

**EXHIBIT**  
**Waterblasting -2002**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/884,643	07/02/2004	James P. Crocker	2708U.001

21917  
MCHALE & SLAVIN, P.A.  
2855 PGA BLVD  
PALM BEACH GARDENS, FL 33410

**CONFIRMATION NO. 6130**  
**POA ACCEPTANCE LETTER**



Date Mailed: 06/04/2015

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 05/29/2015.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/qtran/



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/884,643	07/02/2004	James P. Crocker	2708U.001

21917  
MCHALE & SLAVIN, P.A.  
2855 PGA BLVD  
PALM BEACH GARDENS, FL 33410

**CONFIRMATION NO. 6130**  
**POWER OF ATTORNEY NOTICE**



Date Mailed: 06/04/2015

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 05/29/2015.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/qtran/

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS</b>	Patent Number	7,255,116
	Issue Date	August 14, 2007
	First Named Inventor	James P. Crocker
	Title	STRIPE REMOVAL SYSTEM
	Attorney Docket Number	2708U.001

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: 21917

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☐ The address associated with the above-mentioned Customer Number.

OR

☒ The address associated with Customer Number: 21917

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Inventor, having ownership of the patent.

OR

☒ Patent owner.  
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on \_\_\_\_\_.

**SIGNATURE of Inventor or Patent Owner**

Signature	Date	2/19/15
Name	James P. Crocker	Telephone
Title and Company	Managing Member of Waterblasting, LLC	

**NOTE:** Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ \*Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to be (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**STATEMENT UNDER 37 CFR 3.73(c)**

Applicant/Patent Owner: Slater Street Investment, LLC  
Application No./Patent No.: 7,255,116 Filed/Issue Date: August 14, 2007  
Titled: STRIPE REMOVAL SYSTEM  
Waterblasting, LLC, a Delaware Limited Liability Company  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is \_\_\_\_%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: James P. Crocker To: Slater Street Investment, LLC

The document was recorded in the United States Patent and Trademark Office at  
Reel 033731, Frame 0445, or for which a copy thereof is attached.

2. From: Slater Street Investment, LLC To: Waterblasting, LLC

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(c)**

3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

4. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

5. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

6. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

- ☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.  
[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

James P. Crocker

Printed or Typed Name

Date

2/19/15  
Managing Member of Waterblasting, LLC

Title or Registration Number

[Page 2 of 2]



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

SEPTEMBER 15, 2014

PTAS

MCHALE & SLAVIN, P.A.  
2855 PGA BOULEVARD  
PALM BEACH GARDENS, FL 33410

**502974102**

### UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 09/12/2014

REEL/FRAME: 033731/0445  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 2708.001

ASSIGNOR:  
CROCKER, JAMES P.

DOC DATE: 09/11/2014

ASSIGNEE:  
SLATER STREET INVESTMENT, LLC  
1305 SALERNO ROAD  
STUART, FLORIDA 34997

APPLICATION NUMBER: 10884643  
PATENT NUMBER: 7255116  
TITLE: STRIPE REMOVAL SYSTEM

FILING DATE: 07/02/2004  
ISSUE DATE: 08/14/2007

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION

**ASSIGNMENT**

ASSIGNEE/ James P. Crocker  
ASSIGNOR: \_\_\_\_\_  
Status: an individual  
Address: 3170 SE Slater Street  
City: Stuart State/Zip: FL 34997

ASSIGNEE: Slater Street Investment, LLC  
Status: a limited liability company  
Address: 1305 Salerno Road  
City: Stuart State/Zip: FL 34997

TITLE OF INVENTION: STRIPE REMOVAL SYSTEM

U.S. PATENT NO.: 7,255,116 ISSUE DATE: August 14, 2007

**WITNESSETH**

**WHEREAS**, the Assignor is the owner of the above identified Letters Patent of the United States and the Assignee is desirous of acquiring the same. In consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignor hereby assigns to the Assignee, including its successors, assigns, heirs, administrators, all of the Assignor's right, title and interest in and to the Patent therefore identified herein.

**NOW, THEREFORE**, Assignor, intending to be legally bound, hereby sells, assigns, transfers and delivers unto Assignee, its successors, legal representatives and assigns, all rights, title and interest in, to and under the Patent, including all other rights associated with the Patent, including, without limitation, the right to sue for and collect damages for any past infringement of the Patent, including, but not limited to, all divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues and all other applications for patent which have been or shall be filed in the United States on the inventions disclosed in the Patent; all original, reissued and

reexamined patents and extensions thereof which have been or shall be issued in the United States on the invention to the full end of the term or terms for which the Patent may be granted, as fully and entirely as the same would have been held by the undersigned Assignor had this Agreement not been made; and specifically including all rights of priority created by the Patents under any treaty, convention or law relating thereto.

Assignor agrees, when requested, to carry out in good faith the intent and purpose of this Agreement, to execute and deliver to Assignee, all divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues, and all other patent applications on the inventions; all lawful oaths, declarations, assignments, powers of attorney and other papers; communicate to Assignee all facts known to Assignor relating to the invention and the history thereof; and generally do everything possible which Assignee shall consider desirable for vesting title to the invention in Assignee, and for securing, maintaining and enforcing proper patent protection for the inventions; all without further compensation to Assignor;

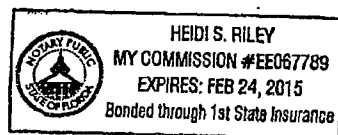
The Assignor agrees to execute any papers or perform any acts required to establish, vest or protect the Assignee's rights therein or required by Assignee to obtain said patent, without any additional payment therefor, but without any expense to Assignor.

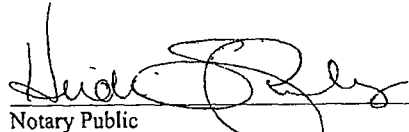
Date 9/11/14

By   
James P. Crocker

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )

Before me this 11 day of September, 2014, personally appeared James P. Crocker, the above named individual, to me known to be the person described in, and who executed the foregoing assignment instrument and acknowledged to me that he executed the same on his own free will for the purpose therein expressed.



  
Notary Public

Personally known ✓  
or Product Identification \_\_\_\_\_  
Type of Identification Produced \_\_\_\_\_



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

FEBRUARY 20, 2015

PTAS

MCHALE & SLAVIN, P.A.  
2855 PGA BOULEVARD  
PALM BEACH GARDENS, FL 33410

**503186141**

### UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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RECORDATION DATE: 02/19/2015

REEL/FRAME: 034985/0440  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 2708U.001

ASSIGNOR:

SLATER STREET INVESTMENT, LLC

DOC DATE: 02/16/2015

ASSIGNEE:

WATERBLASTING, LLC  
3170 SE SLATER STREET  
STUART, FLORIDA 34997

APPLICATION NUMBER: 10884643  
PATENT NUMBER: 7255116  
TITLE: STRIPE REMOVAL SYSTEM

FILING DATE: 07/02/2004  
ISSUE DATE: 08/14/2007

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION

## ASSIGNMENT

ASSIGNEE/ Slater Street Investment, LLC  
ASSIGNOR: \_\_\_\_\_  
Status: A limited liability company  
Address: 1305 Salerno Road  
City: Stuart State/Zip: FL 34997

ASSIGNEE: Waterblasting, LLC  
Status: a Delaware limited liability company  
Address: 3170 SE Slater Street  
City: Stuart State/Zip: FL 34997

TITLE OF INVENTION: STRIPE REMOVAL SYSTEM

U.S. PATENT NO.: 7,255,116 ISSUE DATE: August 14, 2007

## WITNESSETH

**WHEREAS**, the Assignor is the owner of the above identified Letters Patent of the United States and the Assignee is desirous of acquiring the same. In consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignor hereby assigns to the Assignee, including its successors, assigns, heirs, administrators, all of the Assignor's right, title and interest in and to the Patent therefore identified herein.

**NOW, THEREFORE**, Assignor, intending to be legally bound, hereby sells, assigns, transfers and delivers unto Assignee, its successors, legal representatives and assigns, all rights, title and interest in, to and under the Patent, including all other rights associated with the Patent, including, without limitation, the right to sue for and collect damages for any past infringement of the Patent, including, but not limited to, all divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues and all other applications for patent which have been or shall be filed in the United States on the inventions disclosed in the Patent; all original, reissued and

reexamined patents and extensions thereof which have been or shall be issued in the United States on the invention to the full end of the term or terms for which the Patent may be granted, as fully and entirely as the same would have been held by the undersigned Assignor had this Agreement not been made; and specifically including all rights of priority created by the Patents under any treaty, convention or law relating thereto.

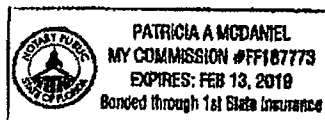
Assignor agrees, when requested, to carry out in good faith the intent and purpose of this Agreement, to execute and deliver to Assignee, all divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues, and all other patent applications on the inventions; all lawful oaths, declarations, assignments, powers of attorney and other papers; communicate to Assignee all facts known to Assignor relating to the invention and the history thereof; and generally do everything possible which Assignee shall consider desirable for vesting title to the invention in Assignee, and for securing, maintaining and enforcing proper patent protection for the inventions; all without further compensation to Assignor;

The Assignor agrees to execute any papers or perform any acts required to establish, vest or protect the Assignee's rights therein or required by Assignee to obtain said patent, without any additional payment therefor, but without any expense to Assignor.

Date 2/16/15 By: Slater Street Investment, LLC  
James P. Crocker, Managing Member

STATE OF Florida )  
COUNTY OF Martin )

Before me this 16<sup>th</sup> day of February 2015, personally appeared James P. Crocker, in his capacity as Managing Member of Slater Street Investment, LLC, the above named individual, to me known to be the person described in, and who executed the foregoing assignment instrument on behalf of Slater Street Investment, LLC and acknowledges to me that he executed the same on his own free will for the purpose therein expressed.



Patricia A. McDaniel  
Notary Public

Personally known ☒  
or Product Identification \_\_\_\_\_  
Type of Identification Produced \_\_\_\_\_



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	22486511
<b>Application Number:</b>	10884643
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6130
<b>Title of Invention:</b>	STRIPE REMOVAL SYSTEM
<b>First Named Inventor/Applicant Name:</b>	James P. Crocker
<b>Customer Number:</b>	21917
<b>Filer:</b>	David Joel Zelner
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	2708U.001
<b>Receipt Date:</b>	29-MAY-2015
<b>Filing Date:</b>	02-JUL-2004
<b>Time Stamp:</b>	16:08:35
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2708U001POAStatement.pdf	436730 9122b9994d0468a3aa0ed32a06d188cd094da817	yes	9

	<b>Multipart Description/PDF files in .zip description</b>		
	<b>Document Description</b>	<b>Start</b>	<b>End</b>
	Power of Attorney	1	1
	Assignee showing of ownership per 37 CFR 3.73	2	9
<b>Warnings:</b>			
<b>Information:</b>			
<b>Total Files Size (in bytes):</b>		436730	
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS</b>	Patent Number	7,255,116
	Issue Date	August 14, 2007
	First Named Inventor	James P. Crocker
	Title	STRIPE REMOVAL SYSTEM
	Attorney Docket Number	2708U.001

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

21917

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☐ The address associated with the above-mentioned Customer Number.

OR

☒ The address associated with Customer Number:

21917

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

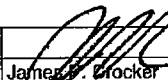
I am the:

☐ Inventor, having ownership of the patent.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on \_\_\_\_\_.

SIGNATURE of Inventor or Patent Owner			
Signature		Date	9/9/2014
Name	James P. Crocker	Telephone	
Title and Company	Managing Member, Slater Street Investment, LLC		

**NOTE:** Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Slater Street Investment, LLC

Application No./Patent No.: 7,255,116

Filed/Issue Date: August 14, 2007

Titled: STRIPE REMOVAL SYSTEM

Slater Street Investment, LLC, a a limited liability company

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;
2. ☐ an assignee of less than the entire right, title, and interest in  
(The extent (by percentage) of its ownership interest is \_\_\_\_\_ %); or
3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy therefore is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

- ☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

James P. Crocker

Printed or Typed Name

9/9/2014

Date

Managing Member

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## ASSIGNMENT

ASSIGNEE/ James P. Crocker  
ASSIGNOR: \_\_\_\_\_  
Status: an individual  
Address: 3170 SE Slater Street  
City: Stuart State/Zip: FL 34997

ASSIGNEE: Slater Street Investment, LLC  
Status: a limited liability company  
Address: 1305 Salerno Road  
City: Stuart State/Zip: FL 34997

TITLE OF INVENTION: STRIPE REMOVAL SYSTEM

U.S. PATENT NO.: 7,255,116 ISSUE DATE: August 14, 2007

## WITNESSETH

**WHEREAS**, the Assignor is the owner of the above identified Letters Patent of the United States and the Assignee is desirous of acquiring the same. In consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignor hereby assigns to the Assignee, including its successors, assigns, heirs, administrators, all of the Assignor's right, title and interest in and to the Patent therefore identified herein.

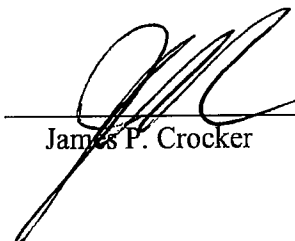
**NOW, THEREFORE**, Assignor, intending to be legally bound, hereby sells, assigns, transfers and delivers unto Assignee, its successors, legal representatives and assigns, all rights, title and interest in, to and under the Patent, including all other rights associated with the Patent, including, without limitation, the right to sue for and collect damages for any past infringement of the Patent, including, but not limited to, all divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues and all other applications for patent which have been or shall be filed in the United States on the inventions disclosed in the Patent; all original, reissued and

reexamined patents and extensions thereof which have been or shall be issued in the United States on the invention to the full end of the term or terms for which the Patent may be granted, as fully and entirely as the same would have been held by the undersigned Assignor had this Agreement not been made; and specifically including all rights of priority created by the Patents under any treaty, convention or law relating thereto.

Assignor agrees, when requested, to carry out in good faith the intent and purpose of this Agreement, to execute and deliver to Assignee, all divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues, and all other patent applications on the inventions; all lawful oaths, declarations, assignments, powers of attorney and other papers; communicate to Assignee all facts known to Assignor relating to the invention and the history thereof; and generally do everything possible which Assignee shall consider desirable for vesting title to the invention in Assignee, and for securing, maintaining and enforcing proper patent protection for the inventions; all without further compensation to Assignor;

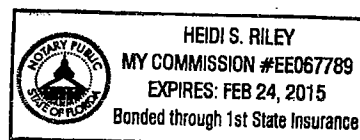
The Assignor agrees to execute any papers or perform any acts required to establish, vest or protect the Assignee's rights therein or required by Assignee to obtain said patent, without any additional payment therefor, but without any expense to Assignor.

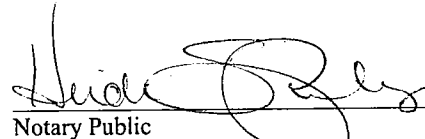
Date 9/11/14

By   
James P. Crocker

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )

Before me this 11 day of September 2014, personally appeared James P. Crocker, the above named individual, to me known to be the person described in, and who executed the foregoing assignment instrument and acknowledged to me that he executed the same on his own free will for the purpose therein expressed.



  
Notary Public

Personally known ☒  
or Product Identification \_\_\_\_\_  
Type of Identification Produced \_\_\_\_\_

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	20155001
<b>Application Number:</b>	10884643
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6130
<b>Title of Invention:</b>	STRIPE REMOVAL SYSTEM
<b>First Named Inventor/Applicant Name:</b>	James P. Crocker
<b>Customer Number:</b>	21917
<b>Filer:</b>	Allen Keith Campbell
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	2708U.001
<b>Receipt Date:</b>	16-SEP-2014
<b>Filing Date:</b>	02-JUL-2004
<b>Time Stamp:</b>	16:36:51
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2708U001RevocationPOA.pdf	461033 99fc8ed1f02dbc32a50bdb44cfb631b8d38 dec8d8	yes	9

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Application Data Sheet	1	5
	Power of Attorney	6	6
	Assignee showing of ownership per 37 CFR 3.73.	7	9
Warnings:			
Information:			
Total Files Size (in bytes):		461033	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	2708U.001
		Application Number	
Title of Invention	STRIPE REMOVAL SYSTEM		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

**Secrecy Order 37 CFR 5.2**

<input type="checkbox"/>	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

**Inventor Information:**

Inventor 1 <span style="float: right;">Remove</span>				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	James	P.	Crocker	
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Stuart	State/Province	FL	Country of Residence
		US		
Mailing Address of Inventor:				
Address 1		1305 Salerno Road		
Address 2				
City	Stuart	State/Province	FL	
Postal Code	34997	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. <span style="float: right;">Add</span>				

**Correspondence Information:**

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
<input type="checkbox"/> An Address is being provided for the correspondence information of this application.			
Customer Number	21917		
Email Address	uspatents@mchaleslavin.com	Add Email	Remove Email

**Application Information:**

Title of the Invention	STRIPE REMOVAL SYSTEM		
Attorney Docket Number	2708U.001	Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	2708U.001
		Application Number	
Title of Invention	STRIPE REMOVAL SYSTEM		

**Publication Information:**

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	<b>Request Not to Publish.</b> I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application <b>has not and will not</b> be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

**Representative Information:**

<p>Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.</p>			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	21917		

**Domestic Benefit/National Stage Information:**

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.			
Prior Application Status		<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.			

**Foreign Priority Information:**

<p>This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)<sup>i</sup> the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).</p>			
<a href="#">Remove</a>			
Application Number	Country <sup>j</sup>	Filing Date (YYYY-MM-DD)	Access Code <sup>k</sup> (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> button.			

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	2708U.001
		Application Number	
Title of Invention	STRIPE REMOVAL SYSTEM		

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

## Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

## Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

## Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	2708U.001
		Application Number	
Title of Invention	STRIPE REMOVAL SYSTEM		

<b>Applicant 1</b>			
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p>			
<input type="button" value="Clear"/>			
<input checked="" type="radio"/> Assignee		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
<input type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
<div style="border: 1px solid black; height: 20px;"></div>			
Name of the Deceased or Legally Incapacitated Inventor : <div style="border: 1px solid black; width: 400px; height: 20px;"></div>			
If the Applicant is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name		Slater Street Investment, LLC	
<b>Mailing Address Information For Applicant:</b>			
Address 1		1305 Salerno Road	
Address 2			
City		Stuart	State/Province
			FL
Country	US	Postal Code	34997
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

## Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.	
<b>Assignee 1</b>	
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.	
If the Assignee is an Organization check here. <input type="checkbox"/>	

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	2708U.001
		Application Number	
Title of Invention	STRIPE REMOVAL SYSTEM		

Prefix	Given Name	Middle Name	Family Name	Suffix

**Mailing Address Information For Non-Applicant Assignee:**

Address 1			
Address 2			
City		State/Province	
Country <sup>1</sup>		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the Add button.

**Signature:**

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Signature	/Keith Campbell/		Date (YYYY-MM-DD)	2014-09-16
First Name	A. Keith	Last Name	Campbell	Registration Number
52686				

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	08/14/2007	7255116	2708U.001	6130

21917 7590 07/25/2007  
MCHALE & SLAVIN, P.A.  
2855 PGA BLVD  
PALM BEACH GARDENS, FL 33410

## ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

### **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment is 44 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

James P. Crocker, Stuart, FL;

# **PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the **ISSUE FEE** and **PUBLICATION FEE** (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

21917 7590 04/03/2007

**MCHALE & SLAVIN, P.A.**  
**2855 PGA BLVD**  
**PALM BEACH GARDENS, FL 33410**

**Certificate of Mailing or Transmission**  
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/884,643 07/02/2004 James P. Crocker 2708U.001 6130

TITLE OF INVENTION: STRIPE REMOVAL SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional YES \$700 \$300 \$0 \$1000 07/03/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
----------	----------	----------------

HUSBAND, SARAH E 1746 134-111000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 McHale & Slavin, P.A.

2 \_\_\_\_\_

3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Ferris H. Lander

Date 07/03/2007

Typed or printed name Ferris H. Lander

Registration No. 43,377

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	10884643			
<b>Filing Date:</b>	02-Jul-2004			
<b>Title of Invention:</b>	STRIPE REMOVAL SYSTEM			
<b>First Named Inventor/Applicant Name:</b>	James P. Crocker			
<b>Filer:</b>	Ferris Harvey Lander			
<b>Attorney Docket Number:</b>	2708U.001			
Filed as Small Entity				
<b>Utility      Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	700	700
Publ. Fee- early, voluntary, or normal	27 1504	1	300	300
<b>Waterblasting - 2002</b>				



Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1000

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	1937564
<b>Application Number:</b>	10884643
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6130
<b>Title of Invention:</b>	STRIPE REMOVAL SYSTEM
<b>First Named Inventor/Applicant Name:</b>	James P. Crocker
<b>Customer Number:</b>	21917
<b>Filer:</b>	Ferris Harvey Lander
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	2708U.001
<b>Receipt Date:</b>	03-JUL-2007
<b>Filing Date:</b>	02-JUL-2004
<b>Time Stamp:</b>	15:45:43
<b>Application Type:</b>	Utility

### Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 1000
RAM confirmation Number	793
Deposit Account	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
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1		2708001Formaldrawings.pdf	191721	yes	7
	<b>Multipart Description/PDF files in .zip description</b>				
	<b>Document Description</b>		<b>Start</b>	<b>End</b>	
	Miscellaneous Incoming Letter		1	1	
	Drawings		2	7	
<b>Warnings:</b>					
<b>Information:</b>					
2	Issue Fee Payment (PTO-85B)	2708001IssueFeepayment.pdf	97067	no	1
<b>Warnings:</b>					
<b>Information:</b>					
3	Fee Worksheet (PTO-06)	fee-info.pdf	8254	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			297042		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION : STRIPE REMOVAL SYSTEM  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 2, 2004  
EXAMINER : Sarah E. Husband  
GROUP ART UNIT : 1746  
ATTORNEY DOCKET NO. : 2708U.001

---

Mail Stop Issue Fee  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**SUBMITTAL OF FORMAL DRAWINGS**

Sir:

Subject to the approval of the Examiner in charge of the above-identified patent application, please substitute the enclosed formal drawings, Figs. 1-7 (6 sheets), for the informal drawings originally filed in this application. The enclosed drawings are believed to satisfy all requirements. These drawings are of record. No new matter is presented.

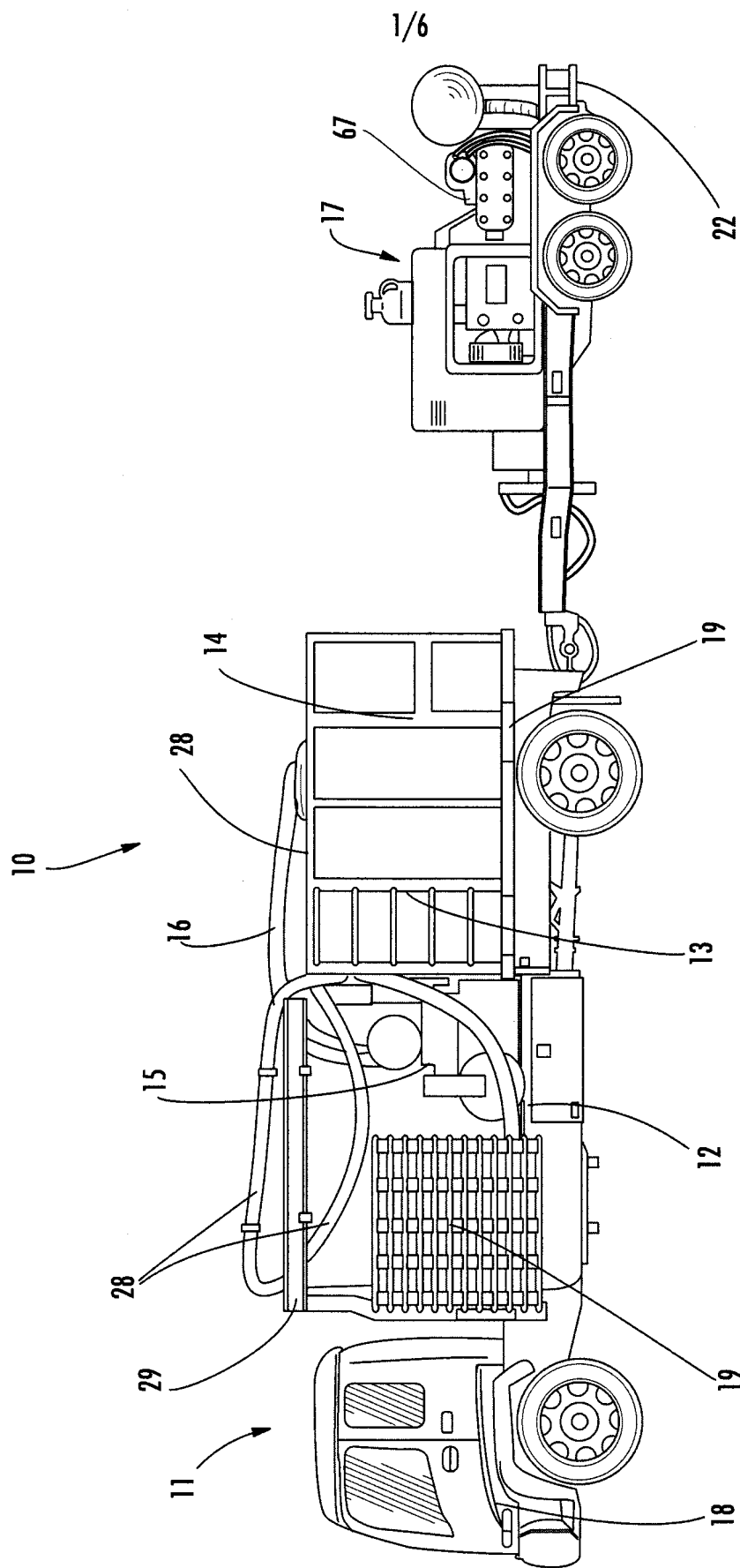
Should the enclosed drawings not be found fully in compliance with all requirements, Applicants respectfully request prompt notice by telephone in order to accomplish expeditious correction within the term allotted.

Date 07/03/2007

Respectfully submitted,

By Ferris H. Lander  
Ferris H. Lander  
Registration No. 43,377

McHale & Slavin, P.A.  
2855 PGA Boulevard  
Palm Beach Gardens, FL 33410  
Telephone: (561) 625-6575  
Facsimile: (561) 625-6572



2/6

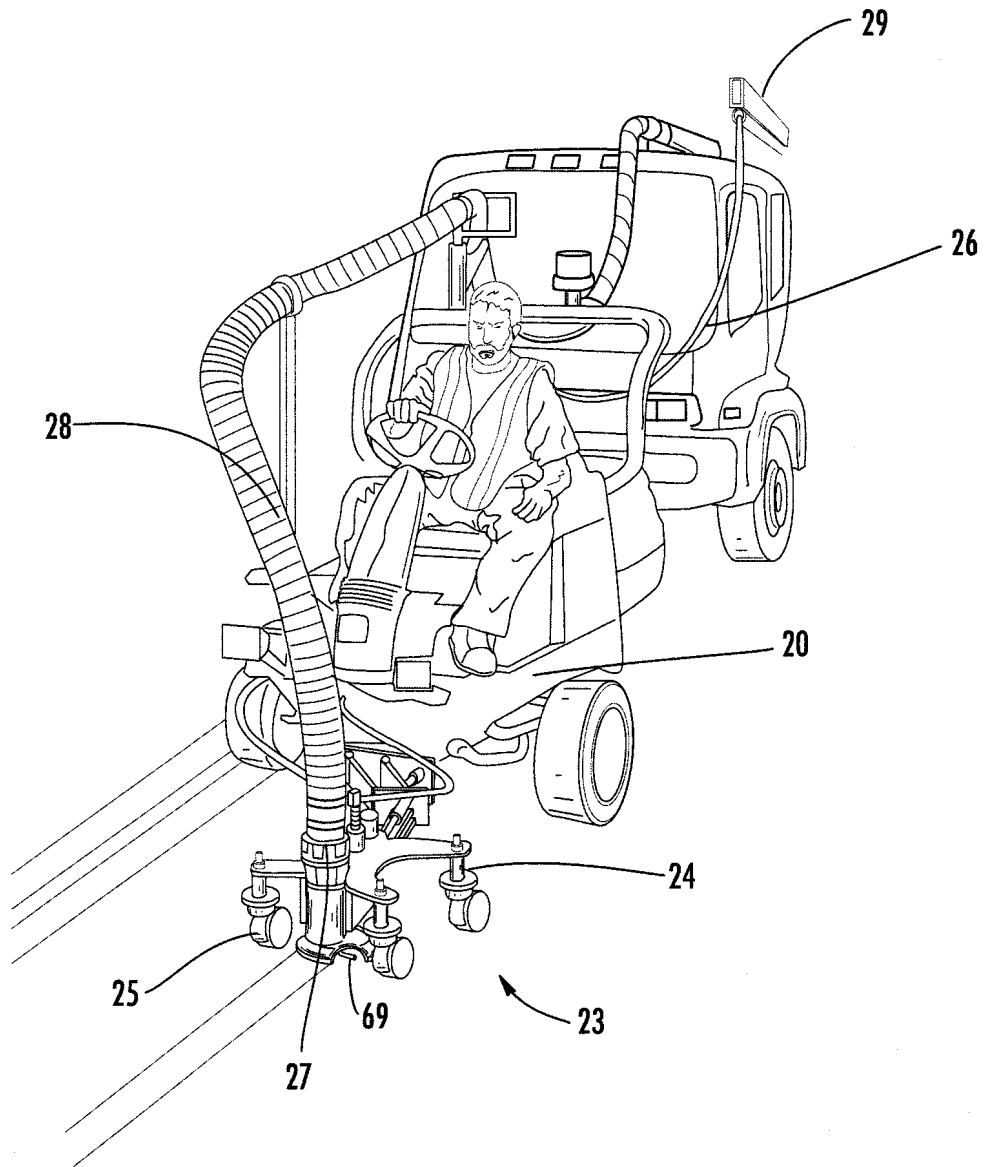
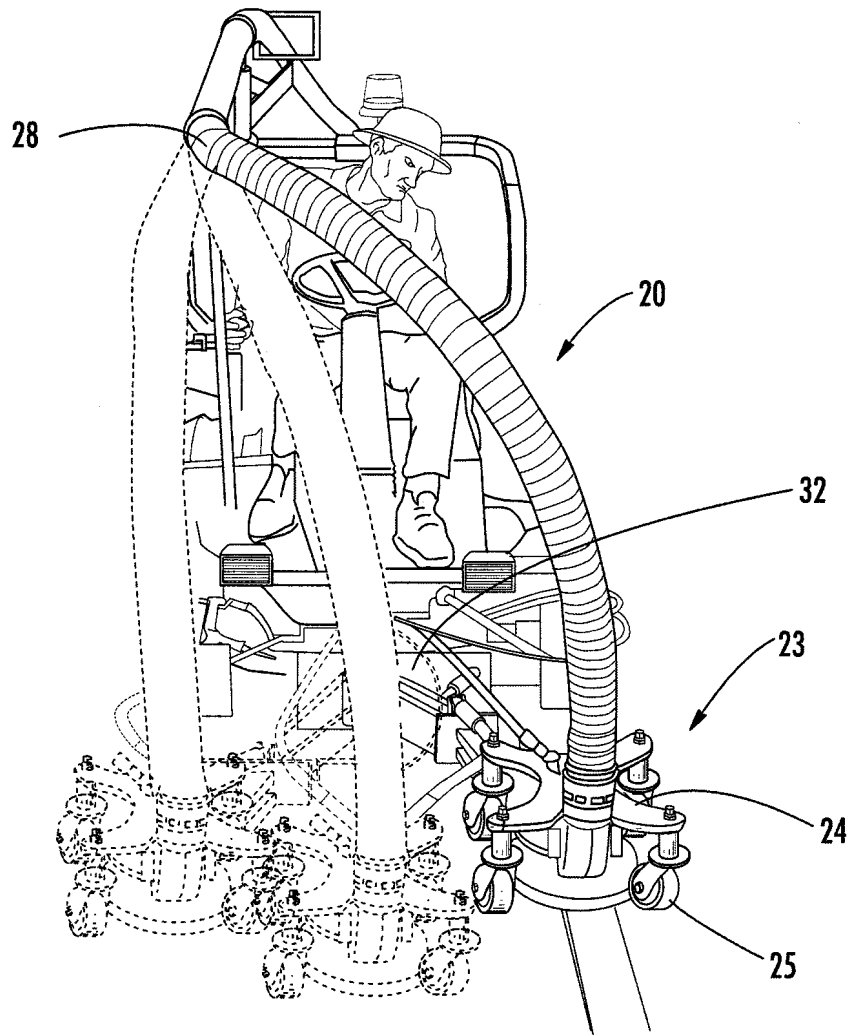


FIG. 2

3/6



**FIG. 3**

4/6

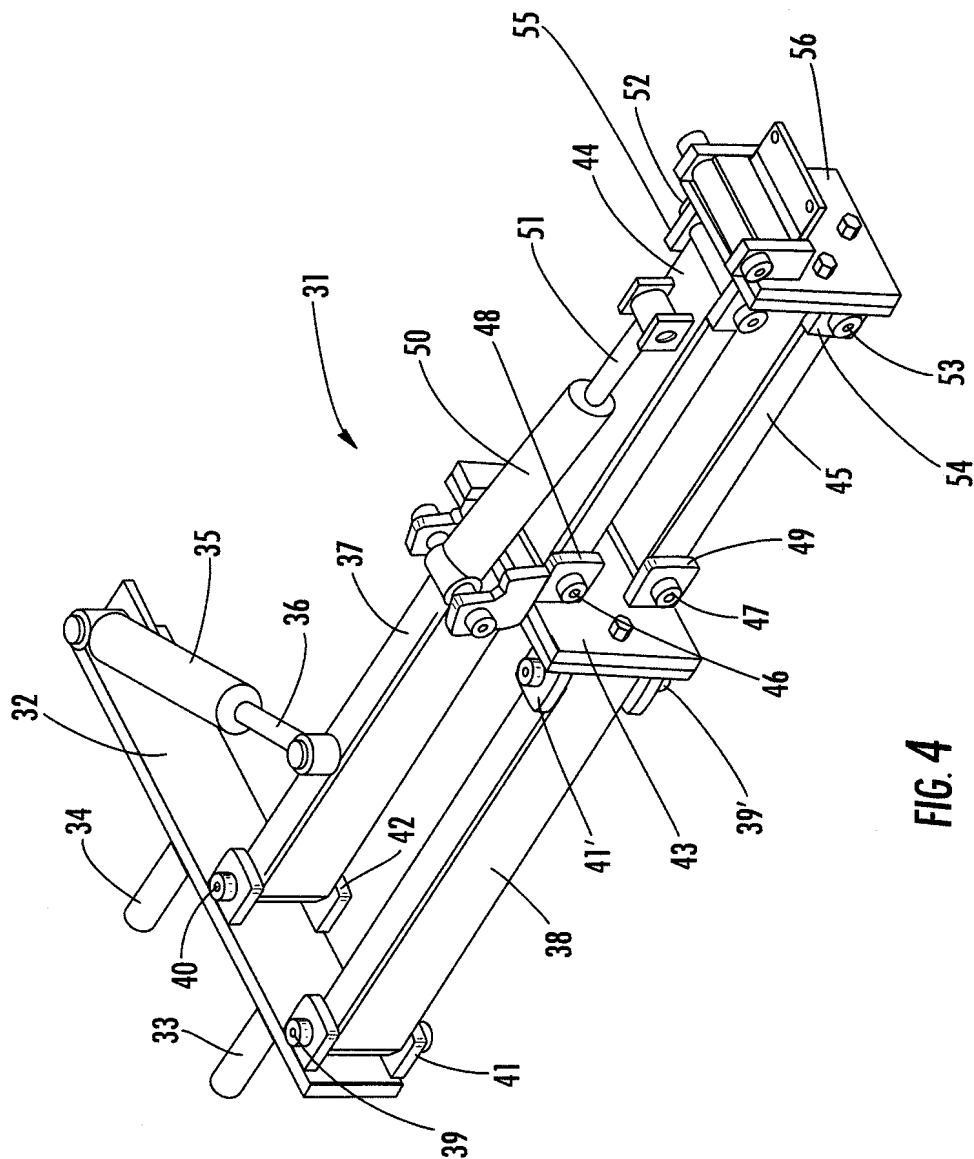


FIG. 4



5/6

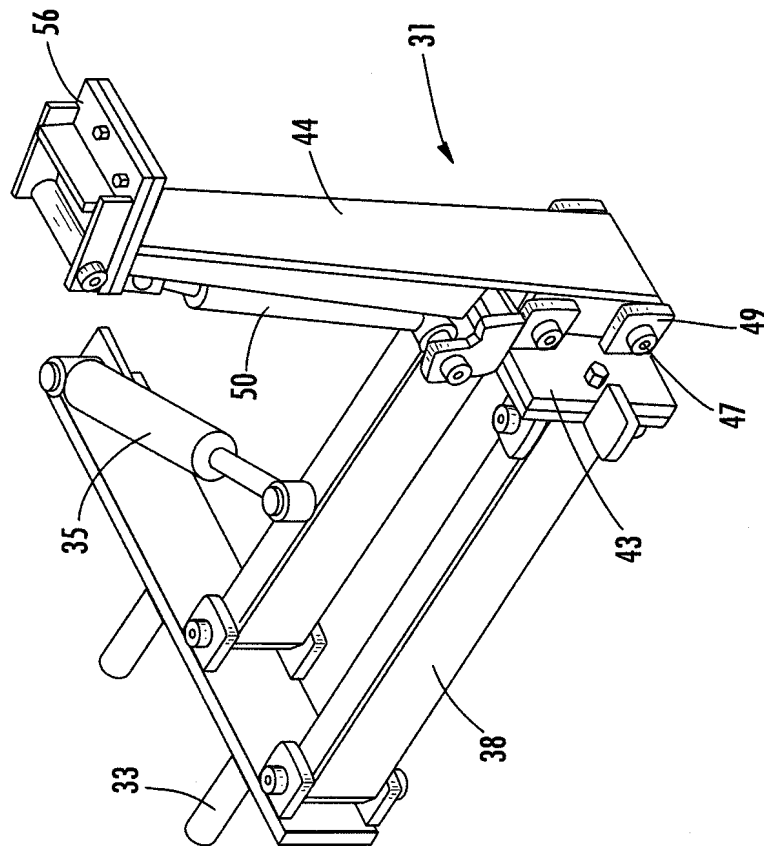
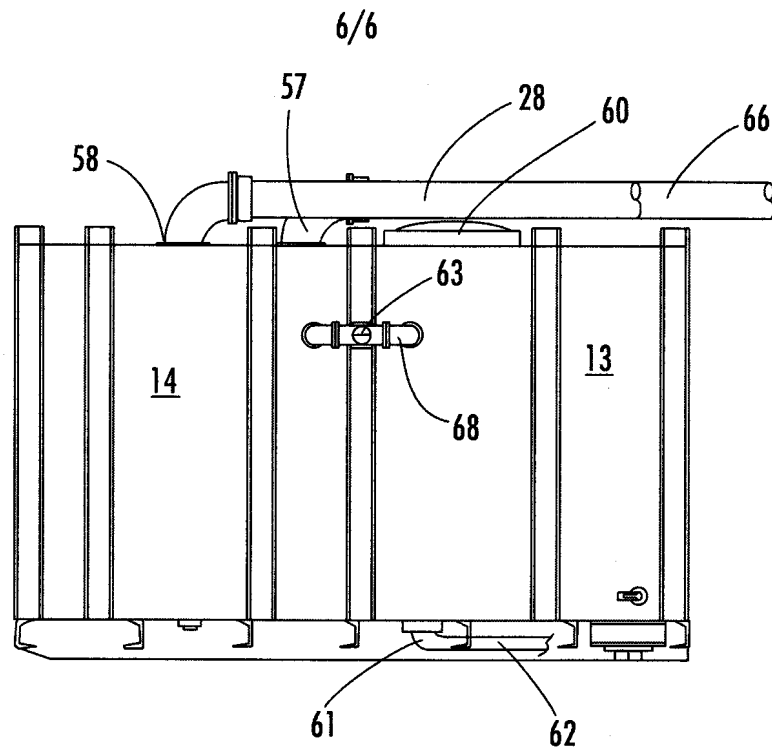
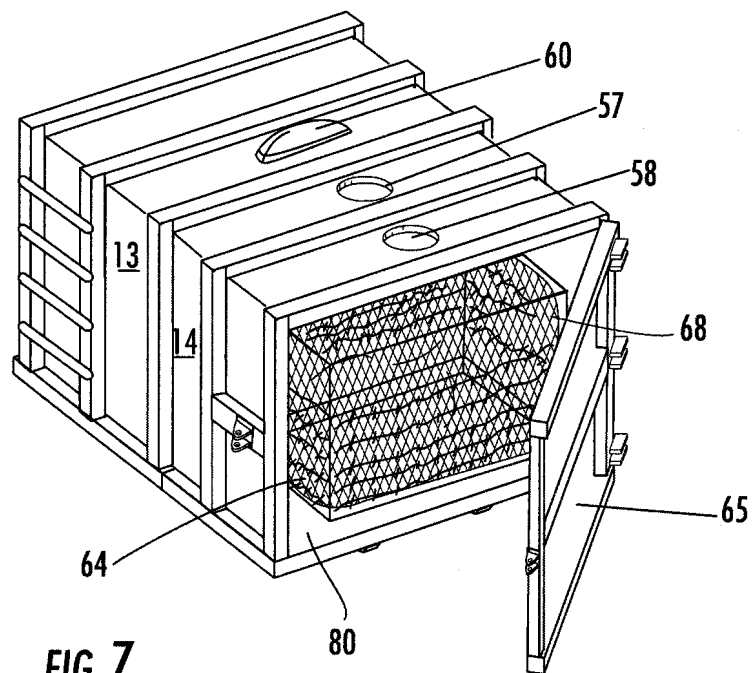


FIG. 5



**FIG. 6**



**FIG. 7**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
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## NOTICE OF ALLOWANCE AND FEE(S) DUE

21917 7590 04/03/2007

MCHALE & SLAVIN, P.A.  
2855 PGA BLVD  
PALM BEACH GARDENS, FL 33410

EXAMINER

HUSBAND, SARAH E

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 04/03/2007

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130
TITLE OF INVENTION: STRIPE REMOVAL SYSTEM				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	07/03/2007

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

21917 7590 04/03/2007  
MCHALE & SLAVIN, P.A.  
2855 PGA BLVD  
PALM BEACH GARDENS, FL 33410

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130

TITLE OF INVENTION: STRIPE REMOVAL SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	07/03/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
HUSBAND, SARAH E	1746	134-111000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number** is required.

2. For printing on the patent front page, list  
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

## 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

## 4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

## 4b. Payment of Fee(s): (Please first reapply any previously paid Issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

## 5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130
21917	7590	04/03/2007	EXAMINER	
MCHALE & SLAVIN, P.A. 2855 PGA BLVD PALM BEACH GARDENS, FL 33410			HUSBAND, SARAH E	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 04/03/2007				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 87 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 87 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

Application No.

10/884,643

Examiner

Sarah E. Husband

Applicant(s)

CROCKER, JAMES P.

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Remarks filed 3/20/2007.
2. ☒ The allowed claim(s) is/are 1-3,5-10 and 13.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT.FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

Applicant's changes to the drawings have been noted. However, the objection to the drawings remains for Fig. 6 and 7 for the reasons given below.

Applicant's arguments, see Remarks, filed 3/20/2007, with respect to the specification and claim objections have been fully considered and are persuasive. The objections of the claims and specification have been withdrawn.

Applicant's arguments, see Remarks, filed 3/20/2007, with respect to the 112 rejection have been fully considered and are persuasive. In light of the amendments, the 112 rejection of claims has been withdrawn.

The 102 rejection of claims 11 and 12 is considered to be moot. These claims have been cancelled.

## EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Keith Campbell on 3/29/2007.

The application has been amended as follows:

### **Specification:**

In the specification, page 10, line 3, please delete "trailer hitch 21" and insert - - trailer hitch - -.

In the specification, page 12, line 18, please delete "pump hose 16" and insert - - pump hose 66 - -.

In the specification, page 13, line 1, please delete "connector pipe 64" and insert - - connector pipe 68 - -.

In the specification, page 13, lines 14, please delete "area 65" and insert - - area 80 - -.

In the specification, page 13, line 16, please delete "valve 70" and insert - - valve - -.

**Drawings:**

The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

**In Fig. 6,** Items 28 and 66 should be reversed;

**In Fig. 7,** Item 67 should be changed to Item 80.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

***Allowable Subject Matter***

Claims 1-3, 5-10 and 13 are allowed.

The reason for allowance was included in the previous office action.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. A related piece of art is Cho (US 5589080), who discloses a




recirculation system, which separates particles using a mesh, however, does not collect the particles inside the mesh, does not have the recirculation outlet outside of the mesh nor the reservoir and is a different setup.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah E. Husband whose telephone number is (571) 272-8387. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SEH

  
**MICHAEL BARR**  
**SUPERVISORY PATENT EXAMINER**

<b>Notice of References Cited</b>	Application/Control No. 10/884,643	Applicant(s)/Patent Under Reexamination CROCKER, JAMES P.	
	Examiner Sarah E. Husband	Art Unit 1746	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,589,080	12-1996	Cho et al.	210/791
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			


**FOREIGN PATENT DOCUMENTS**

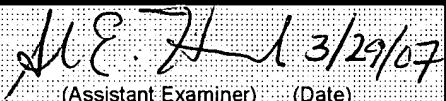


*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>Issue Classification</b> 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/884,643	CROCKER, JAMES P.	
	Examiner	Art Unit	
	Sarah E. Husband	1746	

ISSUE CLASSIFICATION									
ORIGINAL				CROSS REFERENCE(S)					
CLASS		SUBCLASS		CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
134		111		134	172	104.4	104.2	198	
INTERNATIONAL CLASSIFICATION				210	194				
B	0	8	B	3/04					
				/					
				/					
				/					
				/					
 (Assistant Examiner) (Date) 3/29/07				<b>MICHAEL BARR</b> <b>SUPERVISORY PATENT EXAMINER</b>  (Primary Examiner) (Date) 3/29/07				Total Claims Allowed: 10	
 (Legal Instruments Examiner) (Date) 3/30/07								O.G. Print Claim(s) 1	O.G. Print Fig. 2

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant										<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1		31		61		91		121		151		181		
2	2		32		62		92		122		152		182		
3	3		33		63		93		123		153		183		
	4		34		64		94		124		154		184		
4	5		35		65		95		125		155		185		
5	6		36		66		96		126		156		186		
6	7		37		67		97		127		157		187		
7	8		38		68		98		128		158		188		
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	16		46		76		106		136		166		196		
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	19		49		79		109		139		169		199		
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	21		51		81		111		141		171		201		
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	23		53		83		113		143		173		203		
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	28		58		88		118		148		178		208		
	29		59		89		119		149		179		209		
	30		60		90		120		150		180		210		

**Search Notes**

Application/Control No.

10/884,643

Examiner

Sarah E. Husband

Applicant(s)/Patent under  
Reexamination

CROCKER, JAMES P.

Art Unit

1746

**SEARCHED**

Class	Subclass	Date	Examiner
134	111,104.2 104.4,198	3/29/2007	SEH
134	172	3/29/2007	SEH
210	194	3/29/2007	SEH

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner
134	111,104.2	3/29/2007	SEH
134	104.4,198	3/29/2007	SEH
134	172	3/29/2007	SEH
210/194		3/29/2007	

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Updated Inventor Search.	3/29/2007	SEH
Updated Search.	3/29/2007	SEH

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S58	0	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls. or "210"/\$.ccls.) and (clean\$3 or wash\$3 or remov\$3) same (head\$3 or nozzle) same (vacuum or suction) near10 (hose or fluid or liquid) and (vacuum or suction) near10 ((wire or mesh) near4 (screen or box)) near10 (circulat\$3 or recirculat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/28 10:08
S57	17	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls. or "210"/\$.ccls.) and (clean\$3 or wash\$3 or remov\$3) same (head\$3 or nozzle) same (vacuum or suction) near10 (hose or fluid or liquid) and (vacuum or suction) near10 ((wire or mesh) near4 (screen or box))	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/28 10:54
S59	28	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls. or "210"/\$.ccls.) and (clean\$3 or wash\$3 or remov\$3) same (head\$3 or nozzle) same (vacuum or suction) near10 (hose or fluid or liquid) and (vacuum or suction) near4 pump same ((wire or mesh) near4 (screen or box))	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/28 10:57
S60	5	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls. or "210"/\$.ccls.) and (clean\$3 or wash\$3 or remov\$3) near12 (head\$3 or nozzle) near10 (vacuum or suction) near10 (hose or fluid or liquid) and (vacuum or suction) near4 pump same ((wire or mesh) near4 (screen or box))	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/28 11:02
L1	7	"884643".ap.	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:38
L2	0	(cleaning and coatings and hard and pressure and reservoir and blast and head and pump and hose and waste and sump and vacuum and pump and mobile and truck and trailer and engine and link).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:40

## EAST Search History

L4	1	(cleaning and coatings and hard and pressure and pump and blast and head and hose and nozzle and vacuum and wire and mesh and screen and enclosure and wall and re-circulation and outlet).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:42
L3	0	(cleaning and coatings and hard and pressure and pump and blast and head and hose and nozzle and vacuum and wire and mesh and screen and enclosure and wall and recirculation and outlet).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:46
S56	22	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls. or "210"/\$.ccls.) and (clean\$3 or wash\$3 or remov\$3) same (head\$3 or nozzle) same (vacuum or suction) near10 (hose or fluid or liquid) and sump and truck and (head\$3 or nozzle) near10 (pivot\$4 or move\$4 or maneuver or raise or lower)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:50
L6	2	134/111,104.2,104.4,172,198.ccls. and (clean\$3 or wash\$3 or remov\$3) same (head\$3 or nozzle) same (vacuum or suction) near10 (hose or fluid or liquid) and sump and truck and (head\$3 or nozzle) near10 (pivot\$4 or move\$4 or maneuver or raise or lower)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:52
L5	1	134/111,104.2,104.4,198.ccls. and (clean\$3 or wash\$3 or remov\$3) same (head\$3 or nozzle) same (vacuum or suction) near10 (hose or fluid or liquid) and sump and truck and (head\$3 or nozzle) near10 (pivot\$4 or move\$4 or maneuver or raise or lower)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:52
S61	0	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls. or "210"/\$.ccls.) and (clean\$3 or wash\$3 or remov\$3) near12 (head\$3 or nozzle) near10 (vacuum or suction) near10 (hose or fluid or liquid) and (vacuum or suction) near4 pump and ((wire or mesh) near4 (screen or box)) near15 (recirculat\$3 or re\$circulating or re\$circulate or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:54

## EAST Search History

L7	0	(134/111,104.2,104.4.ccls. or 210/194.ccls.) and (clean\$3 or wash\$3 or remov\$3) near12 (head\$3 or nozzle) near10 (vacuum or suction) near10 (hose or fluid or liquid) and ((wire or mesh) near4 (screen or box or frame)) near15 (recirculat\$3 or re\$circulating or re\$circulate or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:56
L8	2	(134/111,104.2,104.4.ccls. or 210/194.ccls.) and (clean\$3 or wash\$3 or remov\$3) near12 (head\$3 or nozzle) near10 (vacuum or suction) near10 (hose or fluid or liquid) and (wire or mesh) same (recirculat\$3 or re\$circulating or re\$circulate or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/29 14:59

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION : **STRIPE REMOVAL SYSTEM**  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 2, 2004  
EXAMINER : Husband Sarah E.  
GROUP ART UNIT : 1746  
OUR FILE NO. : 2708U.001

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Mail Stop: Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION OF DECEMBER 20, 2006

Madam:

In response to the Office Action dated December 20, 2006, having a shortened statutory period for response set to expire March 20, 2007, kindly amend the above-entitled application as follows, no new matter is added:

**Amendments to the Specification begin on page 3 of this paper.**

**Amendments to the Claims are reflected in the listing of claims which begins on page 8 of this paper.**

**Amendments to the Drawings begin on page 13 of this paper and include both an attached replacement sheet and an annotated sheet showing changes.**



Remarks/Arguments begin on page 15 of this paper.

An Appendix including amended drawing figures is attached following page 17 of this paper.

**Amendments to the Specification:**

Please replace the paragraph beginning at page 9, line 1, with the following rewritten paragraph:

The paint removal system 10, shown in Fig. 1, includes a prime-mover truck 11 and a trailer ~~[[12]]~~ 17. The truck has a forward cab-over 18 for the driving controls and operator. Mounted on the bed 12 of the truck is the water reservoir 13 and the sump 14 or vacuum chamber. The reservoir and sump are interconnected by a strategically positioned duct for continuous dumping of filtered wastewater when operating from a fixed position where liquid is supplied to the high pressure pump by a means other than the reservoir 13.

Please replace the paragraph beginning at page 10, line 2, with the following rewritten paragraph:

The trailer ~~[[12]]~~ 17 is removably attached to the prime-mover through a conventional trailer hitch 21. Mounted on the bed 22 of the trailer is a high pressure fluid pump greater than 25,000 - 40,000 psi and from 2-15 gallons per minute. A high pressure hose connects the pump with the blast head during operations.

Please replace the paragraph beginning at page 10, line 8, with the following rewritten paragraph:

In Fig. 2 the mobile tractor 20 is illustrated in the normal operations position. The tractor is similar to a riding mower with a small engine self propelling the tractor. The blast head 23 has at least one and up to sixteen high pressure nozzles 69 delivering high pressure fluid to the surface to be cleaned. The high pressure nozzle is carried on a chassis 24 mounted on casters 25. A shroud 27 descends from the chassis and surrounds the high pressure nozzle. The blast head is connected to the high pressure hose by line 26 and the shroud 27 is connected to the sump by waste removal hose 28. The high pressure hose 26 and the vacuum hose 28 is supported by a swinging boom 29 which is mounted on the prime mover 11 shown in Figure 1 to provide freedom of movement for the tractor and to prevent tangling or running over of the hoses by the prime mover.

Please replace the paragraph beginning at page 11, line 14, with the following rewritten paragraph:

The forward end of the articulated link 31 has a plate 43 connected to the forward ends of trailing arms 37 and 38. The arms 37 and 38 are rotatably connected to the plate by brackets 41'

~~and 42'~~ holding pins 39' ~~and 40'~~, respectively. The forward arms 44 and 45 are rotatably connected to the plate 43 to rotate vertically. Pins 46 and 47 extend horizontally through brackets 48 and 49. Another hydraulic cylinder 50 is connected to the plate 43 and the piston 51 is connected to the forward end of the arm 44. As the piston 51 moves, the distance between the surface to be cleaned and the blast head 23 changes. The vertical movement permits elevation changes to accommodate the contours of the surface. Further, the blast head 23 may be raised to the vertical position and then manually flipped up and back reducing the overall length to permit the tractor 20 and blast head 23 to be stowed on a truck bed sideways consuming a space of less than 8' 6" for highway travel, shown in Fig. 5. The forward ends of the arms 44 and 45 are attached by pins 52 and 53 to brackets 54 and 55 to prevent binding as the arms are manipulated. The brackets are mounted on blast head attachment plate 56.

Please replace the paragraph beginning at page 12, line 13, with the following rewritten paragraph:

The liquid reservoir 13 and the sump 14 are shown in Fig. 6. As illustrated, the liquid reservoir and vacuum chamber have a common enclosure with an internal partition dividing them. The

sump 14 has an inlet 57 for connection by hose 28 to the vacuum shroud 27. An outlet 58 is connected to the vacuum ~~[[pup]]~~ pump hose 16. The liquid reservoir has a hatch 60 for inspecting and cleaning the reservoir with approximately 600-1500 gallons of liquid. An outlet 61 is connected to a low pressure pump by a low pressure suction hose 62. The low pressure 12 volt pump is used to pump water out of the reservoir 13 back to the water blasting pump ~~[[12]]~~ 67 at about 40 Psi and 20 g.p.m.

Please replace the paragraph beginning at page 13, line 6, with the following rewritten paragraph:

In Fig. 7, the sump 14 is shown with the rear door 65 open for unloading the porous enclosure 64. The door has a seal (not shown) to maintain the negative pressure therein during operation. The porous enclosure may be a wire screen or mesh box sized to fit within the sump 14. An additional filter bag 68 ~~[[with]]~~ having between 5-200 micron porosity may be inserted into the enclosure. The dimensions of the enclosure 64 are somewhat less than the interior of the sump which provides a marginal area 65 between the enclosure and the interior walls and floor of the sump which provides an exit path for filtered water through valve 70. The inlet 57 empties into the enclosure 64 thereby preventing coatings

from being entrained in the vacuum system. One side of the enclosure is hinged and latched to permit entry into the enclosure or removal of the filter bags. By opening the sump door and raising the dump bed of the truck, the waste material can be easily and quickly removed without prolonged interruption of the operations. The filter bag is the disposal container, and is dumped with the material. A permanent filter material can also be utilized which requires cleaning after each use but does not waste a filter bag each time it is dumped.

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising in combination a liquid reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a waste removal hose connected at one end to said blast head and at the other end to a sump for collection of liquid and coating, said sump connected to said liquid reservoir, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface for removing coatings therefrom, said liquid and coatings conveyed through said waste removal hose to said sump via a high power vacuum pump, said coatings collected in said sump, said liquid reservoir, said sump and said high power vacuum pump being mounted on a mobile frame, said mobile frame forming an integral part of a truck having a bed portion and a cab portion, said truck being self-propelled, said mobile blast head being mounted at a distal end of an articulating

link, a proximal end of said articulating link secured to a tractor, said tractor including an engine for propulsion thereof, wherein said high pressure hose and said waste removal hose extend between said truck and said tractor and whereby said tractor is utilized to maneuver said blast head.

2. (Original) A cleaning system of claim 1 wherein a high power vacuum pump is connected to said sump.

3. (Original) A cleaning system of claim 2 wherein a shroud is connected to said blast head, said shroud surrounds said at least one nozzle and forms a negative pressure chamber.

4. (Cancelled)

5. (Original) A cleaning system of claim 3 wherein said mobile blast head is attached to a wheeled chassis for maneuvering over the hard surface.

6. (Currently amended) A cleaning system of claim 5 wherein said wheeled chassis is attached to said ~~self-propelled~~ tractor and said mobile blast head and tractor are of a size for removably



docking transversely on said bed portion of said truck.

7. (Previously presented) A cleaning system of claim 6 wherein said bed portion includes a ramp, said ramp pivotally connected to said bed portion for raising and lowering said ramp, said ramp sized to support said tractor for docking transversely on said bed.

8. (currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid ~~consisting of~~ comprising a water reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a liquid and debris removal hose connected at one end to an inlet of a vacuum chamber and connected at the other end to said blast head to remove liquid and coating from said blast head, a high power vacuum pump connected to said vacuum chamber, said vacuum chamber having a rigid outside wall defining an interior, a wire mesh screen in said interior spaced inwardly of said rigid outside wall and forming an enclosure, said inlet inside said enclosure, said vacuum chamber having an outlet for the liquid, said outlet between said rigid

wall and said enclosure, said outlet of said vacuum chamber connected to said reservoir for re-circulation of the liquid, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said high powered vacuum in said vacuum hose to said vacuum chamber through said inlet, said coatings collected by said filter screen in said vacuum chamber and the liquid exiting through said outlet.

9. (Original) A cleaning system of claim 8 wherein a porous flexible bag is removably inserted in said enclosure, said bag having a mouth surrounding said inlet whereby said coatings are collected in said bag.

10. (Currently amended) A cleaning system of claim 8 wherein said reservoir, said vacuum chamber, said vacuum pump ~~and said blast head~~ are mounted on the bed of a truck.

11. (cancelled)

12. (cancelled)

13. (Original) In a cleaning system of claim 1 wherein said articulating link is constructed and arranged for controlled movement in a horizontal and a vertical plane.

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Figs. 1,2,3,6 and 7. These sheets replace the original sheets including Figs. 1,2,3,6 and 7.

In amended Figure 1, the previously duplicate element numeral 12 has been changed to 17 in addition element numeral 67 has been substituted for element numeral 12 in the specification and figures when referring to the pump to eliminate the duplication of element numerals.

In amended Figure 2, element numeral 30 has been deleted, in addition, the arm of Figs. 4 and 5 has been added as well as the nozzle 69. Support for adding the nozzle to Fig. 2 can be found in the specification at page 10, line 10 stating in pertinent part; "The blast head 23 has at least one and up to sixteen high pressure nozzles delivering high pressure fluid to the surface to be cleaned. The high pressure nozzle is carried on a chassis 24 mounted on casters 25. A shroud 27 descends from the chassis and surrounds the high pressure nozzle. The blast head is connected to the high pressure hose by line 26 and the shroud 27 is connected to the sump by waste removal hose 28. The high pressure hose 26 and the vacuum hose 28 is supported by a swinging boom 29 which is mounted on the prime mover 11 shown in Figure 1 to provide freedom

of movement for the tractor and to prevent tangling or running over of the hoses by the prime mover."

In amended Figure 3, the arm of Figs. 4 and 5 has been added for clarity.

In amended Figure 6, element numerals 28 and 66 have been reversed, in addition element numeral 70 has been added. Support for adding the element numeral can be found at page 13, line 12. "The dimensions of the enclosure 64 are somewhat less than the interior of the sump which provides a marginal area 65 between the enclosure and the interior walls and floor of the sump which provides an exit path for filtered water through valve 70".

In amended Figure 7, element numeral 68 has been added to reference the filter bag. Support for adding the filter bag element numeral can be found throughout the specification. For example at page 13, line 10; "An additional filter bag with having between 5-200 micron porosity may be inserted into the enclosure. The dimensions of the enclosure 64 are somewhat less than the interior of the sump which provides a marginal area 65 between the enclosure and the interior walls and floor of the sump which provides an exit path for filtered water through valve 70".

Attachment: Replacement Sheets

Annotated Sheets Showing Changes

REMARKS/ARGUMENTS

In the specification, the paragraphs beginning at page 9 line 1, page 10 line 2, page 10 line 8, page 11 line 14, page 12 line 13 and page 13 line 6 have been amended to correct minor editorial problems.

In amended Figure 1, the previously duplicate element numeral 12 has been changed to 17 in addition omitted element numeral 67 has been added.

In amended Figure 2, element numeral 30 has been deleted, in addition, the arm has been added as well as the nozzle 69.

In amended Figure 6, element numerals 28 and 66 have been reversed, in addition element numeral 70 has been added.

In amended Figure 7, element numeral 68 has been added to reference the filter bag.

Claims 1-3, 5-10 and 13 remain in this application.

Claims 11 and 12 have been canceled.

Claim 1 has been amended to add the missing word "and".

Claim 6 has been amended to delete the phrase "self propelled".

Claim 8 has been amended from consisting to comprising.

Appl. No. 10/884,643 Reply to Office Action of December 20, 2006

The examiner has acknowledged that claims 1-3, 5-7, 8 and 13 are directed to allowable subject matter.

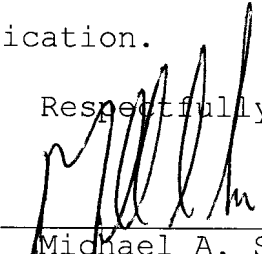
Claims 9 and 10 were indicated to be allowable upon clarification of the 35 USC 112 issues.

In response to the Office Action of **December 20, 2006**, Applicant requests re-examination and reconsideration of this application for patent pursuant to 35 U.S.C. 132.

SUMMARY

In light of the foregoing remarks and amendment to the claims, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested. Should there be any remaining issues which can be resolved via an Examiner's Amendment; the Examiner is urged to call the undersigned in order to expedite the prosecution of this application.

Respectfully submitted,

 3/20/07  
\_\_\_\_\_  
Michael A. Slavin  
Registration # 34,016

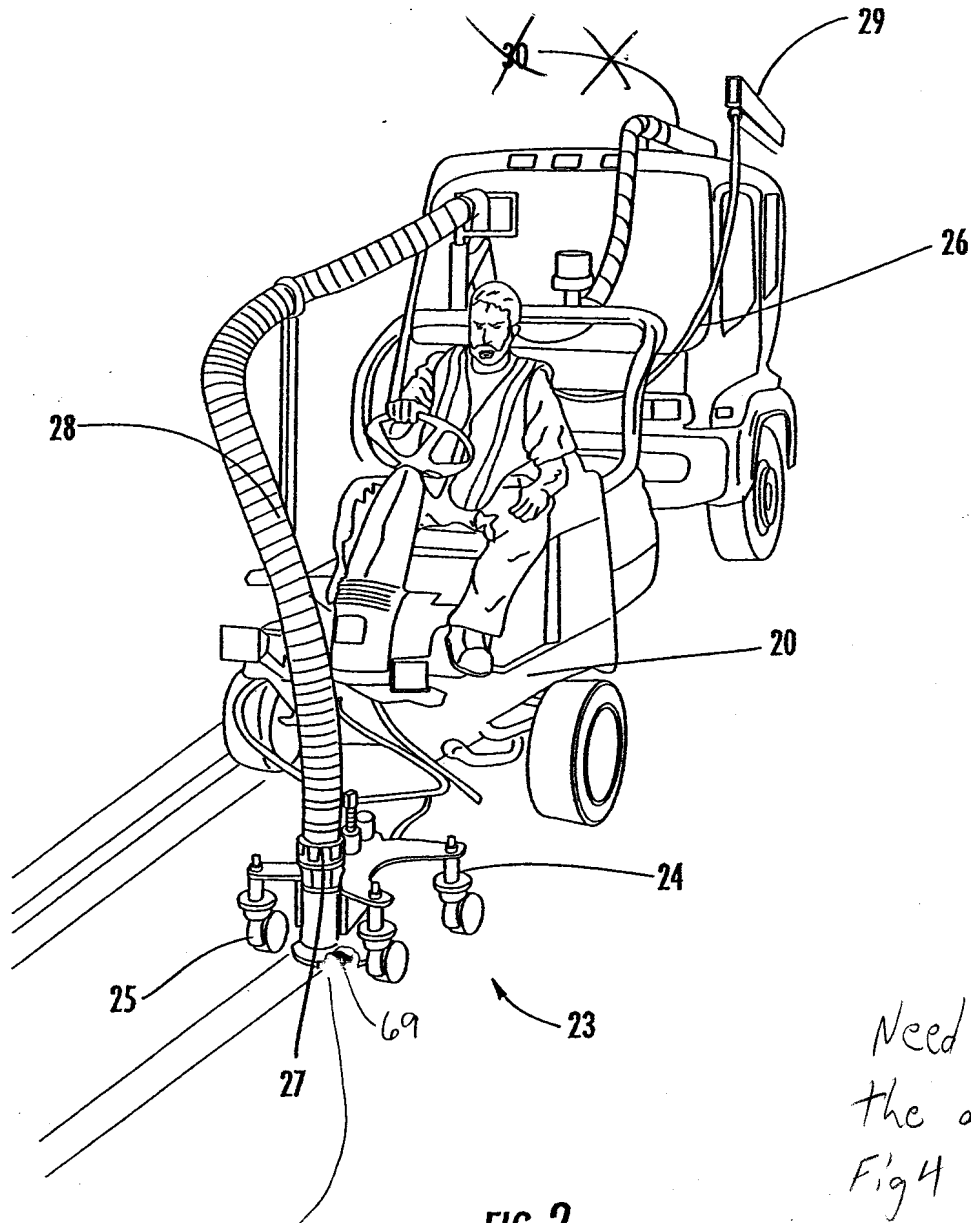
McHale & Slavin, P.A.  
2855 PGA Boulevard  
Palm Beach Gardens, FL 33410  
(561) 625-6575 (Voice)  
(561) 625-6572 (Fax)





The leader should extend to the bed of the truck

2/6



Section here  
to add spray  
bar & nozzle

Need to fit  
the arm of  
Fig 4 between the  
spray head & tractor  
Same for Fig 3

3/6

Add in the  
arm

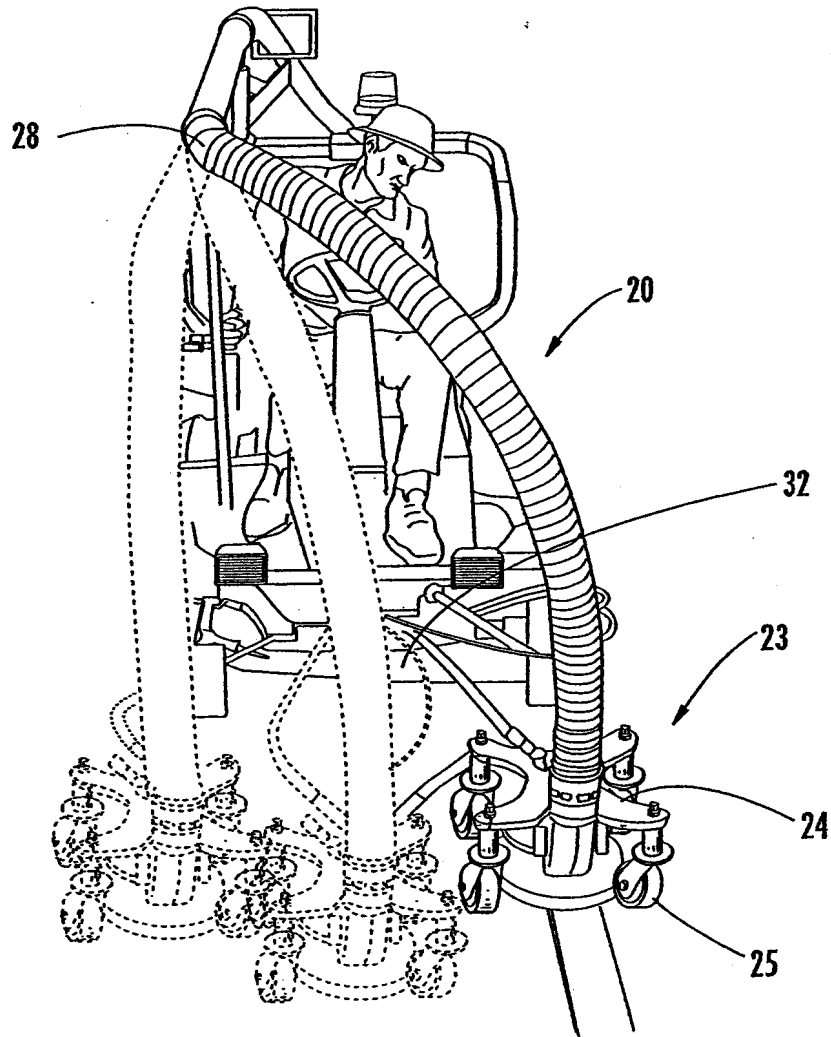
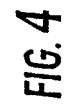
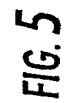
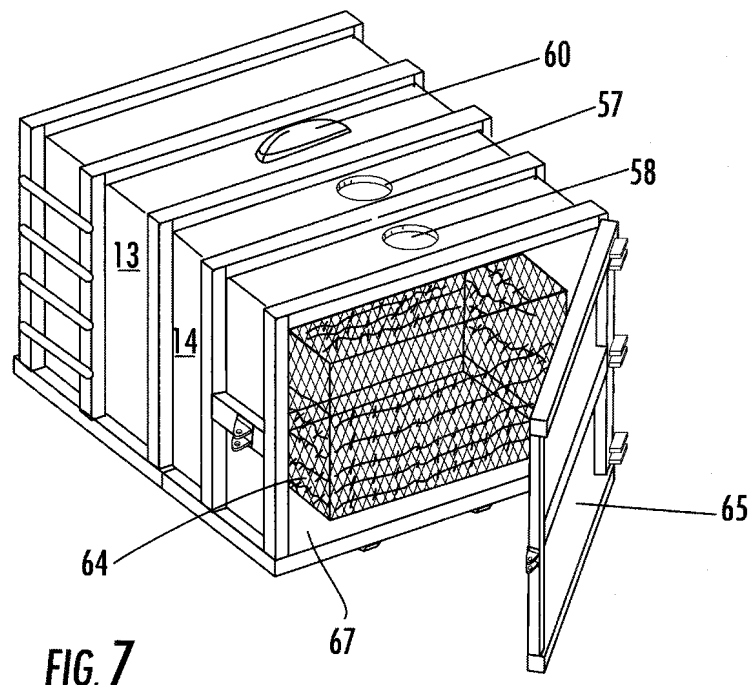
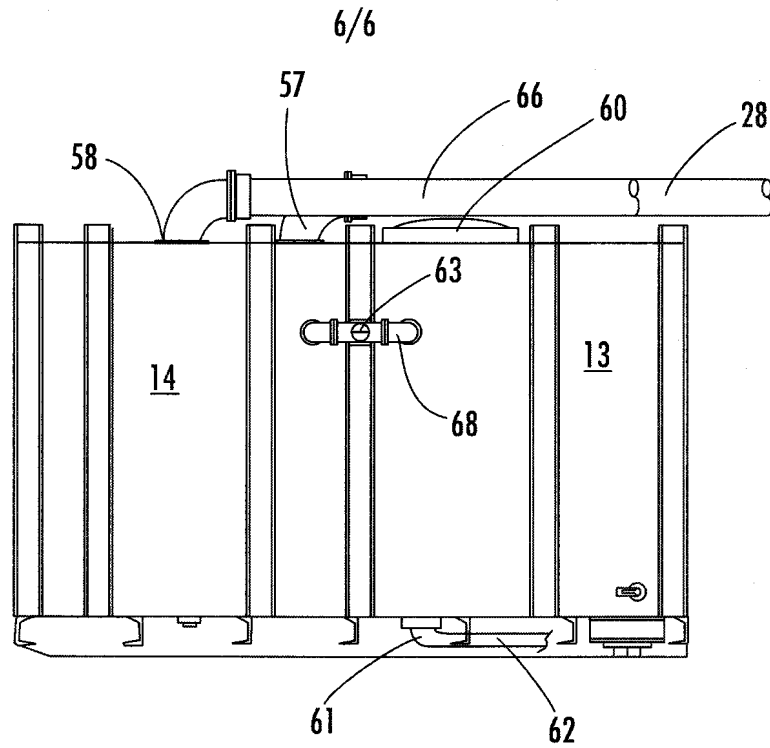
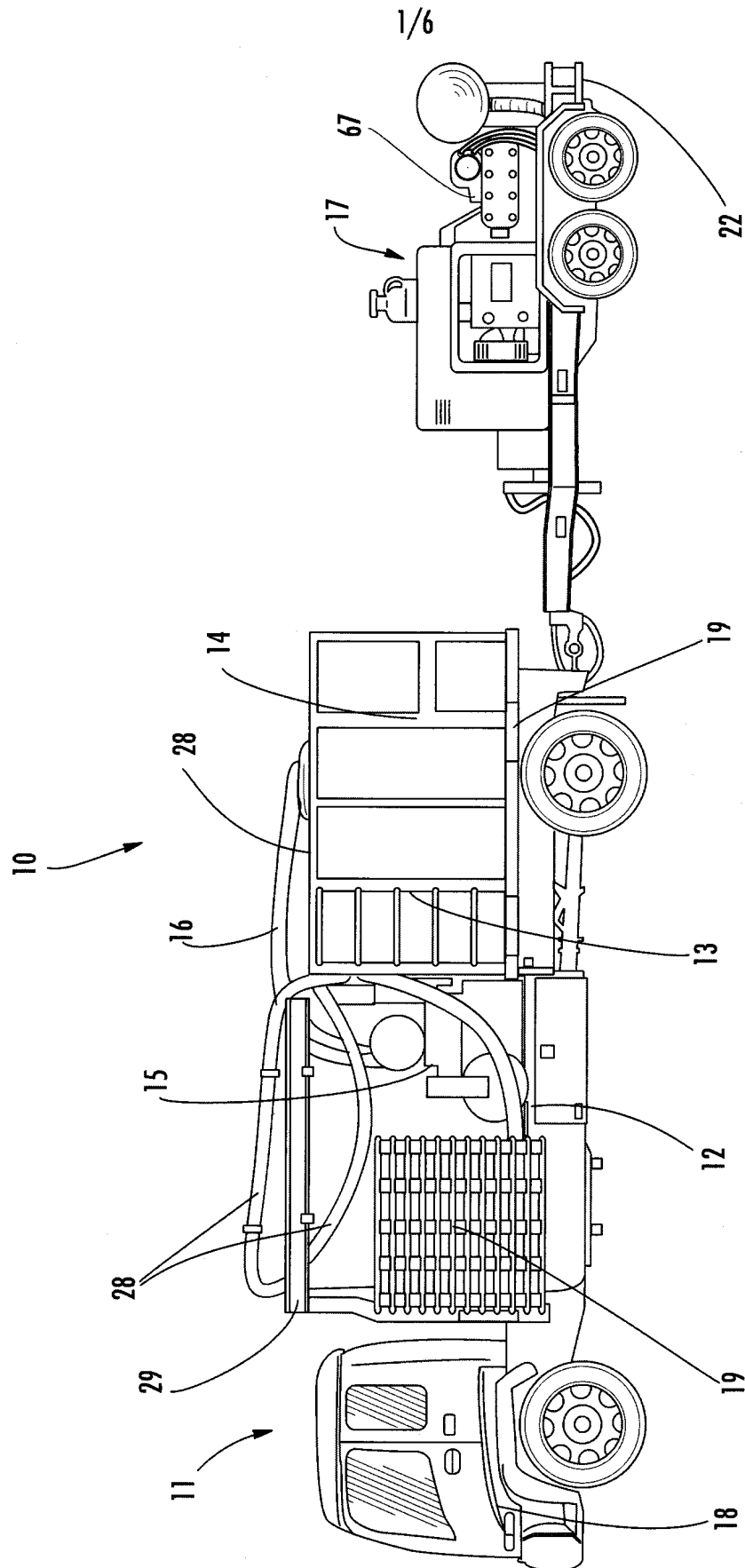


