

11-05-1998



Form PTO-1595  
6-93

100870998

HEET

U.S. Department of Commerce  
Patent and Trademark Office

PATENTS ONLY

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

1. Name of conveying party(ies):

David J. WAXMAN; and  
Ling CHEN

Additional name(s) of conveying party(ies) attached?  yes  no

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

Name: Trustees of Boston University

Street Address: 108 Bay Street

City: Boston State: MA Zip Code: 02215

Country: U.S.A.

Additional name(s) & address(es) attached?  yes  no

3. Nature of Conveyance:

- Assignment  Merger
- Security Agreement  Change of Name
- Other \_\_\_\_\_

Execution Date(s): 10/8/98 and 10/17/98

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

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

A. Patent Application No(s).

Appl. No. 09/118,179; Filed: July 17, 1998

B. Patent No(s).

Additional numbers attached?  yes  no

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

Name: Sterne, Kessler, Goldstein & Fox P.L.L.C.

Internal Address: c/o Karen R. Markowicz

Street Address: 1100 New York Ave., N.W.  
Suite 600

City: Washington State: D.C. Zip Code: 20005-3934

6. Total number of applications and patents involved

1

7. Total fee (37 C.F.R. § 3.41).....\$ 40.00

Enclosed

Authorized to be charged to Deposit Account

8. Deposit Account Number: 19-0036

DO NOT USE THIS SPACE

9. Statement and signature.

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

Karen R. Markowicz  
Name of Person Signing  
Registration No. 36,351

*Karen R. Markowicz* 10/27/98  
Signature Date

Total number of pages including cover sheet, attachments and document 3

OMB NO. 0651-0011 (exp 4/94)

11/04/1998 D:\BUTEN 00000375-09110177

01 FC:581

40.00 OP

Mail documents to be recorded with required cover sheet information to:  
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Washington, D.C. 20231

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017.pto  
SKGF Rev. 1/26/98 dcw

PATENT  
REEL: 9552 FRAME: 0611

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventor(s): David J. WAXMAN and Ling CHEN, the undersigned inventor(s) hereby sell(s) and assign(s) to Trustees of Boston University (the Assignee) his/her entire right, title and interest, including the right to sue for and collect for all past, present and future damages:

check applicable box(es)  for the United States of America (as defined in 35 U.S.C. § 100),  
 and throughout the world,

(a) in the invention(s) known as METHODS OF USING CYTOCHROME P450 REDUCTASE FOR THE ENHANCEMENT OF P450-BASED ANTI-CANCER GENE THERAPY for which application(s) for patent in the United States of America has (have) been executed by the undersigned inventor(s) on 10/8/98 and 10/16/98  
\_\_\_\_\_ (also known as United States Application No. 09/118,179, filed July 17, 1998), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

29,021

(b) in any and all applications that claim the benefit of the patent application(s) listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application(s) or Letters Patent(s) therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application(s) listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application(s), and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application(s), including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable; all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.


The undersigned inventor(s) agree(s) to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventor(s) hereby represents that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

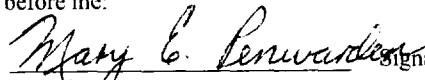
The undersigned inventor(s) hereby grant(s) Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; Samuel L. Fox, Esquire, Registration No. 30,353; David K.S. Cornwell, Esquire, Registration No. 31,944; Robert W. Esmond, Esquire, Registration No. 32,893; Tracy-Gene G. Durkin, Esquire, Registration No. 32,831; Michele A. Cimbala, Esquire, Registration No. 33,851; Michael B. Ray, Esquire, Registration No. 33,997; Robert E. Sokohl, Esquire, Registration No. 36,013; Eric K. Steffe, Esquire, Registration No. 36,688; and Michael Q. Lee, Esquire,

Registration No. 35,239, of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Suite 600, Washington, D.C. 20005-3934, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date(s) opposite his/her name(s).


