

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202111014071 A

(19) INDIA

(22) Date of filing of Application :30/03/2021

(43) Publication Date : 23/12/2022

(54) Title of the invention : AUTOMATED TYRE REMOVING AND FITTING DEVICE

(51) International classification	:B62K0025020000, B60C0025050000, A61B0090000000, B60C0025138000, B60B0030060000	(71)Name of Applicant : 1)Chandigarh Group of Colleges, Jhanjeri Address of Applicant :State Highway 12A Jhanjeri, Sahibzada Ajit Singh Nagar, Punjab 140307, India. Punjab India
(31) Priority Document No	:NA	(72)Name of Inventor :
(32) Priority Date	:NA	1)Dr. Shalom Akhai
(33) Name of priority country	:NA	2)Dr. Arvind Kumar
(86) International Application No	:NA	3)Venktesh Sharma
Filing Date	:NA	4)A. Anderson Jerin
(87) International Publication No	: NA	5)Sahil Sharma
(61) Patent of Addition to Application Number:	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention relates to an automated tyre removing and fitting device, comprising, portable body 1 includes first 2 and second 3 portion , first 2 portion incorporates motorized roller 4 inserted in wheel's central bore for rotating wheel during detachment of tyre from different positions, gripper 5 for pressing tire of wheel for creating space between tyre and rim of wheel, primary and secondary fork works in coordination for inserting in space between created space, primary fork holds tyre and secondary fork lift edge of tyre over rim facilitating detachment of tyre while rotation of wheel, artificial intelligence based imaging unit 7 detects location where tyre is detached through forks 6 providing command to microcontroller for repeating synchronized movement of forks 6 as per rotation of wheel, in order to perform tyre detachment from complete periphery of rim. Ref. Figure 1

No. of Pages : 13 No. of Claims : 7