FIG. 3









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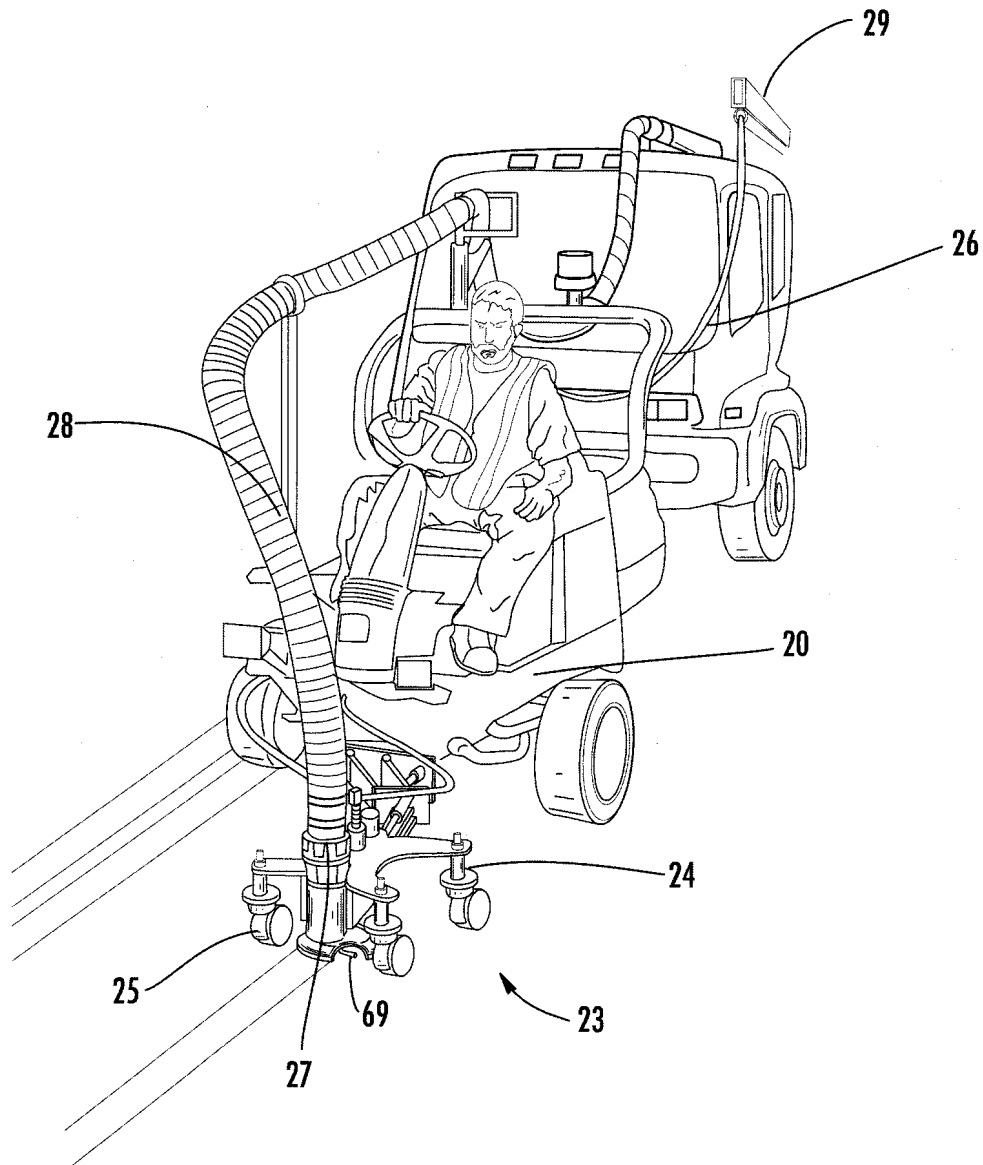
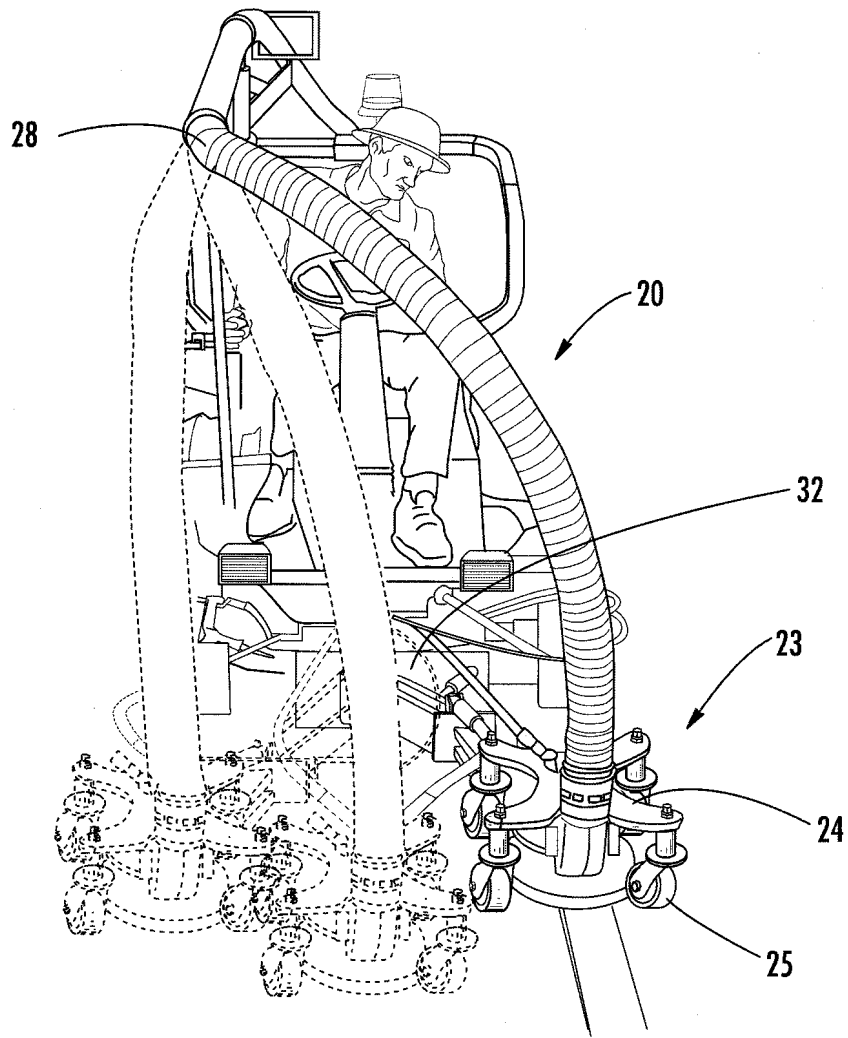


FIG. 2

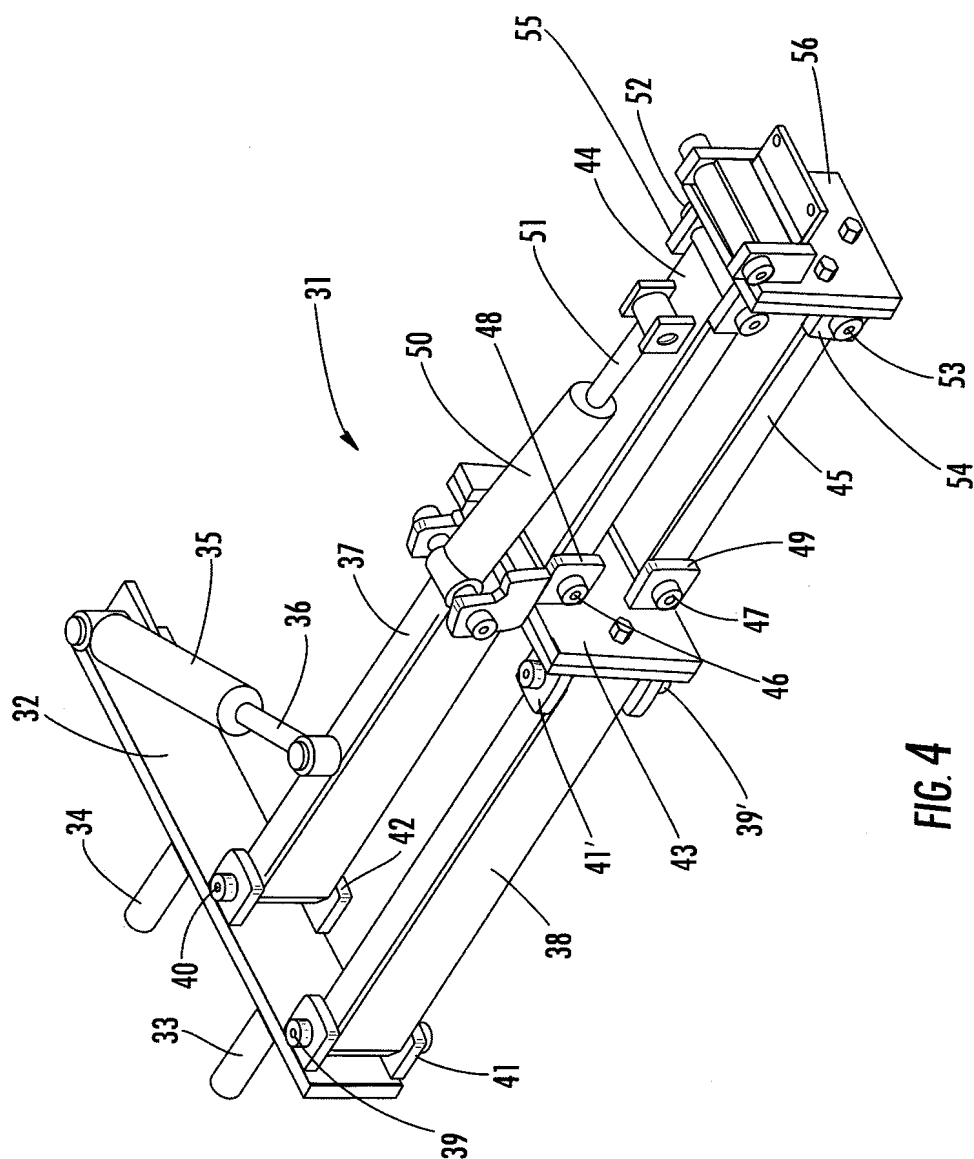


3/6

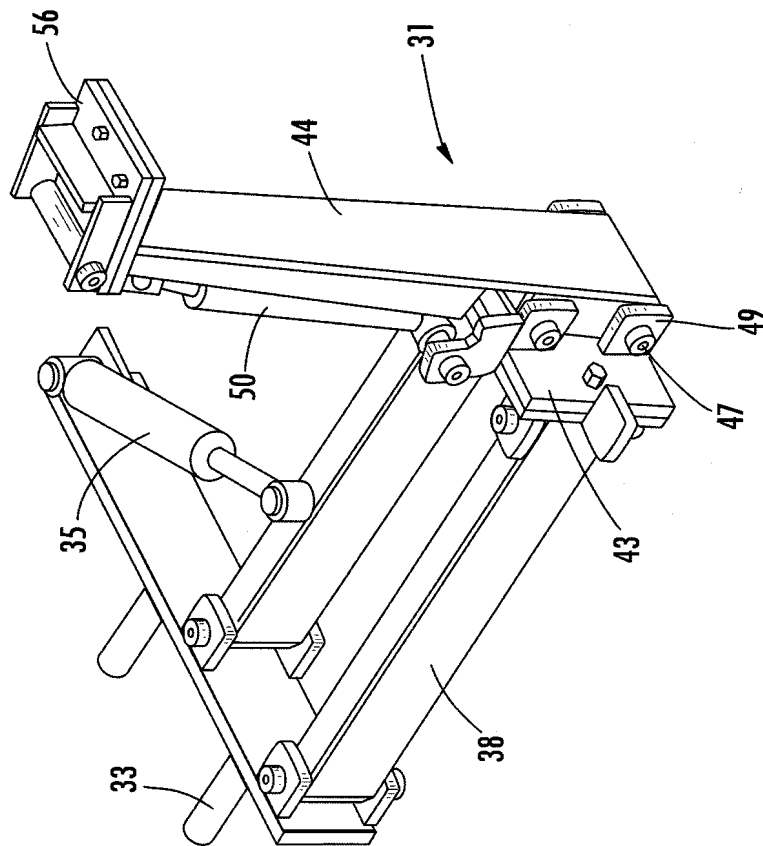


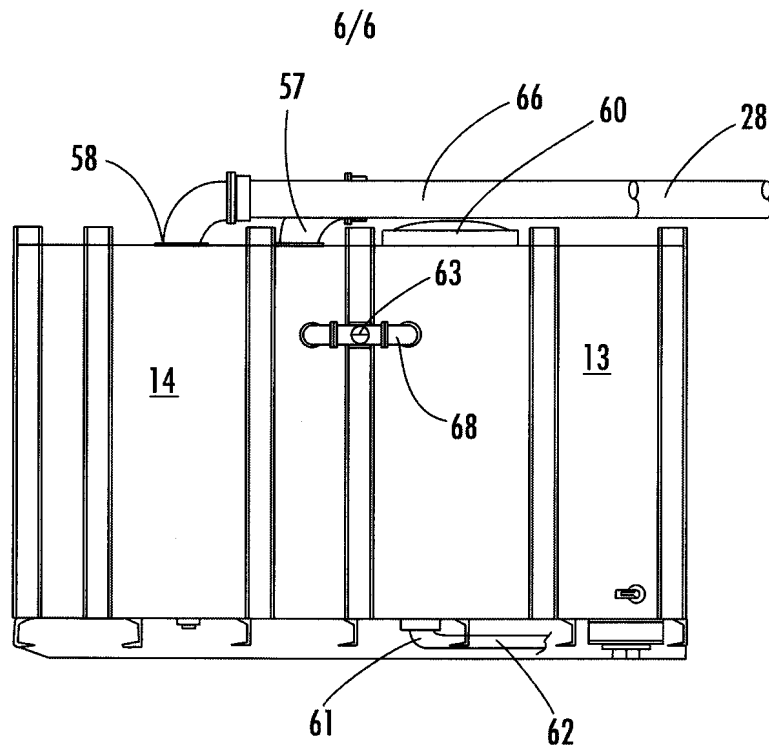
**FIG. 3**

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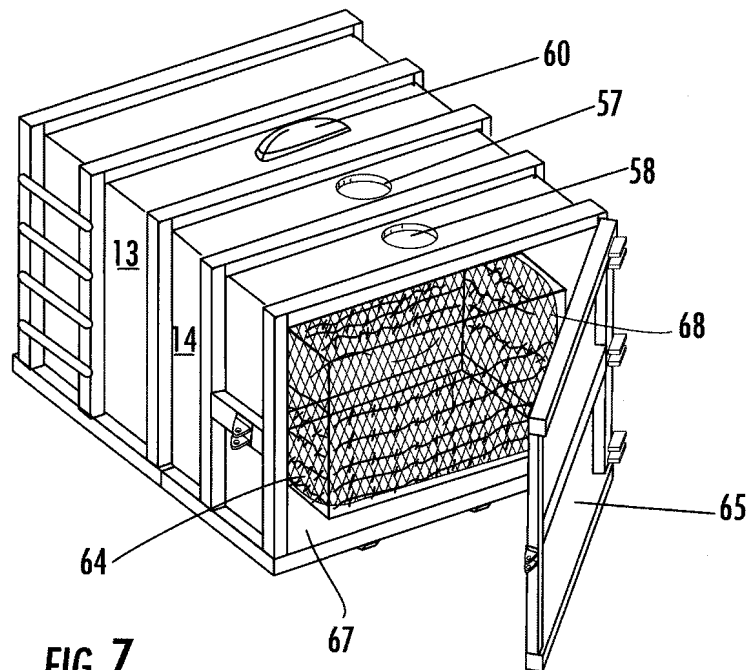


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**FIG. 6**



**FIG. 7**

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	1606407
<b>Application Number:</b>	10884643
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6130
<b>Title of Invention:</b>	Stripe removal system
<b>First Named Inventor/Applicant Name:</b>	James P. Crocker
<b>Customer Number:</b>	21917
<b>Filer:</b>	Michael A. Slavin
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	2708U.001
<b>Receipt Date:</b>	20-MAR-2007
<b>Filing Date:</b>	02-JUL-2004
<b>Time Stamp:</b>	11:27:07
<b>Application Type:</b>	Utility

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1		2708001ResponseOA122006.pdf	785360	yes	29

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment - After Non-Final Rejection	1	2
	Specification	3	7
	Claims	8	12
	Drawings	13	14
	Applicant Arguments/Remarks Made in an Amendment	15	17
	Drawings	18	29
Warnings:			
Information:			
Total Files Size (in bytes):		785360	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			

# PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2003

Application or Document Number

10884643

## CLAIMS AS FILED - PART I

(Column 1) (Column 2)

TOTAL CLAIMS	14	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	14 minus 20 =	
INDEPENDENT CLAIMS	5 minus 3 =	2
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

\* If the difference in column 1 is less than zero, enter "0" in column 2

## CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	14	Minus	20	0
	Independent	5	Minus	3	2
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

SMALL ENTITY TYPE ☒ OR

OTHER THAN SMALL ENTITY

RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	
X43=	86	OR	X86=	
+145=		OR	+290=	
TOTAL	471	OR	TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	12	Minus	20	0
	Independent	3	Minus	3	0
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	10	Minus	20	0
	Independent	2	Minus	3	0
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

\* The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130
21917 7590 12/20/2006 MCHALE & SLAVIN, P.A. 2855 PGA BLVD PALM BEACH GARDENS, FL 33410			EXAMINER HUSBAND, SARAH E	
			ART UNIT	PAPER NUMBER
			1746	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/20/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



**Office Action Summary**

Application No.

10/884,643

Applicant(s)

CROCKER, JAMES P.

Examiner

Sarah E. Husband

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☒ Claim(s) 1-3, 5-7 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

#### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 11/17/2006, with respect to the 102 rejection of claims 1-3 and 5 have been fully considered and are persuasive. In light of the amendments, the 102 rejection of claims 1-3 and 5 has been withdrawn.

Applicant's arguments, see Remarks, filed 11/17/2006, with respect to the drawings have been fully considered and are persuasive. The previous objection of the drawings has been withdrawn. However, there are numerous other problems associated with the drawings and will be discussed below.

Applicant's arguments, see Remarks, filed 11/17/2006, with respect to the 103 rejection of claims 8-10 have been fully considered and are persuasive. The 103 rejection of claims 8-10 has been withdrawn.

Applicant's arguments, see Remarks, filed 11/17/2006, with respect to the rejection(s) of claim(s) 11 and 12 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Akagi.

#### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "12" has been used to designate both trailer and bed in Fig. 1 and throughout the specification.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the nozzle and filter bag must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are further objected to because:

- 1) Fig. 3 is described in the specification as showing the blast head connected to the tractor by an articulated link 31. The link is not shown in Fig. 3;
- 2) Fig. 4 does not show items 42' and 40' which are described in the specification;
- 3) Item 30 (Fig. 2) is not described in the specification;
- 4) Fig. 6, Items 28 and 66 appear to be reversed. The vacuum hose 28 is shown as being connected to the outlet (58) and this appears to be a reversal of what is described in the specification (page 12, ll. 16-18);
- 5) Item 70 in the specification is not shown in the drawings.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

The disclosure is objected to because of the following informalities:

- 1) Clarification of item 12, whether the trailer or bed of the truck, throughout the specification;
- 2) Page 10, line 3 describes a trailer hitch 21 which is not shown in the drawings;
- 3) Page 10, line 19 describes a “prime mower 11” and should be a “prime mover 11”;
- 4) Page 10, lines 17-22 describe the high pressure hose 26 and the vacuum hose 28 both being supported by a swinging boom 29. However, from Fig. 1 and 2, it appears that only the high pressure hose is supported by the boom 29;
- 5) Page 12, line 18 describes “pup” instead of pump and pump hose “16” should be labeled “66” as is shown in the drawings in Fig. 6;
- 6) Page 12, line 23 describes “water blasting pump 12”, however, this number is used frequently to describe other parts of the invention;
- 7) Page 13, line 1 describes a “connector pipe 64” and should be “connector pipe 68”;
- 8) Page 13, ll. 13-14 describes a “marginal area 65” and should be “marginal area 67” according to the drawings; and
- 9) Page 13, line 16 describes a valve 70; no valve 70 exists in the drawings.

Appropriate correction is required.

### *Claim Objections*

Claims 1, 2, 6 and 12 are objected to because of the following informalities:

- 1) The end of claim 1 states "...said high pressure hose said waste removal hose..."

It appears that this part of the claim is missing the word "and";

- 2) Claim 6 describes a "self-propelled" tractor, however the "self-propelled" was removed in claim 1; and

- 3) Claim 12 describes "left or right an" and should be "left or right and".

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 describes the blast head as mounted on the bed of a truck. It is unclear how the blast head is connected to the tractor and is movable, clearly shown in Fig. 2, and is also mounted to the tractor bed. Appropriate clarification is required.

Claim 9 adds an element to the claimed invention, which in claim 8 is described as "consisting of ..." and is closed language. MPEP 2111.02 states, "A claim which depends from a claim which "consists of" the recited elements or steps cannot add an element or step." Therefore, it is unclear as to what invention Applicant is claiming.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Akagi (US Patent No. 3,787,916).

Akagi describes cleaning a floor (hard surface) by pressurized fluid (col. 6, ll. 5-10), having a mobile blast head with at least one nozzle (Fig. 3, 5, Item 42) and an articulating link attaching the blast head to the tractor (Fig. 2, 4, Item 19, 10), the tractor having an engine (col. 4, ll. 48-55), the link having a leading and trailing end (Fig. 2), the trailing end connected to the tractor and the link is arranged for manipulating the blast head horizontally and vertically (Fig. 2, 4; col. 5, ll.40-50; col. 6, ll. 64-67). Akagi also discloses the front wheels and a bar fixed between (Fig. 2, Item 3; col. 5).

#### ***Allowable Subject Matter***

Claim 8 is allowed and claims 1-3, 5-7 and 13 would be allowable if the objections mentioned above were addressed. Applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

The following is an examiner's statement of reasons for allowable subject matter: the prior art of record does not teach or disclose the cleaning system having, among other things, a mobile blast head having a vacuum and spray nozzle which and the blast head attached to the tractor, having an engine for propulsion, by an articulating link and the

Art Unit: 1746

tractor is utilized to maneuver the blast head, nor does the prior art describe a cleaning system consisting of a blast head with a vacuum hose and high pressure hose, the vacuum hose connected to a vacuum chamber which has a rigid outside wall and a wire mesh screen in the interior forming an enclosure, the inlet in the enclosure, and the outlet between the wall and enclosure, and the outlet connected to a reservoir for recirculation.

Claims 9 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art not referred to but considered as pertinent art are Clemons (US 6381801), Thompson (US 3959010), who disclose surface cleaning apparatus which are maneuvered by a tractor and utilize a spray and vacuum apparatus, and Sallquist (US 5224236), who discloses a machine for cleaning paved surfaces and the vacuum filtration. The other prior art which are also related are Schroth (US 2074623), Maasberg (US 31533348), Lamarque (US 3532010), Issenman (US 3540073), Ashton (US 3639936), who disclose various cleaning apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah E. Husband whose telephone number is (571) 272-8387. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SEH



ALEXANDER MARKOFF  
PRIMARY EXAMINER





PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**Complete if Known**

**(Use as many sheets as necessary)**

Sheet	1	of	1	Attorney Docket Number	2708U.001
-------	---	----	---	------------------------	-----------

Application Number	10/884,643
Filing Date	July 02, 2004
First Named Inventor	James P. Crocker
Art Unit	3671
Examiner Name	Sarah E. Husband
Attorney Docket Number	2708U.001

[illegible]

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document, by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

**If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.**

<b>Notice of References Cited</b>	Application/Control No. 10/884,643	Applicant(s)/Patent Under Reexamination CROCKER, JAMES P.	
	Examiner Sarah E. Husband	Art Unit 1746	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-3,787,916	01-1974	Akagi et al.	15/4
*	B	US-3,959,010	05-1976	Thompson et al.	134/21
*	C	US-5,224,236	07-1993	Sallquist, Robert V.	15/321
*	D	US-2,074,623	03-1937	SCHROTH ELMER T	15/50.1
*	E	US-3,151,348	10-1964	WOLFGANG MAASBERG	15/320
*	F	US-3,532,070	10-1970	LAMARQUE PIERRE A	118/681
*	G	US-3,540,073	11-1970	ISSENMANN EDWARD S; et. al.	15/352
*	H	US-3,639,936	02-1972	Ashton, Walter G.	15/4
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

**Search Notes**

Application/Control No.

10/884,643

Examiner

Sarah E. Husband

Applicant(s)/Patent under  
Reexamination

CROCKER, JAMES P.

Art Unit

1746

**SEARCHED**

Class	Subclass	Date	Examiner

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Updated Search. See attached search strategy	12/14/2006	SEH

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION : **STRIPE REMOVAL SYSTEM**  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 2, 2004  
EXAMINER : Husband Sarah E.  
GROUP ART UNIT : 1746  
OUR FILE NO. : 2708U.001

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Mail Stop Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION OF August 17, 2006**

Sir:

In response to the Office Action dated August 17, 2006 having a shortened statutory period for response set to expire November 17, 2006, kindly enter the following response:

**Amendments to the Specification begin on page 3 of this paper.**

**Amendments to the Claims are reflected in the listing of claims which begins on page 4 of this paper.**

**Amendments to the Drawings begin on page 9 of this paper and include both attached replacement sheets and annotated sheets showing changes.**

**Remarks/Arguments begin on page 10 of this paper.**

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S38	7	"884643".ap.	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/04 11:44
S39	10	husband.xa.	US-PGPUB; USPAT	OR	ON	2006/12/04 16:46
S41	1	(attachment and three-dimensional and apertured and curved and structure).clm.	US-PGPUB	OR	ON	2006/12/04 16:47
S40	59	attachment and three-dimensional and apertured and curved and structure.clm.	US-PGPUB	OR	ON	2006/12/04 16:47
S42	19	("3150407"   "3197798"   "3321331"   "3376597"   "3604037"   "3639936"   "3678533"   "3701177").PN. OR ("3787916").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/14 11:12
S43	8	("134"/\$.ccls or "15"/\$.ccls.) and (clean\$3 or wash\$3) same (surface or asphalt or road or concrete) near4 (coating or paint) same (nozzle) and (tractor or engine)	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/14 11:16
S44	62	("134"/\$.ccls or "15"/\$.ccls.) and (clean\$3 or wash\$3) same (surface or asphalt or road or concrete) near4 (coating or paint) same (nozzle) and (tractor or engine or motor)	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/14 11:26
S45	295	("134"/\$.ccls. or "15"/\$.ccls.) and (clean\$3 or was\$3) same (nozzle or jet or spray\$3) and vacuum same mesh	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/14 11:46
S47	10	"5704989"	US-PGPUB; USPAT	OR	ON	2006/12/14 13:09
S1	7	US-3900969-\$.DID. OR US-3977128-\$.DID. OR US-4336671-\$.DID. OR US-4376358-\$.DID. OR US-4377924-\$.DID. OR US-4753052-\$.DID. OR US-5236278-\$.DID.	US-PGPUB; USPAT	OR	ON	2006/12/14 13:09

## EAST Search History

S48	32	("2909800"   "3384239"   "3605169"   "3959010"   "4104164"   "4374028"   "4377018"   "4530131"   "4676908"   "4836921"   "4839061"   "5011609"   "5016314"   "5076919"   "5102503"   "5114574"   "5151194"   "5178769"   "5224236"   "5354458"   "5417851").PN. OR ("5704989"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/14 13:26
S46	7	("134"/\$.ccls. or "15"/\$.ccls.) and (clean\$3 or was\$3) same (nozzle or jet or spray\$3) and vacuum same pump same (chamber or sump or collect\$3 near4 (fluid or liquid or waste)) near10 mesh	US-PGPUB; USPAT; USOCR	OR	ON	2006/12/14 16:43
S49	1	(clean\$3 or was\$3) same (nozzle or jet or spray\$3) near6 (fluid or liquid or water) and vacuum same pump same (chamber or sump or collect\$3 or tank or vessel or vat) near10 (interior or within or inside or inner) near10 mesh near5 screen and (vacuum) near10 (recirculat\$4 or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/14 16:50
S50	1	(clean\$3 or wash\$3) same (nozzle or jet or spray\$3) near6 (fluid or liquid or water) and vacuum same pump same (chamber or sump or collect\$3 or tank or vessel or vat) near10 (interior or within or inside or inner) near10 mesh near5 screen and (vacuum) near10 (recirculat\$4 or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/15 10:34
L1	2	(clean\$3 or wash\$3) same (nozzle or jet or spray\$3) near10 (fluid or liquid or water) and vacuum near10 pump and vacuum same (chamber or sump or collect\$3 or tank or vessel or vat) near10 (interior or within or inside or inner) near10 mesh near5 screen and (recirculat\$4 or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/15 10:36

## EAST Search History

L4	7	(clean\$3 or wash\$3) same (nozzle or jet or spray\$3) near10 (fluid or liquid or water) and vacuum same (chamber or sump or collect\$3 or tank or vessel or vat) near10 (interior or within or inside or inner) near10 mesh near5 screen and (recirculat\$4 or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/15 11:33
L5	26	(clean\$3 or wash\$3) same (nozzle or jet or spray\$3) near10 (fluid or liquid or water) and vacuum same (chamber or sump or collect\$3 or tank or vessel or vat) near10 mesh near5 screen and (recirculat\$4 or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/15 11:51
L6	4438	(clean\$3 or wash\$3) same (nozzle or jet or spray\$3) near10 (fluid or liquid or water) and vacuum same (chamber or sump or collect\$3 or tank or vessel or vat) and (recirculat\$4 or circulat\$3 or recycl\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/15 11:52
L7	26	(clean\$3 or wash\$3) same (nozzle or jet or spray\$3) near10 (fluid or liquid or water) and vacuum same (chamber or sump or collect\$3 or tank or vessel or vat) and (recirculat\$4 or circulat\$3 or recycl\$3) and (nozzle or jet or spray\$3 or blast) near10 (attach\$3 or connect\$3 or maneuver) near10 (tractor or lawnmower or engine)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2006/12/15 12:08

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION : **STRIPE REMOVAL SYSTEM**  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 2, 2004  
EXAMINER : Husband Sarah E.  
GROUP ART UNIT : 1746  
OUR FILE NO. : 2708U.001

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Mail Stop Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION OF August 17, 2006**

Sir:

In response to the Office Action dated August 17, 2006 having a shortened statutory period for response set to expire November 17, 2006, kindly enter the following response:

**Amendments to the Specification begin on page 3 of this paper.**

**Amendments to the Claims are reflected in the listing of claims which begins on page 4 of this paper.**

**Amendments to the Drawings begin on page 9 of this paper and include both attached replacement sheets and annotated sheets showing changes.**

**Remarks/Arguments begin on page 10 of this paper.**



Appl. No. 10/884,643 Reply to Office action of August 17, 2006

**An Appendix including amended drawing figures is attached following  
page 28 of this paper.**

**Amendments to the Specification**

Please replace the paragraph beginning at page 9, line 11, with the following rewritten paragraph:

The sump 14 is positioned on the rear end of the bed 12. The rear portion ~~[[19]]~~ 91 of the bed is pivotally mounted on the truck frame and hydraulically powered to move in the vertical plane permitting dumping of the contents of the sump 14. The sump 14 is connected to the vacuum pump 15 by hose 16. The intake of a high power vacuum pump capable of approximately 1100 CFM (cubic feet per minute) is connected to the vacuum tank. The vacuum tank and pump are also mounted on the bed of the prime-mover 11.

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising in combination a liquid reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a waste removal hose connected at one end to said blast head and at the other end to a sump for collection of liquid and coating, said sump connected to said liquid reservoir, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface for removing coatings therefrom, said liquid and coatings ~~entrained by~~ conveyed through said waste removal hose to said sump via a high power vacuum pump, said coatings collected in said sump ~~and the waste liquid exiting through an outlet,~~ said liquid reservoir, said sump and said high power vacuum pump being mounted on a mobile frame, said mobile frame forming an integral part of a truck having a bed portion and

a cab portion, said truck being self-propelled, said mobile blast head being mounted at a distal end of an articulating link, a proximal end of said articulating link secured to a ~~self-propelled~~ tractor, said tractor including an engine for propulsion thereof, wherein said high pressure hose said waste removal hose extend between said truck and said tractor and whereby said tractor is utilized to maneuver said blast head.

2. (Original) A cleaning system of claim 1 wherein a high power vacuum pump is connected to said sump.

3. (Original) A cleaning system of claim 2 wherein a shroud is connected to said blast head, said shroud surrounds said at least one nozzle and forms a negative pressure chamber.

4. (Cancelled)

5. (Original) A cleaning system of claim 3 wherein said mobile blast head is attached to a wheeled chassis for maneuvering over the hard surface.

6. (Previously presented) A cleaning system of claim 5 wherein said wheeled chassis is attached to said self-propelled

tractor and said mobile blast head and tractor are of a size for removably docking transversely on said bed portion of said truck.

7. (Previously presented) A cleaning system of claim 6 wherein said bed portion includes a ramp, said ramp pivotally connected to said bed portion for raising and lowering said ramp, said ramp sized to support said tractor for docking transversely on said bed.

8. (Currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid ~~comprising~~ consisting of a water reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a liquid and debris removal hose connected at one end to an inlet of a vacuum chamber and connected at the other end to said blast head to remove liquid and coating from said blast head, a high power vacuum pump connected to said vacuum chamber, said vacuum chamber having a rigid outside wall defining an interior, a wire mesh screen in said interior spaced inwardly of said rigid outside wall and forming an enclosure, said inlet inside said enclosure, said vacuum chamber having an outlet for the liquid, said outlet between said rigid

wall and said enclosure, said outlet of said vacuum chamber connected to said reservoir for re-circulation of the liquid, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said high powered vacuum in said vacuum hose to said vacuum chamber through said inlet, said coatings collected by said filter screen in said vacuum chamber and the liquid exiting through said outlet.

9. (Original) A cleaning system of claim 8 wherein a porous flexible bag is removably inserted in said enclosure, said bag having a mouth surrounding said inlet whereby said coatings are collected in said bag.

10. (Original) A cleaning system of claim 8 wherein said reservoir, said vacuum chamber, said vacuum pump and said blast head are mounted on the bed of a truck.

11. (Currently amended) In a cleaning system for removing coatings from a hard surface by high pressure liquid comprising a mobile blast head including at least one high pressure nozzle for directing high pressure liquid onto a hard surface, an articulating link attaching said mobile blast head to a self propelled tractor

said tractor including an engine for propulsion thereof, said link having a leading end and a trailing end, said blast head connected to said leading end, said trailing end connected to said tractor whereby said articulating link is constructed and arranged for manipulating said mobile blast head ~~is movable~~ horizontally and vertically in relation to a hard surface.

12. (Original) In a cleaning system of claim 11 wherein said tractor has a pair of front wheels spaced apart, a bar fixed to said tractor between said front wheels, said link having trailing arms rotatably connected to said bar for rotation in a horizontal plane, said link either fully to the left or right and then fully vertically.

13. (Original) In a cleaning system of claim 1 wherein said articulating link is constructed and arranged for controlled movement in a horizontal and a vertical plane.

**Amendments to the Drawings**

The drawings stand objected to under 37 CFR 1.184(p)(4) because reference characters "19" and "28" have each been used to designate two different items in Figure 1. Figure 1 has been amended to change "19" referring to the rear portion of the tank to "91" to avoid the double inclusion. Reference "28" referring to the upper portion of the tank has been eliminated from the first Figure to avoid the double inclusion. New drawings are being submitted herewith for approval by the Examiner.



**Remarks/Arguments**

A phone interview occurred between Bill Cuchlinski, a registered agent at this firm, and Examiner Sarah Husband on or about 10/24/06 concerning the action dated August 17, 2006. In that interview the Examiner stated that an error had occurred during the last examination and the case should not have been made final. An amended set of claims were submitted to the Examiner to further clarify the invention over the prior art. The Examiner agreed to enter an amendment containing these claims and thereafter conduct another search. This interview resulted in the instant amendment. A second phone interview occurred between Keith Campbell a registered patent attorney at this firm, and Examiner Sarah Husband on November 16, 2006. In that interview Examiner Husband reiterated that the finality of the Office Action would be removed, the amendment would be entered and another search would be conducted.

In the specification, the paragraph beginning at page 9, line 11 has been amended to change reference character associated with the "rear portion of the tank" from 19 to 91.

Claims 1-3 and 5-13 remain in this application. Claim 1 has been amended to further distinguish the instant invention from the prior art of record. Claim 8 has been amended to further distinguish the instant invention from the prior art of record.

In response to the Office Action of August 17, 2006, Applicant requests re-examination and reconsideration of application pursuant to 35 U.S.C 116.

***Claim Rejections- 35 USC §102(b)***

Claims 1-3 and 5 stand rejected under 35 USC 102(b) as being anticipated by Page (5,704,989). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced though

an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. This system requires a person to propel the lawnmower type device across a surface for removal of light surface coatings. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated arm. The articulated arm is mounted to the front portion of a self-propelled mobile tractor. The tractor including an engine for propulsion thereof. The tractor is tethered to a truck or combination truck and trailer to

supply the high pressured water and vacuum recovery to the blast head. The articulated arm mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

It is well established that in order for a claim to be anticipated each and every element as set forth in the claim must be found, either expressly or inherently described in a single prior art reference (see MPEP 2131). Therefore, because the claim as currently amended includes limitations not shown or suggested in the prior art, e.g. a tractor having an engine for propulsion and an articulated link having a blast head mounted at the distal end

of the articulated link, the applicant requests that this rejection be removed.

***Claim Rejections- 35 USC §103(a)***

Claim 6 stands rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Groh (4,007,026) or Dickson (4,7353,052). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter

before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The filters are constructed of pleated paper in the form of tubular elements. The paper is strengthened by impregnation with resin. The pleated elements are periodically cleaned during use of the sweeper by directing pulsed jets of air through the open ends of the elements for dislodging dust accumulated on the outer surface of the elements.

Dickson discloses a surface blasting apparatus. The apparatus includes a rotating wheel to which abrasive is supplied to direct

the abrasive to a surface for abrasion. The device includes a conveyor to re-circulate the abrasive and an air separator to remove small particles from the abrasive prior to re-circulation.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated link. The articulated link is mounted to the front portion of a mobile tractor having an engine for propulsion thereof. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated link mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized

for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh, Dickson, nor Page show or describe a self-propelled tractor having an articulated link controllable by an operator, sitting on the tractor, to maneuver a liquid blast head. The tractor being tethered to a truck for supplying high-pressure water and vacuum recovery to the blast head. Groh is specifically directed at drawing large volumes of dry air and dust from around the broom of an industrial sweeper (Col. 3, line 65). Page is a small, low pressure and hand operated surface cleaning device for removing dust and dirt from surfaces. Neither Groh nor Page show or describe a system suitable to remove surface markings, such as striping, from a roadway. Dickson discloses a device suitable for abrading a road surface however, the road surface is abraded with sand, shot or the like.

It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer, a dust filter system and a sand blaster to assemble the instant invention and thus requests that this rejection be removed.



Claim 7 stands rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Groh (4,007,026), Dickson (4,753,052) and further in view of Herman (H001660). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning

concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The filters are constructed of pleated paper in the form of tubular elements. The paper is strengthened by impregnation with resin. The pleated elements are periodically cleaned during use of the sweeper by directing pulsed jets of air through the open ends of the elements for dislodging dust accumulated on the outer surface of the elements.

Dickson discloses a surface blasting apparatus. The apparatus includes a rotating wheel to which abrasive is supplied to direct the abrasive to a surface for abrasion. The device includes a conveyor to re-circulate the abrasive and an air separator to remove small particles from the abrasive prior to re-circulation.

Herman discloses a process for autonomously locating and retrieving toxic heavy metals and radioactive contaminants. The system includes a box type trailer having rear opening doors. In use, the trailer is separated from the truck to act as a base station (Col. 2, lines 58-64). A ramp is secured to the rear opening for offloading an autonomous drone for searching out radioactive materials on a military firing range. When loaded the autonomous drone is transported in a position parallel to the longitudinal axis of the trailer (see Fig. 1).

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to a liquid blast head mounted at the end of an articulated link. The articulated link is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated link mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art.

The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh, Dickson, Page nor Herman show or describe a tractor and ramp configuration suitable to allow a tractor having a blast head to be loaded and transported in a transverse position with respect to the longitudinal axis of the truck bed. Groh is specifically directed at drawing large volumes of dry air and dust from around the broom of an industrial sweeper (Col. 3, line 65). Therefore, no teaching or suggestion is made as to transporting the device. Page is a small, low pressure and hand operated surface cleaning device for removing dust and dirt from surfaces. Page does not show or suggest any type of tractor to maneuver the blast head and thus does not show or suggest a transversely transportable tractor. Nor does Page disclose or suggest mounting a blast head to an articulating link to allow an operator to manipulate the movements of the head from the tractor operating position. Dickson discloses a device suitable for abrading a road surface however, he

does not show or describe a truck and tractor combination wherein the tractor can be transported transverse with respect to the longitudinal centerline of the truck to reduce the required storage space of the tractor during transport. Herman does not even show a truck in combination with the trailer. In addition, the autonomous drone is transported parallel to the longitudinal centerline of the trailer as shown and described in the specification and the figures. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer, a dust filter system, a sand blaster and a process for locating and retrieving radioactive waste to assemble the instant invention and thus requests that this rejection be removed.

Claims 8-10 stand rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Blehert (4,819,676). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure

the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be

extremely inefficient to remove several miles of markings with the hand operated device.

