

(54) Title of the invention : SMART CROP PROTECTION SYSTEM FROM ANIMALS AND FIRE USING LASER

(51) International classification :G08B0017120000, A01M0029160000, A01K0029000000, A01M0029100000, A01M0031000000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

(71)Name of Applicant :

1)DR. M. SUDHA
Address of Applicant :PROFESSOR AND HEAD, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

2)DR.S.VIJAYAKUMAR
3)MR.S.LOGANATHAN
4)MR.S.SATHEESH KUMAR
5)P. SURYA PRAKASH
6)P. VELAYUTHAM
7)G. VENKATESH PRASHANTH
8)S. ABINASH
9)A. ANBARASAN
10)V. GNANAMOORTHY
11)A. THIRUPUGHALVAN
12)S. VENKATESH
13)N. YUTHAN
14)C.KIRUBAKAR
15)L.CHANDRU

Name of Applicant : NA
Address of Applicant : NA

(72)Name of Inventor :

1)DR. M. SUDHA
Address of Applicant :PROFESSOR AND HEAD, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

2)DR.S.VIJAYAKUMAR
Address of Applicant :PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

3)MR.S.LOGANATHAN
Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

4)MR.S.SATHEESH KUMAR
Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

5)P. SURYA PRAKASH
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

6)P. VELAYUTHAM
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

7)G. VENKATESH PRASHANTH
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

8)S. ABINASH
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

9)A. ANBARASAN
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

10)V. GNANAMOORTHY
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

11)A. THIRUPUGHALVAN
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

12)S. VENKATESH
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

13)N. YUTHAN
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

14)C.KIRUBAKAR
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

15)L.CHANDRU
Address of Applicant :STUDENT, DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING, PAAVAI ENGINEERING COLLEGE (AUTONOMOUS), NH-44, PAAVAI NAGAR, PAACHAL, NAMAKKAL — 637408, TAMIL NADU, INDIA. -----

(57) Abstract :
ABSTRACT SMART CROP PROTECTION SYSTEM FROM ANIMALS AND FIRE USING LASER This present invention aims at designing and executing the advanced development in embedded system for Crops in farms are many times ravaged by local animals like buffaloes, cows, goats, birds, and fire etc. This leads to huge losses for the farmers. The first major threat to the farmers is drought. Crop vandalization by animals is the second major threat after drought. Crops are vulnerable to animals. Therefore, it is very important to monitor the nearby presence of animals, it is to provide a better solution in order to resolve this problem. Animal detection system is designed to detect the presence of animal and offer a warning. It is not possible for fanners to barricade entire fields or stay on field 24 hours and guard it. So here we propose automatic crop protection system from animals and fire. This is Arduino Uno based system using microcontroller, laser sensors to detect the movement of the animal. This system uses a laser beam to detect wild animals approaching near the field and smoke sensor to detect the fire. In such a case the sensor signals to the microcontroller to take action. The microcontroller now sounds an alarm to warn the animals away from the field and this signal is transmitted to GSM and which gives an alert to fanners and forest department immediately by sent a SMS to the fanner and makes call, so that fanner may know about the issue and come to the spot in case the animals don't turn away by the alarm. If there is a smoke, it immediately turns ON the motor. This ensures complete safety of crops from animals and from fire thus protecting the farmer's loss. This article provides a comprehensive review of various methods adopted by fanners to protect their crops. The article also discusses use of modern technology in agriculture. Finally, this article reviews smart crop protection system using sensors, microcontroller and gsm module.