

(12) PATENT APPLICATION PUBLICATION

(21) Application No. 202141001895 A

(19) INDIA

(22) Date of filing of Application : 15/01/2021

(43) Publication Date : 22/01/2021

(54) Title of the invention : A SMART DUSTBIN FOR DISABLED PEOPLE

(51) International classification	:B65F	(71)Name of Applicant :
(31) Priority Document No	1/14	1)Dr. R. Arun Sekar
(32) Priority Date	:NA	Address of Applicant :Assistant Professor, Dept. of ECE,
(33) Name of priority country	:NA	GMR Institute of Technology, Rajam, Andhra Pradesh 532127,
(86) International Application No	:NA	India. Andhra Pradesh India
Filing Date	:NA	2)Dr. Annapantula Sudhakar
(87) International Publication No	: NA	3)Dr. Harsh Pratap Singh
(61) Patent of Addition to Application Number	:NA	4)Radhamani V
Filing Date	:NA	5)Dr.Guntu Nooka Raju
(62) Divisional to Application Number	:NA	(72)Name of Inventor :
Filing Date	:NA	1)Dr. R. Arun Sekar
		2)Dr.S. Jaganathan
		3)Dr. M. A. Raja
		4)Dr. A. P. Arun
		5)Mr. R.S.Mohan Kumar
		6)Mr. Sunil L. Bangare
		7)Mrs. Pallavi S. Bangare
		8)Dr.N.Kumareshan

(57) Abstract :

ABSTRACT A SMART DUSTBIN FOR DISABLED PEOPLE The present invention provides a smart dustbin (10) for collecting the industrial and household wastes from the blind/deaf and dumb people in an effective manner. The smart dustbin comprises a dustbin (21), an ultrasonic sensor (11), an arduino (12), servomotor, LED screen, voice recognition sensor module, level sensor and top door. The voice recognition system is providing the information to the blind people of receiving end. The LED screen (15) is providing the information to the deaf and dumb people receiving end. The electronic system (10) will help to collect the waste perfectly without any mistake. Most illustrative Fig 1

No. of Pages : 14 No. of Claims : 7



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Government of India

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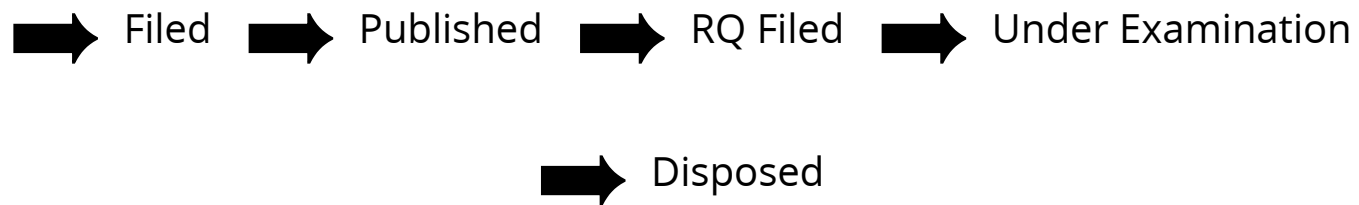


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Application Details	
APPLICATION NUMBER	202141001895
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	15/01/2021
APPLICANT NAME	1 . Dr. R. Arun Sekar 2 . Dr. Annapantula Sudhakar 3 . Dr. Harsh Pratap Singh 4 . Radhamani V 5 . Dr.Guntu Nooka Raju
TITLE OF INVENTION	A SMART DUSTBIN FOR DISABLED PEOPLE
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	iprconnects@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	22/01/2021

Application Status	
APPLICATION STATUS	Awaiting Request for Examination

			View Documents
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In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in



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 Government of India

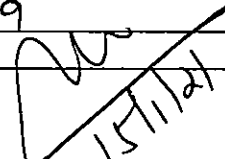
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Document Name	Created Date/Uploaded Date
202141001895-Abstract_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Claims_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Correspondence_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Description Complete_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Drawing_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Form1_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Form2 Title Page_Complete_15-01-2021.pdf	15/01/2021
202141001895-Form3_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Form5_As Filed_15-01-2021.pdf	15/01/2021
202141001895-Form9_Early Publication_15-01-2021.pdf	15/01/2021



"FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of Rule 20)				(FOR OFFICE USE ONLY)			
				Application No.	202141001895		
				Filing date:	15/01/2021		
				Amount of Fee paid:	1750/-		
				CBR No:	1679		
				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			
Dr. R. Arun Sekar		INDIAN	INDIA	Assistant Professor, Dept of ECE, GMR Institute of Technology, Rajam, Andhra Pradesh 532127			
Dr. Annapantula Sudhakar		INDIAN	INDIA	Associate Professor, Dept. of ECE, GMR Institute of Technology, Rajam, Andhra Pradesh 532127			
Dr. Harsh Pratap Singh		INDIAN	INDIA	Assistant Professor, Dept. of CSE, Sri Satya Sai University of Technology and Medical Sciences, Sehore (M.P), India- 466001			
Radhamani V		INDIAN	INDIA	Assistant Professor (SG), Dept. of ECE, Rajalakshmi Engineering College, Rajalakshmi Nagar, Thandalam, Chennai - 602 105, TamilNadu			
Dr. Guntu Nooka Raju		INDIAN	INDIA	Sr. Asst. Professor, Dept. of ECE, GMR Institute of Technology, Rajam, Andhra Pradesh 532127			
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
Dr. R. Arun Sekar	INDIAN	INDIA	Assistant Professor, Dept. of ECE, GMR Institute of Technology, Rajam, Andhra Pradesh 532127, India
Dr.S. Jaganathan	INDIAN	INDIA	Professor, Dept. of EEE, Dr.N.G.P. Institute of Technology, Kallapatty, Coimbatore, Tamilnadu 641048
Dr. M. A. Raja	INDIAN	INDIA	Professor, Dept. of ECE, Nehru Institute of Engineering and Technology, Thirumalaiyampalayam, Coimbatore, Tamil Nadu - 641 105
Dr. A. P. Arun	INDIAN	INDIA	Assistant Professor, Dept. of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore, Tamilnadu.
Mr. R.S.Mohan Kumar	INDIAN	INDIA	Assistant Professor, Dept. of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore, Tamilnadu.
Mr. Sunil L. Bangare	INDIAN	INDIA	Assistant Professor, Dept. of IT, Sinhgad Academy of Engineering, Kondhwa-Saswad Road, KondhwaBk, Pune, Maharashtra-411048
Mrs. Pallavi S. Bangare	INDIAN	INDIA	Assistant Professor, Dept. of IT, Sinhgad Academy of Engineering, Kondhwa-Saswad Road, KondhwaBk, Pune, Maharashtra, Pin-411048
Dr.N.Kumareshan	INDIAN	INDIA	Associate Professor, Dept. of ECE, Sri Shakthi institute of engineering and technology, Coimbatore-641062

5.TITLE OF THE INVENTION		
A SMART DUSTBIN FOR DISABLED PEOPLE		
6.AUTHORISED REGISTERED PATENT AGENT(S)	IN/PA No.	
	Name	
	Mobile No.	

7.ADDRESS FOR SERVICE OF APPLICANT IN INDIA		Name		Dr. R. Arun Sekar	
		Postal Address		Assistant Professor, Dept of ECE, GMR Institute of Technology, Rajam, Andhra Pradesh 532127, India	
		Fax No.			
		E-mail ID		<u>iprconnects@gmail.com</u>	
8.INCASE 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.INCASE 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)

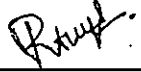
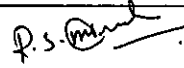

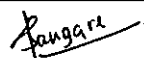
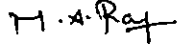
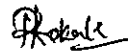


(In case the applicant is an assignee: The inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

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

(a) Date : 12-01-2021

(b) Signature(s) :

(c) Name(s) :