Blehert discloses a combination sweeping and scrubbing system. The sweeping and scrubbing system includes a gutter brush and a roll brush which are used to direct dry dust and dirt to a vacuum system. In one embodiment the vacuum system deposits the dirt in a vacuum sweeper bag which may have a cage for suspending the bag so that all of the bag can pass air.

In contrast, the vacuum system of the instant invention includes a tank having a rigid outer wall defining an interior. A wire mesh screen is positioned within the interior spaced inwardly of the rigid outside wall and forming an enclosure. The wire mesh screen receives the vacuumed liquid and debris and air is exhausted through the top of the tank. Because the dust and dirt is entrained within the liquid no bag is required with the instant invention. Therefore, the tank may be entirely filled with liquid allowing the air to exhaust without concern of plugged filter bags. The water may then be drained from the tank, through the outlet, leaving the debris and dirt within the wire mesh screen. The wire mesh screen may then be removed from the tank through the rear door and dumped at a suitable location.

Neither Page nor Blehert show or describe a vacuum tank configuration suitable to operate without a filter bag. Nor does

Page or Blehert show or describe a tank which functions to de-water debris so that the solid debris can be disposed of separately from the liquid. Blehert is concerned with maintaining air flow and thus vacuum when used in a dusty environment wherein the dust plugs the apertures in the filter bag. Because the dust and dirt is entrained within the liquid no bag is required with the instant invention. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer and a dust filter system to assemble the instant invention and thus requests that this rejection be removed.

Claims 11-12 stand rejected under 35 USC 103(a) as being obvious over Moll (6,129,094) in view of Groh (4,007,026). The Examiner's position is respectfully traversed.

Moll discloses a hand operated pressure washer for cleaning surfaces. The device is similar in appearance to a hand operated push type lawnmower. The device is maneuvered by hand to clean a surface and the device is attachable to a vacuum system for recovery of liquid and debris however, none is shown or disclosed.



Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The sweeper is a three wheeled device, with an engine, that can be steered by an operator to maneuver the sweeper.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated arm. The articulated arm is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated arm mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be

utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh nor Moll show or disclose any type of articulated link secured to the tractor and the spray head that would allow an operator to maneuver the spray head along a path independant from that of the tractor.

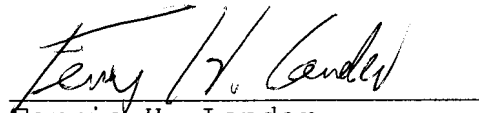
It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine the hand maneuvered device of Moll with the compact dust filter system of Groh to assemble the instant invention and therefore, requests that this rejection be removed.

**CONCLUSION**

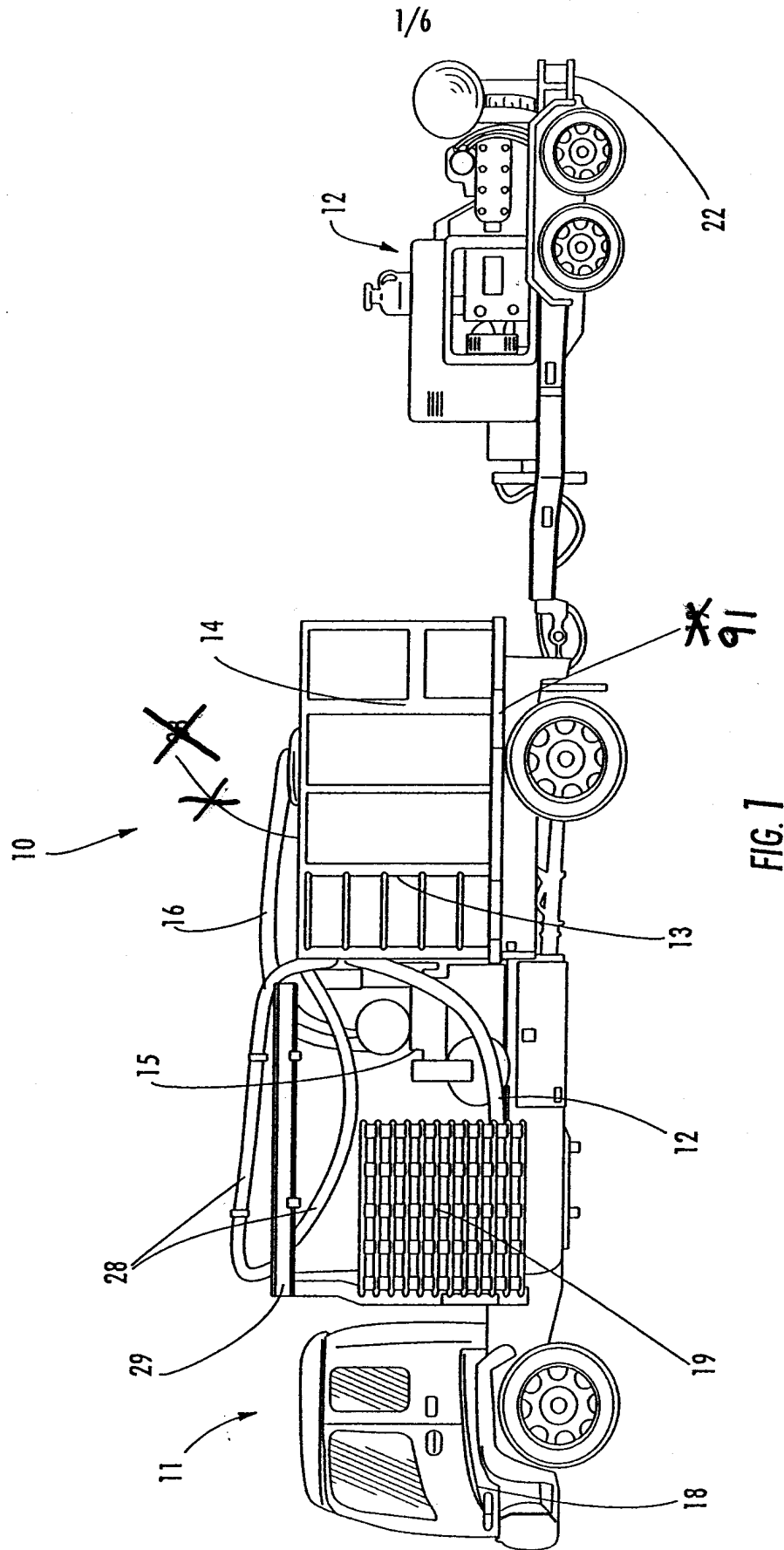
In light of the foregoing remarks, amendments to the specification and amendments to the claims, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested. Should there be any remaining issues which can be resolved via an Examiner's Amendment, the Examiner is urged to call the undersigned in order to expedite the prosecution of this application.

The Commissioner for Patents is hereby authorized to charge any deficiency in any fees due with the filing of this paper or credit any overpayments in any fees paid on the filing to Deposit Account No. 13-0439.

Respectfully submitted,

  
\_\_\_\_\_  
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(561) 625-6572 (Fax)



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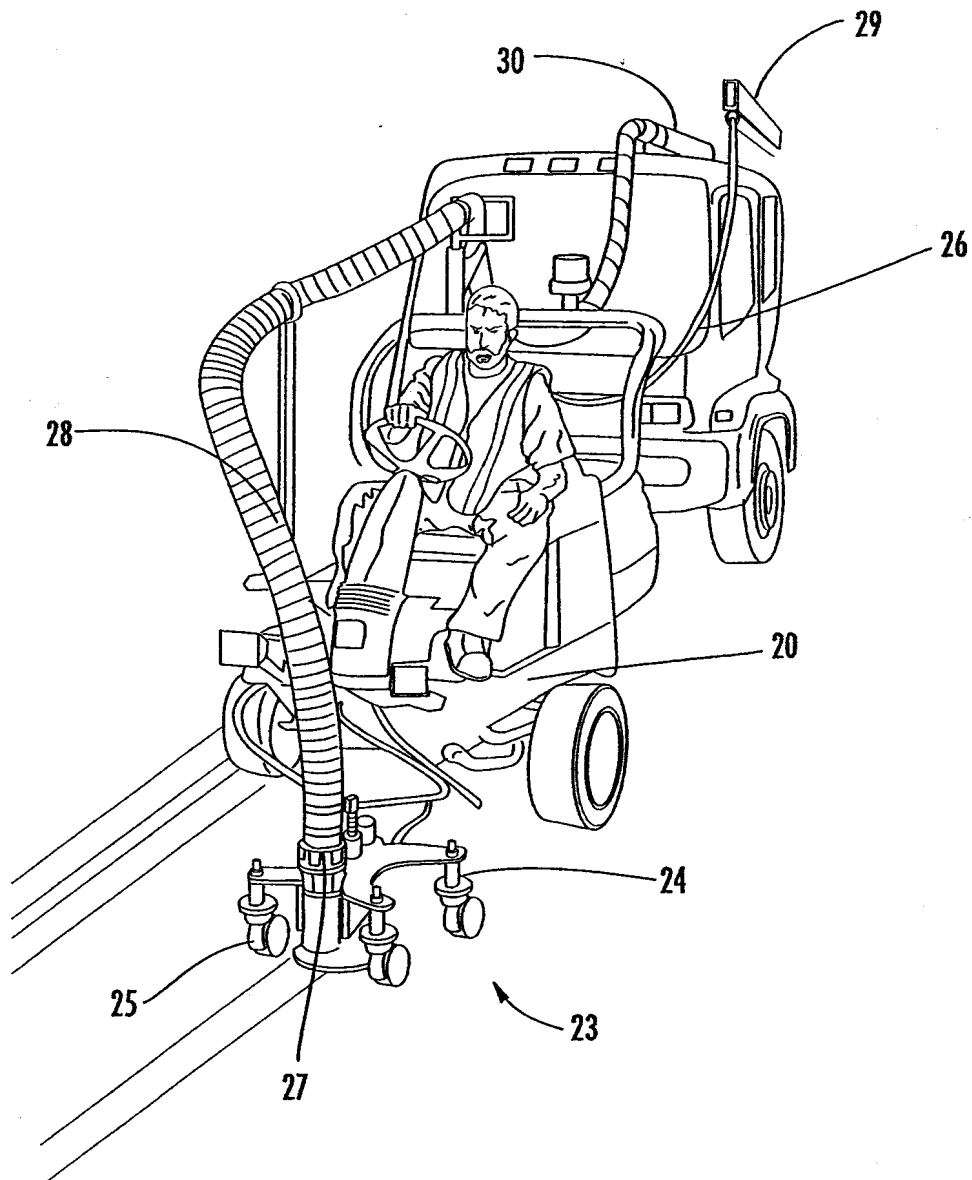


FIG. 2

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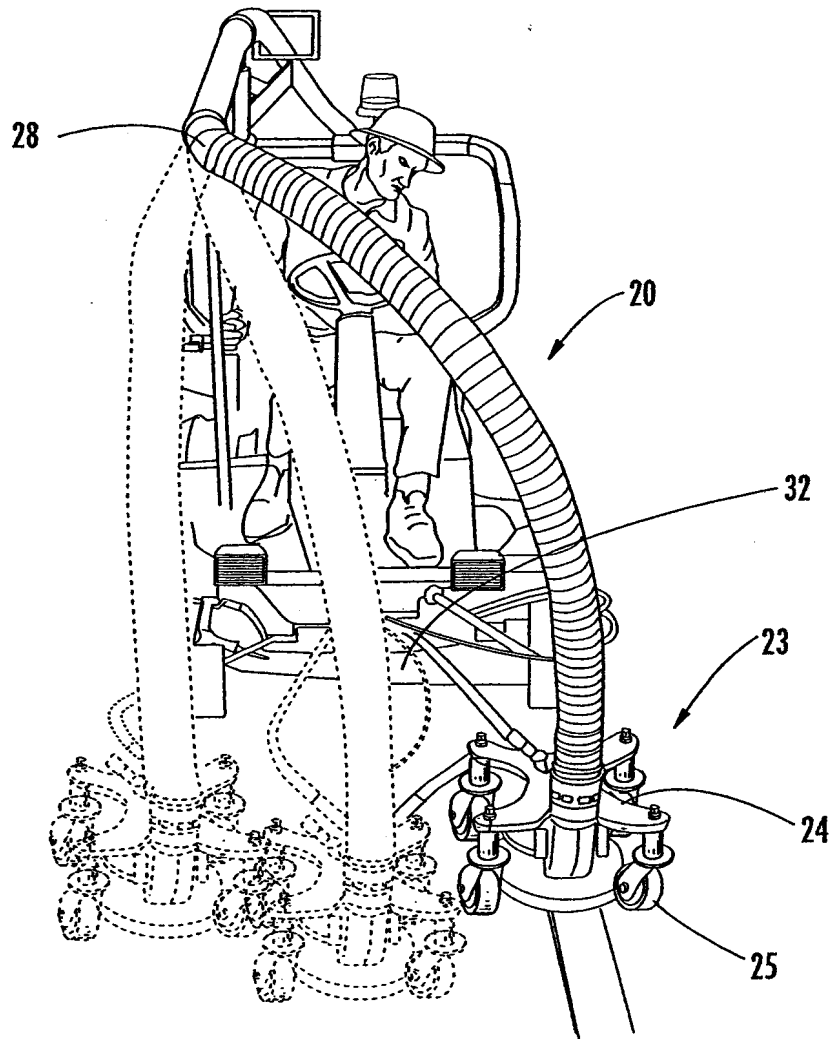


FIG. 3

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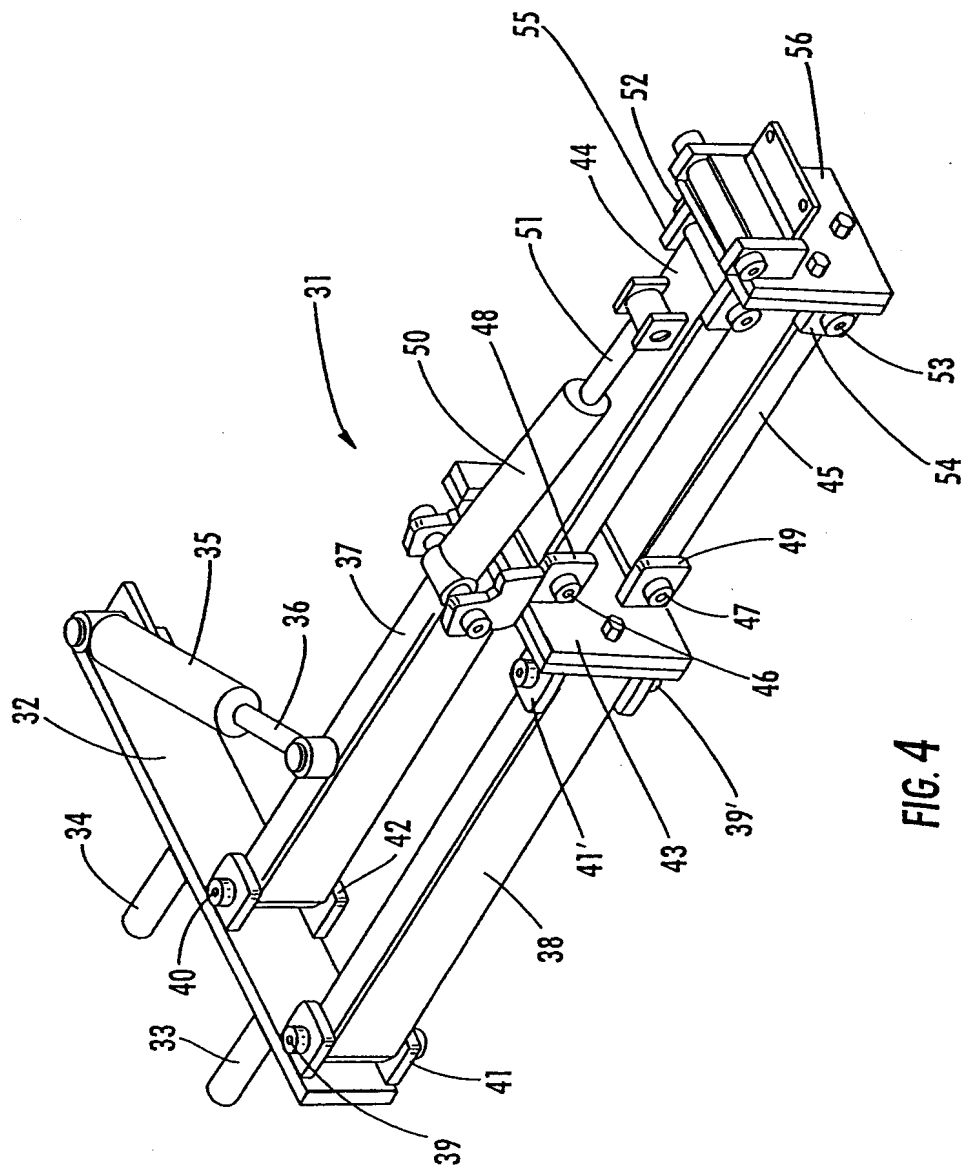


FIG. 4

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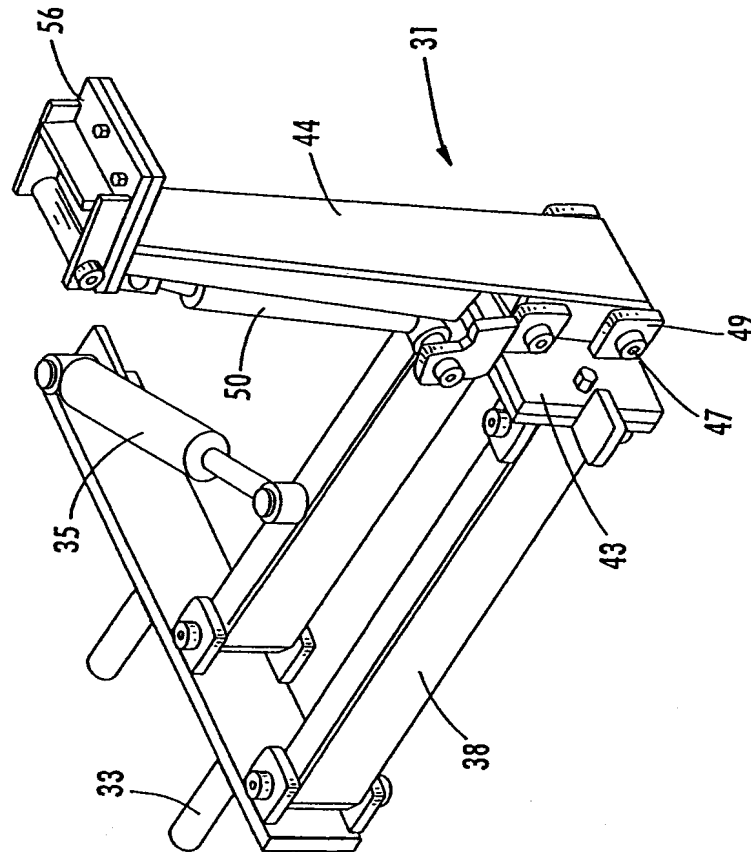
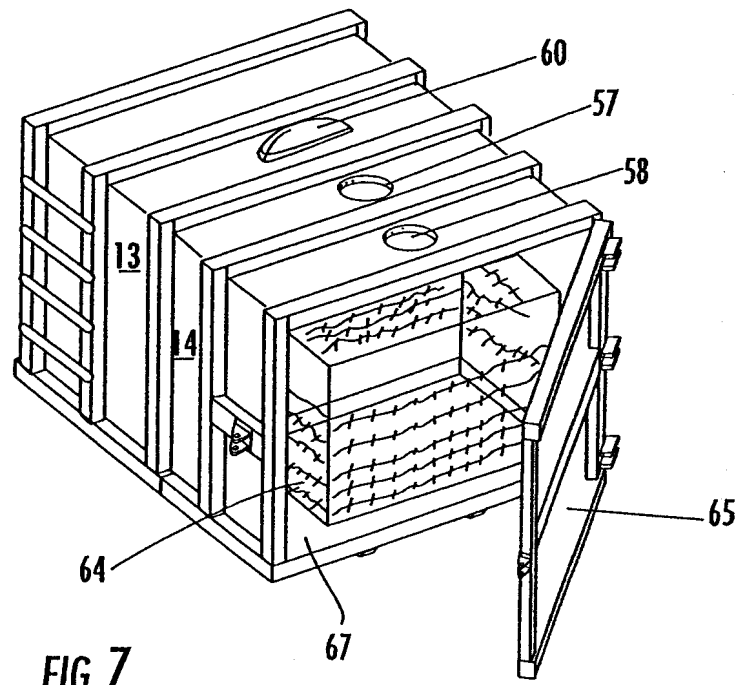
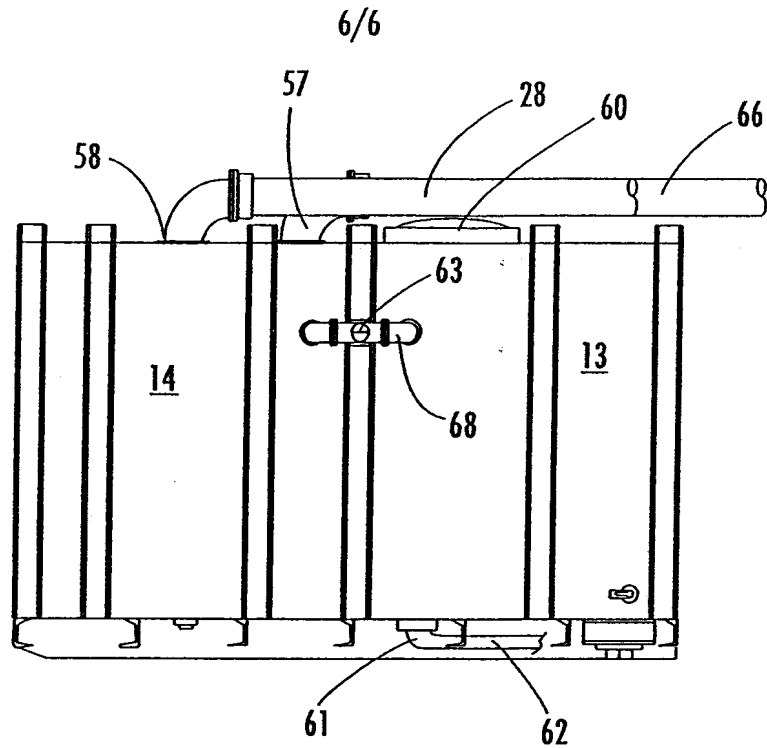


FIG. 5





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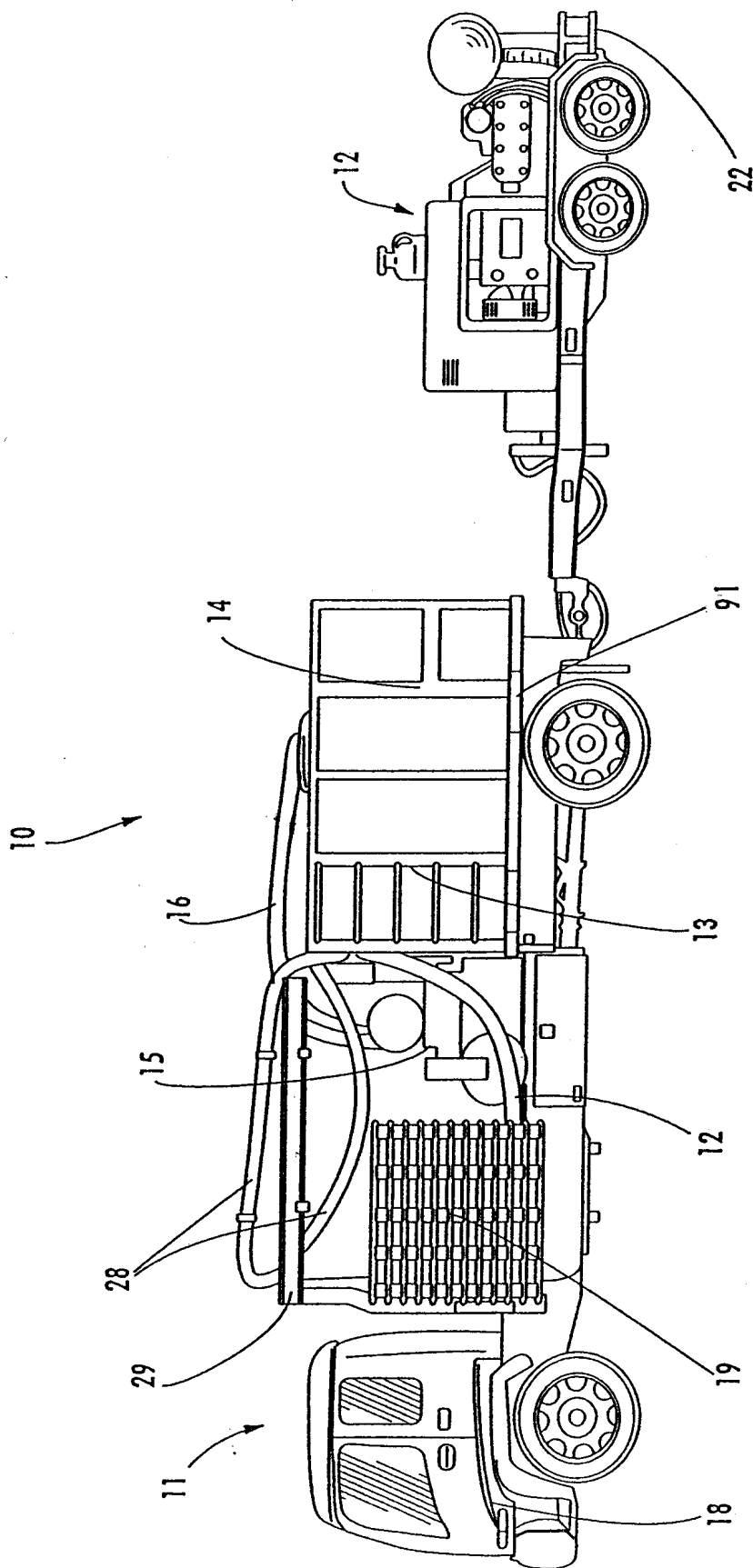


FIG. 1

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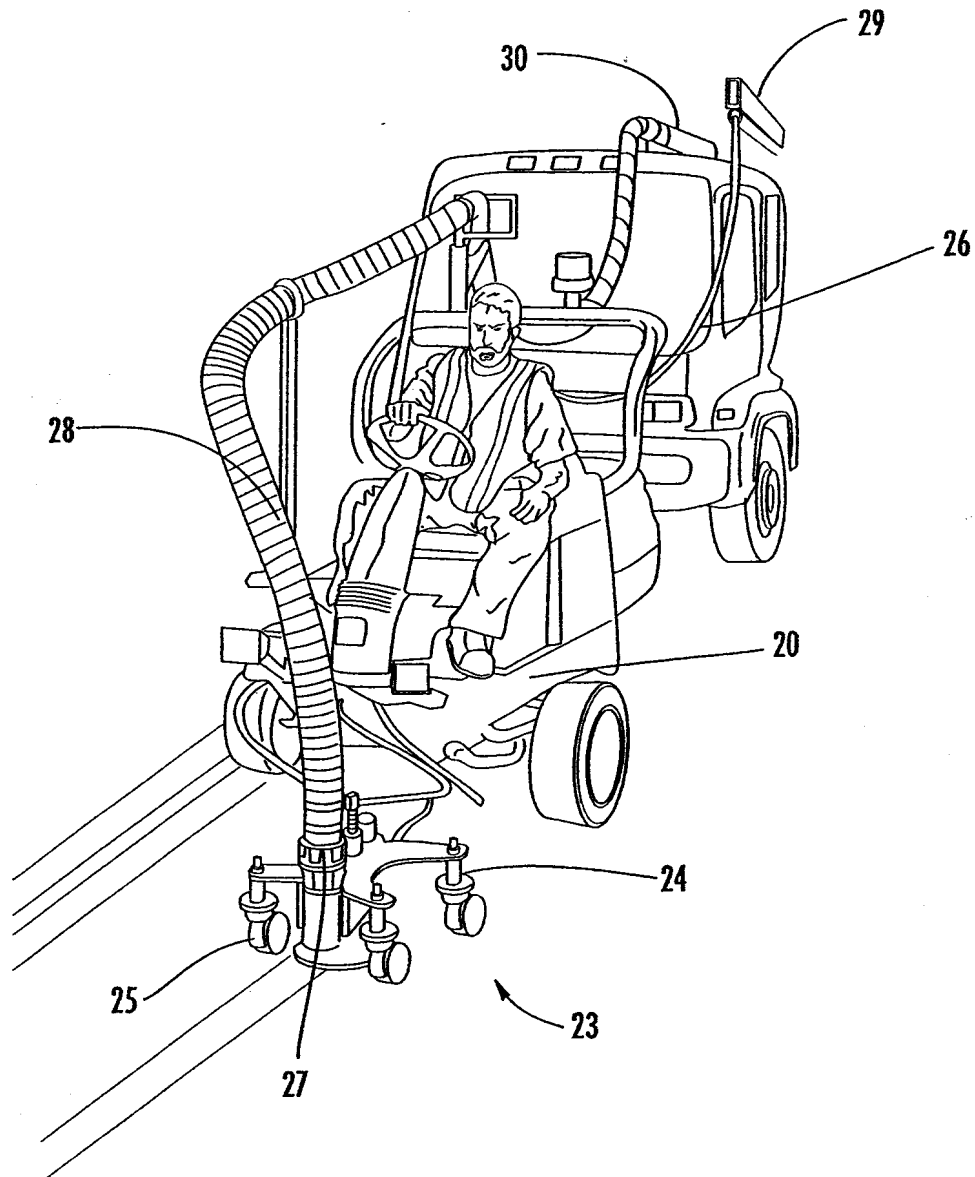


FIG. 2

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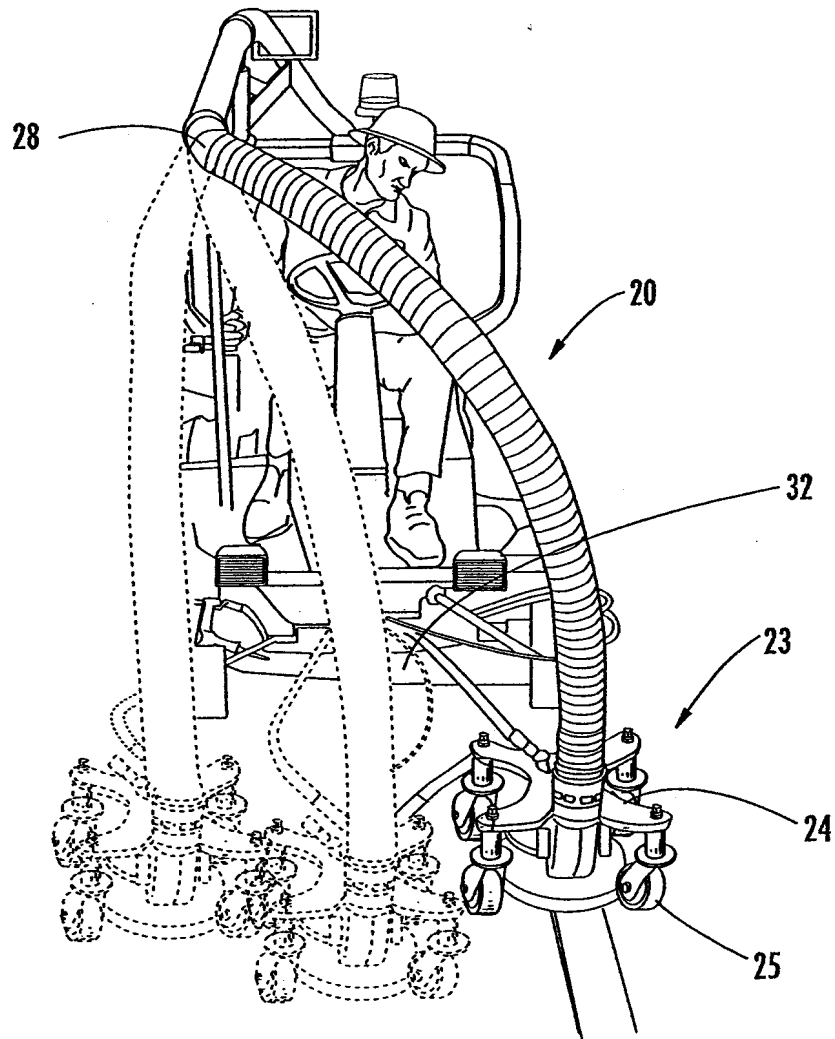


FIG. 3

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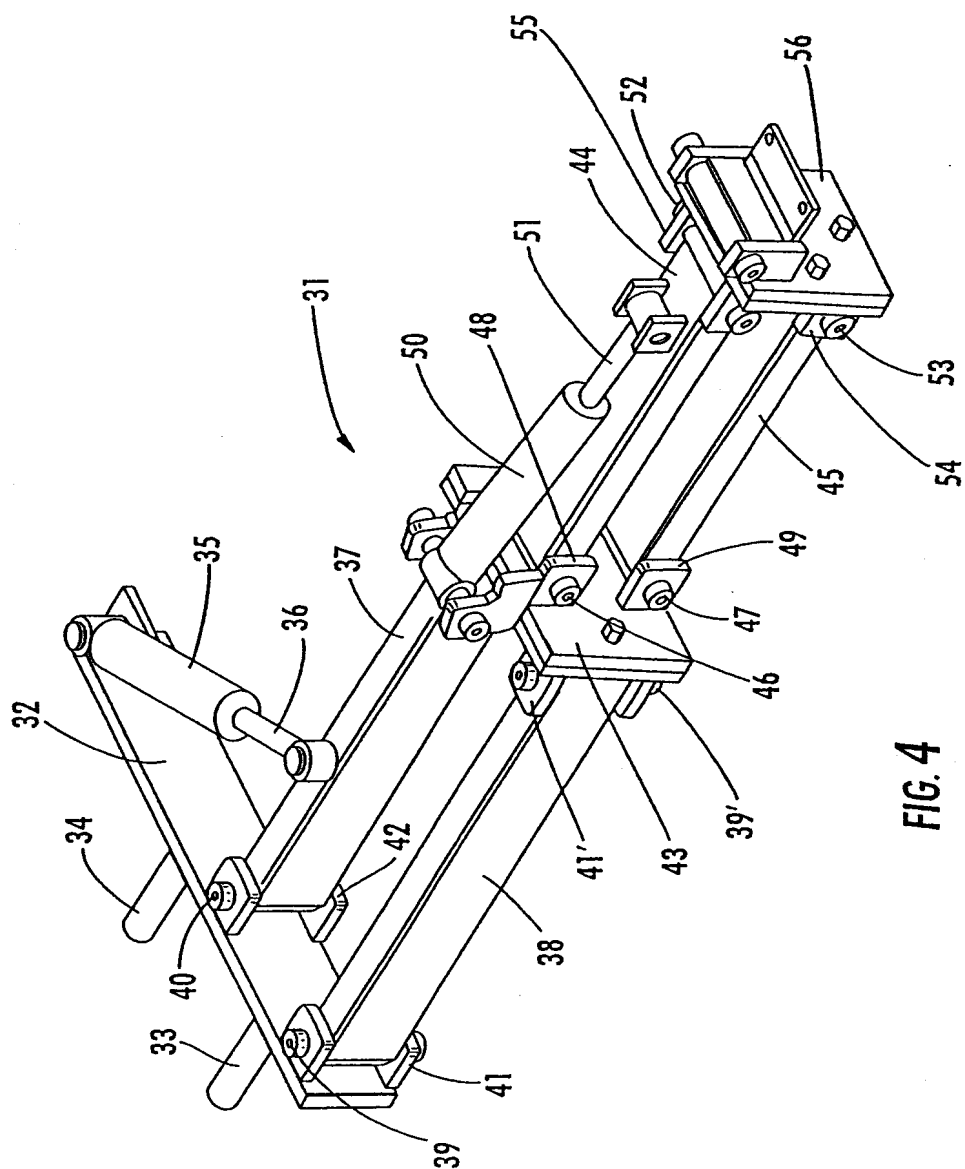


FIG. 4

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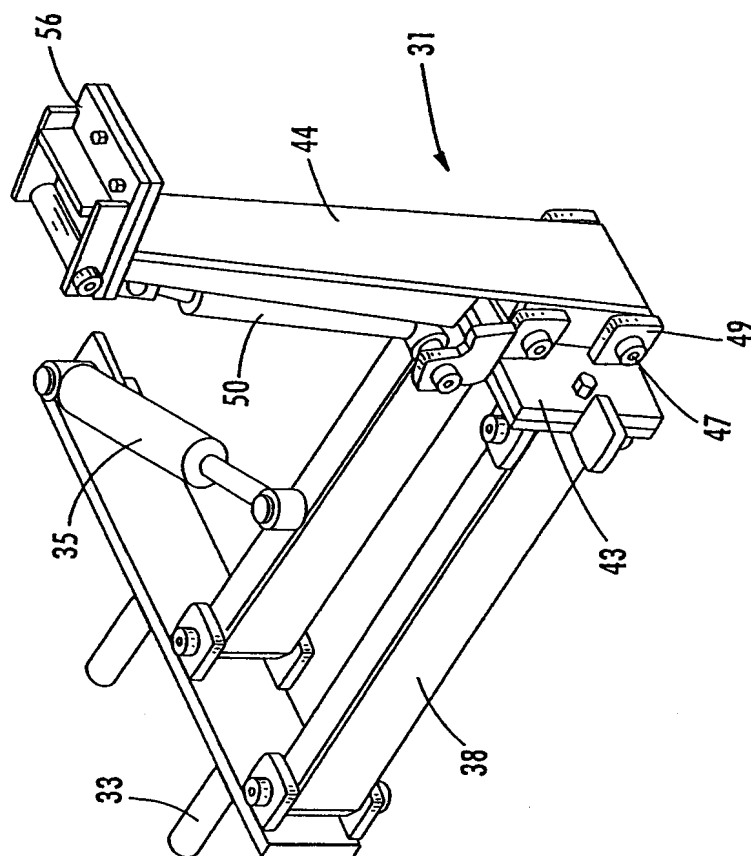


FIG. 5

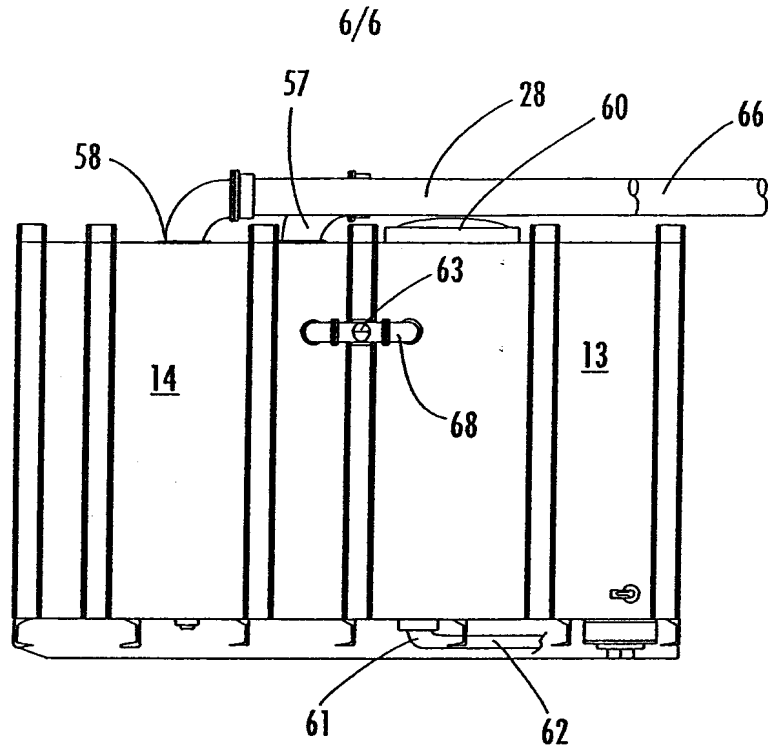


FIG. 6

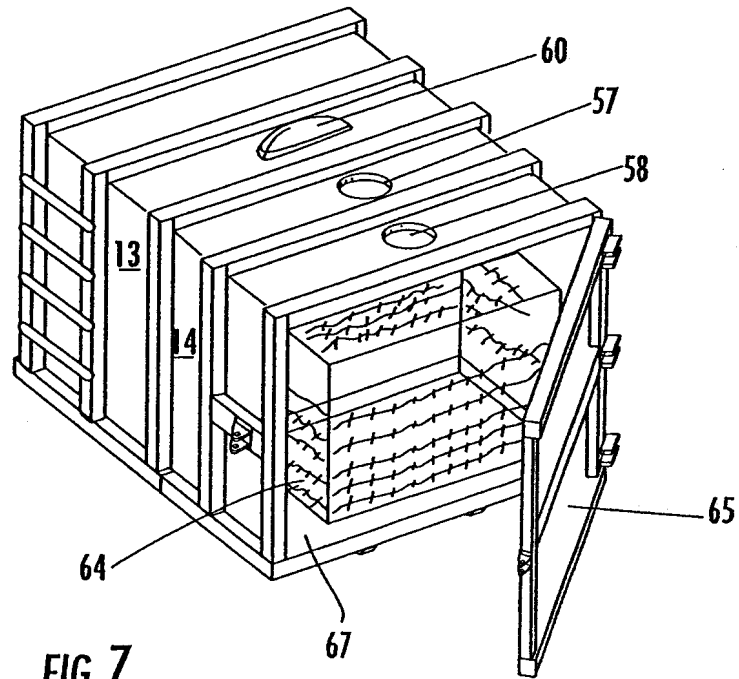


FIG. 7

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	1320305
<b>Application Number:</b>	10884643
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6130
<b>Title of Invention:</b>	Stripe removal system
<b>First Named Inventor/Applicant Name:</b>	James P. Crocker
<b>Customer Number:</b>	21917
<b>Filer:</b>	Ferris Harvey Lander
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	2708U.001
<b>Receipt Date:</b>	17-NOV-2006
<b>Filing Date:</b>	02-JUL-2004
<b>Time Stamp:</b>	12:51:25
<b>Application Type:</b>	Utility

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1		2708001ResponseOA81706.pdf	1256546	yes	40



	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment After Final	1	2
	Specification	3	3
	Claims	4	8
	Drawings	9	9
	Applicant Arguments/Remarks Made in an Amendment	10	28
	Drawings	29	40
Warnings:			
Information:			
Total Files Size (in bytes):		1256546	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p>			

NOV 16 2006

# FAX

McHale & Slavin, P.A.