Date: 10/8/98 Signature of Inventor:   
David J. WAXMAN

Witnessed before me:

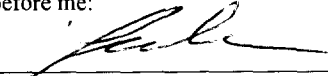
Signature:  Signature: \_\_\_\_\_

Print Name: Mary E. Penwarden Print Name: \_\_\_\_\_

Address: 28 Juniper St, Address: \_\_\_\_\_  
Brookline MA 02115

Date: 10/17/98 Signature of Inventor:   
Ling CHEN

Witnessed before me:

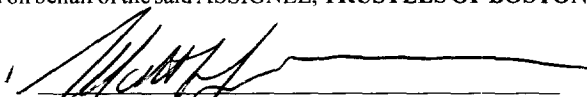
Signature:  Signature: \_\_\_\_\_

Print Name: YUAN ZHU Print Name: \_\_\_\_\_

Address: 203 OAKMONT DR. Address: \_\_\_\_\_  
BLUE BELL, PA 19022

IN WITNESS WHEREOF, executed on behalf of the said ASSIGNEE, TRUSTEES OF BOSTON UNIVERSITY, on the date below:

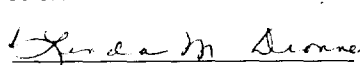
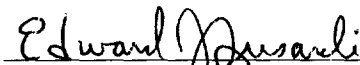
MATTHEW J. BURNS  
ASSISTANT TREASURER  
BOSTON UNIVERSITY

By:   
Matthew J Burns  
[Type/Print Name]

Title: ASST TREAS

Date: 18 Oct 1998

Witnessed before me:

Signature:  Signature: 

Print Name: Linda M. Dienne Print Name: Edward J. Lusardi

Address: 108 Bay State Rd Address: 108 Bay State Rd  
Boston, MA 02215 Boston, MA 02215

PAUSERS\AELLIS\KAREN\1259\007-1\007-1.asn

**STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.**

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DAVID P. MAIVALD\*\*



October 27, 1998

\*BAR OTHER THAN D.C.  
\*\*REGISTERED PATENT AGENTS

**WRITER'S DIRECT NUMBER:**  
(202) 371-2637  
**INTERNET ADDRESS:**  
KAREN@SKGF.COM

The Honorable Commissioner  
of Patents and Trademarks  
Washington, D.C. 20231

**Box Assignment**

Re: U.S. Utility Patent Application  
Appl. No. 09/118,179; Filed: July 17, 1998  
For: **Methods of Using Cytochrome P450 Reductase for  
the Enhancement of P450-Based Anti-Cancer  
Gene Therapy**  
Inventors: Waxman and Chen  
Our Ref: 1259.0070001/KRM

Sir:

Applicants submit the following documents for appropriate action by the U.S. Patent and Trademark Office:

1. Fee Transmittal Form (PTO/SB/17);
2. Recordation Form Cover Sheet (Form PTO-1595);
3. Assignment to Trustees of Boston University, official recordation and return of which is respectfully requested;
4. One return postcard; and
5. Our check no. 22985 for \$40.00 to cover recordation fee.

**PATENT  
REEL: 9552 FRAME: 0614**

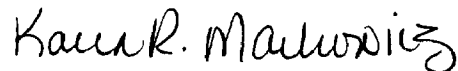
The Honorable Commissioner  
of Patents and Trademarks  
October 27, 1998  
Page 2

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

If extensions of time under 37 C.F.R. § 1.136 other than those otherwise provided for herewith are required to prevent abandonment of the present patent application, then such extensions of time are hereby petitioned, and any fees therefor are hereby authorized to be charged to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Karen R. Markowicz  
Agent for Applicants  
Registration No. 36,351

KRM:aye  
Enclosures

P:\USERS\AELLIS\KAREN\1259\007-1\007-1.trn1  
SKGF Rev. 9/23/98 dcw

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.

# FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.  
 These are the fees effective October 1, 1997.

Small Entity payments must be supported by a small entity statement,  
 otherwise large entity fees must be paid. See Forms PTO/SB/09-12.  
 See 37 C.F.R. §§ 1.27 and 1.28.

### Complete if Known

|                        |                  |
|------------------------|------------------|
| Application Number     | 09/118,179       |
| Filing Date            | July 17, 1998    |
| First Named Inventor   | David J. WAXMAN  |
| Examiner Name          | To Be Assigned   |
| Group / Art Unit       | 1633             |
| Attorney Docket Number | 1259.0070001/KRM |

