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(71)**Name of Applicant :**
1)Mr.P.KARTHIKEYAN
Address of Applicant :Assistant Professor (Senior Grade), Department of Electrical and Electronics Engineering, Kongu Engineering College (Autonomous), Perundurai, Erode, Tamil Nadu, India â€“ 638060 Tamil Nadu India
2)Dr.K.DHAYALINI
3)Dr.B.PRIESTLY SHAN
4)Mr.R.PRABHAKARAN
5)Dr.HITESH PANCHAL
6)Mr.R.ASHOKKUMAR
7)Mrs.V.SUDHA
8)Mr.N.VIKRAM
9)Dr.S.SARAVANAN
10)Mr.R.MANIVANNAN
11)Dr.K.MAHENDRAN
12)Mr.G.L.ABISHEK
13)Mrs.S.SUGANYA
14)Dr.V.PRIYA
15)Dr.B.GUNAPRIYA
(72)**Name of Inventor :**
1)Mr.P.KARTHIKEYAN
2)Dr.K.DHAYALINI
3)Dr.B.PRIESTLY SHAN
4)Mr.R.PRABHAKARAN
5)Dr.HITESH PANCHAL
6)Mr.R.ASHOKKUMAR
7)Mrs.V.SUDHA
8)Mr.N.VIKRAM
9)Dr.S.SARAVANAN
10)Mr.R.MANIVANNAN
11)Dr.K.MAHENDRAN
12)Mr.G.L.ABISHEK
13)Mrs.S.SUGANYA
14)Dr.V.PRIYA
15)Dr.B.GUNAPRIYA

(57) Abstract :
SOLAR POWERED ELECTRIC TRICYCLE FOR PHYSICALLY CHALLENGED PERSONS According to the census taken in India in 2011(2016 updated) out of the 121 Cr population, 2.68 Cr persons are disabled which is 2.21% of the total population. Majority (69%) of the disabled population resided in rural areas (1.86 Cr disabled persons in rural areas and 0.81 Cr in urban areas). In the case of total population also, 69% are from rural areas while the remaining 31% resided in urban areas. So, the Mobility of the physically disabled or crippled people is a great concern of the society. It is really difficult to realize the problems and sorrows of a physically disabled or crippled person who is partially or fully dependent on others or confining himself in a wheelchair with limited mobility. The goal of the solar powered tricycle is to bring increased mobility to disabled persons by providing the solar powered tricycle at lower cost comparatively with the existing tricycle. Thus, the three-wheeler is operated by the solar power and suitable for outdoor use. Solar power option enables the disabled people to use it at any place, even in remote areas where there is no electricity. The renewable energy is vital for todayâ€™s world as in near future the non-renewable sources that we are using in our day-to-day life are going to get exhausted. The solar vehicle is a step in saving these non-renewable sources of energy. This idea, in future, may help us to protect our fuels from getting extinguished. The design specifications of the tricycle considered after analyzing the problems from the disabled persons. Comfort of the person in the tricycle is important and we have given importance to it. The main content of the tricycle is Solar PV panel, Brushless PMDC motor, Charge controller and battery. Thus, this solar tricycle will help to reduce the effort of handicapped person.

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