■ Intellectual Property Attorneys ■



Date: 11-16-06

To: Sarah E. Husband

Recipient Fax #: 273-8300  
(571)272-8387

From: Keith Campbell

Reference / Matter #: 2708U.001

Subject: 10/884,643

# PAGES (Including Cover Page): 29

Remarks

Dear Ms. Husband:

Attached is a copy of the proposed amendment to Application No. 10/884,643. Please call me after you have had a chance to discuss the case with your Supervisor. Also please call if there are any issues which can be resolved via Examiner's amendment.

Best regards  
Keith Campbell  
Reg. No. 52,686

McHale & Slavin, P.A.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION : **STRIPE REMOVAL SYSTEM**  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 2, 2004  
EXAMINER : Husband Sarah E.  
GROUP ART UNIT : 1746  
OUR FILE NO. : 2708U.001

-----  
CERTIFICATE UNDER 37 CFR 1.8(a)  
I hereby certify that this correspondence is being  
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P.O. Box 1450, Alexandria, VA 22313-1450 on \_\_\_\_\_

TO:  
Mail Stop: Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION OF August 17, 2006**

Madam:

In response to the Office Action dated August 17, 2006 having  
a shortened statutory period for response set to expire November  
17, 2006, kindly enter the following response:

Amendments to the Specification begin on page 3 of this paper.

Amendments to the Claims are reflected in the listing of claims  
which begins on page 4 of this paper.

Amendments to the Drawings begin on page 9 of this paper and  
include both attached replacement sheets and annotated sheets

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003/029

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showing changes.

Remarks/Arguments begin on page 10 of this paper.

An Appendix including amended drawing figures is attached following  
page 28 of this paper.

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**Amendments to the Specification**

Please replace the paragraph beginning at page 9, line 11, with the following rewritten paragraph:

The sump 14 is positioned on the rear end of the bed 12. The rear portion ~~[[19]]~~ 91 of the bed is pivotally mounted on the truck frame and hydraulically powered to move in the vertical plane permitting dumping of the contents of the sump 14. The sump 14 is connected to the vacuum pump 15 by hose 16. The intake of a high power vacuum pump capable of approximately 1100 CFM (cubic feet per minute) is connected to the vacuum tank. The vacuum tank and pump are also mounted on the bed of the prime-mover 11.

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**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising in combination a liquid reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a waste removal hose connected at one end to said blast head and at the other end to a sump for collection of liquid and coating, said sump connected to said liquid reservoir, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface for removing coatings therefrom, said liquid and coatings ~~entrained by~~ conveyed through said waste removal hose to said sump via a high power vacuum pump, said coatings collected in said sump ~~and the waste liquid exiting through an outlet~~, said liquid reservoir, said sump and said high power vacuum pump being mounted on a mobile frame, said mobile frame forming an integral part of a truck having a bed portion and

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a cab portion, said truck being self-propelled, said mobile blast head being mounted at a distal end of an articulating link, a proximal end of said articulating link secured to a ~~self-propelled~~ tractor, said tractor including an engine for propulsion thereof, wherein said high pressure hose said waste removal hose extend between said truck and said tractor and whereby said tractor is utilized to maneuver said blast head.

2. (Original) A cleaning system of claim 1 wherein a high power vacuum pump is connected to said sump.

3. (Original) A cleaning system of claim 2 wherein a shroud is connected to said blast head, said shroud surrounds said at least one nozzle and forms a negative pressure chamber.

4. (Cancelled)

5. (Original) A cleaning system of claim 3 wherein said mobile blast head is attached to a wheeled chassis for maneuvering over the hard surface.

6. (Previously amended) A cleaning system of claim 5 wherein said wheeled chassis is attached to said self-propelled tractor and

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said mobile blast head and tractor are of a size for removably docking transversely on said bed portion of said truck.

7. (Previously amended) A cleaning system of claim 6 wherein said bed portion includes a ramp, said ramp pivotally connected to said bed portion for raising and lowering said ramp, said ramp sized to support said tractor for docking transversely on said bed.

8. (Currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid ~~comprising~~ consisting of a water reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a liquid and debris removal hose connected at one end to an inlet of a vacuum chamber and connected at the other end to said blast head to remove liquid and coating from said blast head, a high power vacuum pump connected to said vacuum chamber, said vacuum chamber having a rigid outside wall defining an interior, a wire mesh screen in said interior spaced inwardly of said rigid outside wall and forming an enclosure, said inlet inside said enclosure, said vacuum chamber having an outlet for the liquid, said outlet between said rigid wall and said enclosure, said outlet of said vacuum chamber



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connected to said reservoir for re-circulation of the liquid, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said high powered vacuum in said vacuum hose to said vacuum chamber through said inlet, said coatings collected by said filter screen in said vacuum chamber and the liquid exiting through said outlet.

9. (Original) A cleaning system of claim 8 wherein a porous flexible bag is removably inserted in said enclosure, said bag having a mouth surrounding said inlet whereby said coatings are collected in said bag.

10. (Original) A cleaning system of claim 8 wherein said reservoir, said vacuum chamber, said vacuum pump and said blast head are mounted on the bed of a truck.

11. (Currently amended) In a cleaning system for removing coatings from a hard surface by high pressure liquid comprising a mobile blast head including at least one high pressure nozzle for directing high pressure liquid onto a hard surface, an articulating link attaching said mobile blast head to a self propelled tractor said tractor including an engine for propulsion thereof, said link

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having a leading end and a trailing end, said blast head connected to said leading end, said trailing end connected to said tractor whereby said articulating link is constructed and arranged for manipulating said mobile blast head ~~is movable~~ horizontally and vertically in relation to a hard surface.

12. (Original) In a cleaning system of claim 11 wherein said tractor has a pair of front wheels spaced apart, a bar fixed to said tractor between said front wheels, said link having trailing arms rotatably connected to said bar for rotation in a horizontal plane, said link either fully to the left or right and then fully vertically.

13. (Original) In a cleaning system of claim 1 wherein said articulating link is constructed and arranged for controlled movement in a horizontal and a vertical plane.

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**Amendments to the Drawings**

The drawings stand objected to under 37 CFR 1.184(p)(4) because reference characters "19" and "28" have each been used to designate two different items in Figure 1. Figure 1 has been amended to change "19" referring to the rear portion of the tank to "91" to avoid the double inclusion. Reference "28" referring to the upper portion of the tank has been eliminated from the first Figure to avoid the double inclusion. New drawings are being submitted herewith for approval by the Examiner.

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**Remarks/Arguments**

A phone interview occurred between Bill Cuchlinski, a registered agent at this firm, and Examiner Sarah Husband on or about 10/24/06 concerning the action dated August 17, 2006. In that interview the Examiner stated that an error had occurred during the last examination and the case should not have been made final. An amended set of claims were submitted to the Examiner to further clarify the invention over the prior art. The Examiner agreed to enter an amendment containing these claims and thereafter conduct another search. This interview resulted in the instant amendment.

In the specification, the paragraph beginning at page 9, line 11 has been amended to change reference character associated with the "rear portion of the tank" from 19 to 91.

Claims 1-3 and 5-13 remain in this application. Claim 1 has been amended to further distinguish the instant invention from the prior art of record. Claim 8 has been amended to further distinguish the instant invention from the prior art of record.

In response to the Office Action of August 17, 2006, Applicant requests re-examination and reconsideration of application pursuant to 35 U.S.C 116.

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**Claim Rejections- 35 USC §102(b)**

Claims 1-3 and 5 stand rejected under 35 USC 102(b) as being anticipated by Page (5,704,989). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning

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concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. This system requires a person to propel the lawnmower type device across a surface for removal of light surface coatings. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated arm. The articulated arm is mounted to the front portion of a self-propelled mobile tractor. The tractor including an engine for propulsion thereof. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated arm mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like

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from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

It is well established that in order for a claim to be anticipated each and every element as set forth in the claim must be found, either expressly or inherently described in a single prior art reference (see MPEP 2131). Therefore, because the claim as currently amended includes limitations not shown or suggested in the prior art, e.g. a tractor having an engine for propulsion and an articulated link having a blast head mounted at the distal end of the articulated link, the applicant requests that this rejection be removed.

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**Claim Rejections- 35 USC §103(a)**

Claim 6 stands rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Groh (4,007,026) or Dickson (4,7353,052). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning



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concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The filters are constructed of pleated paper in the form of tubular elements. The paper is strengthened by impregnation with resin. The pleated elements are periodically cleaned during use of the sweeper by directing pulsed jets of air through the open ends of the elements for dislodging dust accumulated on the outer surface of the elements.

Dickson discloses a surface blasting apparatus. The apparatus includes a rotating wheel to which abrasive is supplied to direct the abrasive to a surface for abrasion. The device includes a conveyor to re-circulate the abrasive and an air separator to remove small particles from the abrasive prior to re-circulation.

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In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated link. The articulated link is mounted to the front portion of a mobile tractor having an engine for propulsion thereof. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated link mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh, Dickson, nor Page show or describe a self-

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propelled tractor having an articulated link controllable by an operator, sitting on the tractor, to maneuver a liquid blast head. The tractor being tethered to a truck for supplying high-pressure water and vacuum recovery to the blast head. Groh is specifically directed at drawing large volumes of dry air and dust from around the broom of an industrial sweeper (Col. 3, line 65). Page is a small, low pressure and hand operated surface cleaning device for removing dust and dirt from surfaces. Neither Groh nor Page show or describe a system suitable to remove surface markings, such as striping, from a roadway. Dickson discloses a device suitable for abrading a road surface however, the road surface is abraded with sand, shot or the like.

It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer, a dust filter system and a sand blaster to assemble the instant invention and thus requests that this rejection be removed.

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Claim 7 stands rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Groh (4,007,026), Dickson (4,753,052) and further in view of Herman (H001660). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning

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concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The filters are constructed of pleated paper in the form of tubular elements. The paper is strengthened by impregnation with resin. The pleated elements are periodically cleaned during use of the sweeper by directing pulsed jets of air through the open ends of the elements for dislodging dust accumulated on the outer surface of the elements.

Dickson discloses a surface blasting apparatus. The apparatus includes a rotating wheel to which abrasive is supplied to direct the abrasive to a surface for abrasion. The device includes a conveyor to re-circulate the abrasive and an air separator to remove small particles from the abrasive prior to re-circulation.

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Herman discloses a process for autonomously locating and retrieving toxic heavy metals and radioactive contaminants. The system includes a box type trailer having rear opening doors. In use, the trailer is separated from the truck to act as a base station (Col. 2, lines 58-64). A ramp is secured to the rear opening for offloading an autonomous drone for searching out radioactive materials on a military firing range. When loaded the autonomous drone is transported in a position parallel to the longitudinal axis of the trailer (see Fig. 1).

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to a liquid blast head mounted at the end of an articulated link. The articulated link is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated link mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art.

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The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh, Dickson, Page nor Herman show or describe a tractor and ramp configuration suitable to allow a tractor having a blast head to be loaded and transported in a transverse position with respect to the longitudinal axis of the truck bed. Groh is specifically directed at drawing large volumes of dry air and dust from around the broom of an industrial sweeper (Col. 3, line 65). Therefore, no teaching or suggestion is made as to transporting the device. Page is a small, low pressure and hand operated surface cleaning device for removing dust and dirt from surfaces. Page does not show or suggest any type of tractor to maneuver the blast head and thus does not show or suggest a transversely transportable tractor. Nor does Page disclose or suggest mounting a blast head to an articulating link to allow an operator to manipulate the movements of the head from the tractor operating position. Dickson discloses a device suitable for abrading a road surface however, he

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does not show or describe a truck and tractor combination wherein the tractor can be transported transverse with respect to the longitudinal centerline of the truck to reduce the required storage space of the tractor during transport. Herman does not even show a truck in combination with the trailer. In addition, the autonomous drone is transported parallel to the longitudinal centerline of the trailer as shown and described in the specification and the figures. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer, a dust filter system, a sand blaster and a process for locating and retrieving radioactive waste to assemble the instant invention and thus requests that this rejection be removed.

Claims 8-10 stand rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Blehert (4,819,676). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34



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the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the

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device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Blehert discloses a combination sweeping and scrubbing system. The sweeping and scrubbing system includes a gutter brush and a roll brush which are used to direct dry dust and dirt to a vacuum system. In one embodiment the vacuum system deposits the dirt in a vacuum sweeper bag which may have a cage for suspending the bag so that all of the bag can pass air.

In contrast, the vacuum system of the instant invention includes a tank having a rigid outer wall defining an interior. A wire mesh screen is positioned within the interior spaced inwardly of the rigid outside wall and forming an enclosure. The wire mesh screen receives the vacuumed liquid and debris and air is exhausted through the top of the tank. Because the dust and dirt is entrained within the liquid no bag is required with the instant invention. Therefore, the tank may be entirely filled with liquid allowing the air to exhaust without concern of plugged filter bags. The water may then be drained from the tank, through the outlet, leaving the debris and dirt within the wire mesh screen. The wire mesh screen may then be removed from the tank through the rear door and dumped at a suitable location.

Neither Page nor Blehert show or describe a vacuum tank

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configuration suitable to operate without a filter bag. Nor does Page or Blehert show or describe a tank which functions to de-water debris so that the solid debris can be disposed of separately from the liquid. Blehert is concerned with maintaining air flow and thus vacuum when used in a dusty environment wherein the dust plugs the apertures in the filter bag. Because the dust and dirt is entrained within the liquid no bag is required with the instant invention. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer and a dust filter system to assemble the instant invention and thus requests that this rejection be removed.

Claims 11-12 stand rejected under 35 USC 103(a) as being obvious over Moll (6,129,094) in view of Groh (4,007,026). The Examiner's position is respectfully traversed.

Moll discloses a hand operated pressure washer for cleaning surfaces. The device is similar in appearance to a hand operated push type lawnmower. The device is maneuvered by hand to clean a surface and the device is attachable to a vacuum system for

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recovery of liquid and debris however, none is shown or disclosed.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The sweeper is a three wheeled device, with an engine, that can be steered by an operator to maneuver the sweeper.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated arm. The articulated arm is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated arm mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required

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to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh nor Moll show or disclose any type of articulated link secured to the tractor and the spray head that would allow an operator to maneuver the spray head along a path independant from that of the tractor.

It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine the hand maneuvered device of Moll with the compact dust filter system of Groh to assemble the instant invention and therefore, requests that this rejection be removed.

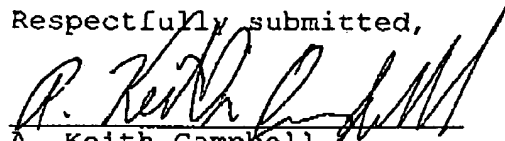
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Appl. No. 10/884,643 Amdt. dated Reply to Office action of August 17, 2006

CONCLUSION

In light of the foregoing remarks, amendments to the specification and amendments to the claims, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested. Should there be any remaining issues which can be resolved via an Examiner's Amendment, the Examiner is urged to call the undersigned in order to expedite the prosecution of this application.

Respectfully submitted,

  
A. Keith Campbell  
Registration # 52,686

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action response 102006.wpd



# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130
21917	7590	08/17/2006	EXAMINER	
MCHALE & SLAVIN, P.A. 2855 PGA BLVD PALM BEACH GARDENS, FL 33410			HUSBAND, SARAH E	
			ART UNIT	PAPER NUMBER

1746

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/884,643

Applicant(s)

CROCKER, JAMES P.

Examiner

Sarah E. Husband

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.



## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments, see Remarks, filed 6/5/2006, with respect to the specification and claims have been fully considered and are persuasive. The objection of the specification and claims has been withdrawn.

Applicant's amendments to the drawings are noted. Although the new drawings substantially improve the clarity of the invention, a few minor issues remain and are described below.

Applicant's arguments, see Remarks, filed 6/5/2006, with respect to the 112 rejection have been fully considered and are persuasive. The 112 rejection of claims 1-7 has been withdrawn.

Applicant's arguments filed 6/5/2006 have been fully considered but they are not persuasive. With respect to Applicant's arguments regarding the 102 rejection of claims 1-5 over Page and the 103 rejection of claim 11 over Moll and Page, these arguments are not persuasive because the articulated link is simply a jointed connection. Page clearly discloses a jointed connection in Fig. 4a, 4b as the structure is said to rotate, therefore a joint is necessary to allow this rotation. Further Moll also discloses an articulated link in Fig. 1 and is described as pivoting in many directions. Therefore, as no further limitations are given of the articulated link, the claimed invention still reads on the prior art. In response to Applicant's argument that Page would not provide the proper pressure to remove a coating, this argument is also not persuasive for the reasons that there are no claim limitations

requiring certain coatings or pressures. Therefore, Page certainly would anticipate removing a coating from a hard surface, whatever the coating may be, such as surface oil or debris.

The arguments regarding claim 6 are also not persuasive because as is disclosed in the office action, it would be obvious to make something automatic which was manual as the automatic cleaning apparatus disclosed by Groh and Dickson. Applicant's arguments regarding Herman (claim 7) are not persuasive because it would be obvious to one of ordinary skill in the art to provide a ramp to load the cleaning apparatus (shown by Page) as the structure is mobile and there would need to be some way of loading and unloading the blast head safely and efficiently as is shown by Herman. Applicant's arguments regarding claim 8 are not persuasive because the language is comprising language and although the Applicant describes a mesh screen, Blehert has this feature and comprising language permits additional features such as the filter bag. Therefore, the rejection stands as follows.

### *Drawings*

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "19" and "28" have each been used to designate two different items in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Page (US Patent No. 5,704,989).

Page discloses a high pressure surface cleaning apparatus having a liquid reservoir (12) connected to a high pressure pump (14), which is connected to a mobile blast head (26) by a high pressure hose (24) having at least one nozzle, a waste removal hose (28) connected to the blast head at one end and a contaminant tank at the other end (see Fig. 1, 2). Page also discloses the sump is connected to the liquid reservoir and the sump also collects the liquid and contaminants (Fig. 2, Items 34, 46, 66; see col. 2-5). Page further discloses a vacuum pump connected to the sump (30) and a shroud surrounds the blast head (Fig. 4A). Page also discloses the liquid reservoir, pump and vacuum pump are mounted on a mobile frame which is part of a truck with a bed and a cab (Fig. 1, Item 8) and the mobile blast head is attached to a wheeled chassis (Fig. 1 and 4A).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Page in view of Dickson (US Patent No. 4,753,052) or Groh (US Patent No. 4,007,026).

Page discloses the apparatus shown above in the 102(b) rejection. Page does not specifically disclose the chassis being self-powered. Dickson and Groh disclose self-propelled tractors (Fig. 1 of each). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Page with Dickson or Groh for the benefit of using less man power as the Courts have ruled that the provision of mechanical or automated means to replace manual activity is obvious, *In re Venner* 128 USPQ 192 (CCPA 1958); *In re Rundell* 9 USPQ 220 (CCPA 1931).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Page and Dickson (or Groh) as applied to claims 1-6 above, and further in view of Herman (US Statutory Invention Registration H001660).

Page and Dickson (or Groh) disclose the apparatus in the above 103(a) rejection. They do not disclose a ramp connected to the bed. Herman discloses a bed with a ramp (Fig. 2, Item 15) to load a mobile platform (14), which is pivotable from where it is attached to the truck. At the time of the invention, it would have been obvious to one of ordinary

skill in the art to modify Page and Dickson (or Groh) with Herman for the benefit of easily transporting and loading the mobile cleaning unit.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page in view of Blehert (US Patent No. 4,819,676).

Page discloses a high pressure surface cleaning apparatus having a liquid reservoir (12) connected to a high pressure pump (14), which is connected to a mobile blast head (26) by a high pressure hose (24) having at least one nozzle, a waste removal hose (28) connected to the blast head at one end and a contaminant tank at the other end (see Fig. 1, 2). Page also discloses the sump is connected to the liquid reservoir and the sump also collects the liquid and contaminants (Fig. 2, Items 34, 46, 66; see col. 2-5). Page further discloses a vacuum pump connected to the sump (30) and a shroud surrounds the blast head (Fig. 4A). Page also discloses the liquid reservoir, pump and vacuum pump are mounted on a mobile frame which is part of a truck with a bed and a cab (Fig. 1, Item 8) and the mobile blast head is attached to a wheeled chassis (Fig. 1 and 4A). Page also discloses filters having mesh (col. 2, ll. 60-65) and bag filters (col. 4, ll. 42-55; Items 38,39). Page does not specifically disclose placing the mesh and bag filters inside of the vacuum tank. However, Blehert discloses a vacuum assembly having a mesh screen and filter bag inside of the vacuum tank (col. 5; Fig. 11, 12). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Page with Blehert for the benefit of having a more compact arrangement.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll (US Patent No. 6,129,094) in view of Groh or Dickson.

Moll discloses a high pressure cleaning system for removing coatings from a hard surface using high or ultra high pressure liquid and having a mobile blast head including at least one nozzle and pivoting unit and wheels to direct the mobile unit (see Fig. 1, Items 62,7; col. 6-10; see entire document). Moll does not specifically disclose the mobile unit being self-propelled. Groh and Dickson both disclose the mobile cleaning units being self-propelled (Fig. 1). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Page with Dickson or Groh for the benefit of using less man power as the Courts have ruled that the provision of mechanical or automated means to replace manual activity is obvious, *In re Venner* 128 USPQ 192 (CCPA 1958); *In re Rundell* 9 USPQ 220 (CCPA 1931).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.

In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah E. Husband whose telephone number is (571) 272-8387. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SEH



**MICHAEL BARR**  
SUPERVISORY PATENT EXAMINER

**Search Notes**

Application/Control No.

10/884,643

Examiner

Sarah E. Husband

Applicant(s)/Patent under  
Reexamination

CROCKER, JAMES P.

Art Unit

1746

**SEARCHED**

Class	Subclass	Date	Examiner

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Updated Search. See attached search strategy	8/14/2006	SEH





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PTO/SB/21 (09-04)  
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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

3

Application Number

10/884,643

Filing Date

July 2, 2004

First Named Inventor

James P. Crocker

Art Unit

3671

Examiner Name

Sarah E. Husband

Attorney Docket Number

2708U.001

### ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):
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<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<b>Remarks</b>  	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	McHale & Slavin, P.A.		
Signature			
Printed name	Michael A. Slavin		
Date	8/10/06	Reg. No.	34,016

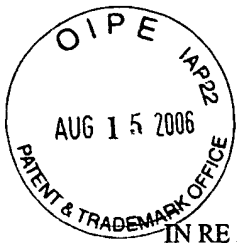
### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Regina A. Pruitt	Date	8/10/06

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : JAMES P. CROCKER  
INVENTION: : STRIPE REMOVAL SYSTEM  
SERIAL NUMBER : 10/884,643  
FILING DATE : JULY 2, 2004  
EXAMINER: : SARAH E. HUSBAND  
GROUP ART UNIT : 3671  
ATTORNEY DOCKET NO. : 2708U.001

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the Duty to Disclose under 37 C.F.R. §1.56, the references cited on the accompanying forms PTO/SB/08A and are hereby brought to the attention of the Examiner for independent evaluation.

In accordance with 37 C.F.R. §1.97(e), Applicants hereby certify that each item of information contained in the accompanying Supplemental Information Disclosure Statement filed concurrently herewith was cited in a communication from a foreign patent office, namely an International Search Report for a counterpart International patent application.

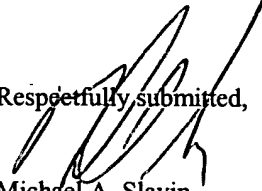
Applicants submit that the present invention is patentable over these references.

Accordingly, pursuant to 37 C.F.R. §1.97(e), Applicants request consideration and entry of the Supplemental Information Disclosure Statement.

Date: 8/8/06

By:

Respectfully submitted,

  
Michael A. Slavin  
Registration No. 34,016  
McHale & Slavin, P.A.  
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(Use as many sheets as necessary)*

Sheet	1	of	1
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**Complete if Known**

Application Number	10/884,643
Filing Date	July 02, 2004
First Named Inventor	James P. Crocker
Art Unit	3671
Examiner Name	Sarah E. Husband
Attorney Docket Number	2708U.001

## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	
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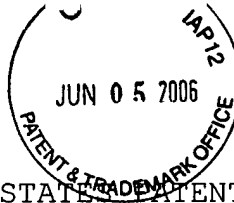
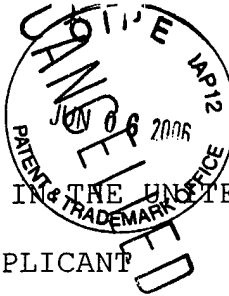
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S37	2	"884643".ap.	US-PGPUB	OR	ON	2006/08/14 09:34



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION : **STRIPE REMOVAL SYSTEM**  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 2, 2004  
EXAMINER : Husband Sarah E.  
GROUP ART UNIT : 1746  
OUR FILE NO. : 2708U.001

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CERTIFICATE UNDER 37 CFR 1.8(a)

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**RESPONSE TO OFFICE ACTION OF MARCH 6, 2006**

Madam:

In response to the Office Action dated March 6, 2006 having  
a shortened statutory period for response set to expire June 6,  
2006, kindly enter the following response:

**Amendments to the Specification begin on page 3 of this paper.**

**Amendments to the Claims are reflected in the listing of claims  
which begins on page 5 of this paper.**

**Amendments to the Drawings begin on page 10 of this paper and  
include both attached replacement sheets and annotated sheets**

Appl. No. 10/816,654 Amdt. dated Reply to Office action of March 6, 2006

showing changes.

Remarks/Arguments begin on page 11 of this paper.

An Appendix including amended drawing figures is attached following page 29 of this paper.

**Amendments to the Specification**

Please replace the paragraph beginning at page 12, line 13, with the following rewritten paragraph:

The liquid reservoir 13 and the sump 14 are shown in Fig. 6. As illustrated, the liquid reservoir and vacuum chamber have a common enclosure with an internal partition dividing them. The sump 14 has an inlet 57 for connection by hose 28 to the vacuum shroud 27. An outlet 58 is connected to the vacuum pup hose 16. The liquid reservoir has a hatch 60 for inspecting and cleaning the reservoir with approximately 600-1500 gallons of liquid. An outlet 61 is connected to a low pressure pump by a low pressure suction hose 62. The low pressure 12 volt pump is used to pump water out of the reservoir 13 back to the water blasting pump 12 at about 40 Psi and 20 g.p.m.

A recycling valve 63 is mounted in a connector pipe ~~[[64]]~~ 68 having one end opening into the reservoir 13 and the other end opening into the sump 14. The connector is located near the top of the sump and reservoir to allow for some settling of *debris* in the sump. The valve 63 opens or closes the connection.

Please replace the paragraph beginning at page 13, line 6, with the following rewritten paragraph:

In Fig. 7, the sump 14 is shown with the rear door 65 open for

unloading the porous enclosure 64. The door has a seal (not shown) to maintain the negative pressure therein during operation. The porous enclosure may be a wire screen or mesh box sized to fit within the sump 14. An additional filter bag with having between 5-200 micron porosity may be inserted into the enclosure. The dimensions of the enclosure 64 are somewhat less than the interior of the sump which provides a marginal area <sup>[[65]]</sup> 67 between the enclosure and the interior walls and floor of the sump which provides an exit path for filtered water through valve 70. The inlet 57 empties into the enclosure 64 thereby preventing coatings from being entrained in the vacuum system. One side of the enclosure is hinged and latched to permit entry into the enclosure or removal of the filter bags. By opening the sump door and raising the dump bed of the truck, the waste material can be easily and quickly removed without prolonged interruption of the operations. The filter bag is the disposal container, and is dumped with the material. A permanent filter material can also be utilized which requires cleaning after each use but does not waste a filter bag each time it is dumped.



**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising in combination a liquid reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a waste removal hose connected at one end to said blast head and at the other end to a sump for collection of liquid and coating, said sump connected to said liquid reservoir, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said waste removal hose to said sump, said coatings collected in said sump and the waste liquid exiting through [[said]] an outlet, said liquid reservoir, said sump and said high power vacuum pump being mounted on a mobile frame, said mobile frame forming an integral part of a truck having a bed portion and a cab portion, said truck being

self-propelled, said mobile blast head being mounted at a distal end of an articulating link, a proximal end of said articulating link secured to a self-propelled tractor.

2. (Original) A cleaning system of claim 1 wherein a high power vacuum pump is connected to said sump.

3. (Original) A cleaning system of claim 2 wherein a shroud is connected to said blast head, said shroud surrounds said at least one nozzle and forms a negative pressure chamber.

4. (Cancelled)

5. (Original) A cleaning system of claim 3 wherein said mobile blast head is attached to a wheeled chassis for maneuvering over the hard surface.

6. (Currently amended) A cleaning system of claim 5 wherein said wheeled chassis is attached to [[a]] said self-propelled tractor and said mobile blast head and tractor are of a size for removably docking transversely on said bed portion of said truck.

7. (Currently amended) A cleaning system of claim 6 wherein

said bed portion includes a ramp, said ramp pivotally connected to said bed portion for raising and lowering said ramp, said ramp sized to support said tractor for docking transversely on said bed.

8. (Original) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising a water reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a liquid and debris removal hose connected at one end to an inlet of a vacuum chamber and connected at the other end to said blast head to remove liquid and coating from said blast head, a high power vacuum pump connected to said vacuum chamber, said vacuum chamber having a rigid outside wall defining an interior, a wire mesh screen in said interior spaced inwardly of said rigid outside wall and forming an enclosure, said inlet inside said enclosure, said vacuum chamber having an outlet for the liquid, said outlet between said rigid wall and said enclosure, said outlet of said vacuum chamber connected to said reservoir for re-circulation of the liquid, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said high powered vacuum in said

vacuum hose to said vacuum chamber through said inlet, said coatings collected by said filter screen in said vacuum chamber and the liquid exiting through said outlet.

9. (Original) A cleaning system of claim 8 wherein a porous flexible bag is removably inserted in said enclosure, said bag having a mouth surrounding said inlet whereby said coatings are collected in said bag.

10. (Original) A cleaning system of claim 8 wherein said reservoir, said vacuum chamber, said vacuum pump and said blast head are mounted on the bed of a truck.

11. (Original) In a cleaning system for removing coatings from a hard surface by high pressure liquid comprising a mobile blast head including at least one high pressure nozzle for directing high pressure liquid onto a hard surface, an articulating link attaching said blast head to a self propelled tractor, said link having a leading end and a trailing end, said blast head connected to said leading end, said trailing end connected to said tractor whereby said blast head is movable horizontally and vertically in relation to a hard surface.

12. (Original) In a cleaning system of claim 11 wherein said tractor has a pair of front wheels spaced apart, a bar fixed to said tractor between said front wheels, said link having trailing arms rotatably connected to said bar for rotation in a horizontal plane, said link either fully to the left or right and then fully vertically.

13. (Original) In a cleaning system of claim 1 wherein said articulating link is constructed and arranged for controlled movement in a horizontal and a vertical plane.

**Amendments to the Drawings**

The drawings stand objected to under 37 CFR 1.121(d) because the pictures have dark and very light portions. New drawings are being submitted herewith for approval by the Examiner.

The drawings stand objected to under 37 CFR 1.84(p)(4) because reference characters "58" (Fig. 6&7), "39" (Fig. 4), and "65" (Fig.7) have been used to designate two items.

Fig. 6 has been amended to correct the problem with reference character "58".

Fig. 4 includes reference character "39" and "39'" as submitted referring to "holding pins" in the specification (Page 11, line 12). The new drawings should provide additional clarity to the Examiner.

Fig. 7 has been amended to correct the problem with reference character "65".

Fig. 6 has been amended to change reference character 64 (connector pipe) to reference character 68 to avoid the double inclusion.

**Remarks/Arguments**

In the specification, the paragraph beginning at page 13, line 6 has been amended to change reference character associated with the "marginal area" from 65 to 67.

***Objections to the Claims***

Claim 4 stands objected to because of the following informalities: "an cab" is improper. Claim 4 has been cancelled and thus this objection is moot.

***Claim Rejections- 35 USC §112***

Claims 1-7 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, "said outlet" has been amended to "an outlet" to provide proper antecedent basis for the limitation.

Claim 1 has been amended to provide antecedent basis for "said truck".

***Claim Rejections- 35 USC §102(b)***

Claim 1 stands rejected under 35 USC 102(b) as being anticipated by Page (5,704,989). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning



concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated arm. The articulated arm is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated arm mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible

by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

It is well established that in order for a claim to be anticipated each and every element as set forth in the claim must be found, either expressly or inherently described in a single prior art reference (see MPEP 2131). Therefore, because the claim as currently amended includes limitations not shown or suggested in the prior art, e.g. a tractor having an articulated link wherein high pressure fluid is delivered to a blast head mounted at the distal end of the articulated link, the applicant requests that this rejection be removed.

***Claim Rejections- 35 USC §103(a)***

Claim 6 stands rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Groh (4,007,026). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning

concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The filters are constructed of pleated paper in the form of tubular elements. The paper is strengthened by impregnation with resin. The pleated elements are periodically cleaned during use of the sweeper by directing pulsed jets of air through the open ends of the elements for dislodging dust accumulated on the outer surface of the elements.

Dickson discloses a surface blasting apparatus. The apparatus includes a rotating wheel to which abrasive is supplied to direct the abrasive to a surface for abrasion. The device includes a conveyor to re-circulate the abrasive and an air separator to remove small particles from the abrasive prior to re-circulation.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated link. The articulated link is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated link mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh, Dickson, nor Page show or describe a tractor having an articulated link controllable by an operator to maneuver

a liquid blast head. The tractor being tethered to a truck for supplying high-pressure water and vacuum recovery to the blast head. Groh is specifically directed at drawing large volumes of dry air and dust from around the broom of an industrial sweeper (Col. 3, line 65). Page is a small, low pressure and hand operated surface cleaning device for removing dust and dirt from surfaces. Neither Groh nor Page show or describe a system suitable to remove surface markings, such as striping, from a roadway. Dickson discloses a device suitable for abrading a road surface however, the entire road surface would be abraded and not just select areas as with the instant invention. Nor do they show or describe a truck and tractor combination wherein the tractor can be transported transverse with respect to the longitudinal centerline of the truck to reduce the required storage space of the tractor during transport. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer, a dust filter system and a sand blaster to assemble the instant invention and thus requests that this rejection be removed.

Claim 7 stands rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Groh (4,007,026), Dickson (4,753,052) and further in view of Herman (H001660). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning

concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The filters are constructed of pleated paper in the form of tubular elements. The paper is strengthened by impregnation with resin. The pleated elements are periodically cleaned during use of the sweeper by directing pulsed jets of air through the open ends of the elements for dislodging dust accumulated on the outer surface of the elements.

Dickson discloses a surface blasting apparatus. The apparatus includes a rotating wheel to which abrasive is supplied to direct the abrasive to a surface for abrasion. The device includes a conveyor to re-circulate the abrasive and an air separator to remove small particles from the abrasive prior to re-circulation.



Herman discloses a process for autonomously locating and retrieving toxic heavy metals and radioactive contaminants. The system includes a box type trailer having rear opening doors. In use, the trailer is separated from the truck to act as a base station (Col. 2, lines 58-64). A ramp is secured to the rear opening for offloading an autonomous drone for searching out radioactive materials on a military firing range. When loaded the autonomous drone is transported in a position parallel to the longitudinal axis of the trailer (see Fig. 1).

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated link. The articulated link is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated link mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable

to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh, Dickson, Page nor Herman show or describe a tractor and ramp configuration suitable to allow a tractor having a blast head to be loaded and transported in a transverse position with respect to the longitudinal axis of the truck bed. Groh is specifically directed at drawing large volumes of dry air and dust from around the broom of an industrial sweeper (Col. 3, line 65). Therefore, no teaching or suggestion is made as to transporting the device. Page is a small, low pressure and hand operated surface cleaning device for removing dust and dirt from surfaces. Page does not show or suggest any type of tractor to maneuver the blast head and thus does not show or suggest a transversely transportable tractor. Dickson discloses a device suitable for abrading a road surface however, he does not show or describe a truck and tractor combination wherein the tractor can be transported transverse with respect to the longitudinal centerline of the truck to reduce the required storage space of the tractor during transport. Herman does

not even show a truck in combination with the trailer. In addition, the autonomous drone is transported parallel to the longitudinal centerline of the trailer as shown and described in the specification and the figures. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer, a dust filter system, a sand blaster and a process for locating and retrieving radioactive waste to assemble the instant invention and thus requests that this rejection be removed.

Claims 8-10 stand rejected under 35 USC 103(a) as being obvious over Page (5,704,989) in view of Blehert (4,819,676). The Examiner's position is respectfully traversed.

Page discloses a closed loop surface cleaning system. The Page device includes a contaminated water tank 34 for collection of water expelled by the device. From the contaminated water tank 34 the water travels to a contaminated fluid pump 42 to re-pressure the water to power the water through the contaminated fluid through filter system 78. The contaminated fluid pump is driven by an

auxiliary diesel engine. The contaminated fluid pump forces the fluid to a contaminated water bag filter system 38 and 39. The fluid is then forced to fluid manifold 48 where micro-organisms are injected into the contaminated water. Thereafter, the fluid is forced to a peat filter 56 where oxygen is injected into the fluid for a pre-determined amount of time. Activated carbon is also added to the peat filters to control pH. After the micro-organisms are added manifold 48 splits the fluid into three equal components for introduction into filters 56. The fluid is then forced through an oil/water separator and thereafter through a clean fluid filter before being returned to the clean water tank 12. The clean water is supplied to a pump capable of pressurizing the water to 1500 psi for cleaning asphalt surface and up to 5000 psi for cleaning concrete surfaces. The low pressure water is supplied to a hand propelled device similar to a hand operated lawnmower, where the fluid is directed toward a surface and vacuumed to return the water through the filter system. The low pressure and hand-operated nature of the spray assembly make the device unsuitable for removing road type markings that are constructed from polymers to extend below the upper surface of the roadway. In addition, if the device were capable of removing such markings, it would be extremely inefficient to remove several miles of markings with the hand operated device.

