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(54) Title of the invention : A SYSTEM AND METHOD FOR CLEANING AND SANITIZING LARGE UTENSILS USING ML INTERFACE

| | |
|---|---|
| (51) International classification | :G06N0020000000, A47L0015000000, A47L0015420000, B08B0009032000, A61L0002180000 |
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**10)Thella.Sunitha**

(57) Abstract :
The present invention discloses a system for cleaning and sanitizing large utensils using machine learning and artificial intelligence interfaces. The present invention includes, but not limited to, a plurality of sprayers for providing supply of water, liquid detergent and sanitizing agent as per the instruction provided by a processing unit. Further, the processing unit is provided with artificial intelligence and machine learning interfaces to validate the flow of all supplied articles water, liquid detergent and sanitizing agent. In operation, a flow of water is directed to the dishwasher. A sanitizing agent is added to the water in the reservoir to form a sanitizing solution which is circulated throughout the enclosure. After the sanitizing process, the utensil is drained in a separate reservoir and the reservoir is filled with fresh water for rinsing the utensil once again.

No. of Pages : 21 No. of Claims : 8

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| Application Details | |
|---|---|
| APPLICATION NUMBER | 202111027588 |
| APPLICATION TYPE | ORDINARY APPLICATION |
| DATE OF FILING | 21/06/2021 |
| APPLICANT NAME | 1 . Ms. Esha Tripathi<br>2 . Dr.G.Madhavi<br>3 . Mr.Gaurav Kumar<br>4 . Dr. Jayavani Vankara<br>5 . Mr. Bhupati<br>6 . J.Rajasekhar<br>7 . Mr.Mahima Shanker Pandey<br>8 . Digvijay Singh<br>9 . Dr. Yogesh Misra<br>10 . Thella.Sunitha |
| TITLE OF INVENTION | A SYSTEM AND METHOD FOR CLEANING AND SANITIZING LARGE UTENSILS USING ML INTERFACE |
| FIELD OF INVENTION | COMPUTER SCIENCE |
| E-MAIL (As Per Record) | iprsince2014@hotmail.com |
| ADDITIONAL-EMAIL (As Per Record) | |
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| PRIORITY DATE | |
| REQUEST FOR EXAMINATION DATE | -- |
| PUBLICATION DATE (U/S 11A) | 16/07/2021 |

Application Status

| | |
|---|---|
| APPLICATION STATUS | **Awaiting Request for Examination** |

| | | | |
|---|---|---|---|
| | | | View Documents |

Filed → Published → RQ Filed → Under Examination → Disposed

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Government of India

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| Document Name | Created Date/Uploaded Date |
|---|---|
| 202111027588-COMPLETE SPECIFICATION [21-06-2021(online)].pdf | 21/06/2021 |
| 202111027588-DECLARATION OF INVENTORSHIP (FORM 5) [21-06-2021(online)].pdf | 21/06/2021 |
| 202111027588-DRAWINGS [21-06-2021(online)].pdf | 21/06/2021 |
| 202111027588-FORM 1 [21-06-2021(online)].pdf | 21/06/2021 |
| 202111027588-FORM-9 [21-06-2021(online)].pdf | 21/06/2021 |
| 202111027588-REQUEST FOR EARLY PUBLICATION(FORM-9) [21-06-2021(online)].pdf | 21/06/2021 |
| 202111027588-STATEMENT OF UNDERTAKING (FORM 3) [21-06-2021(online)].pdf | 21/06/2021 |

| | |
|---|---|
| "**FORM 1**<br>THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 **APPLICATION FOR GRANT OF PATENT**<br>(See section 7, 54 and 135 and sub-rule (1) of rule 20) | (FOR OFFICE USE ONLY) |

| | | |
|---|---|---|
| | Application No. | |
| | Filing date: | |
| | Amount of Fee paid: | |
| | CBR No: | |
| | Signature: | |
| **1. APPLICANT'S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)** | | |

**2. TYPE OF APPLICATION [Please tick (✓ ) at the appropriate category]**

| Ordinary (✓) | | Convention ( ) | | PCT-NP ( ) | |
|---|---|---|---|---|---|
| Divisional ( ) | Patent of Addition ( ) | Divisional ( ) | Patent of Addition ( ) | Divisional ( ) | Patent of Addition ( ) |

**3A. APPLICANT(S)**

| Name in Full | Nationality | Country of Residence | Address of the Applicant |
|---|---|---|---|
| 1. Ms. Esha Tripathi | Indian | India | Assistant Professor<br>Information Technology<br>Pranveer Singh Institute of Technology, Kanpur, Uttar Pradesh<br>Dr. A.P.J. Abdul Kalam Technical University, Lucknow |
| 2. Dr.G.Madhavi | Indian | India | Assistant Professor,<br>Department of ECE,<br>MGIT, Gandipet, Hyderabad |
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| | | | |
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| 7. Mr.Mahima Shanker Pandey | Indian | India | Department of Computer Science and Engineering ,<br>Institute of Engineering And Technology,Lucknow-226024<br>Uttar Pradesh |
| 8. Digvijay Singh | Indian | India | Assistant Professor<br>Computer Science & Engineering<br>Dev Bhoomi Institute Of Technology<br>Affiliated From Uttarakhand Technical University Dehradun |
| 9. Dr. Yogesh Misra, | Indian | India | Department of Electronics and Communication Engineering,<br>GMR Institute of Technology, Rajam – 532127,<br>Srikakulam district, Andhra Pradesh |
| 10. Thella.Sunitha | Indian | India | Computer Science And Engineering<br>Qis College Of Engineering And Technology<br>Vengamukkalapalem,Ongole,Prakasam(Dt). |

