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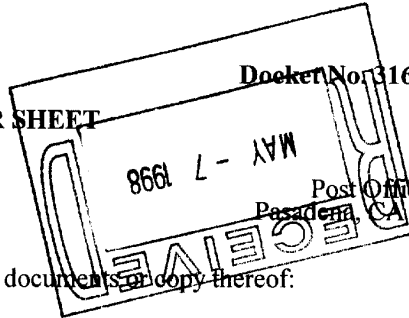
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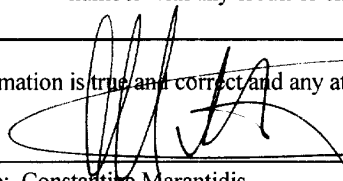
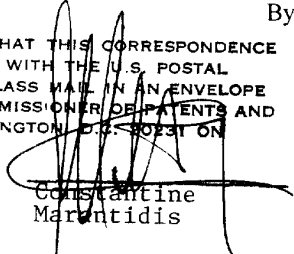
Docket No. 31622/CM/S61



Post Office Box 7068
Pasadena, CA 91109-7068

BOX ASSIGNMENT
Commissioner of Patents and Trademarks
Washington, D.C. 20231

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

<p>1. Name of conveying party(ies): David Truax, Ghanshyam Rai, Stephen G. Southland, Gary R. Portwood</p> <p>Additional name(s) of conveying party(ies) attached: NO</p>	<p>2. Name and address of receiving party(ies):</p> <p>Name: Smith International, Inc.</p> <p>Street Address: 16740 Hardy Street Houston, Texas 77032</p> <p>Additional name(s) & address(es) attached? NO</p>		
<p>3. Name of conveyance:</p> <p><input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other:</p> <p>Execution Date: April 27, 1998; March 19, 1998; March 19, 1998; March 18, 1998; respectively.</p>			
<p>4. Application number(s) or patent number(s):</p> <p>If this document is being filed together with a new application, the execution date of the application is:</p> <table border="0"> <tr> <td data-bbox="207 1094 760 1213"> <p>A. Patent Application No.(s) Application No. 08/976,913; Filed November 24, 1997</p> </td> <td data-bbox="760 1094 1516 1213"> <p>B. Patent No.(s)</p> </td> </tr> </table> <p>Additional numbers attached? NO</p>		<p>A. Patent Application No.(s) Application No. 08/976,913; Filed November 24, 1997</p>	<p>B. Patent No.(s)</p>
<p>A. Patent Application No.(s) Application No. 08/976,913; Filed November 24, 1997</p>	<p>B. Patent No.(s)</p>		
<p>5. Please return the recorded document and address all correspondence to:</p> <p>CHRISTIE, PARKER & HALE, LLP P.O. Box 7068 Pasadena, CA 91109-7068</p> <p>Attention: Constantine Marantidis</p>	<p>6. Total number of applications and patents involved..... 1</p> <p>7. <input checked="" type="checkbox"/> Total fee enclosed (37 CFR 3.41): \$ 40.00</p> <p>8. <input checked="" type="checkbox"/> Any deficiency or overpayment of fees should be charged or credited to Deposit Account No. 03-1728, except for payment of issue fees required under 37 CFR § 1.18. Please show our docket number with any credit or charge to our deposit account.</p>		
<p>10. <input type="checkbox"/> Explanatory letter is enclosed.</p>			
<p>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.</p> <p>Date: May 1, 1998</p> <p>By </p> <p>Name: Constantine Marantidis 626/795-9900; 213/681-1800</p> <p>I HERECY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE U.S. POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER OF PATENTS AND TRADEMARKS, WASHINGTON, D.C. 20231 ON</p> <p><u>May 1, 1998</u> (DATE SIGNED)  Constantine Marantidis</p> <p>Total number of pages including cover sheet, attachments, and document: 4</p>			

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05/27/1998 DC0000228 08576913
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ASSIGNMENT

WHEREAS, WE, **David Truax, Ghanshyam Rai, Stephen G. Southland and Gary R. Portwood**, residing at