Blehert discloses a combination sweeping and scrubbing system. The sweeping and scrubbing system includes a gutter brush and a roll brush which are used to direct dry dust and dirt to a vacuum system. In one embodiment the vacuum system deposits the dirt in a vacuum sweeper bag which may have a cage for suspending the bag so that all of the bag can pass air.

In contrast, the vacuum system of the instant invention includes a tank having a rigid outer wall defining an interior. A wire mesh screen is positioned within the interior spaced inwardly of the rigid outside wall and forming an enclosure. The wire mesh screen receives the vacuumed liquid and debris and air is exhausted through the top of the tank. Because the dust and dirt is entrained within the liquid no bag is required with the instant invention. Therefore, the tank may be entirely filled with liquid allowing the air to exhaust without concern of plugged filter bags. The water may then be drained from the tank, through the outlet, leaving the debris and dirt within the wire mesh screen. The wire mesh screen may then be removed from the tank through the rear door and dumped at a suitable location.

Neither Page nor Blehert show or describe a vacuum tank configuration suitable to operate without a filter bag. Nor does Page or Blehert show or describe a tank which functions to de-water debris so that the solid debris can be disposed of separately from

the liquid. Blehert is concerned with maintaining air flow and thus vacuum when used in a dusty environment wherein the dust plugs the apertures in the filter bag. Because the dust and dirt is entrained within the liquid no bag is required with the instant invention. It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine a hand operated pressure washer and a dust filter system to assemble the instant invention and thus requests that this rejection be removed.

Claims 11-12 stand rejected under 35 USC 103(a) as being obvious over Moll (6,129,094) in view of Groh (4,007,026). The Examiner's position is respectfully traversed.

Moll discloses a hand operated pressure washer for cleaning surfaces. The device is similar in appearance to a hand operated push type lawnmower. The device is maneuvered by hand to clean a surface and the device is attachable to a vacuum system for recovery of liquid and debris however, none is shown or disclosed.

Groh discloses a compact dust filter system. The filter system is secured within an industrial sweeper. The sweeper is a

three wheeled device, with an engine, that can be steered by an operator to maneuver the sweeper.

In contrast, the instant invention includes a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000 - 40,000 psi. The high pressure fluid is delivered to blast head mounted at the end of an articulated arm. The articulated arm is mounted to the front portion of a self-propelled mobile tractor. The tractor is tethered to a truck or combination truck and trailer to supply the high pressured water and vacuum recovery to the blast head. The articulated arm mounted to the front portion of the tractor is constructed and arranged to be maneuvered by the operator to remove polymer coatings, embedded rubber and the like from the surface and below the surface of asphalt and concrete. The articulated arm in combination with the tractor facilitates removal of surface markings and the like from places inaccessible by the prior art. The articulated arm is also movable to a storage position wherein the length of the tractor and arm are less than 8' 6" to allow the tractor to be transported on the truck bed in a transverse orientation with respect to the longitudinal axis of the truck. This construction substantially reduces the space required to transport the tractor and allows valuable bed space to be utilized for other equipment needed to support the high-pressure blast head of the instant invention.

Neither Groh nor Moll show or disclose any type of articulated link secured to the tractor and the spray head that would allow an operator to maneuver the spray head along a path independent from that of the tractor.

It is well settled that a showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success, See *Brown & Williamson Tobacco Corp. V. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir 2000). The applicant contends there is no motivation to combine the hand maneuvered device of Moll with the compact dust filter system of Groh to assemble the instant invention and therefore, requests that this rejection be removed.



**CONCLUSION**

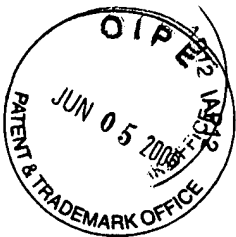
In light of the foregoing remarks, amendments to the specification and amendments to the claims, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested. Should there be any remaining issues which can be resolved via an Examiner's Amendment, the Examiner is urged to call the undersigned in order to expedite the prosecution of this application.

Respectfully submitted,



A. Keith Campbell  
Registration # 52,686

McHale & Slavin, P.A.  
2855 PGA Boulevard  
Palm Beach Gardens, FL 33410  
(561) 625-6575 (Voice)  
(561) 625-6572 (Fax)



1/6

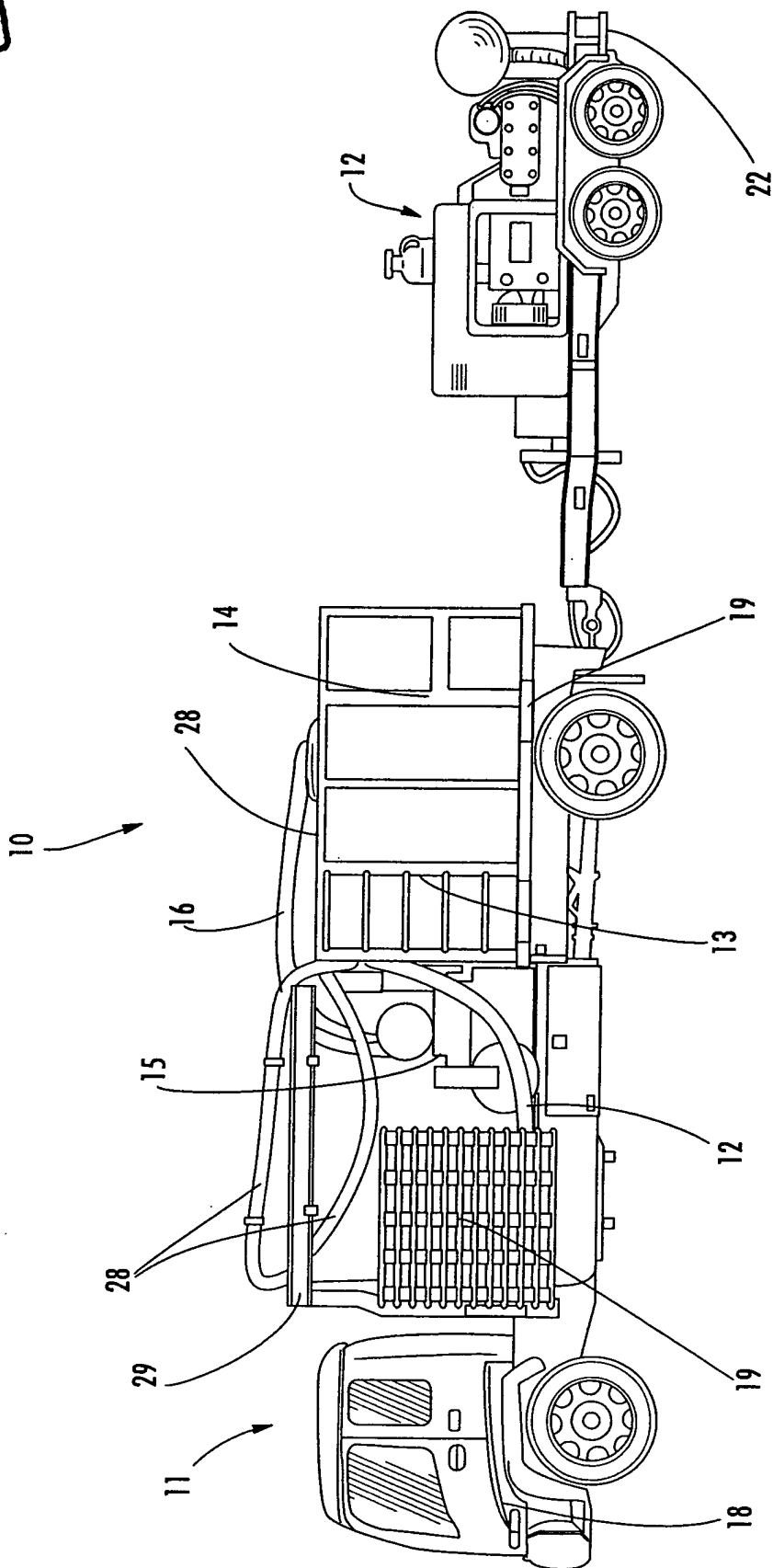


FIG. 1

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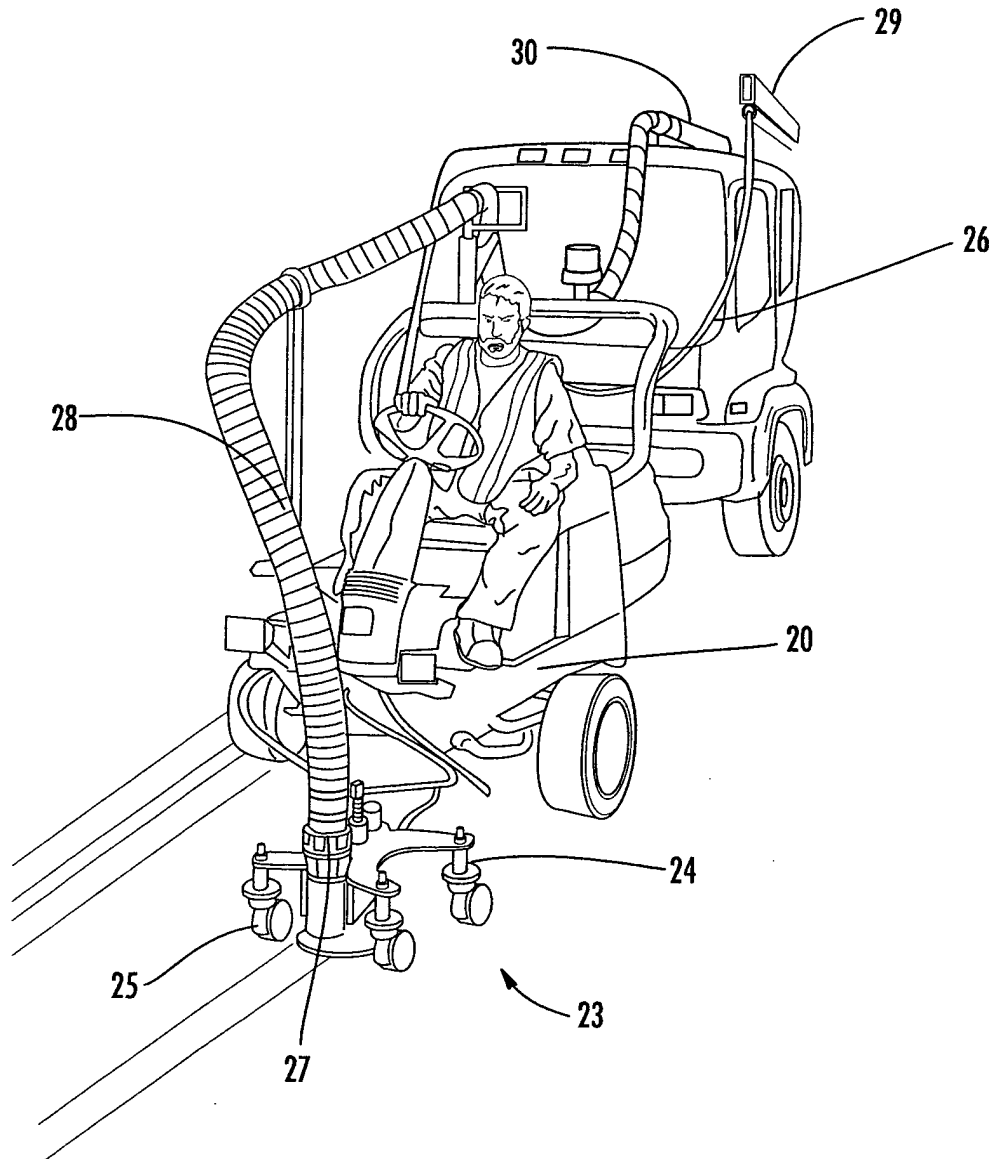
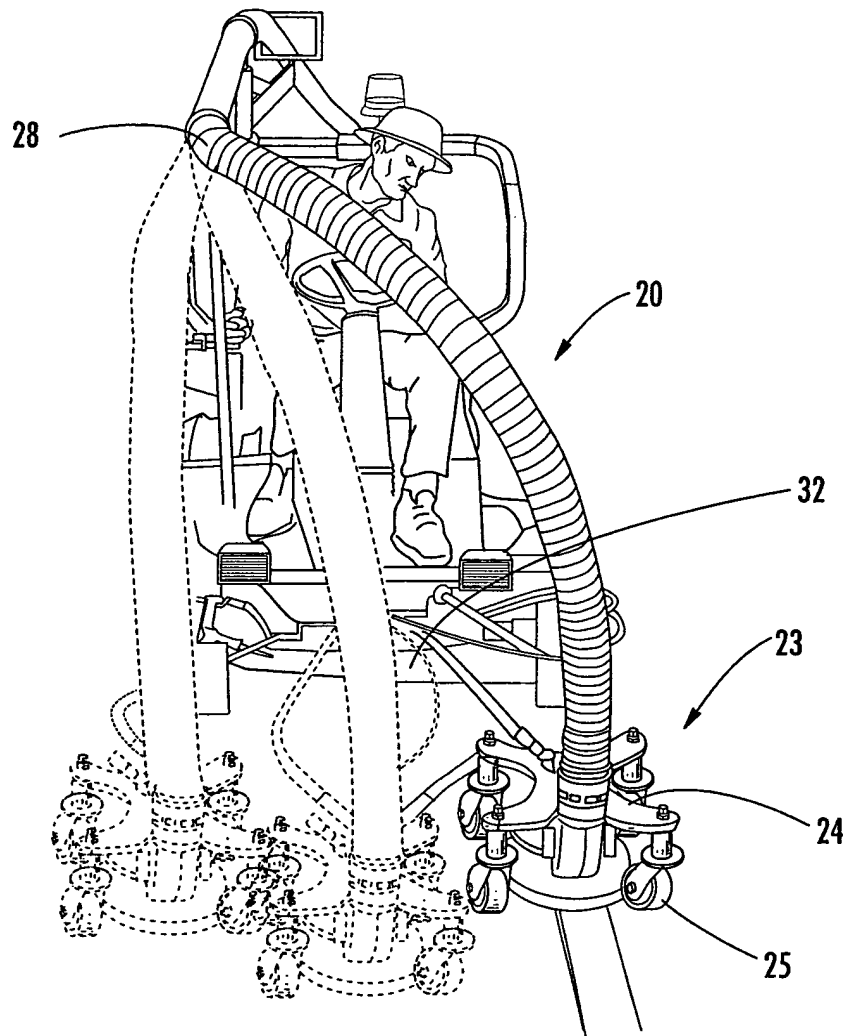


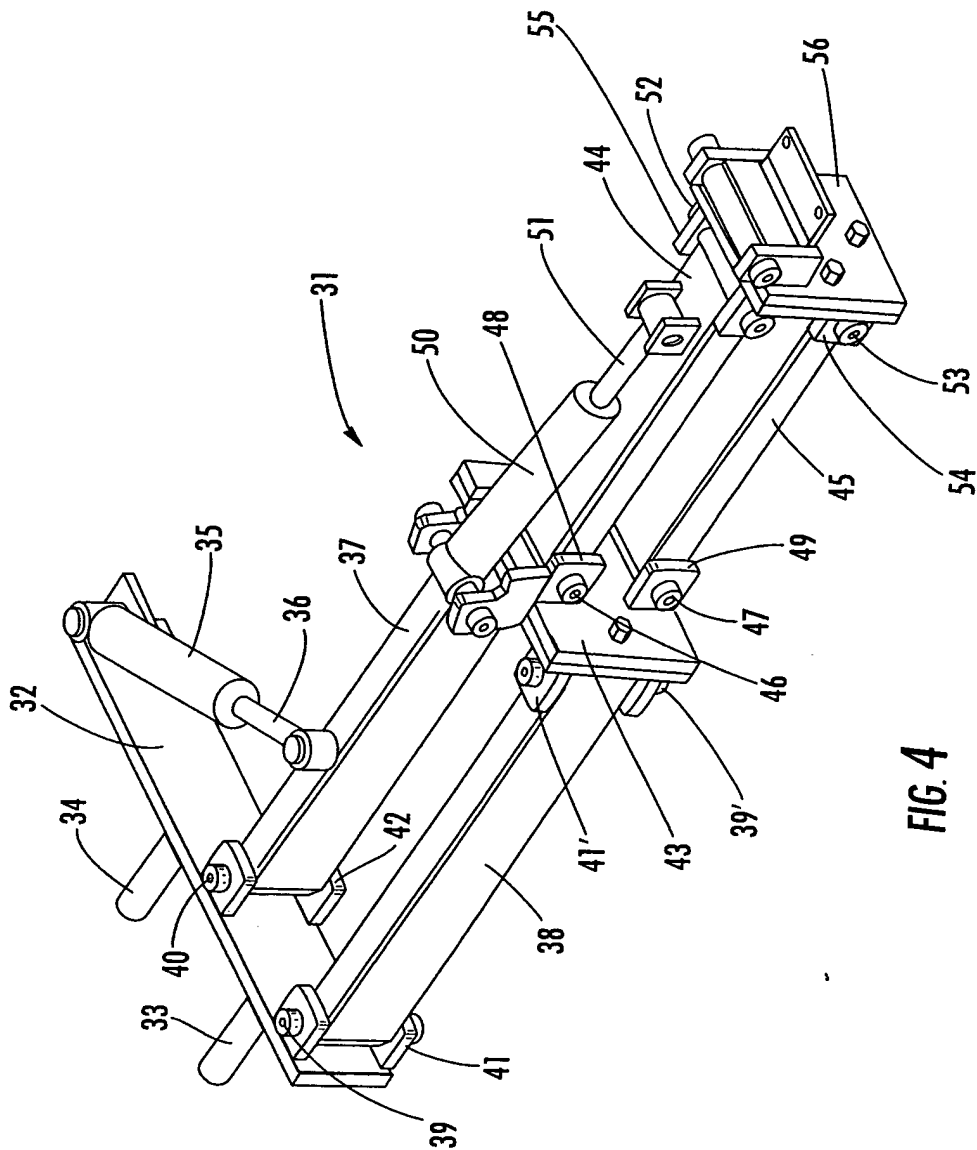
FIG. 2

3/6

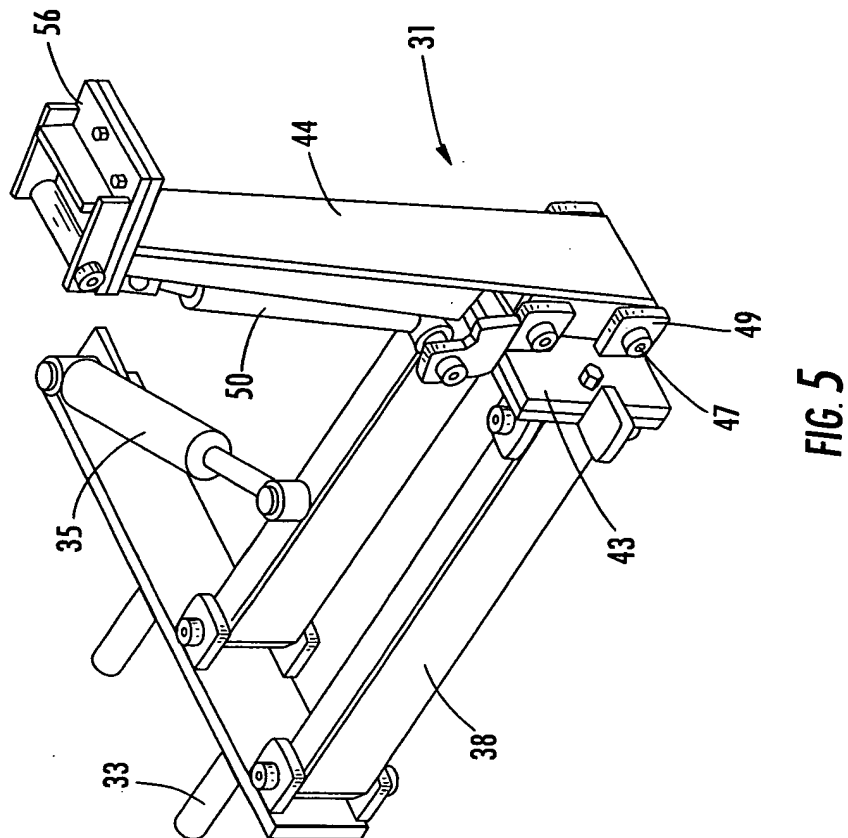


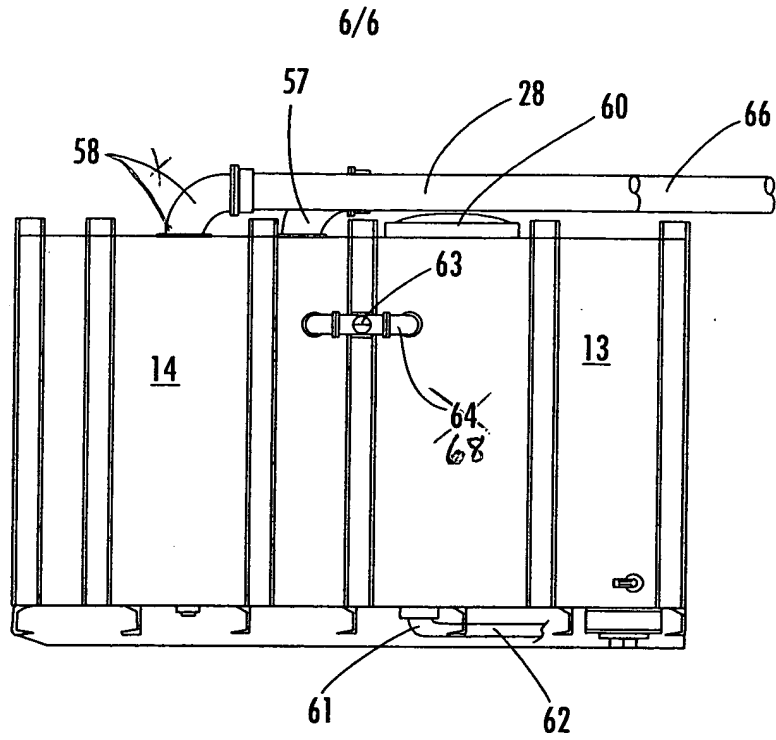
**FIG. 3**

4/6

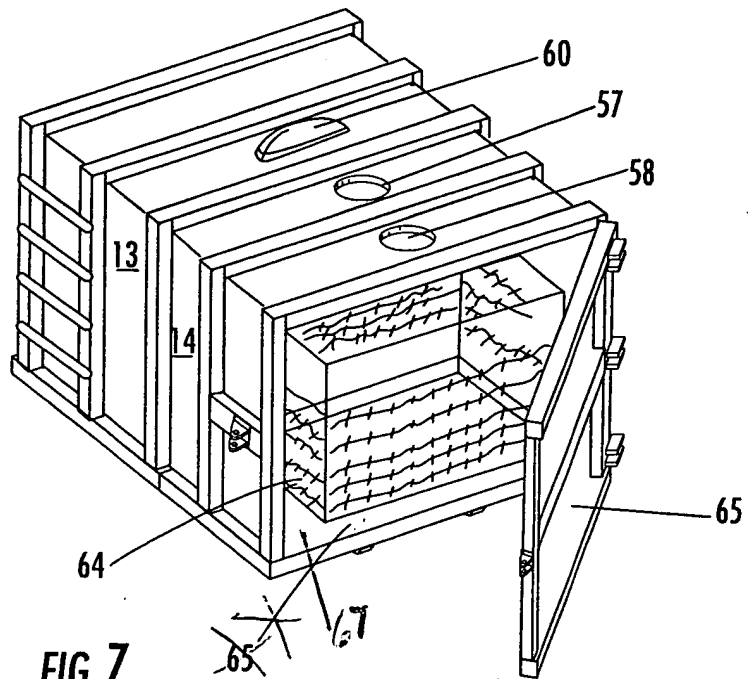


5/6

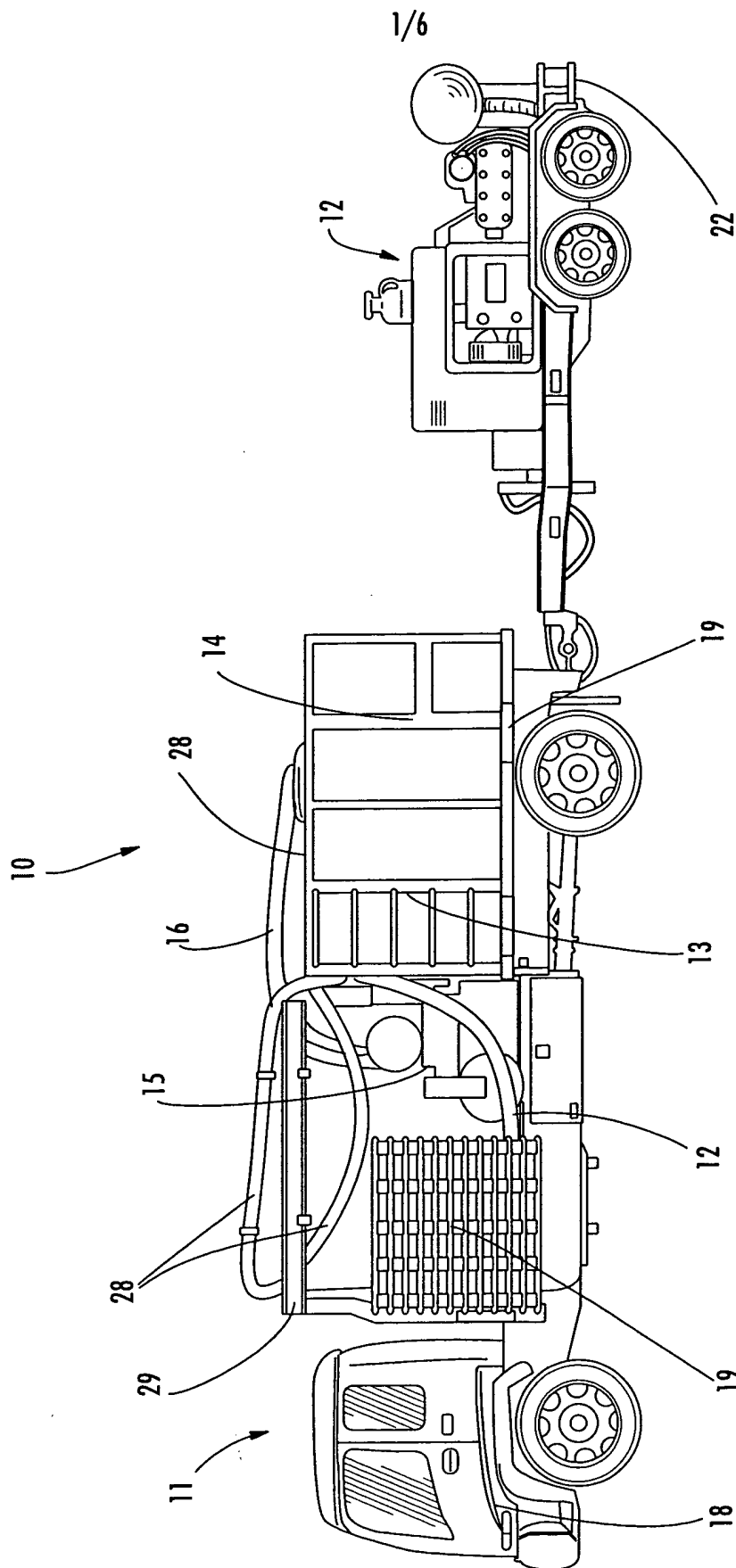




**FIG. 6**



**FIG. 7**





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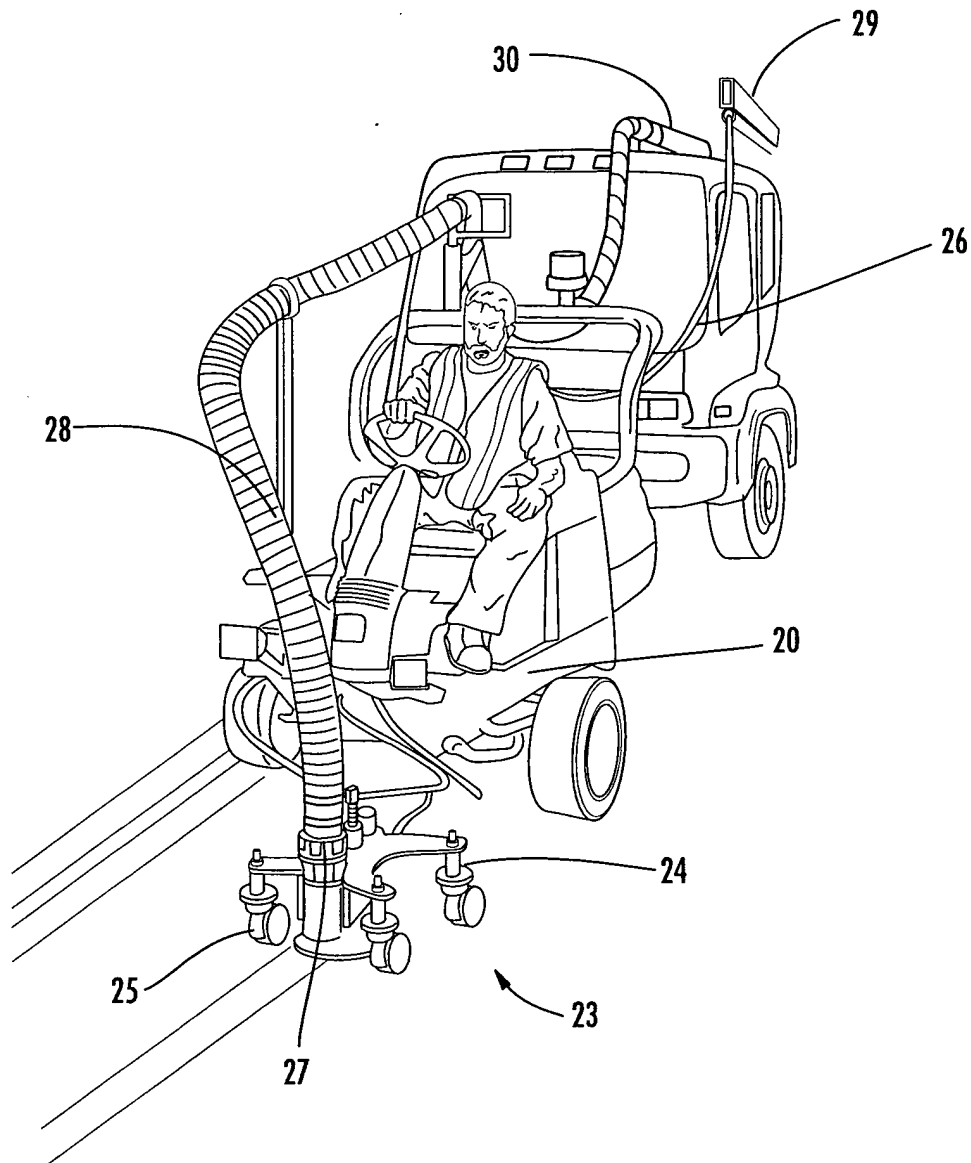


FIG. 2

3/6

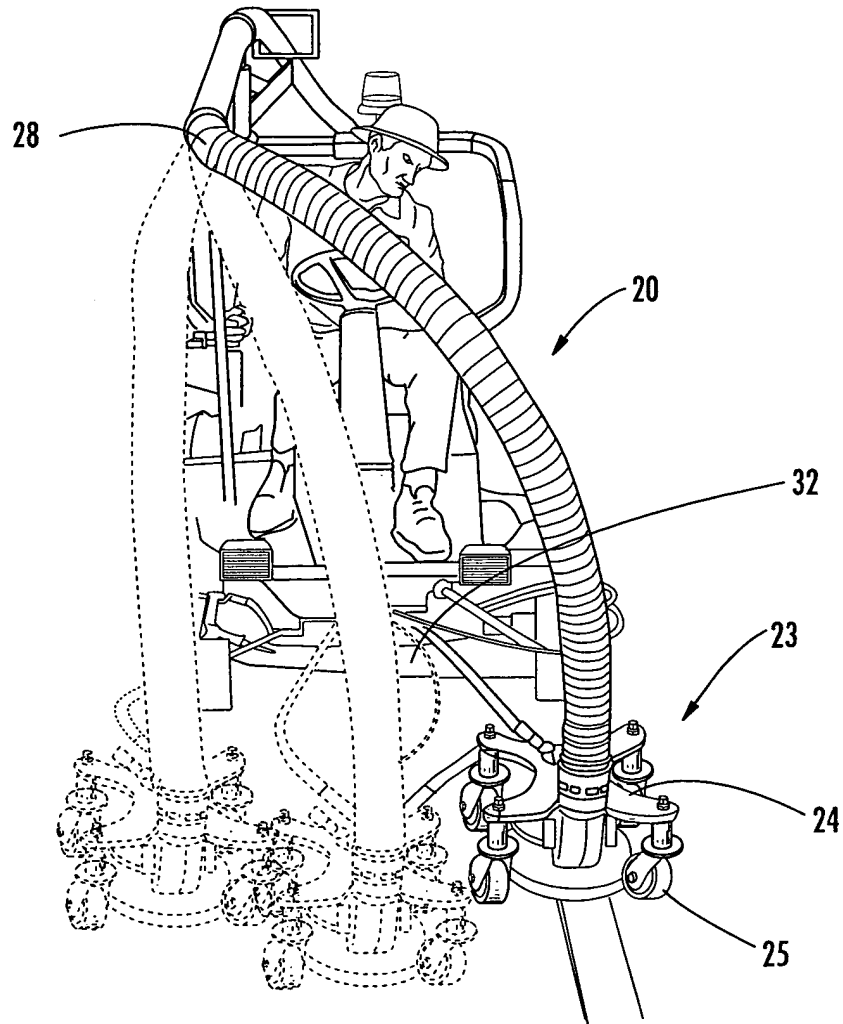


FIG. 3

4/6

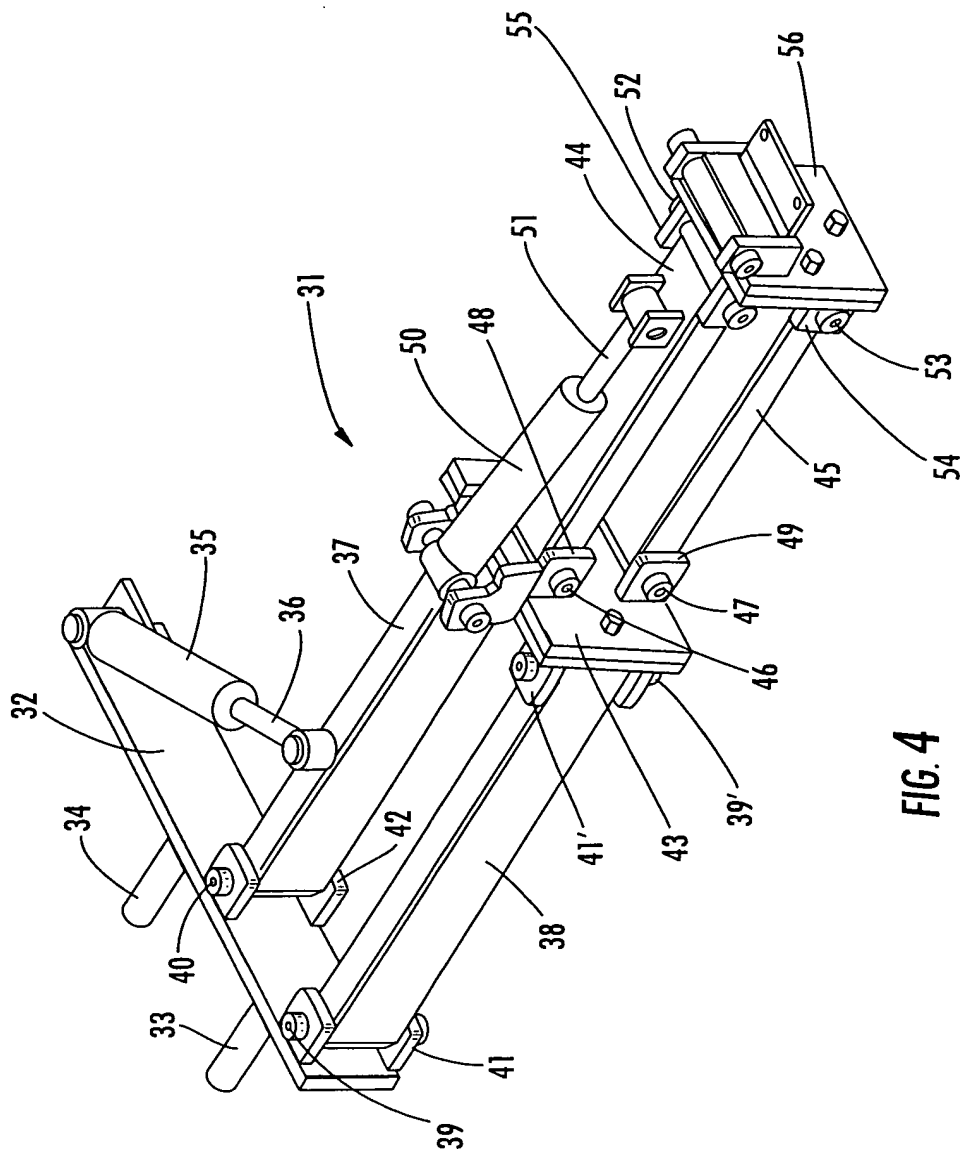


FIG. 4

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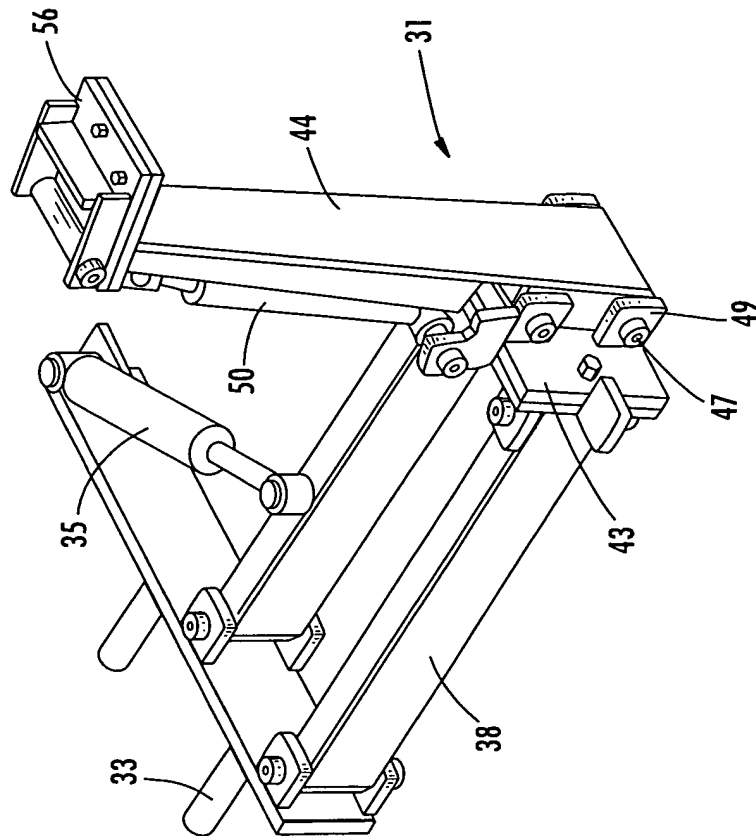
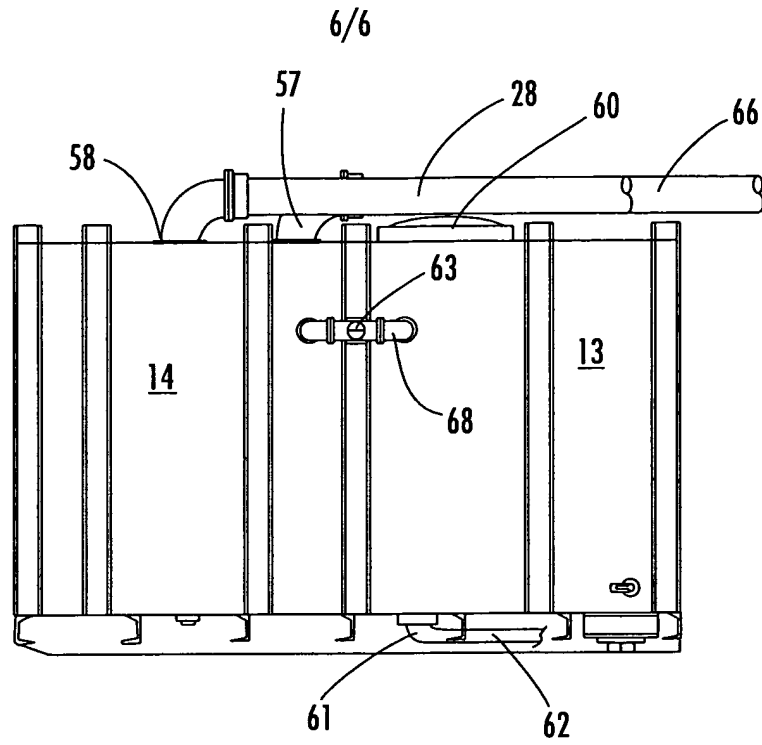
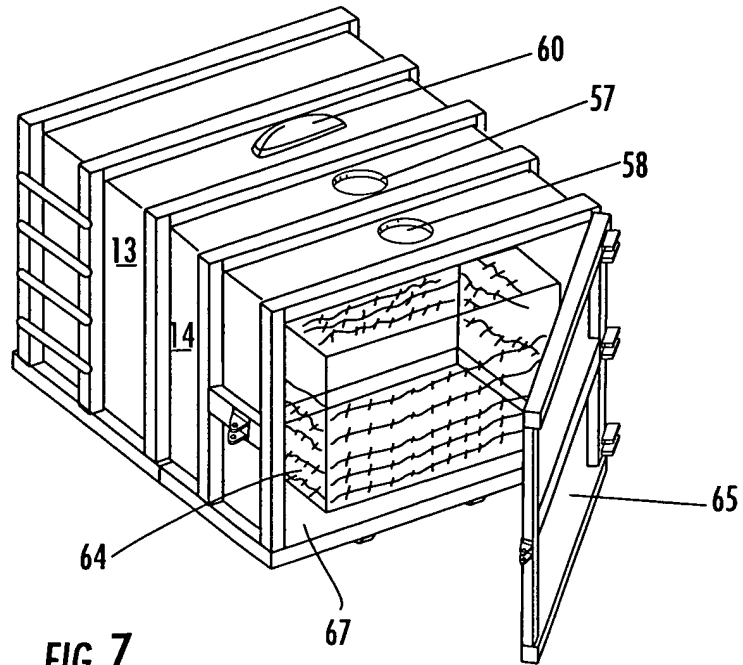


FIG. 5



**FIG. 6**



**FIG. 7**



JFW

PTO/SB/21 (09-04)

Approved for use through 07/31/2006, OMB 0651-0031

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b> JUN 05 2006 PATENT & TRADEMARK OFFICE <small>Do not be used for all correspondence after initial filing</small>	Application Number	10/884,643	
	Filing Date	07/02/2004	
	First Named Inventor	James P. Crocker	
	Art Unit	1746	
	Examiner Name	Sarah E. Husband	
Total Number of Pages in This Submission	42	Attorney Docket Number	2708U.001

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input checked="" type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input checked="" type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	McHale & Slayin, P.A.		
Signature			
Printed name	A. Keith Campbell		
Date	6/2/2006	Reg. No.	52,686

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature			
Typed or printed name	Debra N. Gerstemeier	Date	6-2-2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

# Index of Claims



Application/Control No.