TOTAL AMOUNT OF PAYMENT (\$)**40.00**

| METHOD OF PAYMENT (check one)  | FEE CALCULATION (continued)               |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
|--|---|-----------------|----------------------|--|--|----------------|-----------------|----------------|-----------------|-----------------|--------------------|-----|-----|-----|-----|-------------------------------------|-------------------|-----|-----|-----|-----|--|------------------|-----|-----|-----|-----|---------------------------|--------------------|-----|-------|-----|-------|--|------------------------|-----|--|-------|----------------|--|-----------------------------------|-----------------|--------|-----------------------------------|-----------------|---|---------------------------------|---------|-----|----------------|-----------------|--|-----------------|-----------------|----------|-----|-----|---|----|------------------------|-----|-----|-----|--|----|-----------------------------------|-------|-----|-----|---|-----|--------------------------|-------|-----|-------|--|----|---|-----|-----|-----|------------------|----|---|-----|-----|-----|--|--|-----|-----|-----|-----|--------------------------|--|-----|-------|-----|-------|---|--|-----|-----|-----|----|----------------------------------|--|-----|-------|-----|-----|------------------------------------|--|-----|-------|-----|-----|--------------------------------|--|-----|-----|-----|-----|------------------|--|-----|-----|-----|-----|-----------------|--|-----|-----|-----|-----|-------------------------------|--|-----|----|-----|----|---|--|-----|-----|-----|-----|---|--|-----|----|-----|----|--|-------|-----|-----|-----|-----|---|--|-----|-----|-----|-----|--|--|
| <p>1. <input type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to:</p> <table border="1" style="width:100%"> <tr> <td>Deposit Account Number</td> <td>19-0036</td> </tr> <tr> <td>Deposit Account Name</td> <td>Sterne, Kessler, Goldstein &amp; Fox P.L.L.C.</td> </tr> </table> <p><input type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17      <input type="checkbox"/> Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance</p>  | Deposit Account Number                    | 19-0036         | Deposit Account Name | Sterne, Kessler, Goldstein & Fox P.L.L.C.                                  | <p>3. ADDITIONAL FEES</p> <table border="1" style="width:100%"> <thead> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>950</td><td>217</td><td>475</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,510</td><td>218</td><td>755</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>2,060</td><td>228</td><td>1,030</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>310</td><td>219</td><td>155</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>310</td><td>220</td><td>155</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>270</td><td>221</td><td>135</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,320</td><td>241</td><td>660</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,320</td><td>242</td><td>660</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>450</td><td>243</td><td>225</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>670</td><td>244</td><td>335</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>126</td><td>240</td><td>126</td><td>240</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td>40.00</td></tr> <tr><td>146</td><td>790</td><td>246</td><td>395</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>149</td><td>790</td><td>249</td><td>395</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> </tbody> </table> <p>Other fee (specify) :<br/>                 Other fee (specify) :<br/>                 *Reduced by Basic Filing Fee Paid</p> | Large Fee Code | Entity Fee (\$) | Small Fee Code | Entity Fee (\$) | Fee Description | Fee Paid           | 105 | 130 | 205 | 65  | Surcharge - late filing fee or oath |                   | 127 | 50  | 227 | 25  | Surcharge - late provisional filing fee or cover sheet |                  | 139 | 130 | 139 | 130 | Non-English specification |                    | 147 | 2,520 | 147 | 2,520 | For filing a request for reexamination |                        | 112 | 920*   | 112   | 920*           | Requesting publication of SIR prior to Examiner action |                                   | 113             | 1,840* | 113                               | 1,840*          | Requesting publication of SIR after Examiner action |                                 | 115     | 110 | 215            | 55              | Extension for reply within first month |                 | 116             | 400      | 216 | 200 | Extension for reply within second month |    | 117                    | 950 | 217 | 475 | Extension for reply within third month |    | 118                               | 1,510 | 218 | 755 | Extension for reply within fourth month |     | 128                      | 2,060 | 228 | 1,030 | Extension for reply within fifth month |    | 119   | 310 | 219 | 155 | Notice of Appeal |    | 120   | 310 | 220 | 155 | Filing a brief in support of an appeal |  | 121 | 270 | 221 | 135 | Request for oral hearing |  | 138 | 1,510 | 138 | 1,510 | Petition to institute a public use proceeding |  | 140 | 110 | 240 | 55 | Petition to revive - unavoidable |  | 141 | 1,320 | 241 | 660 | Petition to revive - unintentional |  | 142 | 1,320 | 242 | 660 | Utility issue fee (or reissue) |  | 143 | 450 | 243 | 225 | Design issue fee |  | 144 | 670 | 244 | 335 | Plant issue fee |  | 122 | 130 | 122 | 130 | Petitions to the Commissioner |  | 123 | 50 | 123 | 50 | Petitions related to provisional applications |  | 126 | 240 | 126 | 240 | Submission of Information Disclosure Stmt |  | 581 | 40 | 581 | 40 | Recording each patent assignment per property (times number of properties) | 40.00 | 146 | 790 | 246 | 395 | Filing a submission after final rejection (37 CFR 1.129(a)) |  | 149 | 790 | 249 | 395 | For each additional invention to be examined (37 CFR 1.129(b)) |  |
| Deposit Account Number   | 19-0036                                   |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Deposit Account Name   | Sterne, Kessler, Goldstein & Fox P.L.L.C. |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Large Fee Code   | Entity Fee (\$)                           | Small Fee Code  | Entity Fee (\$)      | Fee Description  | Fee Paid   |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 105  | 130                                       | 205             | 65                   | Surcharge - late filing fee or oath  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 127  | 50  | 227             | 25                   | Surcharge - late provisional filing fee or cover sheet                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 139  | 130                                       | 139             | 130                  | Non-English specification  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 147  | 2,520                                     | 147             | 2,520                | For filing a request for reexamination                                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 112  | 920*                                      | 112             | 920*                 | Requesting publication of SIR prior to Examiner action                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 113  | 1,840*                                    | 113             | 1,840*               | Requesting publication of SIR after Examiner action                        |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 115  | 110                                       | 215             | 55                   | Extension for reply within first month                                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 116  | 400                                       | 216             | 200                  | Extension for reply within second month                                    |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 117  | 950                                       | 217             | 475                  | Extension for reply within third month                                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 118  | 1,510                                     | 218             | 755                  | Extension for reply within fourth month                                    |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 128  | 2,060                                     | 228             | 1,030                | Extension for reply within fifth month                                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 119  | 310                                       | 219             | 155                  | Notice of Appeal   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 120  | 310                                       | 220             | 155                  | Filing a brief in support of an appeal                                     |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 121  | 270                                       | 221             | 135                  | Request for oral hearing   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 138  | 1,510                                     | 138             | 1,510                | Petition to institute a public use proceeding                              |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 140  | 110                                       | 240             | 55                   | Petition to revive - unavoidable   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 141  | 1,320                                     | 241             | 660                  | Petition to revive - unintentional   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 142  | 1,320                                     | 242             | 660                  | Utility issue fee (or reissue)   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 143  | 450                                       | 243             | 225                  | Design issue fee   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 144  | 670                                       | 244             | 335                  | Plant issue fee  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 122  | 130                                       | 122             | 130                  | Petitions to the Commissioner  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 123  | 50  | 123             | 50                   | Petitions related to provisional applications                              |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 126  | 240                                       | 126             | 240                  | Submission of Information Disclosure Stmt                                  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 581  | 40  | 581             | 40                   | Recording each patent assignment per property (times number of properties) | 40.00  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 146  | 790                                       | 246             | 395                  | Filing a submission after final rejection (37 CFR 1.129(a))                |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 149  | 790                                       | 249             | 395                  | For each additional invention to be examined (37 CFR 1.129(b))             |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| <p><b>FEE CALCULATION</b></p> <p>1. BASIC FILING FEE</p> <table border="1" style="width:100%"> <thead> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>101</td><td>790</td><td>201</td><td>395</td><td>Utility filing fee</td><td></td></tr> <tr><td>106</td><td>330</td><td>206</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>107</td><td>540</td><td>207</td><td>270</td><td>Plant filing fee</td><td></td></tr> <tr><td>108</td><td>790</td><td>208</td><td>395</td><td>Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>150</td><td>214</td><td>75</td><td>Provisional filing fee</td><td></td></tr> </tbody> </table> <p style="text-align:right">SUBTOTAL (1) (\$)<b>0.00</b></p> | Large Fee Code                            | Entity Fee (\$) | Small Fee Code       | Entity Fee (\$)  | Fee Description  | Fee Paid       | 101             | 790            | 201             | 395             | Utility filing fee |     | 106 | 330 | 206 | 165                                 | Design filing fee |     | 107 | 540 | 207 | 270  | Plant filing fee |     | 108 | 790 | 208 | 395                       | Reissue filing fee |     | 114   | 150 | 214   | 75                                     | Provisional filing fee |     | <p>2. EXTRA CLAIM FEES</p> <table