1)Dr.D.Sengeni, CK College of Engineering and Technology

and Communication Engineering, CK College of Engineering and Technology, Jayaram Nagar, Chellangkuppam, Cuddalore-607003. Tamil Nadu Email id: sengeni@ckcet.edu.in Mobile No: 7892425885 Tamil

7)Dr. Makarand Upadhyaya, University of Bahrain 8) Prasad B, Dhirajlal Gandhi College of Technology 9)Sijo George, Adi Shankara Institute of Engineering and

11)Dr. Thangamani, Kongu Engineering College

10) Jenopaul P, Adi Shankara Institute of Engineering and

Address of Applicant : Associate Professor, Department of Electronics

2)Dr.T.V.Ramana, Chitkara University school of Engineering and

(19) INDIA

(22) Date of filing of Application :25/06/2021

(43) Publication Date: 09/07/2021

(71)Name of Applicant:

Technology

## (54) Title of the invention: A PORTABLE APPARATUS FOR BREATHING ASSISTANCE TO MONITOR THE PATIENT SUFFER FROM RESPIRATORY DISEASES

		3)Dr.Sumana B K, Maharani's Women's Commerce and
		Management College
		4)Dr.NANDHAGOPAL S MUNUSAMY, Chitkara University
	:A61B00050000000.	school of Engineering and Technology
	A61B0005080000,	5)P. Srinivasa Varma, Koneru Lakshmaiah Education Foundation
(51) International classification	A61B0005087000,	6)Lakshmi Devadas, ETAP Automation Pvt Ltd
(+ -)	A63B0023180000,	7)Dr. Makarand Upadhyaya, University of Bahrain
	G16H0050200000	8)Prasad B, Dhirajlal Gandhi College of Technology
(31) Priority Document No	:NA	9)Sijo George, Adi Shankara Institute of Engineering and
(32) Priority Date	:NA	Technilogy
(33) Name of priority country	:NA	10)Jenopaul P, Adi Shankara Institute of Engineering and
(86) International Application No	:NA	Technilogy
Filing Date	:NA	11)Dr.Thangamani, Kongu Engineering College
(87) International Publication No	: NA	(72)Name of Inventor:
(61) Patent of Addition to Application Number	:NA	1)Dr.D.Sengeni, CK College of Engineering and Technology
Filing Date	:NA	2)Dr.T.V.Ramana, Chitkara University school of Engineering and
(62) Divisional to Application Number	:NA	Technology
Filing Date	:NA	3)Dr.Sumana B K, Maharani's Women's Commerce and
1 ming Date	.11/1	Management College
		4)Dr.NANDHAGOPAL S MUNUSAMY, Chitkara University
		school of Engineering and Technology
		5)P. Srinivasa Varma, Koneru Lakshmaiah Education Foundation
		6)Lakshmi Devadas, ETAP Automation Pvt Ltd

## (57) Abstract:

Nearly one Billion people suffer from respiratory diseases such as chronic obstructive pulmonary diseases, asthma, neuromuscular disorders that greatly affect patient<sup>TM</sup>s muscles and that decrease lung function. Two hundred Million people globally suffer from Chronic obstructive pulmonary disease (COPD) and it is foretold to become the third foremost source of death and disease globally by 2022, mostly due to its growing occurrence in developing and low-income countries. The key source of COPD is found to be tobacco smoke. Other risk factors for COPD pointed are indoor and outdoor air pollution, occupational dusts and chemicals. This invention consists of housing unit which is mouthpiece having a sensor assembly to sense the breathing characteristics of the patient. The input of this invention is designed to receive external data such as environmental related information, patient activity information, physiological information. Output of this invention is designed to provide information or instruction related to breathing exercises or training program.

Technilogy

Technilogy

No. of Pages: 12 No. of Claims: 3