10/884643

Examiner

Applicant(s)/Patent under Reexamination

INVENTOR

Art Unit

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date									
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# **PATENT APPLICATION FEE DETERMINATION RECORD** Effective October 1, 2003

Application or Docket Number

10884643

## **CLAIMS AS FILED - PART I**

(Column 1) (Column 2)

TOTAL CLAIMS	14	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	14 minus 20 =	
INDEPENDENT CLAIMS	5 minus 3 =	2
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

\* If the difference in column 1 is less than zero, enter "0" in column 2

## **CLAIMS AS AMENDED - PART II**

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	14	Minus	20	0
	Independent	5	Minus	3	2
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

(Column 1) (Column 2) (Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	13	Minus	20	0
	Independent	3	Minus	3	0
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

(Column 1) (Column 2) (Column 3)

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total		Minus		
	Independent		Minus		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

\* The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE ☒ OR

OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	385.00
X5 9=	
X43=	86
+145=	
TOTAL	471

RATE	FEE
BASIC FEE	770.00
X518=	
X86=	
+290=	
TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDI-TIONAL FEE
X5 9=	
X43=	
+145=	
TOTAL	
ADDIT. FEE	

RATE	ADDI-TIONAL FEE
X518=	
X86=	
+290=	
TOTAL	
ADDIT. FEE	

RATE	ADDI-TIONAL FEE
X5 9=	
X43=	
+145=	
TOTAL	
ADDIT. FEE	

RATE	ADDI-TIONAL FEE
X518=	
X86=	
+290=	
TOTAL	
ADDIT. FEE	

RATE	ADDI-TIONAL FEE
X5 9=	
X43=	
+145=	
TOTAL	
ADDIT. FEE	

RATE	ADDI-TIONAL FEE
X518=	
X86=	
+290=	
TOTAL	
ADDIT. FEE	





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130
21917	7590	03/06/2006	EXAMINER	
MCHALE & SLAVIN, P.A. 2855 PGA BLVD PALM BEACH GARDENS, FL 33410			HUSBAND, SARAH E	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/884,643

Applicant(s)

CROCKER, JAMES P.

Examiner

Sarah E. Husband

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election without traverse of Group I (claims 1-12) in the reply filed on 12/16/2005 is acknowledged.

### *Information Disclosure Statement*

The Information Disclosure Statement filed on 11/17/2005 has been received.

### *Drawings*

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings do not clearly portray the invention. The numbers are difficult to decipher in some of the drawings, the pictures are dark or some have very light portions and the point on the drawing which the numbers are describing is also unclear in Figures 1-3. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "58" (Fig. 6 & 7), "39" (Fig. 4), and "65" (Fig. 7) have been used to designate two items. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: page 13, lines 1 and 7 describe 64 as two different items (connector pipe and porous enclosure).

A thorough proofreading of the specification is requested and appropriate correction is required.

### ***Claim Objections***

Claim 4 is objected to because of the following informalities: "an cab" is improper. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said outlet" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said truck" in line 4. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Page (US Patent No. 5,704,989).

Page discloses a high pressure surface cleaning apparatus having a liquid reservoir (12) connected to a high pressure pump (14), which is connected to a mobile blast head (26) by a high pressure hose (24) having at least one nozzle, a waste removal hose (28) connected to the blast head at one end and a contaminant tank at the other end (see Fig. 1, 2). Page also discloses the sump is connected to the liquid reservoir and the sump also collects the liquid and contaminants (Fig. 2, Items 34, 46, 66; see col. 2-5). Page further discloses a vacuum pump connected to the sump (30) and a shroud surrounds the blast head (Fig. 4A). Page also discloses the liquid reservoir, pump and vacuum pump are mounted on a mobile frame which is part of a truck with a bed and a cab (Fig. 1, Item 8) and the mobile blast head is attached to a wheeled chassis (Fig. 1 and 4A).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Page in view of Dickson (US Patent No. 4,753,052) or Groh (US Patent No. 4,007,026).

Page discloses the apparatus shown above in the 102(b) rejection. Page does not specifically disclose the chassis being self-powered. Dickson and Groh disclose self-propelled tractors (Fig. 1 of each). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Page with Dickson or Groh for the benefit of using less man power as the Courts have ruled that the provision of mechanical or automated means to replace manual activity is obvious, *In re Venner* 128 USPQ 192 (CCPA 1958); *In re Rundell* 9 USPQ 220 (CCPA 1931).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Page and Dickson (or Groh) as applied to claims 1-6 above, and further in view of Herman (US Statutory Invention Registration H001660).

Page and Dickson (or Groh) disclose the apparatus in the above 103(a) rejection. They do not disclose a ramp connected to the bed. Herman discloses a bed with a ramp (Fig. 2, Item 15) to load a mobile platform (14). At the time of the invention, it would have

been obvious to one of ordinary skill in the art to modify Page and Dickson (or Groh) with Herman for the benefit of easily transporting and loading the mobile cleaning unit.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page in view of Blehert (US Patent No. 4,819,676).

Page discloses a high pressure surface cleaning apparatus having a liquid reservoir (12) connected to a high pressure pump (14), which is connected to a mobile blast head (26) by a high pressure hose (24) having at least one nozzle, a waste removal hose (28) connected to the blast head at one end and a contaminant tank at the other end (see Fig. 1, 2). Page also discloses the sump is connected to the liquid reservoir and the sump also collects the liquid and contaminants (Fig. 2, Items 34, 46, 66; see col. 2-5). Page further discloses a vacuum pump connected to the sump (30) and a shroud surrounds the blast head (Fig. 4A). Page also discloses the liquid reservoir, pump and vacuum pump are mounted on a mobile frame which is part of a truck with a bed and a cab (Fig. 1, Item 8) and the mobile blast head is attached to a wheeled chassis (Fig. 1 and 4A). Page also discloses filters having mesh (col. 2, ll. 60-65) and bag filters (col. 4, ll. 42-55; Items 38,39). Page does not specifically disclose placing the mesh and bag filters inside of the vacuum tank. However, Blehert discloses a vacuum assembly having a mesh screen and filter bag inside of the vacuum tank (col. 5; Fig. 11, 12). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Page with Blehert for the benefit of having a more compact arrangement.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll (US Patent No. 6,129,094) in view of Groh or Dickson.

Moll discloses a high pressure cleaning system for removing coatings from a hard surface using high or ultra high pressure liquid and having a mobile blast head including at least one nozzle and pivoting unit and wheels to direct the mobile unit (see Fig. 1, Items 62,7; col. 6-10; see entire document). Moll does not specifically disclose the mobile unit being self-propelled. Groh and Dickson both disclose the mobile cleaning units being self-propelled (Fig. 1). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Page with Dickson or Groh for the benefit of using less man power as the Courts have ruled that the provision of mechanical or automated means to replace manual activity is obvious, *In re Venner* 128 USPQ 192 (CCPA 1958); *In re Rundell* 9 USPQ 220 (CCPA 1931).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art not referred to are Gerber (US 20030205242), Nowak (US 20040237247), Wyczalek (US 3166773), Akagi (US 3787916), Townsend (US 4158575), Swisher (US 4290820), Manchak (US 4839061), Francisco (US 5076919), Rohrbacher (US 6302967) and Geyer (US 6896742), who disclose surface cleaning apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah E. Husband whose telephone number is (571) 272-8387. The examiner can normally be reached on M-F 8-5.

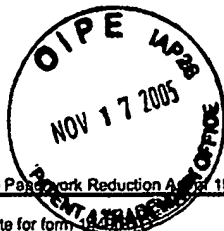


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEH 3/1/2006

  
**MICHAEL BARR**  
**SUPERVISORY PATENT EXAMINER**



PTO/SB/08A (08-03)

Approved for use through 07/31/2008. OMB 0651-0031

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1-220 (1-2-00)

**Complete if Known****INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 1

Application Number	10/884,643
Filing Date	July 02, 2004
First Named Inventor	James P. Crocker
Art Unit	3671
Examiner Name	
Attorney Docket Number	2708U.001

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
ADD		US- 3,900,969	08-26-1975	Diehn	
		US- 3,977,128	08-31-1976	Goff	
		US- 4,336,671	06-29-1982	Nelson	
		US- 4,376,358	03-15-1983	Shelton	
		US- 4,377,924	03-29-1983	Bergh	
		US- 4,753,052	06-28-1988	Dickson	
ADD		US- 5,236,278	08-17-1993	Dickson	
		US-			
		US-			
		US-			
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**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>4</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner  
SignatureDate  
Considered

3/1/06

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

<b>Notice of References Cited</b>	Application/Control No. 10/884,643		Applicant(s)/Patent Under Reexamination CROCKER, JAMES P.	
	Examiner Sarah E. Husband		Art Unit 1746	Page 1 of 2

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,129,094	10-2000	Moll et al.	134/21
*	B	US-5,704,989	01-1998	Page, Thomas A.	134/10
*	C	US-4,819,676	04-1989	Bleher et al.	134/21
*	D	US-4,007,026	02-1977	Groh, Andrew F.	55/302
*	E	US-4,753,052	06-1988	Dickson, Wayne E.	451/87
*	F	US-H0,001,660	07-1997	Herman et al.	180/6.2
*	G	US-2003/0205242	11-2003	Gerber et al.	134/6
*	H	US-2004/0237247	12-2004	Nowak et al.	015/340.1
*	I	US-3,166,773	01-1965	WYCZALEK FLOYD A	15/97.1
*	J	US-3,787,916	01-1974	Akagi et al.	15/4
*	K	US-4,158,575	06-1979	Townsend, Robert L.	134/6
*	L	US-4,290,820	09-1981	Swisher et al.	134/6
*	M	US-4,839,061	06-1989	Manchak Jr. et al.	210/743

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>Notice of References Cited</b>	Application/Control No. 10/884,643	Applicant(s)/Patent Under Reexamination CROCKER, JAMES P.	
	Examiner Sarah E. Husband	Art Unit 1746	Page 2 of 2

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,076,919	12-1991	Francisco, Jr., Allen C.	210/241
*	B	US-6,302,967	10-2001	Rohrbacher et al.	134/10
*	C	US-6,896,742	05-2005	Geyer et al.	134/21
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

**Search Notes**

Application/Control No.

10/884,643

Examiner

Sarah E. Husband

Applicant(s)/Patent under  
Reexamination

CROCKER, JAMES P.

Art Unit

1746

**SEARCHED**

Class	Subclass	Date	Examiner

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Inventor search	3/1/2006	SEH
Class 134, 15, and 261 and text. See attached search strategy	3/1/2006	SEH
East Search, Internet search	3/1/2006	SEH



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Bib Data Sheet

CONFIRMATION NO. 6130

SERIAL NUMBER 10/884,643	FILING DATE 07/02/2004  RULE	CLASS 134	GROUP ART UNIT 1746	ATTORNEY DOCKET NO. 2708U.001
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## APPLICANTS

James P. Crocker, Stuart, FL;

\*\* CONTINUING DATA \*\*\*\*\*

None *for*

\*\* FOREIGN APPLICATIONS \*\*\*\*\*

None *for*

IF REQUIRED, FOREIGN FILING LICENSE GRANTED \*\* SMALL ENTITY \*\*

\*\* 08/18/2004

Foreign Priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	STATE OR	SHEETS	TOTAL	INDEPENDENT
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowances	COUNTRY	DRAWING	CLAIMS	CLAIMS
Verified and Acknowledged <i>James P. Crocker</i> Examiner's Signature Initials	FL	5	14	5

## ADDRESS

21917  
 MCHALE & SLAVIN, P.A.  
 2855 PGA BLVD  
 PALM BEACH GARDENS , FL  
 33410

## TITLE

Stripe removal system

FILING FEE  RECEIVED 471	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____
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## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L14	4	"613755".ap.	US-PGPUB; USPAT	OR	ON	2006/03/01 12:53
L15	1	h001660	US-PGPUB; USPAT	OR	ON	2006/03/01 14:16
L16	1	"58085405"	US-PGPUB; USPAT; JPO	OR	ON	2006/03/01 14:17
L17	525	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and ((clean\$3 or wash\$3) same (truck or tractor or trailer) and ((pivot\$3 or rotat\$3 or turn\$3) near10 (nozzle or head or spray)))	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/01 14:35
S1	7	US-3900969-\$.DID. OR US-3977128-\$.DID. OR US-4336671-\$.DID. OR US-4376358-\$.DID. OR US-4377924-\$.DID. OR US-4753052-\$.DID. OR US-5236278-\$.DID.	US-PGPUB; USPAT	OR	ON	2006/02/24 13:19
S2	62	134/196.ccls.	US-PGPUB; USPAT	OR	ON	2006/02/23 19:20
S3	1943	"134"/\$.ccls. and (surface or etch\$3 or road).ti. and (clean\$3 or wash\$3 or etch\$3)	US-PGPUB; USPAT	OR	ON	2006/02/23 19:21
S4	1165	"134"/\$.ccls. and ((surface or road) near5 (clean\$3 or wash\$3) or etch\$3).ti.	US-PGPUB; USPAT	OR	ON	2006/02/23 19:21
S5	49	S4 and (vacuum or suction) near5 pump and pressur\$5 near5 (clean\$3 or wash\$3)	US-PGPUB; USPAT	OR	ON	2006/02/23 19:22
S6	31	("2909800"   "3384239"   "3605169"   "3959010"   "4104164"   "4374028"   "4377018"   "4530131"   "4676908"   "4836921"   "4839061"   "5011609"   "5016314"   "5076919"   "5102503"   "5114574"   "5151194"   "5178769"   "5224236"   "5354458"   "5417851").PN. OR ("5704989"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 09:13

## EAST Search History

S7	31	("2909800"   "3384239"   "3605169"   "3959010"   "4104164"   "4374028"   "4377018"   "4530131"   "4676908"   "4836921"   "4839061"   "5011609"   "5016314"   "5076919"   "5102503"   "5114574"   "5151194"   "5178769"   "5224236"   "5354458"   "5417851").PN. OR ("5704989"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 09:58
S8	7675	134/38,21,40,104.2,109,110,114,115r,123,184,190,196.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 09:59
S9	154	S8 and hose same pump and (vacuum or suction) and (mesh or filter or screen)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 10:00
S10	290	S8 and (hose or nozzle) same pump and (vacuum or suction) and (mesh or filter or screen)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 10:17
S11	5493	"134"/\$.ccls. and (wafer or semiconductor)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 12:07
S12	1105	S11 and fluid and nozzle	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 11:44
S13	459	S11 and (intel or "applied Materials" or LAM).as.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/24 12:07
S14	94	(road or surface) near10 (paint) near10 (clean\$3 or wash\$3 or remov\$3 or strip\$3) near10 (liquid or fluid or water) near10 (pressur\$5)	US-PGPUB; USPAT	OR	ON	2006/02/24 13:37
S15	56	(road or surface) near10 (paint) near10 (clean\$3 or wash\$3 or remov\$3 or strip\$3) near10 (liquid or fluid or water) near10 (pressur\$5)	USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 13:43
S16	4569	(road or surface or highway) same (paint) same (clean\$3 or wash\$3 or remov\$3 or strip\$3) same (liquid or fluid or water) same (pressur\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 13:44



## EAST Search History

S17	1449	(road or surface or highway) same (paint) same (clean\$3 or wash\$3 or remov\$3 or strip\$3) same (liquid or fluid or water) near5 (pressur\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 13:45
S18	364	(road or surface or highway) near10 (paint) near10 (clean\$3 or wash\$3 or remov\$3 or strip\$3) same (liquid or fluid or water) near5 (pressur\$5)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 13:45
S19	231	S18 not (S14 or S15)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 13:48
S20	54	S19 and (vacuum or suction)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 14:23
S21	7	"884643".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/02/24 14:23
S22	31	("2909800"   "3384239"   "3605169"   "3959010"   "4104164"   "4374028"   "4377018"   "4530131"   "4676908"   "4836921"   "4839061"   "5011609"   "5016314"   "5076919"   "5102503"   "5114574"   "5151194"   "5178769"   "5224236"   "5354458"   "5417851").PN. OR ("5704989").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 16:36
S23	1	"20060014125"	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 16:36
S24	2	"hovervac"	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 16:47
S25	2	"210"/\$.ccls. and rotary near5 floor near5 (clean\$3 or wash\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 16:40
S26	50	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and (self near5 (power\$3 or propel\$3) near5 floor near5 clean\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 16:59

## EAST Search History

S27	161	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and (self near5 (power\$3 or propel\$3) near10 (floor or surface or road) near10 clean\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 16:49
S28	22	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and ((clean\$3 or wash\$3) same (truck or trailer or tractor) near10 ramp)	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/01 14:33
S29	40	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and ((truck or trailer or tractor) near10 ramp)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 17:35
S30	29	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and ((truck or trailer or tractor) near10 ramp and (mobile or stor\$3))	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 17:02
S31	247	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and (vacuum same mesh same filter)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 17:36
S32	16	("134"/\$.ccls. or "15"/\$.ccls. or "261"/\$.ccls.) and (vacuum near5 (chamber or tank) same mesh same filter near5 bag)	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/28 17:37

10/884643

# PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2003

Application or Docket Number

10884643

## CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

TOTAL CLAIMS	14	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	14 minus 20=	*
INDEPENDENT CLAIMS	5 minus 3 =	2
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

\* If the difference in column 1 is less than zero, enter "0" in column 2

## CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	14	Minus	** 20	= 0
Independent	*	5	Minus	*** 5	= 0
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>					

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

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BASIC FEE	385.00
XS 9=	
X43=	86
+145=	
TOTAL	471

RATE	FEE
BASIC FEE	770.00
XS18=	
X86=	
+290=	
TOTAL	

SMALL ENTITY

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

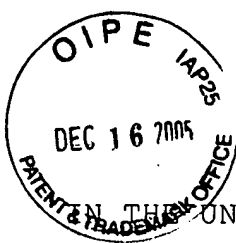
RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*		Minus	**	=
Independent	*		Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>					

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*		Minus	**	=
Independent	*		Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>					

- \* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
  - \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
  - \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
- The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



*J.H.W.*

UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker

INVENTION : **STRIPE REMOVAL SYSTEM**

SERIAL NUMBER : 10/884,643

FILING DATE : July 2, 2004

EXAMINER : El Arini, Zeinab

GROUP ART UNIT : 1746

OUR FILE NO. : 2708U.001

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CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 on 12/13/05

*[Signature]*

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Mail Stop: Non-Fee Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION OF NOVEMBER 28, 2005**

Sir:

In response to the Office Action dated November 28, 2005 having a shortened statutory period for response set to expire December 28, 2005, kindly enter the following response:

**Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.**

**The Requirement for Restriction begins on page 8 of this paper.**

**Remarks begin on page 9 of this paper.**

## **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

1. (Original) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising a liquid reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a waste removal hose connected at one end to said blast head and at the other end to a sump for collection of liquid and coating, said sump connected to said liquid reservoir, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said waste removal hose to said sump, said coatings collected in said sump and the waste liquid exiting through said outlet.

2. (Original) A cleaning system of claim 1 wherein a high power vacuum pump is connected to said sump.

3. (Original) A cleaning system of claim 2 wherein a shroud is connected to said blast head, said shroud surrounds said at least one nozzle and forms a negative pressure chamber.

4. (Original) A cleaning system of claim 3 wherein said liquid reservoir, said sump and said high power vacuum pump are mounted on a mobile frame, said mobile frame forms an integral part of a truck having a bed and an cab, said truck being self-propelled.

5. (Original) A cleaning system of claim 3 wherein said mobile blast head is attached to a wheeled chassis for maneuvering over the hard surface.

6. (Original) A cleaning system of claim 5 wherein said wheeled chassis is attached to a self-propelled tractor and said mobile blast head and tractor are of a size for removably docking transversely on said bed of said truck.

7. (Original) A cleaning system of claim 6 wherein said bed includes a ramp, said ramp connected to said bed for raising and lowering said ramp, said ramp sized to support said tractor for docking transversely on said bed.

8. (Original) A cleaning system for removing coatings from a hard surface by high pressure liquid comprising a water reservoir connected to a high pressure pump, said pump connected to a mobile blast head by a high pressure hose, said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface, a liquid and debris removal hose connected at one end to an inlet of a vacuum chamber and connected at the other end to said blast head to remove liquid and coating from said blast head, a high power vacuum pump connected to said vacuum chamber, said vacuum chamber having a rigid outside wall defining an interior, a wire mesh screen in said interior spaced inwardly of said rigid outside wall and forming an enclosure, said inlet inside said enclosure, said vacuum chamber having an outlet for the liquid, said outlet between said rigid wall and said enclosure, said outlet of said vacuum chamber connected to said reservoir for re-circulation of the liquid, whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface removing coatings therefrom, said liquid and coatings entrained by said high powered vacuum in said vacuum hose to said vacuum chamber through said inlet, said coatings collected by said filter screen in said vacuum chamber and the liquid exiting through said outlet.

9. (Original) A cleaning system of claim 8 wherein a porous flexible bag is removably inserted in said enclosure, said bag having a mouth surrounding said inlet whereby said coatings are collected in said bag.

10. (Original) A cleaning system of claim 8 wherein said reservoir, said vacuum chamber, said vacuum pump and said blast head are mounted on the bed of a truck.

11. (Original) In a cleaning system for removing coatings from a hard surface by high pressure liquid comprising a mobile blast head including at least one high pressure nozzle for directing high pressure liquid onto a hard surface, an articulating link attaching said blast head to a self propelled tractor, said link having a leading end and a trailing end, said blast head connected to said leading end, said trailing end connected to said tractor whereby said blast head is movable horizontally and vertically in relation to a hard surface.

12. (Original) In a cleaning system of claim 11 wherein said tractor has a pair of front wheels spaced apart, a bar fixed to said tractor between said front wheels, said link having trailing arms rotatably connected to said bar for rotation in a horizontal



plane, said link either fully to the left or right and then fully vertically.

13. (Withdrawn) A process for removing material comprising the steps of:

1. providing a vacuum tank and a water tank with a connection valve therebetween, closing of said connection valve;
2. inserting a filter material in said vacuum tank;
3. creating a vacuum in said vacuum tank by use of a vacuum pump powered by an internal combustion engine;
4. directing ultra high pressure water at a material to be removed creating a debris slurry, said slurry drawn into said vacuum tank being trapped in said filter.
5. breaking of the vacuum when said vacuum tank reaches full capacity;
6. draining water from said vacuum tank through said filter material; and
7. repeating steps 1-7 until said filter bag is filled.

14. (Withdrawn) A process for removing material comprising the steps of:

1. providing a vacuum tank and a water tank with a connection valve there between, opening said connection valve;

2. inserting a filter material in said vacuum tank;
3. creating a vacuum in said vacuum tank by use of a vacuum pump powered by an internal combustion engine;
4. directing ultra high pressure water at a material to be removed creating a debris slurry, said slurry drawn into said vacuum tank being trapped in said filter.
5. allow water to pass from said vacuum tank through said connection valve to said water tank when the water level rises to the level of said connection valve;
6. closing of said connection valve releasing vacuum from said water side tank;
- 7 draining of water from said water tank;
8. closing said drain valve;
9. opening said connection valve;
10. repeating steps 1-9 until said filter bag is filled.

## **Restriction**

Restriction to one of the following inventions has been required under 35 USC 121:

I. Claims 1-12, drawn to a cleaning system, classified in class 134, subclass 172.

II. Claims 13-14, drawn to a process for removing material, classified in class 134, subclass 21.

## **REMARKS**

### **Claim Status**

Claims 1-12 are subject to examination on the merits at this time. Claims 13-14 are withdrawn from consideration. It is understood that claims 13-14, drawn to non-elected inventions, will remain pending, albeit withdrawn from prosecution on the merits at this time. Claims 1-12 remain pending in the instant application.

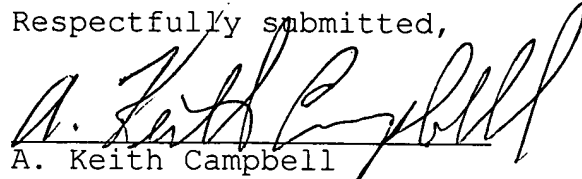
### **Election**

Applicant herein elects, without traverse, Group I (claims 1-12, drawn to a cleaning system) for prosecution on the merits.

## CONCLUSION

Now that Applicant has fully responded to the Office Action mailed on November 28, 2005, an examination on the merits is respectfully requested.

Respectfully submitted,



A. Keith Campbell

Registration No. 52,686

McHale & Slavin, P.A.  
2855 PGA Boulevard  
Palm Beach Gardens, FL 33410  
(561) 625-6575 (Voice)  
(561) 625-6572 (Fax)

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# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/884,643	07/02/2004	James P. Crocker	2708U.001	6130

21917 7590 11/28/2005

MCHALE & SLAVIN, P.A.  
2855 PGA BLVD  
PALM BEACH GARDENS, FL 33410

EXAMINER
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EL ARINI, ZEINAB

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/884,643

Applicant(s)

CROCKER, JAMES P.

Examiner

Zeinab E. EL-Arini

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-14 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-12, drawn to a cleaning system, classified in class 134, subclass 172.
  - II. Claims 13-14, drawn to a process for removing material, classified in class 134, subclass 21.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practice by another apparatus such as one without mobile blast head, and high pressure nozzle, and without waste removal hose.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.




Art Unit: 1746

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (571) 272-1301. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Zeinab E. EL-Arini  
Primary Examiner  
Art Unit 1746

ZEE  
11/22/05



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Bib Data Sheet

CONFIRMATION NO. 6130

SERIAL NUMBER 10/884,643	FILING DATE 07/02/2004  RULE	CLASS 134	GROUP ART UNIT 1746	ATTORNEY DOCKET NO. 2708U.001
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APPLICANTS

James P. Crocker, Stuart, FL;

\*\* CONTINUING DATA \*\*\*\*\*  
*None ZE*

\*\* FOREIGN APPLICATIONS \*\*\*\*\*  
*None ZE*

IF REQUIRED, FOREIGN FILING LICENSE GRANTED \*\* SMALL ENTITY \*\*  
 \*\* 08/18/2004

Foreign Priority claimed 35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance	STATE OR COUNTRY FL	SHEETS DRAWING 5	TOTAL CLAIMS 14	INDEPENDENT CLAIMS 5
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Verified and Acknowledged *ZE* Examiner's Signature Initials

ADDRESS  
 21917  
 MCHALE & SLAVIN, P.A.  
 2855 PGA BLVD  
 PALM BEACH GARDENS , FL  
 33410

TITLE  
 Stripe removal system

FILING FEE  RECEIVED 471	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____
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# Index of Claims



Application/Control No.

10/884,643

Examiner

Zeinab E. EL-Arini

Applicant(s)/Patent under Reexamination

CROCKER, JAMES P.

Art Unit

1746

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date											
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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/884,643	
	Filing Date	07/02/2004	
	First Named Inventor	James P. Crocker	
	Art Unit	3671	
	Examiner Name		
Total Number of Pages in This Submission	3	Attorney Docket Number	2708U.001

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<b>Remarks</b>	
<div></div>		
<b>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</b>		
Firm Name	McHale & Slavin, P.A.	
Signature		
Printed name	Michael A. Slavin	
Date	11/15/05	Reg. No. 34,016

CERTIFICATE OF TRANSMISSION/MAILING		
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:		
Signature		
Typed or printed name	Debra N. Gerstemeier	Date 11-15-2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICANT : James P. Crocker  
INVENTION: : STRIPE REMOVAL SYSTEM  
SERIAL NUMBER : 10/884,643  
FILING DATE : July 02, 2004  
EXAMINER: : (not assigned yet)  
GROUP ART UNIT : 3671  
ATTORNEY DOCKET NO. : 2708U.001

CERTIFICATE UNDER 37 CFR §1.8(a)  
I hereby certify that this correspondence is being deposited with  
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Alexandria, VA 22313-1450 on 11-15-05

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the Duty to Disclose under 37 CFR §1.56, the references cited on the accompanying form PTO/SB/08A are hereby brought to the attention of the Examiner for independent evaluation. Pursuant to the Official Gazette Notice dated August 5, 2003, Applicants are not required to submit copies of these references. The references were cited in the specification and their relevancy is set forth therein.

Applicants submit that the present invention is patentable over these references.

Date: 11/15/05

Respectfully Submitted,

Michael A. Slavin  
Reg. No. 34,016  
McHale & Slavin, P.A.  
2855 PGA Boulevard  
Palm Beach Gardens, FL 33410  
Telephone: (561) 625-6575  
Telefax: (561) 625-6572  
e-mail: [palmbeach@mspatents.com](mailto:palmbeach@mspatents.com)

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Substitute for form 3

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/884,643
Filing Date	July 02, 2004
First Named Inventor	James P. Crocker
Art Unit	3671
Examiner Name	
Attorney Docket Number	2708U.001

Sheet	1	of	1
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## U. S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 2708U.001

First Inventor Crocker

Title STRIPE REMOVAL SYSTEM

Express Mail Label No. EU470270178US

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

## ADDRESS TO:

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 24]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 5]
5. Oath or Declaration [Total Sheets 2]
  - a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)
  - i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ Paper
  - c. ☐ Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☐ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: .....

Prior application information:

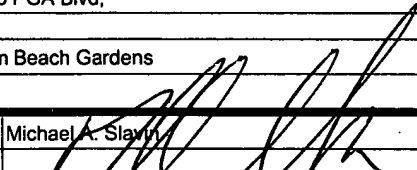
Examiner

Art Unit:

For CONTINUATION OF DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

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Signature		Date	7/2/04

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# FEE TRANSMITTAL

## for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** (\$) 471.00

**Complete if Known**

Application Number	
Filing Date	
First Named Inventor	Crocker
Examiner Name	
Art Unit	
Attorney Docket No.	2708U.001

**METHOD OF PAYMENT** (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

 Deposit Account Number  
13-0439

 Deposit Account Name  
McHale & Slavin, P.A.

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☐ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

**FEE CALCULATION**
**1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	750	2001	375	Utility filing fee	385.00
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
<b>SUBTOTAL (1)</b>					<b>(\$ 385.00)</b>

**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims	Extra Claims	Fee from below	Fee Paid
14	-20** =	X	-0-
Independent Claims	5	-3** =	X 2 = 86
Multiple Dependent			

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2)** (\$) 471.00

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION** (continued)

**3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** (\$)

**SUBMITTED BY**

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Signature		Date	7/2/04		

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Waterblasting - 2002

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## 1 STRIPE REMOVAL SYSTEM

2 Field of the invention

3 This invention relates to the field of high pressure water  
4 cleaning devices for highways, runways, parking decks, and  
5 other hard surfaces.

6 Prior art Background

7 The use of paint stripes on road surfaces is the accepted  
8 method to indicate vehicle lanes, crossing lanes, parking areas  
9 and numerous other indicators. Various pavement marking  
10 techniques are known, including the use of traffic paint,  
11 thermoplastic, epoxy paint and preformed tapes. Common pavement  
12 surfaces are asphalt and concrete. Most pavement marking  
13 systems are intended to be as durable and permanent as  
14 possible, and resistant to weathering and wear from traffic.

15 The removal of such striping is typically required when the  
16 road is to be resurfaced or if the indication is to be changed.

17 The removal of such stripes is typically performed by use of  
18 abrasive wheels, grinding teeth, or the blasting of abrasive  
19 particles against the material to be removed. The use of these  
20 carbide teeth and grinding wheels results in an undesirable  
21 trench or groove in the road.

22 For example, paint, when used for roadway marking,  
23 penetrates into the pavement, perhaps 1/8 -3/8 inch, so that  
24 mere surface removal of the paint is not sufficient to remove

1 the marking. For example, a pavement marking removal technique  
2 that uses abrasive wheels or teeth can create excessive heat  
3 which may be suitable for removing painted markings but can  
4 melt thermoplastic materials causing equipment to gum up, by  
5 reconstituting the thermoplastic.

6 Current pavement marking removal machines typically employ  
7 various forms of cutting devices to remove the marking  
8 material, as well as a portion of the underlying layer of  
9 pavement material, for example, 1/8 - 3/8 inch, in order to  
10 effectively remove painted lines, including paint which has  
11 penetrated the porous pavement. A common type of machine  
12 employed for removing pavement marking is known as a "Road Pro"  
13 grinder manufactured by Dickson Industries, Inc., in Dickson  
14 U.S. Pat. No. 5,236,278. This type of machine employs parallel  
15 passive shafts that extend between circular rotating end  
16 plates. Hardened steel star wheels are carried on the parallel  
17 passive shafts, and these star wheels strike and abrade the  
18 pavement surface.

19 Another approach to pavement marking removal is the use of  
20 diamond saw blades arranged to make a dado cut. Still other  
21 types of machines use grinders or shot blast as described in  
22 Patent Registrations 4,753,052; 4,376,358; 3,900,969;  
23 4,336,671; 3,977,128 and 4,377,924.

24 NLB Corporation markets a high pressure water jet system

1 for removing paint from pavement under the name "StarJet". The  
2 water jet system includes a blast head frame mounted on an  
3 attachment to the front bumper of a prime-mover truck. Casters  
4 support the frame for movement over the pavement and the path  
5 of the blast head is controlled by the driver steering the  
6 truck. Because of the position of the driver and the cab body  
7 of the prime-mover, it is difficult to see the blast head's  
8 position with regard to the stripes on the pavement. Any  
9 vision at all requires the driver to lean out of the driver's  
10 side window resulting in fatigue and other non ergonomically  
11 efficient factors. Positioning the head to the passenger side  
12 is performed manually with some difficulty and greatly  
13 complicating the driver's ability to view the blast path. The  
14 driver must now position himself in an almost upright standing  
15 position. Further, due to the length of the extension holding  
16 the blast head, the angular off-set, and the swivel of the  
17 casters, the movement of the wheel of the truck is not directly  
18 related to the path of the blast head.

19 NLB Corporation also has another system marketed under the  
20 mark "StripeJet", that is a self propelled tractor with a blast  
21 head on the front of the tractor. The blast head has a shroud  
22 and high pressure inlet with a vacuum recovery.

23 Another stripe removal system is marketed by the Blasters  
24 Corporation which is mounted on a truck similar to the

1 "StarJet" device. Another model appears to be a self-powered  
2 four wheeled tractor, similar to a grass mower, which supports  
3 a driver and is connected to the prime-mover by high pressure  
4 lines for delivery of high pressure water to a blast head. The  
5 blast head is on the front of the tractor.

6 The problem with the prior art is the inability to place  
7 an operator close to the material removal site by use of a  
8 device that has over-all dimensions that allow for easy  
9 transfer sideways on a truck or trailer having a width less  
10 than 8' 6".

11

12

1 SUMMARY OF THE PRESENT INVENTION

2 Briefly, disclosed is a cleaning system for removing  
3 coatings from a hard surface by high pressure liquid. The  
4 system employs a liquid reservoir connected to a high pressure  
5 pump for directing ultra high pressure water through a blast  
6 head mounted on a self-propelled mobile frame. The mobile  
7 frame is a self-propelled tractor wherein the blast head and  
8 tractor are of a size for removably docking transversely on a  
9 bed of said truck. The cleaning system is mounted on the truck  
10 or pulled behind the truck on a trailer. The truck is then  
11 tethered to the tractor during operation. The truck bed  
12 includes a ramp sized to support the tractor for docking and  
13 transport.

14 It is an object of this invention to provide a vacuum  
15 recovery truck mounted stripe removal system having a compact  
16 unit for safe, fast over-the-road travel to job sites.

17 It is another object of this invention to provide a unit  
18 that is quickly deployed, with hoses not having to be  
19 disconnected, and in operation at the job site.

20 It is a further object of this invention to provide a  
21 tractor mounted blast head that is hydraulically articulated  
22 from left to right and at the same time when moved all the way  
23 to the right this also brings the blast head closer to the  
24 wheels of the tractor thereby reducing its overall dimension to

1 under 8' 6" when in its upright and locked position to reduce  
2 the over-all dimensions of the blast head for over-the-road  
3 transportation.

4 It is still another object of this invention to provide a  
5 blast head that is articulated to swing horizontally  
6 independently of the tractor path for more flexibility in  
7 coverage.

