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Application Details

APPLICATION NUMBER	202141001091
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	10/01/2021
APPLICANT NAME	Institute of Aeronautical Engineering
TITLE OF INVENTION	Thermo-Electric Shoes with Automatic Temperature Control
FIELD OF INVENTION	ELECTRICAL
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E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	15/01/2021

Application Status

APPLICATION STATUS	Awaiting Request for Examination
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➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

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Patent Search

Invention Title	Thermo-Electric Shoes with Automatic Temperature Control
Publication Number	03/2021
Publication Date	15/01/2021
Publication Type	INA
Application Number	202141001091
Application Filing Date	10/01/2021
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	PHYSICS
Classification (IPC)	H05B3/02

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Abstract:

ABSTRACT: Title: Thermo-Electric Shoes with Automatic Temperature Control The present disclosure proposes thermo-electric shoes with automatic temperature control. The automatic temperature control comprises of a thermoelectric temperature control circuit 101, installed along an inner portion of a shoe portion. The thermoelectric temperature control circuit 101 comprises of a thermoelectric module 102, a battery unit 103 connected to the thermoelectric module 101, a charging circuit 104 connected to the battery unit 103, and a thermostat switch 105. A switching unit 106 along with an indicator 107a and 107b are placed along an outer portion of the shoe, and a heat sink 108 is placed on the thermoelectric module 102. The proposed thermo-electric shoe with automatic temperature control is a low cost shoe and suitable for any age group. Thermo-electric shoes with thermoelectric module have advantages such as compact size, light weight, high reliability, no mechanical moving parts and no working fluid.

Complete Specification

Claims:CLAIMS:

I / We Claim:

1. A thermo-electric shoes with automatic temperature control, comprising:
 - a thermoelectric temperature control circuit installed along an inner portion of a shoe portion, wherein said thermoelectric temperature control circuit, comprising:
 - a thermoelectric module configured to generate cooling and heating effect inside said shoe portion;
 - a battery unit connected to said thermoelectric module to supply power to said thermoelectric module;
 - a charging circuit configured to charge said battery unit which in turn connected to a converter that provides suitable electrical energy to said thermoelectric module, and a thermostat switch configured with a specified range of temperature and thereby cut power supply for said thermoelectric module after crossing said specified range of temperature;
 - a switching unit placed along an outer portion of said shoe portion and connected to said thermoelectric temperature control circuit configured to switch functionality of said thermoelectric module between cooling function and heating function;
 - an indicator placed along said outer portion of said shoe portion configured with a pair LED light for indicating said cooling function and said heating function of said thermoelectric module in coordination with the selection of said switching unit, and
 - a heat sink placed on said thermoelectric module configured with a water block to minimize said heating effect or said cooling effect on one portion of said shoe portion.
2. The thermo-electric shoes with automatic temperature control as recited in claim 1 wherein said thermoelectric temperature control circuit runs through a power

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Page last updated on: 26/06/2019

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.:		
			Filing Date:		
			Amount of Fee Paid:		
			CBR No.:		
			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)					
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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)					
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5. TITLE OF THE INVENTION					
Thermo-Electric Shoes with Automatic Temperature					
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		Fax No.	-----		
		E-mail ID	hima@novelpatent.com		
8. IN CASE 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. IN CASE 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) herein is/are my/our assignee or legal representative.

(a) Date: 18.12.2020

(b) Signatures:    

(c) Names: Mr. Ashok Bhati Dr. Manisha G Ms. Megha Gupta Alamuri Mr. Ch. Jaya Prakasa Rao

(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 prays 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/ provisional	No. of pages:		

specification)#:			
No. of Claim(s):	No. of pages:		
Abstract:	No. of pages:		
No. of Drawing(s):	No. of pages:		

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.

- b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- 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 (2 copies).
- e) Priority document(s) or a request to 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 Undertaking on Form 3
- h) Declaration of Inventorship on Form 5
- i) Power of Authority
- j)

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I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this 18th day of December 2020

Signature:

Name: Hima Bindu Atti

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.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule";