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| Reel # Conveying Party | Frame # | | | Execution Date | |
| 1. Sadayuki MAT 2. Takuya OHIRA 3. Masakazu TAI 4. Kiichi YOSHIA 5. Shigeru MATS 6. Hajime TAKE | TSUMOTO A KABAYASHI JRA SUNO | eving Parties Attache | ed. | June 4, 2001 June 4, 2001 June 4, 2001 June 4, 2001 June 4, 2001 June 4, 2001 | e(5) |
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| | nai Names of Recei | ing Parties Attache | d | · | |
| Correspondent N | ame and Address | | | | |
| Jeffrey A. Wyand Leydig, Voit & Mayer, Ltd. 700 Thirteenth St., N.W. Suite 300 Washington, D.C. 20005-3960 Pages Enter the total number of pages of the attached Application Number(s) or Patent Number(s) Enter either the Patent Application Number or the Patent Number (December 1) | | | Facsin Attorney nent including any a Mark if additional | numbers attached | |
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| | being filed together aned by the first nam | | | date the patent | Month Day Year June 4, 2001 |
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| Jeffrey A. Wyand John Man Joy 200/ | | | | | |
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PATENT

REEL: 011971 FRAME: 0444

| Attorney | Docket | No | .401269 |
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| | | PCT | PCT | PCT | |

PATENT REEL: 011971 FRAME: 0445

ASSIGNMENT

| good ar | n consideration of the sum of One Dollar (\$1.00), and other and valuable consideration, the receipt of which is Ledged, the undersigned, Sadayuki MATSUMOTO, Takuya OHIRA, Masakazu TAKABAYASHI, Kiichi YOSHIARA, Shigeru MATSUNO, Hajime TAKEYA |
|---------|---|
| | Masakazu TAKABAYASHI, Kiichi YOSHIARA, Shigeru MATSUNO, Hajime TAKEYA |
| B | and Junichiro HOSHIZAKI |
| of | c/o Mitsubishi Denki Kabushiki Kaisha, |
| | 2-3, Marunouchi 2-chome, Chiyoda-ku, |
| | TOKYO 100-8310 JAPAN |
| sells, | assigns, and transfers to |
| | Mitsubishi Denki Kabushiki Kaisha |
| | of 2-3, Marunouchi 2-chome, Chiyoda-ku,TOKYO 100-8310 JAPAN |
| | ssignee), its successors and assigns, the entire right, and interest in and to: |
| (i) | the application for United States Letters Patent entitled: |
| | TEMPERATURE CONTROL SYSTEM FOR A GRATING . |
| | |
| | |
| | which was executed by the undersigned on <u>June 4, 2001</u> , 2001 or was filed on and accorded Serial No (the Application); |
| (ii) . | any and all inventions and improvements that are described in the Application; |
| (iii) | any and all United States Letters Patents that may be granted on the Application (the Patent); |
| (iv) | any and all divisions, continuations, reexaminations, reissues, or extensions of the Application or the Patent; and |
| (v) . | all benefits under the International Convention for the Protection of Industrial Property. |
| | authorize the Assignee and its agents to insert in this ment the filing date and serial number of the Application. |

I authorize and request the Commissioner of Patents to issue any and all Letters Patent, when granted, to the Assignee.

PATENT REEL: 011971 FRAME: 0446 Further, it is agreed that, when requested, without charge to, but at the expense of, the Assignee, the undersigned will execute all divisional, continuing, or reissue patent applications; execute all additional assignments and other writings, including reissue and reexamination papers; and provide all reasonable assistance requested by the Assignee to secure and maintain appropriate patent protection for any invention described in the Application.

| DATE(S): | INVENTOR(S): |
|--------------|--|
| June 4, 2001 | Sadayuki Matsumoto Sadayuki MATSUMOTO |
| June 4, 2001 | <u>Jakuya Ohira</u> Takuya OHIRA |
| June 4, 2001 | Masahan Takabayashi Masakazu TAKABAYASHI |
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| June 4, 200/ | Shigery matrana Shigery MATSUNO |
| June 4, 200/ | Hajime Takeya Hajime TAKEYA |
| June 4. 2001 | <u>Junichiw Hoshigaki</u> Junichiro HOSHIZAKI |
| WITNESS(ES): | |

PATENT
RECORDED: 06/27/2001 REEL: 011971 FRAME: 0447

Fusniki (Kibawa Mitunohu Wakata)