Dr. R. Arun Sekar		Mr. R.S.Mohan Kumar	
Dr.S. Jaganathan		Mr. Sunil L. Bangare	
Dr. M. A. Raja		Mrs. Pallavi S. Bangare	
Dr. A. P. Arun		Dr.N.Kumareshan	

(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 in Paragraph-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 specification	No. of pages 13		
No. of Claim(s)	No. of claims 07 No. of pages 02		
Abstract	No. of pages 01		
No. of Drawing(s)	No. of drawings 01 and No. of pages 01		
<p># 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.</p>			
<p>(b) Complete specification (in conformation with the international application)/as amended before The International Preliminary Examination Authority (IPEA), as applicable (2copies). (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 (2copies). (e) Priority document(s) or are quest or 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 Under taking on Form 3 (h) Declaration of Inventor ship on Form 5 (i).....</p>			
<p>Total fee ⁴⁵⁰⁰.....in Cash/ Banker's Cheque /Bank Draft bearing No. ²¹⁸¹⁶⁴..... Date ¹²⁻⁰¹⁻²⁰²¹.....on IOB..... Bank.</p>			
<p>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.</p>			
Dated this <u>12-01-2021</u>		<ol style="list-style-type: none"> 1. <i>[Signature]</i> 2. <i>[Signature]</i> 3. <i>[Signature]</i> 4. <i>Rashamani.v.</i> 5. <i>[Signature]</i> 	
Signature:			

To,
The Controller of Patents
The Patent Office, at Chennai

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.
- * Strikeout the portion which is/are not applicable.
- * For fee: See First Schedule”;



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FORM 5
THE PATENTS ACT, 1970
(39 of 1970)
&
The Patents Rules, 2003
DECLARATION AS TO INVENTORSHIP
(See section 10(6) and rule 13(6))

1. Name of Applicant(s)

1. Dr. R. Arun Sekar
2. Dr. Annapantula Sudhakar
3. Dr. Harsh Pratap Singh
4. Radhamani V
5. Dr. Guntu Nooka Raju

hereby declares that the true and first inventor of the invention disclosed in the Complete Specification filed in pursuance of our application titled "A SMART DUSTBIN FOR DISABLED PEOPLE"

2. Inventor(s) Name, Address and Nationality

Signature

(a)

Dr. R. Arun Sekar	Assistant Professor, Dept. of ECE, GMR Institute of Technology, Rajam, Andhra Pradesh 532127, India	
Dr. S. Jaganathan	Professor, Dept. of EEE, Dr. N.G.P. Institute of Technology, Kallapatty, Coimbatore, Tamilnadu 641048	
Dr. M. A. Raja	Professor, Dept. of ECE, Nehru Institute of Engineering and Technology, Thirumalaiyampalayam, Coimbatore, Tamil Nadu - 641 105	
Dr. A. P. Arun	Assistant Professor, Dept. of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore, Tamilnadu.	
Mr. R.S. Mohan Kumar	Assistant Professor, Dept. of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore, Tamilnadu.	
Mr. Sunil L. Bangare	Assistant Professor, Dept. of IT, Sinhgad Academy of Engineering, Kondhwa-Saswad Road, KondhwaBk, Pune, Maharashtra-411048	
Mrs. Pallavi S. Bangare	Assistant Professor, Dept. of IT, Sinhgad Academy of Engineering, Kondhwa-Saswad Road, KondhwaBk, Pune, Maharashtra, Pin-411048	
Dr. N. Kumareshan	Associate Professor, Dept. of ECE, Sri Shakthi Institute of Engineering and Technology, Coimbatore-641062	

PATENT OFFICE CHENNAI 18/01/2021 11:28

Dated at Chennai this ... 12-01-2021

3. Declaration to be given when the application in India is filed by the applicant(s) in convention country:- Not applicable

1. *Rajesh*
2. *Munish*
3. *SPW*
4. *Rethamani*
5. *Nookap*

Dated at Chennai this ... 12-01-2021

4. Statement (to be signed by the additional inventor(s) not mentioned in the application form) – Not applicable

To,

The Controller of Patents
The Patent Office, at Chennai.