| **3B. CATEGORY OF APPLICANT [Please tick (✓ ) at the appropriate category]** | | | |
|---|---|---|---|
| Natural Person (✓ ) | Other than Natural Person | | |
| | Small Entity ( ) | Startup () | Others () |

| **4. INVENTOR(S) [Please tick (✓ ) at the appropriate category]** | | |
|---|---|---|
| Are all the inventor(s) same as the applicant(s) named above? | Yes (✓ ) | No () |

**If "No",** furnish the details of the inventor(s)

| Name in Full | Nationality | Country of Residence | Address of the Inventor |
|---|---|---|---|
| Same as Applicant | | | |

**5. TITLE OF THE INVENTION**

| A SYSTEM AND METHOD FOR CLEANING AND SANITIZING LARGE UTENSILS USING ML INTERFACE | | |
|---|---|---|
| **6. AUTHORISED REGISTERED PATENT AGENT(S)** | IN/PA No. | |
| | Name | |
| | Mobile No. | |
| **7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA** | Name | Ms. Esha Tripathi |
| | Postal Address | Assistant Professor<br>Information Technology<br>Pranveer Singh Institute of Technology, Kanpur, Uttar Pradesh<br>Dr. A.P.J. Abdul Kalam Technical University, Lucknow |
| | Telephone No. | |
| | Mobile No. | 9958310827 |
| | Fax No. | |
| | E-mail ID | iprsince2014@hotmail.com |

~~**8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION**~~

| ~~Country~~ | ~~Application Number~~ | ~~Filing date~~ | ~~Name of the applicant~~ | ~~Title of the invention~~ | ~~IPC (as classified in the convention country)~~ |
|---|---|---|---|---|---|
| | | | | | |

~~**9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)**~~

| ~~International application number~~ | ~~International filing date~~ |
|---|---|
| | |

~~**10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION**~~

| ~~Original (first) application No.~~ | ~~Date of filing of original (first) application~~ |
|---|---|
| | |

~~**11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT**~~

| ~~Main application/patent No.~~ | ~~Date of filing of main application~~ |
|---|---|

**12. DECLARATIONS**

**(i) Declaration by the inventor(s)**

(**In case the applicant is an assignee**: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date 21/06/2021

| (b) Name | (c) Signature |
|---|---|
| 1. Ms. Esha Tripathi<br>2. Dr.G.Madhavi<br>3. Mr.Gaurav Kumar<br>4. Dr. Jayavani Vankara<br>5. Mr. Bhupati<br>6. J.Rajasekhar<br>7. Mr.Mahima Shanker Pandey<br>8. Digvijay Singh<br>9. Dr. Yogesh Misra,<br>10. Thella.Sunitha | |

~~**(ii) Declaration by the applicant(s) in the convention country**~~

~~**(In case the applicant in India is different than the applicant in the convention country:** the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)~~

~~I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.~~

~~(a) Date~~

~~(b) Signature(s)~~

(c) ~~Name(s) of the signatory~~

**(iii) Declaration by the applicant(s)**

I/We the applicant(s) hereby declare(s) that: -

- ☐ ~~I am/~~ We are in possession of the above-mentioned invention.
- ☐ The ~~provisional~~/complete specification relating to the invention is filed with this application.
- ☐ ~~The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.~~
- ☐ There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- ☐ ~~I am~~/we are the true & first inventor(s).

- ~~I am/we are the assignee or legal representative of true & first inventor(s).~~
- ~~The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s).~~
- ~~I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.~~
- ~~My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9.~~
- ~~The application is divided out of my /our application particulars of which is given inParagraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.~~
- ~~The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11.~~

**13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION**

(a) Form 2

| Item | Details | Fee | Remarks |
|---|---|---|---|
| Complete/ ~~Provisional~~ specification)# | No. of pages : 17 | | |
| No. of Claim(s) | No. of claims : 08<br>No. of pages: 02 | | |
| Abstract | No. of pages: 01 | | |
| No. of Drawing(s) | No. of drawings: 02<br>No. of pages: 01 | | |

# In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

(b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(c) Sequence listing in electronic form

(d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.

(f) Translation of priority document/Specification/International Search Report/International

Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3

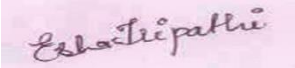
(h) Declaration of Inventorship on Form 5

(i)Power of Authority

(j)**Total fee ₹…….in Cash/ Banker's Cheque /Bank Draft bearing No..... Date on……. Bank.**

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters slated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

**Dated this 21st day of June, 2021**

Signature: 

Name: Ms. Esha Tripathi et. al.

To,

The Controller of Patents

The Patent Office, at Delhi

Note: -

* Repeat boxes in case of more than one entry.
* To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
* Tick ()/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
* Name of the inventor and applicant should be given in full, family name in the beginning.
* Strike out the portion which is/are not applicable.
* For fee: See First Schedule";