border="1" style="width:100%"> <thead> <tr> <th>Extra</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>Total Claims _____ - 20** = _____</td> <td>X _____ = _____</td> <td></td> </tr> <tr> <td>Indep. Claims _____ - 3** = _____</td> <td>X _____ = _____</td> <td></td> </tr> <tr> <td>Multiple Dependent Claims _____</td> <td>= _____</td> <td></td> </tr> </tbody> </table> <p>** or number previously paid, if greater; For Reissues, see below</p> <table border="1" style="width:100%"> <thead> <tr> <th>Large Fee Code</th> <th>Entity Fee (\$)</th> <th>Small Fee Code</th> <th>Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>103</td><td>22</td><td>203</td><td>11</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>102</td><td>82</td><td>202</td><td>41</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>104</td><td>270</td><td>204</td><td>135</td><td>Multiple dependant claim</td><td></td></tr> <tr><td>108</td><td>82</td><td>209</td><td>41</td><td>**Reissue independent claims over original patent</td><td></td></tr> <tr><td>110</td><td>22</td><td>210</td><td>11</td><td>**Reissue claims in excess of 20 and over original patent</td><td></td></tr> </tbody> </table> <p style="text-align:right">SUBTOTAL (2) (\$)<b>0.00</b></p> | Extra | Fee from below | Fee Paid   | Total Claims _____ - 20** = _____ | X _____ = _____ |        | Indep. Claims _____ - 3** = _____ | X _____ = _____ |   | Multiple Dependent Claims _____ | = _____ |     | Large Fee Code | Entity Fee (\$) | Small Fee Code                         | Entity Fee (\$) | Fee Description | Fee Paid | 103 | 22  | 203                                     | 11 | Claims in excess of 20 |     | 102 | 82  | 202                                    | 41 | Independent claims in excess of 3 |       | 104 | 270 | 204                                     | 135 | Multiple dependant claim |       | 108 | 82    | 209                                    | 41 | **Reissue independent claims over original patent |     | 110 | 22  | 210              | 11 | **Reissue claims in excess of 20 and over original patent |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Large Fee Code   | Entity Fee (\$)                           | Small Fee Code  | Entity Fee (\$)      | Fee Description  | Fee Paid   |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 101  | 790                                       | 201             | 395                  | Utility filing fee   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 106  | 330                                       | 206             | 165                  | Design filing fee  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 107  | 540                                       | 207             | 270                  | Plant filing fee   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 108  | 790                                       | 208             | 395                  | Reissue filing fee   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 114  | 150                                       | 214             | 75                   | Provisional filing fee   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Extra  | Fee from below                            | Fee Paid        |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Total Claims _____ - 20** = _____  | X _____ = _____                           |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Indep. Claims _____ - 3** = _____  | X _____ = _____                           |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Multiple Dependent Claims _____  | = _____                                   |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| Large Fee Code   | Entity Fee (\$)                           | Small Fee Code  | Entity Fee (\$)      | Fee Description  | Fee Paid   |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 103  | 22  | 203             | 11                   | Claims in excess of 20   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 102  | 82  | 202             | 41                   | Independent claims in excess of 3  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 104  | 270                                       | 204             | 135                  | Multiple dependant claim   |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 108  | 82  | 209             | 41                   | **Reissue independent claims over original patent                          |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| 110  | 22  | 210             | 11                   | **Reissue claims in excess of 20 and over original patent                  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |
| <p>SUBTOTAL (3) (\$)<b>40.00</b></p>   |   |                 |                      |  |  |                |                 |                |                 |                 |                    |     |     |     |     |                                     |                   |     |     |     |     |  |                  |     |     |     |     |                           |                    |     |       |     |       |  |                        |     |  |       |                |  |                                   |                 |        |                                   |                 |   |                                 |         |     |                |                 |  |                 |                 |          |     |     |   |    |                        |     |     |     |  |    |                                   |       |     |     |   |     |                          |       |     |       |  |    |   |     |     |     |                  |    |   |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |   |  |     |     |     |     |   |  |     |    |     |    |  |       |     |     |     |     |   |  |     |     |     |     |  |  |

|                       |                        |      |          |                                 |        |
|-----------------------|------------------------|------|----------|---------------------------------|--------|
| <b>SUBMITTED BY</b>   |                        |      |          | <b>Complete (if applicable)</b> |        |
| Typed or Printed Name | Karen R. Markowicz     |      |          | Reg. Number                     | 36,351 |
| Signature             | <i>Karen Markowicz</i> | Date | 10/27/98 | Deposit Acct. User ID           |        |

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