(19) INDIA

(51) International

(86) International

(87) International

Publication No

Filing Date

Filing Date

Application Number

Filing Date

(62) Divisional to

(61) Patent of Addition:NA

to Application Number :NA

Application No

classification

(22) Date of filing of Application :26/10/2022

:G08B0021220000, G08B0007060000.

A62B0001200000, A61B0005110000,

A61B0034300000

:NA

:NA

: NA

:NA

:NA

(43) Publication Date: 09/12/2022

(54) Title of the invention: SYSTEM TO ESCAPE FROM A BUILDING IN AN EMERGENCY BY COLLAPSIBLE STAIRCASE

(71) Name of Applicant:

1)Chitkara University

Address of Applicant: Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India, Patiala -----

2) Chitkara Innovation Incubator Foundation

Name of Applicant: NA Address of Applicant: NA (72) Name of Inventor:

1)PANDA, Surya Narayana

Address of Applicant: Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

2) VERMA, Sanjeev

Address of Applicant: Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

3)PANDA, Ashutosh

Address of Applicant : Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

4)KUMAR, Vinod

Address of Applicant : Professor, Mechanical Engineering Department, Punjabi University, NH 64, Next to Urban Estate Phase II, Patiala - 147002, Punjab, India. Patiala ------

5) GUPTA, Vinay Kumar

Address of Applicant : Professor, Mechanical Engineering Department, Punjabi University, NH 64, Next to Urban Estate Phase II, Patiala - 147002, Punjab, India. Patiala ------

6)MANSI

Address of Applicant: Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

7) JENA. Sudarson

Address of Applicant: Sambalpur University, Jyoti Vihar, Burla, Odisha - 768019, India. Burla -----

(57) Abstract:

The present disclosure relates to a system (100) to assist in escaping from a building in an emergency. The system (100) includes a collapsible staircase that has a structure (104) attached to a building in a collapsible state, a rope and pulley arrangement (106) attached to the structure, and upon activation of the rope and pulley arrangement, the structure is opened to provide stairs from a top floor of the building to ground. Additionally, the system (100) includes an alert unit (108) configured to transmit an alert signal to one or more computing devices 118, upon activation of a first actuator, and an image capture device (120) attached to each floor of a building, head of people stuck in the building are detected from images by one or more machine learning techniques. Furthermore, wheelchairs are also detected from the images and correspondingly corresponding authorities are notified to assist disabled persons in the building.

No. of Pages: 28 No. of Claims: 7