S) each hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, or reissue thereof to COMPANY.

The undersigned INVENTOR(S) each hereby grants to the firm of OSHA•LIANG LLP the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for the recordation of this document.

**OSHA•LIANG LLP**

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

2/28/06

Date

1<sup>st</sup> Inventor Signature: [Signature]

Print or Type Name: John Youhe Zhang

2/28/06

Date

2<sup>nd</sup> Inventor Signature: [Signature]

Print or Type Name: Yuelin Shen

Date

3<sup>rd</sup> Inventor Signature: \_\_\_\_\_

Print or Type Name: \_\_\_\_\_

Date

4<sup>th</sup> Inventor Signature: \_\_\_\_\_

Print or Type Name: \_\_\_\_\_

This Assignment may be signed before either:

(a) a Notary Public for one of the States of the United States, or (b) two witnesses who sign below:

State of Texas

County of Harris

Before me personally appeared:

John Zhang  
1<sup>st</sup> Inventor

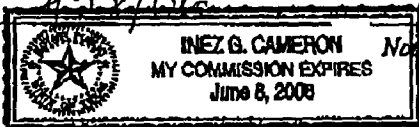
Yuelin Shen  
2<sup>nd</sup> Inventor

3<sup>rd</sup> Inventor

4<sup>th</sup> Inventor

each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.

Dated: 2/28/06



[Signature]  
Notary Public

My commission expires: 2-8-06

Signature of Witness: \_\_\_\_\_

Date

Print or Type Name: \_\_\_\_\_

Signature of Witness: \_\_\_\_\_

Date

Print or Type Name: \_\_\_\_\_

When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:

U.S. Application Serial No.: \_\_\_\_\_

Filing Date: \_\_\_\_\_

ASSIGNMENT - WORLDWIDE

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PATENT

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