9307 Point Park Drive, Houston, Texas 77095;
79 North Piney Plains Circle, The Woodlands, Texas 77382;
2630 Spring Dusk Lane, Spring, Texas 77373; and
3703 Fern View Drive, Kingwood, Texas 77345;

respectively, have invented certain new and useful improvements disclosed in an application for United States Letters Patent entitled CUTTER ASSEMBLY FOR ROCK BITS WITH BACK SUPPORT GROOVE, filed November 24, 1997, Application No. 08/976,913;

AND WHEREAS **Smith International, Inc.**, a Delaware corporation, having a place of business at 16740 Hardy Street, Houston, Texas 77032 (hereafter, together with any successors, legal representatives or assigns thereof, called "ASSIGNEE") wants to acquire the entire right, title and interest in and to said improvements and application.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned, transferred and set over, and do hereby sell, assign, transfer and set over to ASSIGNEE the entire right, title and interest in and to said improvements, and said application and all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon and all reissues, reexaminations and extensions thereof, and all priority rights under all available International Agreements, Treaties and Conventions for the protection of intellectual property in its various forms in every participating country, and all applications for patents (including related rights such as utility-model registrations, inventor's certificates, and the like) heretofore or hereafter filed for said improvements in any foreign countries, and all patents (including all continuations, divisions, extensions, renewals, substitutes, and reissues thereof) granted for said improvements in any foreign countries; and we hereby authorize and request the United States Commissioner of Patents and Trademarks, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue all patents for said improvements to ASSIGNEE in accordance with the terms of this Assignment;

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith;

AND WE HEREBY further covenant and agree that we will communicate to ASSIGNEE any facts known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute and reissue applications, make all rightful oaths and generally do everything possible to aid ASSIGNEE to obtain and enforce proper patent protection for said improvements in all countries.

ASSIGNMENT
Docket No. 31622/CM/S61

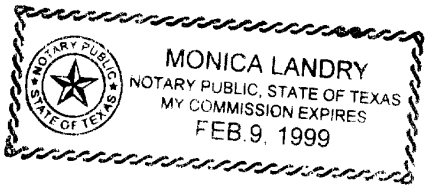
Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this 27 day of Apr. 1, 19 98.

[Signature]
David Truax

STATE OF Texas)
COUNTY OF Harris)

On 4/27/98, before me Monica Landry, Notary Public, personally appeared **David Truax** personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.



WITNESS my hand and official seal.

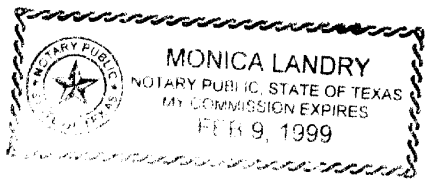
[Signature]
Signature of Notary

IN TESTIMONY WHEREOF, I hereunto set my hand this 19 day of Mar, 19 98.

[Signature]
Ghanshyam Rai

STATE OF Texas)
COUNTY OF Harris)

On 3/19/98, before me Monica Landry, Notary Public, personally appeared **Ghanshyam Rai** personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.



WITNESS my hand and official seal.

[Signature]
Signature of Notary

ASSIGNMENT
Docket No. 31622/CM/S61

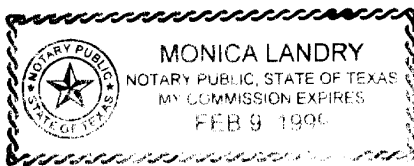
Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this 19 day of March, 19 98

Stephen G. Southland
Stephen G. Southland

STATE OF)
COUNTY OF)

On 3/19/98, before me Monica Landry, Notary Public, personally appeared **Stephen G. Southland** personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.



WITNESS my hand and official seal.

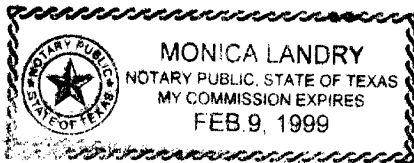
Monica Landry
Signature of Notary

IN TESTIMONY WHEREOF, I hereunto set my hand this 18 day of March, 19 98

Gary R. Portwood
Gary R. Portwood

STATE OF Texas)
COUNTY OF Harris)

On 3/18/98, before me Monica Landry, Notary Public, personally appeared **Gary R. Portwood** personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.



WITNESS my hand and official seal.

Monica Landry
Signature of Notary

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