8 It is a further object of this invention to provide a high  
9 pressure water jet for removal of paint or other coverings and  
10 a vacuum recovery system for the water and debris being  
11 generated.

12 It is yet another object of this invention to provide a  
13 collection/filter receptacle for the removed materials for ease  
14 of disposal and the release of filtered wastewater. This  
15 allows an operator to easily regain all of the available  
16 capacity not occupied by paint chips or road debris of the  
17 vacuum chamber by simply releasing the dump valve. All of the  
18 remaining debris is retained until such time as the vacuum  
19 chamber is completely full of actual debris. The amount of  
20 capacity able to be regained will be continually diminished as  
21 the vacuum tank fills with debris and will eventually reach a  
22 point of inefficiency at which point it must be dumped. When  
23 the material is dumped, it is dumping semi dried, dewatered  
24 debris in which the wastewater is not mixed with the debris.

1           Other objectives and advantages of this invention will  
2   become apparent from the following description taken in  
3   conjunction with the accompanying drawings wherein are set  
4   forth, by way of illustration and example, certain embodiments  
5   of this invention. The drawings constitute a part of this  
6   specification and include exemplary embodiments of the present  
7   invention and illustrate various objects and features thereof.  
8

1 BRIEF DESCRIPTION OF THE DRAWINGS

2 While the novel features of the invention are set forth  
3 with particularity in the appended claims, the invention, both  
4 as to organization and content, will be better understood and  
5 appreciated from the following detailed description, taken in  
6 conjunction with the drawings, in which:

7 Fig. 1 is a side view of the stripe removal system;

8 Fig. 2 is a perspective of the stripe removal system with  
9 blast head deployed;

10 Fig. 3 is a front view of the blast head and tractor;

11 Fig. 4 is perspective of the blast head link;

12 Fig. 5 is a side view of the tractor with blast head  
13 stowed;

14 Fig. 6 is a side view of the liquid reservoir and sump;  
15 and

16 Fig. 7 is a perspective of the sump and waste removal  
17 system.

18

19



1     **DETAILED DESCRIPTION OF THE INVENTION**

2             The paint removal system 10, shown in Fig. 1, includes a  
3     prime-mover truck 11 and a trailer 12. The truck has a forward  
4     cab-over 18 for the driving controls and operator. Mounted on  
5     the bed 12 of the truck is the water reservoir 13 and the sump  
6     14 or vacuum chamber. The reservoir and sump are  
7     interconnected by a strategically positioned duct for  
8     continuous dumping of filtered wastewater when operating from  
9     a fixed position where liquid is supplied to the high pressure  
10    pump by a means other than the reservoir 13.

11            The sump 14 is positioned on the rear end of the bed 12.  
12    The rear portion 19 of the bed is pivotally mounted on the  
13    truck frame and hydraulically powered to move in the vertical  
14    plane permitting dumping of the contents of the sump 14. The  
15    sump 14 is connected to the vacuum pump 15 by hose 16. The  
16    intake of a high power vacuum pump capable of approximately  
17    1100 CFM (cubic feet per minute) is connected to the vacuum  
18    tank. The vacuum tank and pump are also mounted on the bed of  
19    the prime-mover 11.

20            A ramp 19 is hinged to the edge of the bed 12 between the  
21    vacuum pump 15 and the cab 18. The ramp can be lowered to  
22    provide a pathway for the self propelled tractor 20. As shown,  
23    the ramp 19 is in the stowed or traveling position for highway  
24    transport. When the ramp is unfolded it is approximately 9

1 feet in length.

2 The trailer 12 is removably attached to the prime-mover  
3 through a conventional trailer hitch 21. Mounted on the bed 22  
4 of the trailer is a high pressure fluid pump greater than  
5 25,000 - 40,000 psi and from 2-15 gallons per minute. A high  
6 pressure hose connects the pump with the blast head during  
7 operations.

8 In Fig. 2 the mobile tractor 20 is illustrated in the  
9 normal operations position. The tractor is similar to a riding  
10 mower with a small engine self propelling the tractor. The  
11 blast head 23 has at least one and up to sixteen high pressure  
12 nozzles delivering high pressure fluid to the surface to be  
13 cleaned. The high pressure nozzle is carried on a chassis 24  
14 mounted on casters 25. A shroud 27 descends from the chassis  
15 and surrounds the high pressure nozzle. The blast head is  
16 connected to the high pressure hose by line 26 and the shroud  
17 27 is connected to the sump by waste removal hose 28. The high  
18 pressure hose 26 and the vacuum hose 28 is supported by a  
19 swinging boom 29 which is mounted on the prime mover 11 shown  
20 in Figure 1 to provide freedom of movement for the tractor and  
21 to prevent tangling or running over of the hoses by the prime  
22 mover.

23 As shown in Figs. 3-5, the blast head 23 is connected to  
24 the tractor 20 by an articulated link 31 which is capable of

1 horizontal movement, as shown in Figs. 3 and 4, and vertical  
2 movement, as shown in Fig. 5. A bar 32 is attached to the  
3 tractor frame by rods 33 and 34. The bar 32 is located between  
4 the front wheels of the tractor. The horizontal swinging  
5 movement of the link results in a widened path of the high  
6 pressure nozzle to adjust for different widths or patterns of  
7 striping of the surface being cleaned and deviations in  
8 direction of the tractor. The horizontal movement is powered  
9 by the hydraulic cylinder 35 connected to bar 32 which may be  
10 controlled by the operator moving a joy stick on the tractor.  
11 As the hydraulic piston 36, connected to the trailing arm 37,  
12 arm 37 and 38 move, with the trailing arms rotating about pins  
13 39 and 40 attached by brackets 41 and 42 on bar 32.

14 The forward end of the articulated link 31 has a plate 43  
15 connected to the forward ends of trailing arms 37 and 38. The  
16 arms 37 and 38 are rotatably connected to the plate by brackets  
17 41' and 42' holding pins 39' and 40', respectively. The  
18 forward arms 44 and 45 are rotatably connected to the plate 43  
19 to rotate vertically. Pins 46 and 47 extend horizontally  
20 through brackets 48 and 49. Another hydraulic cylinder 50 is  
21 connected to the plate 43 and the piston 51 is connected to the  
22 forward end of the arm 44. As the piston 51 moves, the  
23 distance between the surface to be cleaned and the blast head  
24 23 changes. The vertical movement permits elevation changes to

1 accommodate the contours of the surface. Further, the blast  
2 head 23 may be raised to the vertical position and then  
3 manually flipped up and back reducing the overall length to  
4 permit the tractor 20 and blast head 23 to be stowed on a truck  
5 bed sideways consuming a space of less than 8' 6" for highway  
6 travel, shown in Fig. 5. The forward ends of the arms 44 and  
7 45 are attached by pins 52 and 53 to brackets 54 and 55 to  
8 prevent binding as the arms are manipulated. The brackets are  
9 mounted on blast head attachment plate 56.

10 A blast head attachment plate 56 is removably connected to  
11 the chassis 24 of the blast head 23 to provide support and  
12 control of the blast head from the tractor through the link 31.

13 The liquid reservoir 13 and the sump 14 are shown in Fig.  
14 6. As illustrated, the liquid reservoir and vacuum chamber  
15 have a common enclosure with an internal partition dividing  
16 them. The sump 14 has an inlet 57 for connection by hose 28 to  
17 the vacuum shroud 27. An outlet 58 is connected to the vacuum  
18 pump hose 16. The liquid reservoir has a hatch 60 for  
19 inspecting and cleaning the reservoir with approximately 600-  
20 1500 gallons of liquid. An outlet 61 is connected to a low  
21 pressure pump by a low pressure suction hose 62. The low  
22 pressure 12 volt pump is used to pump water out of the  
23 reservoir 13 back to the water blasting pump 12 at about 40 Psi  
24 and 20 g.p.m.

1 A recycling valve 63 is mounted in a connector pipe 64 having  
2 one end opening into the reservoir 13 and the other end opening  
3 into the sump 14. The connector is located near the top of the  
4 sump and reservoir to allow for some settling of debris in the  
5 sump. The valve 63 opens or closes the connection.

6 In Fig. 7, the sump 14 is shown with the rear door 65 open  
7 for unloading the porous enclosure 64. The door has a seal  
8 (not shown) to maintain the negative pressure therein during  
9 operation. The porous enclosure may be a wire screen or mesh  
10 box sized to fit within the sump 14. An additional filter bag  
11 with having between 5-200 micron porosity may be inserted into  
12 the enclosure. The dimensions of the enclosure 64 are somewhat  
13 less than the interior of the sump which provides a marginal  
14 area 65 between the enclosure and the interior walls and floor  
15 of the sump which provides an exit path for filtered water  
16 through valve 70. The inlet 57 empties into the enclosure 64  
17 thereby preventing coatings from being entrained in the vacuum  
18 system. One side of the enclosure is hinged and latched to  
19 permit entry into the enclosure or removal of the filter bags.  
20 By opening the sump door and raising the dump bed of the truck,  
21 the waste material can be easily and quickly removed without  
22 prolonged interruption of the operations. The filter bag is  
23 the disposal container, and is dumped with the material. A  
24 permanent filter material can also be utilized which requires

1 cleaning after each use but does not waste a filter bag each  
2 time it is dumped.

3 In operation, the process for using the disclosed  
4 equipment in a mobile operation for stripe removal:

5 1. Connection valve remains closed. Water side is used  
6 only as a fresh water supply and is not placed under vacuum at  
7 any time.

8 2. Filter material positioned in the vacuum tank at a  
9 distance off the walls and floor of the tank. A filter "bag"  
10 may also be hung by hooks from the ceiling to produce even  
11 cleaner waste water.

12 3. The vacuum tank is placed under vacuum by starting the  
13 diesel powered vacuum pump which is connected by an air outlet  
14 hose to the vacuum tank.

15 4. As strip material is removed creating a slurry of  
16 water and debris, the mixture is drawn through the inlet hose  
17 into the vacuum tank being trapped in the filter.

18 5. When the vacuum tank reaches its full capacity, a  
19 shutoff ball is forced upwards toward the air outlet hose and  
20 makes contact with a ball seal causing loss of tank vacuum.

21 6. The drain valve is then opened on the vacuum tank.  
22 The drain permits water to drain through the filter material  
23 and into the open cavity between the walls and floor allowing  
24 an exit from the drain.

1           7.    The shutoff valve is closed allowing for a capacity  
2   equal to the capacity previously occupied by dirty water, only  
3   the debris slurry remains inside the tank.

4           8.    Steps 1 - 7 are repeated until the strip is removed.

5           9.    Upon opening of a door to the vacuum container,  
6   allows for a removal of all debris captured in the filter.

7           The instant invention may also be used in a non-mobile  
8   setting in continuous operation as follows.

9           1.    The connection valve remains open except when it is  
10   necessary to dump the water side. Water side is used as an  
11   overflow vacuum tank and is under vacuum much of the time.

12          2.    Filter material positioned in the vacuum tank at a  
13   distance off the walls and floor of the tank. A filter "bag"  
14   may also be hung by hooks from the ceiling to produce even  
15   cleaner waste water.

16          3.    Vacuum tank is placed under vacuum by starting the  
17   diesel powered vacuum pump which is connected by the air outlet  
18   hose to the vacuum tank. Water side is under vacuum as well by  
19   way of connection valve.

20          4.    As strip material is removed creating a slurry of  
21   water and debris, the mixture is drawn through the inlet hose  
22   into the vacuum tank being trapped in the filter.

23          5.    As the debris and water level rise to the level of  
24   the connection valve, the water will begin flowing through the

1 connection valve into the water side. The water in the water  
2 side tank will be filtered water as the water has had to first  
3 flow through the filter material to reach the connection valve.

4 6. When the waste water has reached the level of the  
5 connection valve it will be visible to the operator through a  
6 strategically positioned sight glass. At that point, without  
7 shutting down the vacuum or the operation, the operator closes  
8 the connection valve which releases the water side tank from  
9 vacuum.

10 7 Next, the operator must open the drain valve on the  
11 water side to release the waste water being held there.

12 8. After the water tank has drained completely, the  
13 water side drain valve must be closed.

14 9. The connection valve is reopened allowing wastewater  
15 to flow freely into the water side box.

16 10. Repeating of steps 1 - 9 while never shutting down or  
17 affecting the blasting operation whatsoever. This may be  
18 continued until the vacuum tank is full of debris.

19 11. It is now necessary to shut off the vacuum power unit  
20 and open the drain valve on the vacuum tank. This allows the  
21 water to drain through the filter material, into the open  
22 cavity between the walls and floor, and exit the drain. This  
23 allows the debris to dewater.

24



1           12.     Opening of the vacuum door allows for a release of  
2 all material to repeat the process.

3           A number of embodiments of the present invention have been  
4 described. Nevertheless, it will be understood that various  
5 modifications may be made without departing from the spirit and  
6 scope of the invention. Accordingly, it is to be understood  
7 that the invention is not to be limited by the specific  
8 illustrated embodiment but only by the scope of the appended  
9 claims.

10

1     **CLAIMS**

2     What is claimed is:

3           1. A cleaning system for removing coatings from a hard  
4     surface by high pressure liquid comprising a liquid reservoir  
5     connected to a high pressure pump, said pump connected to a  
6     mobile blast head by a high pressure hose, said blast head  
7     having at least one high pressure nozzle for delivering high  
8     pressure liquid onto a hard surface, a waste removal hose  
9     connected at one end to said blast head and at the other end to  
10    a sump for collection of liquid and coating, said sump  
11    connected to said liquid reservoir, whereby liquid is pumped  
12    through said high pressure hose from said reservoir and exits  
13    said high pressure nozzle onto the hard surface removing  
14    coatings therefrom, said liquid and coatings entrained by said  
15    waste removal hose to said sump, said coatings collected in  
16    said sump and the waste liquid exiting through said outlet.

17

18           2. A cleaning system of claim 1 wherein a high power  
19    vacuum pump is connected to said sump.

20

21           3. A cleaning system of claim 2 wherein a shroud is  
22    connected to said blast head, said shroud surrounds said at  
23    least one nozzle and forms a negative pressure chamber.

24

1           4. A cleaning system of claim 3 wherein said liquid  
2   reservoir, said sump and said high power vacuum pump are  
3   mounted on a mobile frame, said mobile frame forms an integral  
4   part of a truck having a bed and an cab, said truck being self-  
5   propelled.

6  
7           5. A cleaning system of claim 3 wherein said mobile blast  
8   head is attached to a wheeled chassis for maneuvering over the  
9   hard surface.

10  
11          6. A cleaning system of claim 5 wherein said wheeled  
12   chassis is attached to a self-propelled tractor and said mobile  
13   blast head and tractor are of a size for removably docking  
14   transversely on said bed of said truck.

15  
16          7. A cleaning system of claim 6 wherein said bed includes  
17   a ramp, said ramp connected to said bed for raising and  
18   lowering said ramp, said ramp sized to support said tractor for  
19   docking transversely on said bed.

20  
21          8. A cleaning system for removing coatings from a hard  
22   surface by high pressure liquid comprising a water reservoir  
23   connected to a high pressure pump, said pump connected to a  
24   mobile blast head by a high pressure hose, said blast head

1 having at least one high pressure nozzle for delivering high  
2 pressure liquid onto a hard surface, a liquid and debris  
3 removal hose connected at one end to an inlet of a vacuum  
4 chamber and connected at the other end to said blast head to  
5 remove liquid and coating from said blast head, a high power  
6 vacuum pump connected to said vacuum chamber, said vacuum  
7 chamber having a rigid outside wall defining an interior, a  
8 wire mesh screen in said interior spaced inwardly of said rigid  
9 outside wall and forming an enclosure, said inlet inside said  
10 enclosure, said vacuum chamber having an outlet for the liquid,  
11 said outlet between said rigid wall and said enclosure, said  
12 outlet of said vacuum chamber connected to said reservoir for  
13 re-circulation of the liquid, whereby liquid is pumped through  
14 said high pressure hose from said reservoir and exits said high  
15 pressure nozzle onto the hard surface removing coatings  
16 therefrom, said liquid and coatings entrained by said high  
17 powered vacuum in said vacuum hose to said vacuum chamber  
18 through said inlet, said coatings collected by said filter  
19 screen in said vacuum chamber and the liquid exiting through  
20 said outlet.

21  
22 9. A cleaning system of claim 8 wherein a porous flexible  
23 bag is removably inserted in said enclosure, said bag having a  
24 mouth surrounding said inlet whereby said coatings are

1 collected in said bag.

2

3 10. A cleaning system of claim 8 wherein said reservoir,  
4 said vacuum chamber, said vacuum pump and said blast head are  
5 mounted on the bed of a truck.

6

7 11. In a cleaning system for removing coatings from a  
8 hard surface by high pressure liquid comprising a mobile blast  
9 head including at least one high pressure nozzle for directing  
10 high pressure liquid onto a hard surface, an articulating link  
11 attaching said blast head to a self propelled tractor, said  
12 link having a leading end and a trailing end, said blast head  
13 connected to said leading end, said trailing end connected to  
14 said tractor whereby said blast head is movable horizontally  
15 and vertically in relation to a hard surface.

16

17 12. In a cleaning system of claim 11 wherein said  
18 tractor has a pair of front wheels spaced apart, a bar fixed to  
19 said tractor between said front wheels, said link having  
20 trailing arms rotatably connected to said bar for rotation in  
21 a horizontal plane, said link either fully to the left or right  
22 an then fully vertically.

23

24

1           13. A process for removing material comprising the steps  
2 of:

3           1. providing a vacuum tank and a water tank with a  
4 connection valve therebetween, closing of said connection  
5 valve;

6           2. inserting a filter material in said vacuum tank;

7           3. creating a vacuum in said vacuum tank by use of a  
8 vacuum pump powered by an internal combustion engine;

9           4. directing ultra high pressure water at a material to  
10 be removed creating a debris slurry, said slurry drawn into  
11 said vacuum tank being trapped in said filter.

12           5. breaking of the vacuum when said vacuum tank reaches  
13 full capacity;

14           6. draining water from said vacuum tank through said  
15 filter material; and

16           7. repeating steps 1-7 until said filter bag is filled.  
17

18           14. A process for removing material comprising the steps  
19 of:

20           1. providing a vacuum tank and a water tank with a  
21 connection valve there between, opening said connection valve;  
22

23           2. inserting a filter material in said vacuum tank;

24           3. creating a vacuum in said vacuum tank by use of a

1 vacuum pump powered by an internal combustion engine;  
2 4. directing ultra high pressure water at a material to  
3 be removed creating a debris slurry, said slurry drawn into  
4 said vacuum tank being trapped in said filter.  
5 5. allow water to pass from said vacuum tank through  
6 said connection valve to said water tank when the water level  
7 rises to the level of said connection valve;  
8 6. closing of said connection valve releasing vacuum  
9 from said water side tank;  
10 7 draining of water from said water tank;  
11 8. closing said drain valve;  
12 9. opening said connection valve;  
13 10. repeating steps 1-9 until said filter bag is filled.  
14

1 ABSTRACT

2 A system for removing paint and other coatings from hard  
3 surfaces is mounted on a truck for over-the-road travel. The  
4 truck bed carries a high power vacuum pump, a self propelled  
5 tractor with an attached blast head, a liquid reservoir, a sump  
6 or vacuum tank, and a ramp for loading the tractor. The  
7 reservoir is connected to a low pressure pump that transfers  
8 water to the high pressure pump. The high pressure pump is  
9 connected to the blast head by a high pressure hose. A vacuum  
10 hose is connected to the sump which has an internal enclosure  
11 for separating the waste materials from the liquid for easy  
12 dumping of semi dried materials.



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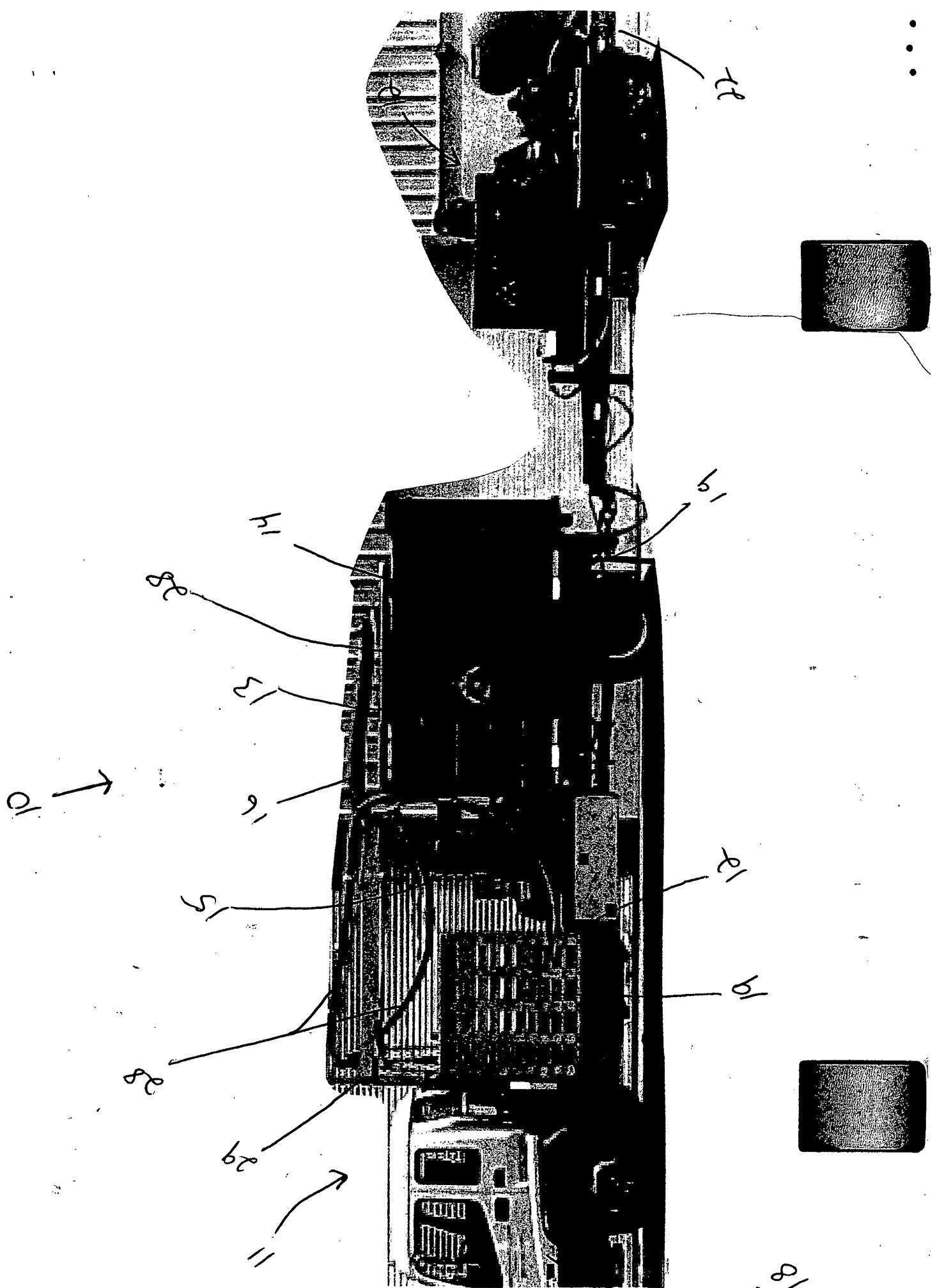
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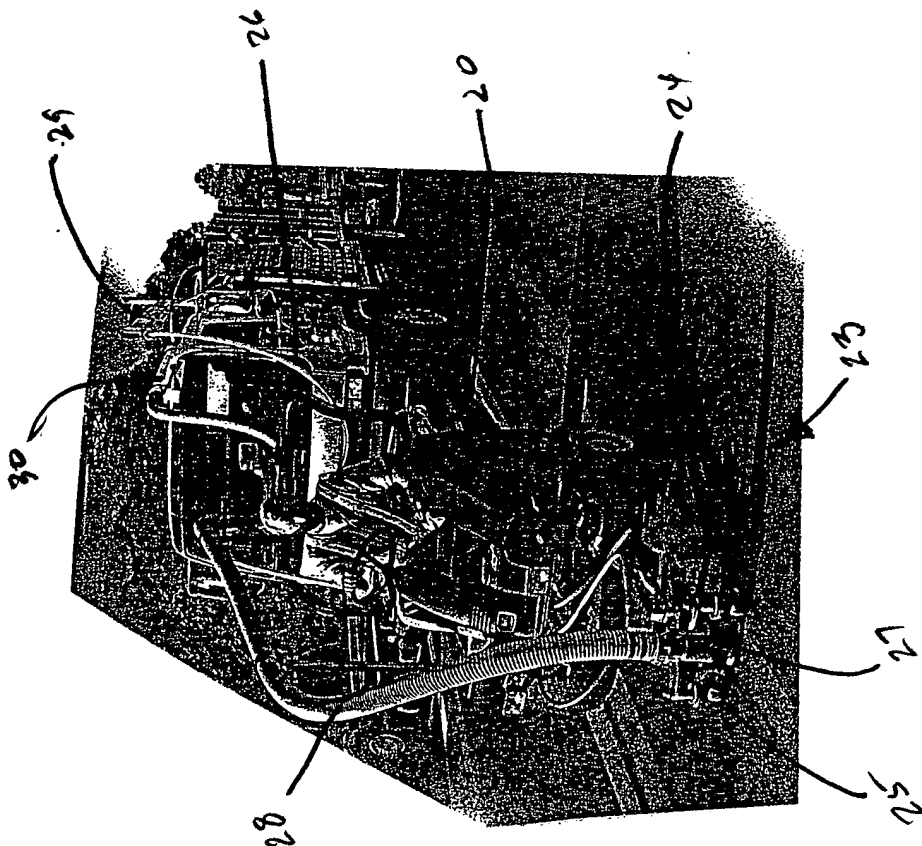


FIG. 2

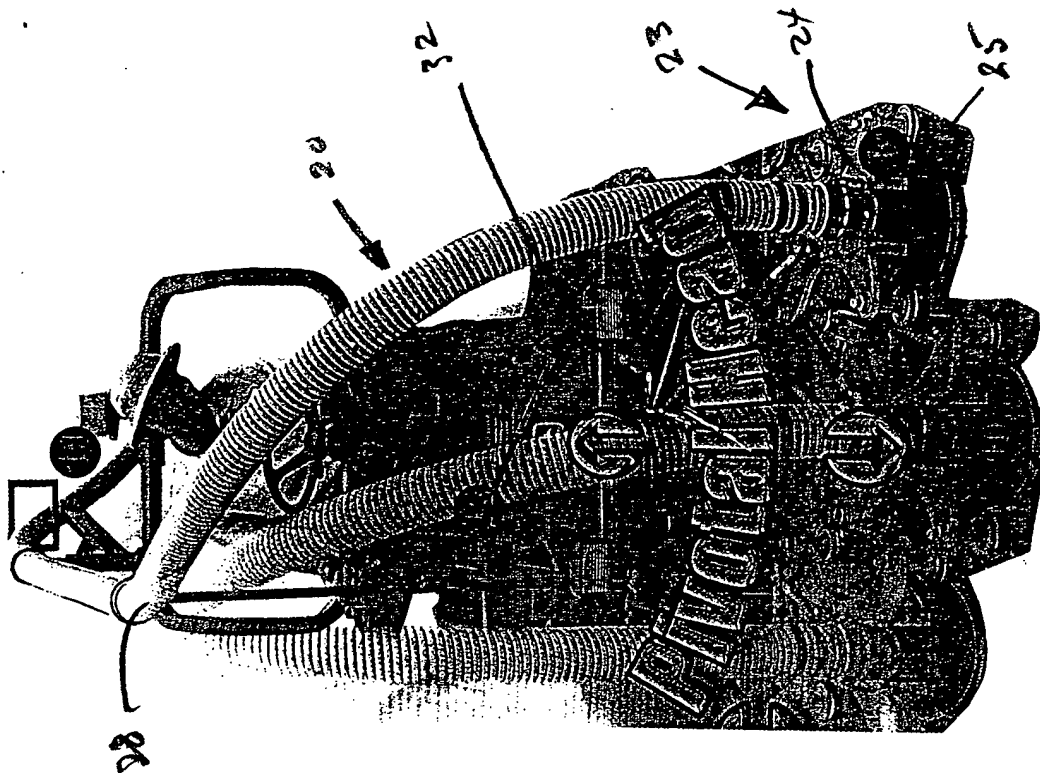
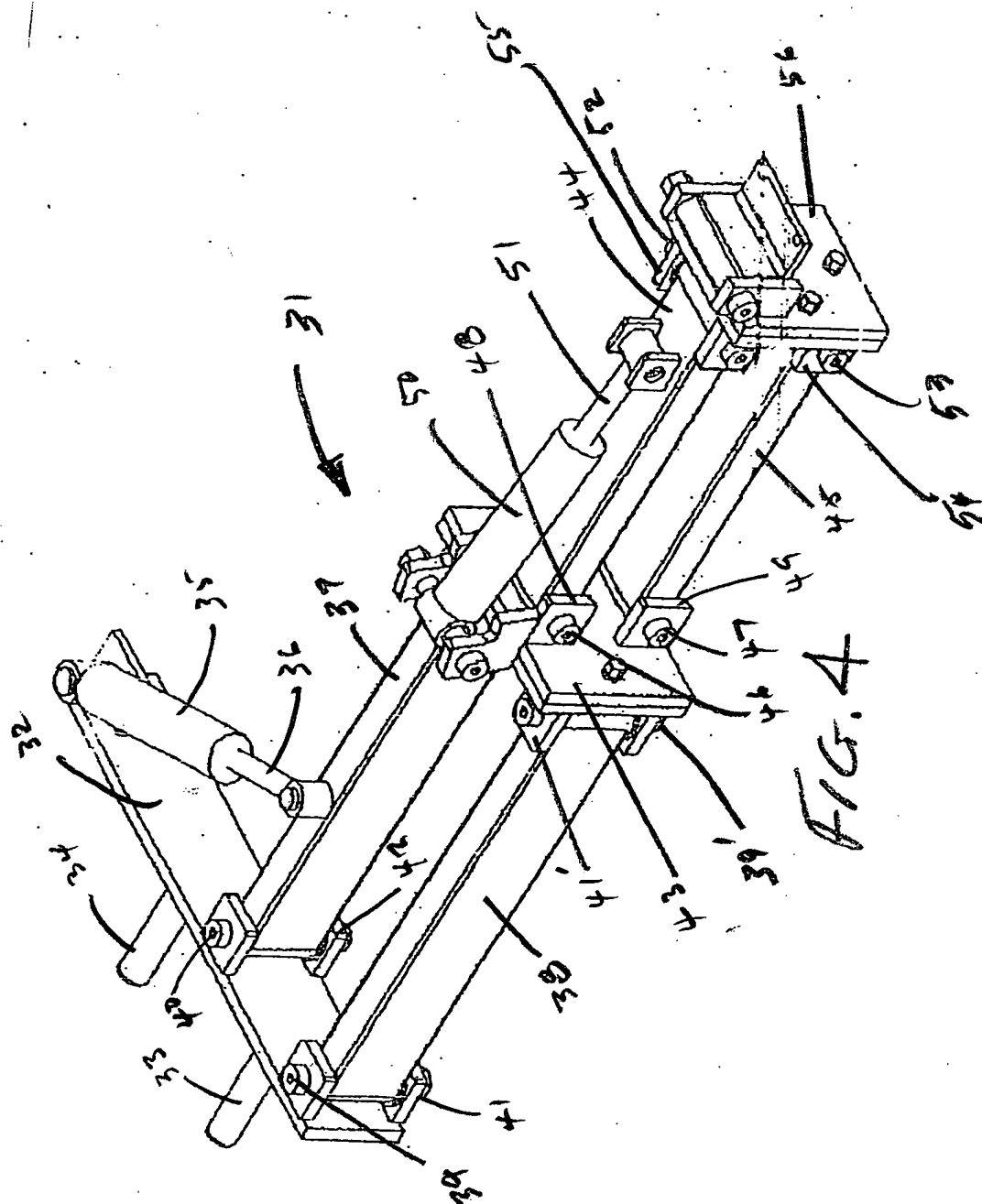


FIG. 3



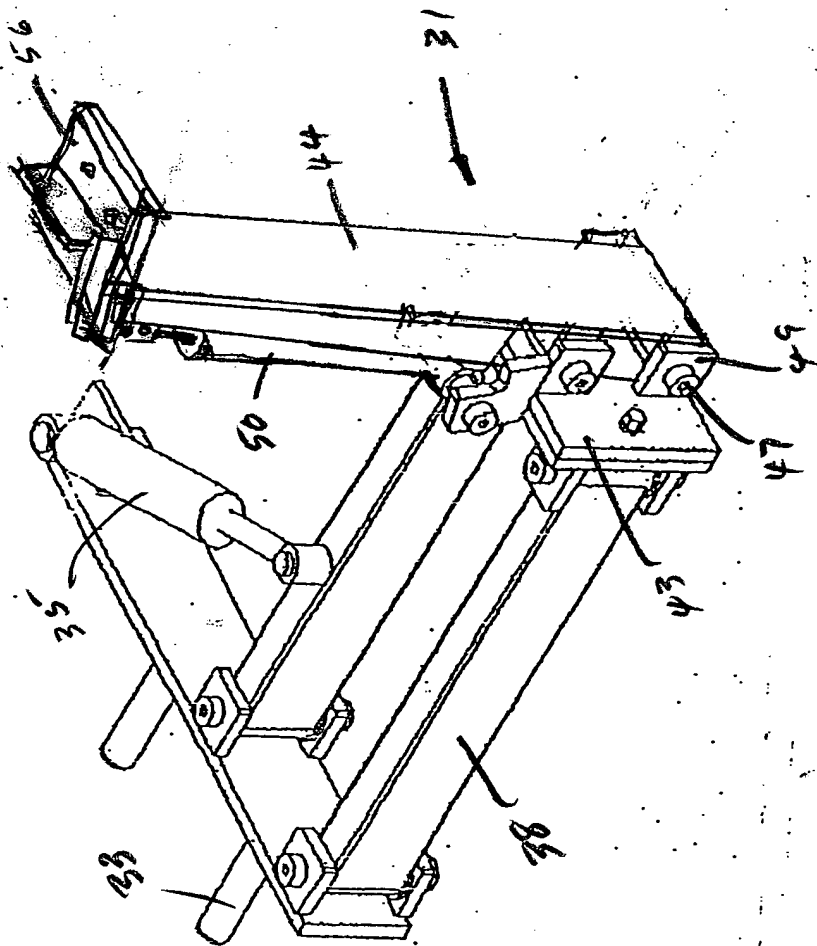


FIG. 5

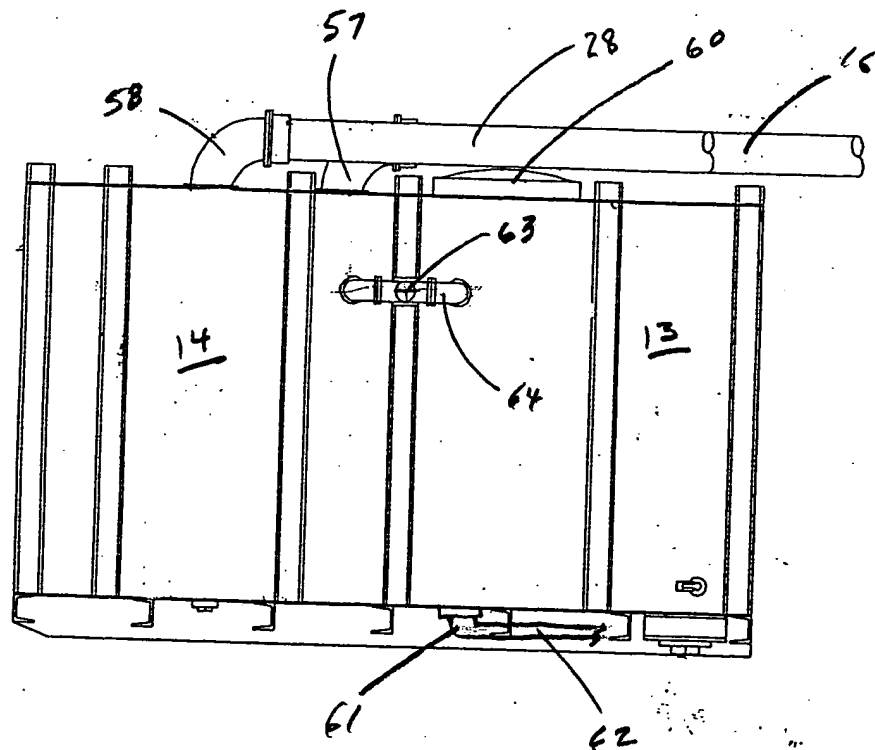


FIG. 6

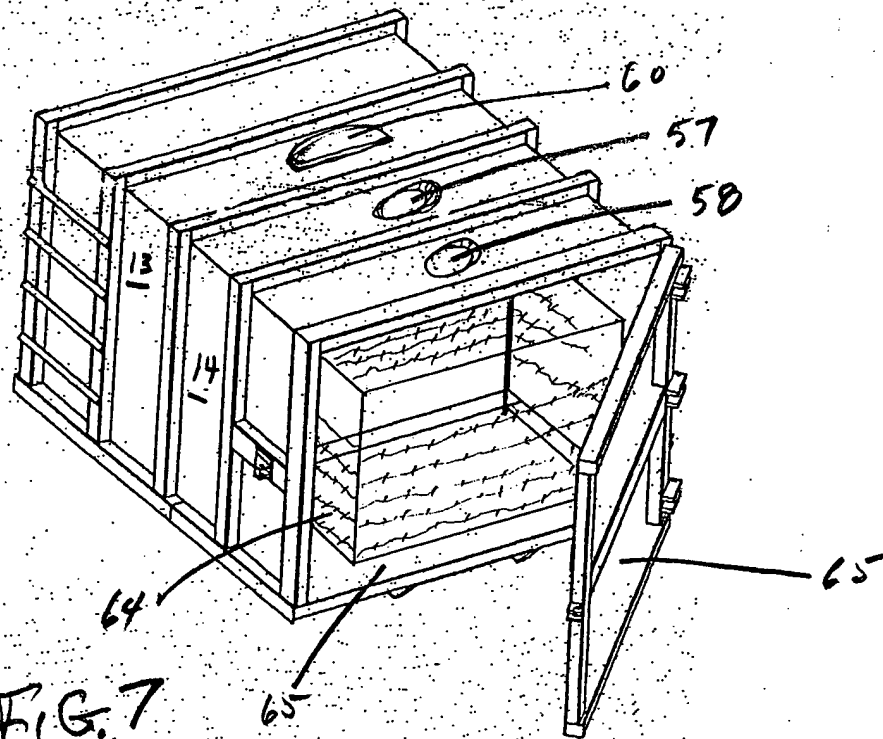


FIG. 7

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(37 CFR 1.16 (e))  
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Attorney Docket Number

2708U.0000001

First Named Inventor

Crocker

COMPLETE IF KNOWN

Application Number

Filing Date

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Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

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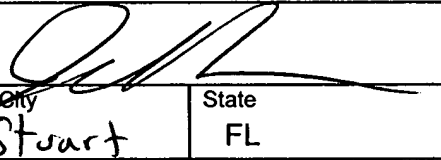
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NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any]) <del>Jim</del> James P.		Family Name or Surname Crocker	
Inventor's Signature 		Date 6/29/04	
Residence: City Stuart	State FL	Country US	Citizenship US
Mailing Address 1305 Salerno Rd			
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[Page 2 of 2]



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# PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2003

Application or Docket Number

10884643

## CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	14	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	14 minus 20 = *	
INDEPENDENT CLAIMS	5 minus 3 = *	2
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

\* If the difference in column 1 is less than zero, enter "0" in column 2

## CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

1 8 11 13 14

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
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	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
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- \* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
  - \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
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BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	
X43=	86	OR	X86=	
+145=		OR	+290=	
TOTAL	471	OR	TOTAL	

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### OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
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01 FC:2001		385.00 OP
02 FC:2201	43.00 DA	43.00 OP

PTO-1556  
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